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Şefika Şule Erçetin
Editor

Chaos, Complexity and Leadership 2016

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Editor

Chaos, Complexity and Leadership 2016

 Springer

Editor

Şefika Şule Erçetin
Hacettepe University
Ankara, Turkey

Lancaster University
Lancaster, UK

ISSN 2213-8684

ISSN 2213-8692 (electronic)

Springer Proceedings in Complexity

ISBN 978-3-319-64552-0

ISBN 978-3-319-64554-4 (eBook)

<https://doi.org/10.1007/978-3-319-64554-4>

Library of Congress Control Number: 2018930801

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Printed on acid-free paper

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The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

*To all who sacrificed their lives for our
beloved country, Turkey*

and

*with love to all newborns including my dear
granddaughter **Mihri** who make us still
believe in the beauties of life and hope for
miracles....*

Şefika Şule Erçetin

Preface

Chaos and complexity have fast become the new order of the contemporary world. Indeed, to talk about any phenomenon in life without alluding to the intricate nature of chaos and complexity is to miss a point and render the search for knowledge inefficient. Nevertheless, nothing gets even more paradoxical than the quest for efficient and effective leadership within a chaos and complexity vacuum. Chaos and complexity are largely inseparable with leadership because they augment leadership's inextricable structures making them indispensable with leadership especially in the modern world.

Tellingly, therefore, no effort has been spared and no stone left unturned in the world of academia to bring to literature the ontological, epistemological, axiological and logical premises of chaos and complexity and also as to how it obtains within leadership exegeses. Such has been the accomplishment leading to a series of works and books in the realm of exploration of the daunting challenge posed by chaos and complexity brought to bear on leadership systems by both literal and technical aspects in various forms.

The latest effort, like the others preceding it, draws on the proverbial linearity and non-linearity divide in the conceptualization of various phenomena which also engulfs the leadership terrain. This is through a comprehensive analysis of the relationship between chaos and complexity theory as well as leadership by dissecting a number of misnomers and fallacies that are viewed as innuendos of misconception of the logical nature of chaos and complexity by many.

Chaos and complexity alongside leadership have been explored from both a conventional and educational perspective, whilst the authors engaged a variety of approaches ranging from theoretical to practical aspects as well as content analysis to field-based studies. The result has been a toast of academic and research excellence obtaining in the realm of pioneer adventurism in contextual and structural settings. The studies and academic works in question have been put together in what has been entitled as *Chaos, Complexity and Leadership 2016*.

The book indeed positions itself as virtually the finest knowledge stopover for chaos and complexity from the perspective of leadership as it brought together researchers and academicians from different walks of knowledge fields and

amalgamated their views into a model that informs the applicability of chaos and complexity theory to leadership which has been a missing link in many a previous undertaking.

As usual we remain indebted to the international science association and all the authors who partook in this academic journey. We owe it to all those who directly or indirectly contributed to the possibility of this undertaking. This is because, in the process of developing the concept, structure of the book, author identification and orientation, review of manuscripts and evaluation, a considerable amount of time was spent: we feel this work will be an icing on a cake in the realm of abrogating the curtain on the less-explored concept of chaos and complexity in leadership. Yet again, we feel that readers would be tempted to jump onto the bandwagon and partake in studies related to chaos, complexity, leadership and non-linearity in general, thus expounding on the knowledge base, which is long overdue.

With pleasure allow us to present the latest edition, *Chaos, Complexity and Leadership 2016*, which draws on a wide range of views related to chaos and complexity theory as well as leadership.

We hope you will enjoy the latest product of a rather exhausting journey.

Ankara, Turkey

Şefika Şule Erçetin

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Chapter 1

Solutions to Chance-Constrained Programming Problems with Exponential Random Variables by Edgeworth Approximation



Mehmet Yılmaz and Nihan Potas

Abstract This paper introduces three methods for approximating distribution of weighted sum of exponential variates. These methods are useful for transforming chance constraints into their equivalent deterministic constraints when the technological coefficients are exponential random variables. Hence, the equivalent deterministic constraint is obtained by three methods which are normal approximation and first- and second-term Edgeworth series expansions, respectively. These methods are based on normal approximation related to the central limit theorem (CLT). Furthermore, the exact distribution of weighted sum of exponential variates is presented by using convolution technique. The fourth method is proposed for deriving deterministic equivalent of chance constraint by using this exact distribution. The fifth method is transforming the exponential variates into the chi-squared variates. Illustrative examples are given for the purpose of comparing the solutions of these five methods. Additionally, the optimal solution for Example 1 of Biswal et al. (1998. *European Journal of Operational Research* 111:589–597) is extended to a global solution by using three methods.

1.1 Introduction

Tail probabilities of nonnegative weighted sum of independent random variables are obviously useful in applications such as portfolio analyses and for industrial production process of glass manufacturing and iron-steel manufacturing. Consequently,

M. Yılmaz (✉)

Faculty of Science, Department of Statistics, Ankara University, Ankara, Turkey
e-mail: yilmazm@science.ankara.edu.tr

N. Potas

Faculty of Economics and Administrative Sciences, Health Care Management Department,
Ankara, Turkey
e-mail: nihanp@gazi.edu.tr

tail probabilities are used to determine the reliability of mixtured structures in industry, commerce, communication systems, and so on. Without doubt, exponential distributions are basic enquiry material for reliability analysis, and the results obtained can easily be extended to a larger-scale family of gamma distributions. Common problem in the practical application of statistics is the difficulty of finding the exact distribution of the weighted sum. Therefore, normal approximation is commonly used in application. However, the exact distribution of the weighted sum of exponential variates can easily be obtained. This exact distribution may not be appropriate for large n in many application areas such as stochastic programming. At the same time, the exact distribution cannot be derived from the well-known methods for some type of variates such as uniform, chi-squared, and others. So the Edgeworth expansions and CLT are used to overcome these difficulties. In this study, we compare these methods to the exact distribution of the weighted sum. Furthermore, since the exponential variate can be represented as chi-squared variate, the suggested method of Sengupta (1970) is considered.

In most of the probabilistic constrained stochastic programming problems, the random technologic coefficients are assumed to be normal. In the literature of the stochastic linear programming, normality assumption of the technologic coefficients has been suggested by several researchers. Here, a partial bibliography is presented as follows: Sahoo and Biswal (2009), Birge and Louveaux (1997) (pp. 105–108), Kall and Wallace (2003) (pp. 245–248), Chiralaksanakul and Mahadevan (2005), Poojari and Varghese (2008), Shapiro et al. (2009) (Chap. 1), and Hansotia (1980).

The distribution of weighted sum cannot be obtained, or the exact distribution would be more complex to solve the chance-constrained programming (CCP) problem even if this distribution was obtained. In both cases some simulation techniques and algorithms are suggested. These can be found in Chap. 4 of Liu (2009). Another useful method for transforming chance constraint into a deterministic equivalent is a normal approximation to the distribution of weighted sum according to CLT. However, it is possible to see some studies which have suggested this normality approximation such as Aringhieri (2005), Kampas and White (2003), Bitran and Leong (1990), and Kibzun (1991). They pointed out the usefulness of CLT for finding deterministic equivalence of chance (probabilistic) constraint. Besides, DePaolo and Rader (2007) suggested deterministic equivalent when the technologic coefficients have a Binom distribution by using the normal approximation according to CLT. Gurgur and Luxhoj (2003) and Jeeva et al. (2004) considered that the technologic coefficients are distributed as Weibull, and hence they suggest an approximation of the distribution of weighted sum given in chance constraint to normal distribution by using CLT.

First and second Edgeworth approximations for finding deterministic equivalence of chi-squared-type chance (probabilistic) constraint are firstly suggested by Yılmaz (2007). Finding the distribution of weighted sum of the gamma random variable is as difficult as calculating the weighted sum of the chi-squared random variables. Therefore, Yılmaz (2009) proposed two methods to find deterministic equivalence for gamma-type chance constraint by using first and second Edgeworth approximations. Also, a method to find the deterministic equivalence for Rayleigh-

type chance constraint by using the first Edgeworth approximation is introduced by Yılmaz and Topçu (2008). In the present work, deterministic equivalences for exponential-type chance constraint are obtained by first and second Edgeworth approximations, and these results are compared to the solutions of CCP problem obtained from the exact distribution.

1.2 Distribution of Weighted Sum of Exponential Variates

We will derive the distribution of the weighted sum by using convolution technique. Let X_1, X_2, \dots, X_n be independent and distributed as exponential with different parameters θ_i , i.e., $F_{X_i}(x_i) = 1 - e^{-x_i\theta_i}$, $x_i > 0$, $\theta_i > 0$ ($i = 1, 2, \dots, n$). Then we state the following definition:

Definition 1 (Convolution) The convolution of f and g is defined as an integral of the product of the two functions after one is reversed and shifted. It is denoted by $f * g$:

$$(f * g)(t) = \int f(t - z)g(z)dz.$$

If X and Y are two independent random variables with probability distributions F and G , respectively, then the probability distribution of the sum $X + Y$ is given by the convolution $F * G$ as

$$P(X + Y \leq t) = \int F(t - y)dG(y) \tag{1.1}$$

The distribution of $\sum_{j=1}^n a_j X_j$ can be obtained by iterating (1.1) as follows:

$$\begin{aligned} P(a_1 X_1 + a_2 X_2 \leq t) &= F_{X_1} * F_{X_2}(t) \\ &= \int_0^{\frac{t}{a_2}} F_{X_1}\left(\frac{t - a_2 x_2}{a_1}\right) dF_{X_2}(x_2) \\ P(a_1 X_1 + a_2 X_2 + a_3 X_3 \leq t) &= F_{X_1} * F_{X_2} * F_{X_3}(t) \\ &= \int_0^{\frac{t}{a_3}} F_{X_1} * F_{X_2}(t - a_3 x_3) dF_{X_3}(x_3) \\ &\vdots \\ P\left(\sum_{j=1}^n a_j X_j \leq t\right) &= F_{X_1} * F_{X_2} * F_{X_3} * \dots * F_{X_n}(t) \\ &= \int_0^{\frac{t}{a_n}} F_{X_1} * \dots * F_{X_{n-1}}(t - a_n x_n) dF_{X_n}(x_n) = 1 - \sum_{j=1}^n A_j e^{-\theta_j t} \end{aligned} \tag{1.2}$$

where $A_j = \prod_{\substack{i=1 \\ i \neq j}}^n \frac{h_i}{h_i - h_j}$, and $h_j = \frac{\theta_j}{a_j}$.

1.3 Expansion for Distributions

This section introduces three expansion methods related to the normal approximation. The first approximation method is based on the CLT, the second method is called first-term Edgeworth expansion, and the third one is the second-term Edgeworth expansion.

Theorem 1 (*Generalized CLT*). Let X_1, X_2, \dots, X_n be independent continuous random variables such that $\sum_{j=1}^n E \left| X_j - E(X_j) \right|^2 < \infty$ ($j = 1, 2, \dots, n$); then

$$P \left(\sum_{j=1}^n X_j \leq t \right) = P \left(\left(\mu_2^{(n)} \right)^{-\frac{1}{2}} \left[\sum_{j=1}^n X_j - E \left(\sum_{j=1}^n X_j \right) \right] \leq x \right) \approx \Phi(x) \quad (1.3)$$

where Φ stands for the standard normal distribution function and $\mu_k^{(n)}$ denotes the k th central moment, i.e., $\sum_{j=1}^n E \left(X_j - E(X_j) \right)^k$, here

$$x = \frac{t - E \left(\sum_{j=1}^n X_j \right)}{\sqrt{\mu_2^{(n)}}}$$

(Lehmann 1999; Feller 1966).

Theorem 2 Let X_1, X_2, \dots, X_n be independent continuous random variables with $E|X_j|^3 < \infty$ ($j = 1, 2, \dots, n$); then for large values of n , the first-term Edgeworth expansion

$$P \left(\frac{\sum_{j=1}^n X_j - E \left(\sum_{j=1}^n X_j \right)}{\left(\mu_2^{(n)} \right)^{\frac{1}{2}}} \leq x \right) = \Phi(x) + \frac{\mu_3^{(n)} (1 - x^2)}{6 \left(\mu_2^{(n)} \right)^{\frac{3}{2}}} \phi(x) + o \left(\frac{n}{\left(\mu_2^{(n)} \right)^{\frac{3}{2}}} \right) \quad (1.4)$$

is used as an approximation to the standard normal distribution where ϕ stands for the standard normal density function (Feller, Chap. XVI 1966; Kendall 1945).

$$\left[\frac{\mu_4^{(n)} - \frac{3 \left(\mu_2^{(n)} \right)^2}{2} (x^3 - 3x) + \frac{\left(\mu_3^{(n)} \right)^2}{72 \left(\mu_2^{(n)} \right)^3} (x^5 - 10x^3 + 15x)}{24 \left(\mu_2^{(n)} \right)^2} \right] \phi(x) \quad (1.5)$$

The second-term Edgeworth expansion can easily be extended by subtracting (1.5) from the right side of (1.4) (Wallace 1958).

1.3.1 Set-Up for Weighted Exponential Variates

Consider the exponential random variables X_i ($i = 1, 2, \dots, n$) with mean $\frac{1}{\theta_i}$. The k th central moment is obtained by evaluating the following integral:

$$\begin{aligned} \mu_k^{(1)} &= \int_0^\infty \theta_i \left(x_i - \frac{1}{\theta_i} \right)^k \exp(-x_i \theta_i) dx_i, k = 1, 2, 3, \dots \\ &= \frac{k!}{\theta_i^k} \sum_{j=0}^k \frac{(-1)^j}{j!}. \end{aligned}$$

Here, $\mu_1^{(1)} = 0$, $\mu_2^{(1)} = \frac{1}{\theta_i^2}$, $\mu_3^{(1)} = \frac{2}{\theta_i^3}$, and $\mu_4^{(1)} = \frac{9}{\theta_i^4}$. Hence (1.3–1.5) can be rearranged as

$$\begin{aligned} &\approx \Phi(x), \text{ where } x = \frac{t - M_1}{\sqrt{M_2}} \\ &\approx \Phi(x) + \left[\frac{M_3(1 - x^2)}{6(M_2)^{\frac{3}{2}}} \right] \phi(x), \tag{1.6} \\ &\approx \Phi(x) + \left[\frac{M_3(1 - x^2)}{6(M_2)^{\frac{3}{2}}} - \frac{M_4(x^3 - 3x)}{24M_2^2} - \frac{M_3^2(x^5 - 10x^3 + 15x)}{72M_2^3} \right] \phi(x). \end{aligned}$$

Here, M_1 denotes the expectation of the weighted sum of $\sum_{i=1}^n a_i X_i$, and M_k ($k > 1$) denote the k th central moments of $\sum_{i=1}^n a_i X_i$, and M_4 stands for the fourth cumulant of $\sum_{i=1}^n a_i X_i$. Then, for $\sum_{i=1}^n a_i X_i$, M_i ($i = 1, 2, 3, 4$) can be defined as follows:

$$\begin{aligned} M_1 &= \sum_{i=1}^n a_i \frac{1}{\theta_i}, & M_2 &= \sum_{i=1}^n a_i^2 \frac{1}{\theta_i^2} \\ M_3 &= \sum_{i=1}^n a_i^3 \frac{2}{\theta_i^3}, & M_4 &= \sum_{i=1}^n a_i^4 \frac{6}{\theta_i^4}. \end{aligned} \tag{1.7}$$

Now we will calculate the probabilities of weighted sums according to methods summarized above. We compare our results to the exact distribution of $3X_1 + 2X_2$ according to the results in Table 1.1. Here X_1 and X_2 are independent random variables distributed as exponential with mean 1. Throughout the paper, the notations ED, NA, FE, and SE are used to stand out for exact distribution, normal approximation,

Table 1.1 Computed probability for $n = 2$

t	ED	NA	FE	SE
1	0.063467387704	0.133628746577	0.121244728225	0.091693637211
2	0.195507525245	0.202690278229	0.224303811104	0.208784587588
3	0.342621996782	0.289549870977	0.348492085494	0.345825630688
4	0.479879152126	0.390755647499	0.478957171064	0.481253589885
5	0.597543188735	0.500000000000	0.599298303169	0.599298303169
6	0.693568287026	0.609244352501	0.697445876066	0.695149457245
7	0.769478863251	0.710450129023	0.769392343540	0.772058798347
8	0.828180924109	0.797309721770	0.818923254645	0.834442478162
9	0.872856787973	0.866371253423	0.853987235070	0.883538326084
10	0.906453913956	0.917241070651	0.882199071643	0.918371522030
11	0.931488943257	0.951953835272	0.907959628683	0.939335691803
12	0.950010587687	0.973898182329	0.932132179492	0.950068294009
13	0.963635692175	0.986749859699	0.953519420583	0.956059381269
14	0.973613076277	0.993722540701	0.970680919101	0.961812849867
15	0.980892327743	0.997227166342	0.983031547312	0.969131819545
16	0.986187075274	0.998859031373	0.991001565089	0.977436270215
17	0.990028804728	0.999562956394	0.995627940543	0.985220760380
18	0.992810563078	0.999844254512	0.998052786982	0.991332322940
19	0.994821393022	0.999948391279	0.999204452297	0.995437905720
20	0.996272898455	0.999984105131	0.999701606268	0.997838235963
21	0.997319427002	0.999995451660	0.999897169551	0.999074861459

Table 1.2 Computed probability for $n = 4$

t	ED	NA	FE	SE
1	0.031175163672	0.080071029570	0.055147717307	0.037941563819
2	0.207337542005	0.202904828725	0.217928983506	0.210839448932
3	0.461214562587	0.398208608106	0.460236360344	0.461515987214
4	0.680997122641	0.623739513415	0.682607764594	0.681375001970
5	0.828746516517	0.812896507270	0.822633632904	0.831218840051
6	0.914332776482	0.928119023337	0.901283844954	0.918412878053
7	0.959328351894	0.979086029345	0.951876487554	0.957974743380
8	0.981441019278	0.995453419303	0.982175001068	0.976662960728
9	0.991787283794	0.999268274814	0.995298875642	0.989461902945
10	0.996452518479	0.999913377315	0.999133098824	0.996748908918
11	0.998496972636	0.999992491625	0.999888392119	0.999339486794
12	0.999373043380	0.999999525057	0.999989936161	0.999911095721

first-term Edgeworth expansion, and second-term Edgeworth expansion, respectively. The values have been obtained by using MATLAB codes given in Appendix A. According to Table 1.1, SE method approaches to the $P(3X_1 + 2X_2 \leq t)$ faster than others. In Table 1.2, we compare our results with the exact distribution of $0.8X_1 + 1.4X_2 + 2.7X_3 + 4.2X_4$ for $n = 4$. Here, X_i 's are assumed to be independent and exponential random variables with mean $\frac{1}{i}$, for $i = 1, 2, 3, 4$.

1.4 Deterministic Model for Exponential-Type Chance Constraints

A mathematical model of a chance (probabilistic) constrained linear programming problem can be presented as follows: The probabilistic constraint(s) replaces the original mathematical programming model,

$$\begin{aligned} \max(\min) z(\mathbf{x}) &= \sum_{j=1}^n c_j x_j \\ \sum_{j=1}^n a_{ij} x_j &\leq t_i, \text{ for } i = 1, 2, \dots, m, \\ x_j &\geq 0, \quad j = 1, 2, \dots, n \end{aligned}$$

by

$$P\left(\sum_{j=1}^n a_{ij} x_j \leq t_i\right) \geq 1 - \alpha_i, \text{ for } i = 1, 2, \dots, m,$$

where the α_i are specified probabilities. Here, it is assumed that the decision variables, x_j , are deterministic; technologic coefficients, a_{ij} or t_i or c_j , are random variables; or both of a_{ij} , t_i and c_j are random variables (see Charnes and Cooper 1959; Hillier and Lieberman 1990; Taha 1997; Kolbin 1977). CCP model can be stated as

$$\begin{aligned} \max(\min) z(\mathbf{x}) &= \sum_{j=1}^n c_j x_j \\ P\left(\sum_{j=1}^n a_{ij} x_j \leq t_i\right) &\geq 1 - \alpha_i, \\ x_j &\geq 0, \quad j = 1, 2, \dots, n \\ \alpha_i &\in (0, 1) \quad i = 1, 2, \dots, m. \end{aligned} \tag{1.8}$$

We consider the chance-constrained stochastic programming when the a_{ij} 's are random variables distributed as exponential with different parameters and for c_j , t_i are being constant. In this case deterministic equivalences of (1.8) will be obtained. The equivalent deterministic problem is obtained for five different methods. We compare the objective functions of model which are obtained from these methods by giving numerical examples, and discuss these results by illustrative examples. The k th chance constraint given in model (1.8) is

$$P\left(\sum_{j=1}^n a_{kj}x_j \leq t_k\right) \geq 1 - \alpha_k, \quad (1.9)$$

where a_{kj} are independent random variables having finite fourth central moment. If one can find deterministic equivalent of (1.9), the problem turns out to find the exact distribution of $\sum_{j=1}^n a_{kj}x_j$, which is a linear combination of a_{kj} 's. However, some difficulties arise for finding the exact distribution of linear combination for large n ; it is complicated to get a feasible solution of (1.9). Therefore, the convolution technique is suggested for transforming deterministic equivalent of (1.9).

Method I: Exact Distribution (ED) The deterministic equivalence of (1.9) can be obtained from Eq. 1.2 which let us to find the exact distribution of $\sum_{j=1}^n a_jx_j$ as follows:

$$\begin{aligned} P\left(\sum_{j=1}^n a_jx_j \leq t\right) &\geq 1 - \alpha \\ 1 - \sum_{j=1}^n A_j e^{-\theta_j} &\geq 1 - \alpha \\ \sum_{j=1}^n A_j e^{-\theta_j} &\leq \alpha \\ A_j &= \prod_{\substack{i=1 \\ i \neq j}}^n \frac{h_i}{h_i - h_j} \\ h_j &= \frac{\theta_j}{x_j}. \end{aligned} \quad (1.10)$$

Method II: Central Limit Theorem (NA) The deterministic equivalence of (1.9) can be obtained by using normalization and the approximations (1.3) and (1.6), and then we have the following:

$$\begin{aligned} \Phi\left(\frac{t-M_1}{\sqrt{M_2}}\right) &\geq 1-\alpha \\ t &\geq \sqrt{M_2}\Phi^{-1}(1-\alpha)+M_1 \\ \sqrt{\sum_{j=1}^n\left(\frac{x_j}{\theta_j}\right)^2}\Phi^{-1}(1-\alpha)+\sum_{j=1}^n\frac{x_j}{\theta_j} &\leq t \end{aligned} \tag{1.11}$$

Method III: First-Term Edgeworth Expansion (FE) The deterministic equivalence of (1.9) can be obtained from the approximations (1.4) and (1.6) as follows:

$$\Phi(x)+\left[\frac{M_3(1-x^2)}{6(M_2)^{\frac{3}{2}}}\right]\phi(x)\geq 1-\alpha,$$

where $x = \frac{t-M_1}{\sqrt{M_2}}$. By recalling the expression (1.7), we have

$$\Phi(x)+\left[\frac{\sum_{j=1}^n2\left(\frac{x_j}{\theta_j}\right)^3(1-x^2)}{6\left(\sum_{j=1}^n\left(\frac{x_j}{\theta_j}\right)^2\right)^{\frac{3}{2}}}\right]\frac{e^{-0.5x^2}}{\sqrt{2\pi}}\geq 1-\alpha; \tag{1.12}$$

here, the expression x in $\Phi(x)$ is not constant; therefore, we may use an approximation suggested by Polyà:

$$\Phi(x)\approx\frac{1}{2}\left[1+\left[1+e^{-\frac{2x^2}{\pi}}\right]^{\frac{1}{2}}\right]$$

(see Petrov 1975). Lingo program can solve $\Phi(x)$ by “@PSN” function.

Method IV: Second-Term Edgeworth Expansion (SE) The deterministic equivalence of (1.9) can be obtained from the approximations (1.4) to (1.7) as follows:

$$\Phi(x)+\left[\frac{M_3(1-x^2)}{6(M_2)^{\frac{3}{2}}}-\frac{M_4(x^3-3x)}{24M_2^2}-\frac{M_3^2(x^5-10x^3+15x)}{72M_2^3}\right]\frac{e^{-0.5x^2}}{\sqrt{2\pi}}\geq 1-\alpha, \tag{1.13}$$

where $x = \frac{t-M_1}{\sqrt{M_2}}$.

Method V: Sengupta's Method (SM) Sengupta (1970) suggested a transformation for chi-squared-type chance constraint. Let a_i be random variable independently distributed as chi-squared with degrees of freedom v_i denoted as $(\chi_{(v_i)}^2)$; then the probabilistic constraint $P\left(\sum_{i=1}^n x_i a_i \leq t\right) \geq 1 - \alpha$ is transformed to

$$t \left(\sum_{i=1}^n x_i E(a_i) \right) - \chi_{(v)}^{2\text{inv}} \left(\sum_{i=1}^n x_i^2 E(a_i) \right) \geq 0. \quad (1.14)$$

Here, $E(a_i) = v_i$, $v = \sum_{i=1}^n v_i$, and $\chi_{(v)}^{2\text{inv}}$ denotes inverse chi-squared distribution function with v degrees of freedom on the $1 - \alpha$ level. Exponential variables will be represented by chi-squared random variables, such that if $a_i \sim EXP(\theta_i)$, then $2\theta_i a_i \sim \chi_{(2)}^2$. Thus, equivalent deterministic constraint of (1.9) can be given as follows:

$$\begin{aligned} t \left(\sum_{i=1}^n \frac{x_i}{2\theta_i} 2 \right) - \chi_{(2n)}^{2\text{inv}} \left(\sum_{i=1}^n \left(\frac{x_i}{2\theta_i} \right)^2 2 \right) &\geq 0 \\ t \left(\sum_{i=1}^n \frac{x_i}{\theta_i} \right) - \frac{\chi_{(2n)}^{2\text{inv}}}{2} \left(\sum_{i=1}^n \frac{x_i^2}{\theta_i^2} \right) &\geq 0 \\ tM_1 - \frac{\chi_{(2n)}^{2\text{inv}}}{2} M_2 &\geq 0. \end{aligned} \quad (1.15)$$

Here, the inequality is reversed for the *minimum* problem. In the next section, we give some illustrative examples for five different methods considered above and compare with each other.

1.5 Numerical Examples

Example 1 Consider the chance-constrained model as follows:

$$\begin{aligned} \max z(x) &= \sum_{j=1}^n x_j \\ P \left(\sum_{j=1}^n x_j a_j \leq 5 \right) &\geq 0.7 \\ x_j &\geq 1, j = 1, 2, \dots, 9 \end{aligned} \quad (1.16)$$

where a_j 's are independent and distributed as $EXP(j)$. According to the solution of (1.16), we get the compromise solutions for $n = 1, 2, \dots, 9$. Solutions have been obtained by using Lingo 9.0 packet program and tabulated in Tables 1.3 and 1.4. Note that there is no restriction on $x_j \geq 1$ for the case $n = 7, 8, 9$.

Table 1.3 Solutions for model (1.16)

	Methods	Decision variable (x)	z
<i>n</i> = 1	ED	$x_1 = 4.152918$	4.152918
	NA	$x_1 = 3.279978$	3.279978
	FE	$x_1 = 4.215364$	4.215364
	SE	$x_1 = 4.152928$	4.152928
	SM	$x_1 = 4.152918$	4.152918
<i>n</i> = 2	ED	$x_1 = 1.000000$ $x_2 = 6.365911$	7.365911
	NA	$x_1 = 1.000000$ $x_2 = 5.118317$	6.118317
	FE	$x_1 = 1.000000$ $x_2 = 6.466510$	7.466510
	SE	$x_1 = 1.000000$ $x_2 = 6.415745$	7.415745
	SM	$x_1 = 1.673135$ $x_2 = 4.642702$	6.315837
<i>n</i> = 3	ED	$x_1 = 1.000000$ $x_2 = 1.000000$ $x_3 = 17.06375$	19.06375
	NA	$x_1 = 1.000000$ $x_2 = 1.000000$ $x_3 = 13.55338$	15.55338
	FE	$x_1 = 1.000000$ $x_2 = 1.000000$ $x_3 = 17.29024$	19.29024
	SE	$x_1 = 1.000000$ $x_2 = 1.000000$ $x_3 = 17.09930$	19.09930
	SM	$x_1 = 3.822900$ $x_2 = 2.160036$ $x_3 = 8.314319$	14.29726
<i>n</i> = 4	ED	$x_1 = 1.000000$ $x_2 = 1.000000$ $x_3 = 1.000000$ $x_4 = 9.638675$	12.638675
	NA	$x_1 = 1.000000$ $x_2 = 1.000000$ $x_3 = 1.116827$ $x_4 = 7.752866$	10.86969
	FE	$x_1 = 1.000000$ $x_2 = 1.000000$ $x_3 = 1.000000$ $x_4 = 9.769109$	12.769109
	SE	$x_1 = 1.000000$ $x_2 = 1.000000$ $x_3 = 1.000000$ $x_4 = 9.770452$	12.770452
	SM	$x_1 = 1.000000$ $x_2 = 1.745408$ $x_3 = 3.139721$ $x_4 = 4.881774$	10.76690
<i>n</i> = 5	ED	$x_1 = 1.000000$ $x_2 = 1.000000$ $x_3 = 1.000000$ $x_4 = 1.000000$ $x_5 = 10.90722$	14.90722
	NA	$x_1 = 1.000000$ $x_2 = 1.000000$ $x_3 = 1.000000$ $x_4 = 1.998770$ $x_5 = 7.985875$	12.98465
	FE	$x_1 = 1.000000$ $x_2 = 1.000000$ $x_3 = 1.000000$ $x_4 = 1.000000$ $x_5 = 11.04010$	15.04010
	SE	$x_1 = 1.000000$ $x_2 = 1.000000$ $x_3 = 1.000000$ $x_4 = 1.000000$ $x_5 = 11.06572$	15.06572
	SM	$x_1 = 1.000000$ $x_2 = 1.259582$ $x_3 = 2.197426$ $x_4 = 3.340640$ $x_5 = 4.689222$	12.48687

Table 1.4 Solutions for model 16 (continue)

	Methods	Decision variable (x)	z
$n = 6$	ED	$x_1 = 1.000000$ $x_2 = 1.000000$ $x_3 = 1.000000$ $x_4 = 1.000000$ $x_5 = 1.000000$ $x_6 = 11.99950$	16.99950
	NA	$x_1 = 1.000000$ $x_2 = 1.000000$ $x_3 = 1.000000$ $x_4 = 1.000000$ $x_5 = 2.715343$ $x_6 = 8.260234$	14.97558
	FE	$x_1 = 1.000000$ $x_2 = 1.000000$ $x_3 = 1.000000$ $x_4 = 1.000000$ $x_5 = 1.000000$ $x_6 = 12.12926$	17.12926
	SE	$x_1 = 1.000000$ $x_2 = 1.000000$ $x_3 = 1.000000$ $x_4 = 1.000000$ $x_5 = 1.000000$ $x_6 = 12.17592$	17.17592
	SM	$x_1 = 1.000000$ $x_2 = 1.000000$ $x_3 = 1.628066$ $x_4 = 2.418527$ $x_5 = 3.332873$ $x_6 = 4.371105$	13.75057
$n = 7$	ED	$x_1 = x_2 = x_3 = x_4 = x_5 = x_6 = 0.000000$ $x_7 = 29.07042$	29.07042
	NA	$x_1 = x_2 = x_3 = x_4 = 0.000000$ $x_5 = 1.023557$ $x_6 = 7.320402$ $x_7 = 15.64796$	23.99192
	FE	$x_1 = x_2 = x_3 = x_4 = x_5 = 0.000000$ $x_6 = 0.3068302$ $x_7 = 29.20324$	29.51007
	SE	$x_1 = x_2 = x_3 = x_4 = x_5 = 0.000000$ $x_6 = 0.7988493$ $x_7 = 28.28418$	29.08303
	SM	$x_1 = 0.3771420$ $x_4 = 2.335613$ $x_7 = 5.534652$ $x_2 = 0.8921248$ $x_5 = 3.264118$ $x_3 = 1.544948$ $x_6 = 4.330465$	18.27906
$n = 8$	ED	$x_1 = x_2 = x_3 = x_4 = x_5 = x_6 = 0.000000$ $x_7 = 1.386583$ $x_8 = 31.87330$	33.25988
	NA	$x_1 = x_2 = x_3 = x_4 = x_5 = 0.000000$ $x_6 = 2.352911$ $x_7 = 8.663308$ $x_8 = 16.66463$	27.68085
	FE	$x_1 = x_2 = x_3 = x_4 = x_5 = x_6 = 0.000000$ $x_7 = 0.8077346$ $x_8 = 32.92997$	33.73770
	SE	$x_1 = x_2 = x_3 = x_4 = x_5 = x_6 = 0.000000$ $x_7 = 1.521479$ $x_8 = 31.74135$	33.26283
	SM	$x_1 = 0.3252352$ $x_4 = 1.946062$ $x_7 = 4.534570$ $x_2 = 0.7579906$ $x_5 = 2.701378$ $x_8 = 5.612446$ $x_3 = 1.298266$ $x_6 = 3.564214$	20.74016
$n = 9$	ED	$x_1 = x_2 = x_3 = x_4 = x_5 = x_6 = x_7 = 0.000000$ $x_8 = 2.011476$ $x_9 = 35.43402$	37.44549
	NA	$x_1 = x_2 = x_3 = x_4 = x_5 = x_6 = 0.000000$ $x_7 = 3.651208$ $x_8 = 9.985854$ $x_9 = 17.77376$	31.41082
	FE	$x_1 = x_2 = x_3 = x_4 = x_5 = x_6 = x_7 = 0.000000$ $x_8 = 1.319368$ $x_9 = 36.65307$	37.97244
	SE	$x_1 = x_2 = x_3 = x_4 = x_5 = x_6 = x_7 = 0.000000$ $x_8 = 2.243317$ $x_9 = 35.20850$	37.45182
	SM	$x_1 = 0.2858319$ $x_4 = 1.660880$ $x_7 = 3.812256$ $x_2 = 0.6579224$ $x_5 = 2.291747$ $x_8 = 4.701899$ $x_3 = 1.1162720$ $x_6 = 3.008872$ $x_8 = 5.677801$	23.21348

Example 2 Let $X_1, X_2, X_3,$ and X_4 be independent random variables with $X_1 \sim EXP(6), X_2 \sim EXP(2), X_3 \sim EXP(5),$ and $X_4 \sim EXP(10);$ then the model contains one chance constraint and some deterministic constraints as follows:

$$\begin{aligned} \max z(\mathbf{x}) &= 2x_1 + 4x_2 + 3x_3 + x_4 \\ P\left(\sum_{j=1}^4 x_j a_j \leq t\right) &\geq 0.95 \\ x_j &\leq 6, j = 1, 2, 3, 4. \end{aligned} \tag{1.17}$$

Solutions are obtained for some values of t in Table 1.5. Here, in this problem, only the methods ED, FE, and SE are considered. Solutions are tabulated in Table 1.5. The following example can be found in Biswal et al. (1998). We get the solutions by using three methods which are ED, FE, and SE (Lingo program codes can be seen in Appendix B).

Example 3 Let a_{ij} and c_j be independent random variables distributed as $a_{11} \sim EXP\left(\frac{1}{5}\right), a_{12} \sim EXP\left(\frac{1}{4}\right), a_{13} \sim EXP\left(\frac{1}{8}\right), a_{21} \sim EXP\left(\frac{1}{10}\right), a_{22} \sim EXP\left(\frac{1}{2}\right), a_{23} \sim EXP\left(\frac{1}{20}\right)$ and $c_1 \sim EXP\left(\frac{1}{5}\right), c_2 \sim EXP\left(\frac{1}{6}\right), c_3 \sim EXP\left(\frac{1}{3}\right),$ respectively. The problem,

$$\begin{aligned} \max z(x) &= c_1 x_1 + c_2 x_2 + c_3 x_3 \\ P(x_1 a_{11} + x_2 a_{12} + x_3 a_{13} \leq 10) &\geq 0.95, \\ P(x_1 a_{21} + x_2 a_{22} + x_3 a_{23} \leq 20) &\geq 0.90, \\ x_j &\geq 0, j = 1, 2, 3 \end{aligned} \tag{1.18}$$

has the following deterministic equivalences, which can be obtained by using (1.10, 1.12, and 1.13), respectively;

Table 1.5 Solutions for model 17

	Methods	Decision variable (x)	z
$t = 1$	ED	$x_1 = 0.8162458$ $x_3 = 1.0043790$ $x_2 = 0.1128527$ $x_4 = 0.9822255$	6.079266
	FE	$x_1 = 0.8138174$ $x_3 = 0.8658707$ $x_2 = 0.1356959$ $x_4 = 1.0555860$	5.823616
	SE	$x_1 = 0.8687483$ $x_3 = 0.9527295$ $x_2 = 0.1073619$ $x_4 = 1.044401$	6.069534
	ED	$x_1 = 1.632492$ $x_3 = 2.008759$ $x_2 = 0.2257054$ $x_4 = 1.964451$	12.15853
$t = 2$	FE	$x_1 = 1.6276350$ $x_3 = 1.731741$ $x_2 = 0.2713919$ $x_4 = 2.111171$	11.64723
	SE	$x_1 = 1.7374970$ $x_3 = 1.905459$ $x_2 = 0.2147239$ $x_4 = 2.088801$	12.13907
	ED	$x_1 = 2.448737$ $x_3 = 3.013138$ $x_2 = 0.3385580$ $x_4 = 2.946677$	18.23780
$t = 3$	FE	$x_1 = 2.441452$ $x_3 = 2.597612$ $x_2 = 0.4070878$ $x_4 = 3.166757$	17.47085
	SE	$x_1 = 2.606245$ $x_3 = 2.858189$ $x_2 = 0.3220858$ $x_4 = 3.133202$	18.20860
	ED	$x_1 = 3.2649830$ $x_3 = 4.017517$ $x_2 = 0.4514108$ $x_4 = 3.928902$	24.31706
$t = 4$	FE	$x_1 = 3.255270$ $x_3 = 3.463483$ $x_2 = 0.5427837$ $x_4 = 4.222343$	23.29446
	SE	$x_1 = 3.474993$ $x_3 = 3.810918$ $x_2 = 0.4294478$ $x_4 = 4.177603$	24.27813
	ED	$x_1 = 4.081229$ $x_3 = 5.021897$ $x_2 = 0.5642636$ $x_4 = 4.911128$	30.39633
$t = 5$	FE	$x_1 = 4.069087$ $x_3 = 4.329353$ $x_2 = 0.6784797$ $x_4 = 5.277928$	29.11808
	SE	$x_1 = 4.343742$ $x_3 = 4.763648$ $x_2 = 0.5368097$ $x_4 = 5.222003$	30.34767

$$\begin{aligned} \max E[z(\mathbf{x})] &= 5x_1 + 6x_2 + 3x_3 \\ \frac{e^{-10k_{21}} k_{21} k_{32} (k_{31} - k_{21}) - e^{-10k_{21}} k_{11} k_{31} (k_{31} - k_{11}) + e^{-10k_{21}} k_{11} k_{21} (k_{21} - k_{11})}{(k_{21} - k_{11})(k_{31} - k_{11})(k_{31} - k_{21})} &\leq 0.05, \\ k_{11} - 1/(5x_1) &= 0, \\ k_{21} - 1/(4x_2) &= 0, \\ k_{31} - 1/(8x_3) &= 0, \end{aligned}$$

$$\begin{aligned} \frac{e^{-20k_{12}} k_{22} k_{32} (k_{32} - k_{22}) - 2^{-20k_{12}} k_{12} k_{32} (k_{32} - k_{12}) + e^{-20k_{12}} k_{12} k_{22} (k_{22} - k_{12})}{(k_{22} - k_{12})(k_{32} - k_{12})(k_{32} - k_{22})} &\leq 0.10, \\ k_{12} - 1/(10x_1) &= 0, \\ k_{22} - 1/(2x_2) &= 0, \\ k_{32} - 1/(20x_3) &= 0, \\ x_j \geq 0, j = 1, 2, 3. \end{aligned}$$

$$\max E[z(\mathbf{x})] = 5x_1 + 6x_2 + 3x_3$$

$$pi = 3.1415926535,$$

$$\begin{aligned} m_{11} - (5x_1 + 4x_2 + 8x_3) &= 0, \\ m_{21} - [(5x_1)^2 + (4x_2)^2 + (8x_3)^2] &= 0, \\ m_{31} - 2[(5x_1)^3 + (4x_2)^3 + (8x_3)^3] &= 0, \\ x_1 m_{21} - (10 - m_{11})^2 &= 0, \\ m_{12} - (5x_1 + 4x_2 + 8x_3) &= 0, \\ m_{22} - [(5x_1)^2 + (4x_2)^2 + (8x_3)^2] &= 0, \\ m_{32} - 2[(5x_1)^3 + (4x_2)^3 + (8x_3)^3] &= 0, \\ x_2 m_{22} - (20 - m_{12})^2 &= 0, \end{aligned}$$

$$\Phi(x_1^{0.5}) + \frac{e^{-\frac{x_1}{2}} m_{31} (1 - x_1)}{6(2 * pi)^5 m_{21}^{1.5}} \geq 0.95,$$

$$\Phi(x_2^{0.5}) + \frac{e^{-\frac{x_2}{2}} m_{32} (1 - x_2)}{6(2 * pi)^5 m_{22}^{1.5}} \geq 0.90,$$

$$x_j \geq 0, j = 1, 2, 3$$

$$\max E[z(x)] = 5x_1 + 6x_2 + 3x_3$$

$$pi = 3.1415926535,$$

$$\begin{aligned} m_{11} - (5x_1 + 4x_2 + 8x_3) &= 0, \\ m_{21} - [(5x_1)^2 + (4x_2)^2 + (8x_3)^2] &= 0, \\ m_{31} - 2[(5x_1)^3 + (4x_2)^3 + (8x_3)^3] &= 0, \\ m_{41} - 6[(5x_1)^4 + (4x_2)^4 + (8x_3)^4] &= 0, \end{aligned}$$

$$\begin{aligned}
 &x_1 m_{21} - (10 - m_{11})^2 = 0, \\
 &m_{12} - (5x_1 + 4x_2 + 8x_3) = 0, \\
 &m_{22} - [(5x_1)^2 + (4x_2)^2 + (8x_3)^2] = 0, \\
 &m_{32} - 2[(5x_1)^3 + (4x_2)^3 + (8x_3)^3] = 0, \\
 &m_{42} - 6[(5x_1)^4 + (4x_2)^4 + (8x_3)^4] = 0, \\
 &x_2 m_{22} - (20 - m_{12})^2 = 0, \\
 &\Phi(x_1^{0.5}) + \left[\frac{m_{31}(1-x_1)}{6m_{21}^{1.5}} - \frac{m_{41}(x_1^{1.5} - 3x_1^{0.5})}{24m_{21}^2} - \frac{m_{32}^2(x_1^{2.5} - 10x_1^{1.5} + 15x_1)}{72m_{21}^{1.5}} \right] \frac{e^{-\frac{x_1}{2}}}{(2 * \pi i)^{0.5}} \geq 0.95, \\
 &\Phi(x_2^{0.5}) + \left[\frac{m_{32}(1-x_2)}{6m_{22}^{1.5}} - \frac{m_{42}(x_2^{1.5} - 3x_2^{0.5})}{24m_{22}^2} - \frac{m_{32}^2(x_2^{2.5} - 10x_2^{1.5} + 15x_2)}{72m_{22}^{1.5}} \right] \frac{e^{-\frac{x_2}{2}}}{(2 * \pi i)^{0.5}} \geq 0.90, \\
 &x_j \geq 0, j = 1, 2, 3.
 \end{aligned}$$

We get the solutions by using Lingo 9.0 packet program and these are tabulated in Table 1.6. Notice that BM denotes Biswal et al. (1998)’s solution in the Table 1.6.

In Example 4, we consider the following CCP which was solved by Liu (2009) and Varghese and Poojari (2004). Then the optimal solution is obtained by three methods NA, FE, and SE, and the results are tabulated in Table 1.7.

Example 4 Let us consider the following CCP in which there are three decision variables and nine stochastic parameters:

$$\begin{aligned}
 &\max = \bar{f} \\
 &P(a_{11}x_1 + a_{12}x_2 + a_{13}x_3 \geq \bar{f}) \geq 0.90, \\
 &P(a_{21}x_1^2 + a_{22}x_2^2 + a_{23}x_3^2 \leq 8) \geq 0.80, \\
 &P(a_{31}x_1^3 + a_{32}x_2^3 + a_{33}x_3^3 \leq 15) \geq 0.85, \\
 &x_1, x_2, x_3 \geq 0
 \end{aligned}$$

Table 1.6 Solutions for model 18

Methods	Decision variable (x)	z
ED	$x_1 = 0.2787872$ $x_2 = 0.6744852$ $x_3 = 0.000000$	5.440847
FE	$x_1 = 0.2651778$ $x_2 = 0.6830134$ $x_3 = 0.000000$	5.423970
SE	$x_1 = 0.2653392$ $x_2 = 0.7171086$ $x_3 = 0.000002303109$	5.629355
BM	$x_1 = 0.001177$ $x_2 = 0.346094$ $x_3 = 0.000010$	2.082476

Table 1.7 Solution reports of Example 4

Methods	Decision variable (x)	Obj. (\bar{f})
NA	$x_1 = 1.536343$ $x_2 = 0.5810151$ $x_3 = 0.5503400$	2.263304
FE	$x_1 = 1.532690$ $x_2 = 0.5466225$ $x_3 = 0.5949421$	2.304522
SE	$x_1 = 1.519914$ $x_2 = 0.4902376$ $x_3 = 0.6871793$	2.374062
LB	$x_1 = 1.458$ $x_2 = 0.490$ $x_3 = 0.811$	2.27
VP	$x_1 = 1.52$ $x_2 = 0.39$ $x_3 = 1.48$	2.53

where a_{11} , a_{21} , and a_{31} are uniformly distributed random variables $U(1,2)$, $U(2,3)$, and $U(3,4)$, respectively; a_{12} , a_{22} , and a_{32} are normal random variables, namely, $N(1,1)$, $N(2, 1)$, and $N(3, 1)$; and a_{13} , a_{23} , and a_{33} are exponential random variables with means 1, $\frac{1}{2}$, and $\frac{1}{3}$, respectively.

Liu (2009) and Varghese and Poojari (2004) solved this problem by employing the stochastic simulation. Their optimal solutions are also included in Table 1.7 denoted as LB and VP, respectively. According to Table 1.7, for different types of weighted random variables, the methods NA, FE, and SE provide tangible solutions with nonlinear deterministic equivalences of the probabilistic constraints.

1.6 Conclusion

In this paper we have established the distribution function of the random variable $\sum_{j=1}^n a_{ij}x_j$, where a_{ij} are independent exponential random variables with known means. Then using the derived distribution function, a chance (probabilistic) constrained linear programming problem can be transformed into a deterministic nonlinear programming problem. The result in this paper has generalized the existing literature to cases with n independent exponential random variables. Furthermore, two expansions have been introduced based on normal approximation for the weighted sum of independent exponential variates, named as first- and second-term Edgeworth expansion, respectively. We have showed that if the technologic coefficients are assumed to be independent exponential random variables, then two expansion methods can be considered as an application of chance-constrained programming problem for transforming deterministic nonlinear programming problem. Most of the probabilistic models assume the normality (or normal approximation according to CLT) for model coefficients. Illustrative examples show that using NA method for finding deterministic equivalents for some probabilistic programming without having normality cannot be efficient to obtain a better solution. Therefore, this paper proposes two alternative methods to improve the solution of the problem based on the NA method. Distribution of the weighted sum of exponential random

variables can be easily obtained; therefore, in order to check whether the solutions based on Edgeworth expansions are optimal, the exponential variables are chosen. The solutions are compared according to the decision variables and the objective functions of some deterministic models. The solutions of (1.16) are summarized for the five methods in Tables 1.3 and 1.4. Although the solutions of the deterministic model obtained from NA and SM methods are extremely far away from the solutions obtained from ED method, solutions obtained from FE and SE methods are close to the solution obtained from ED method. As seen in Example 2, the solutions obtained from SE method are closer to the solutions obtained from ED method than the solutions from FE method, tabulated in Table 1.5. Since FE and SE methods are based on normal approximation, these methods are very useful for large n . For small sample case, illustrative examples show that these methods are preferable. As seen from Table 1.7, NA, FE, and SE solutions are reasonable as well as the solutions which are obtained by stochastic simulation techniques. Hence, FE and SE methods can be recommended to convert chance constraint into its deterministic constraint for exponential-type chance-constrained stochastic programming problem.

Acknowledgments The authors would like to express their deepest gratitude to Dr. Didem Atalay for her insightful comments and considerable encouragements to complete this study.

Appendix

MATLAB Program for Computing Probabilities

```
close all
clear all
n=3;
t=input('t=');
teta(1)=input('teta1=');
teta(2)=input('teta2=');
teta(3)=input('teta3=');
a(1)=input('a1=');
a(2)=input('a2=');
a(3)=input('a3=');
%-----ED-----;
for j=1:n
h(j)=teta(j)/a(j);
end
for j=1:n
K(j)=1;
for i=1:n
```

```

if i~=j
K(j)=K(j)*h(i)/(h(i)-h(j));
end
end
end
Tail=0;
for i=1:n
Tail=Tail+K(i)*exp(-t*h(i));
end
probability=1-Tail
%-----;
m1=0;
m2=0;
m3=0;
m4=0;
for i=1:n
m1=m1+1/h(i);
m2=m2+1/h(i)^2;
m3=m3+2*1/h(i)^3;
m4=m4+6*1/h(i)^4;
end
x=(t-m1)/m2^.5;
%-----NA-----;
normal1=normcdf(x,0,1)
%-----FE-----;
firstterm=normcdf(x,0,1)+(m3*(1-x^2)/(6*m2^1.5))*exp(-x^2/2)/(2*pi)^.5
%-----SE-----;
p1=normcdf(x,0,1);
p2=(m3*(1-x^2)/(6*m2^1.5)-(m4)*(x^3-3*x)/(24*m2^2)-m3^2*(x^5-10*x^3+15*x)/(72*m2^3))*exp(-x^2/2)/(2*pi)^.5;
secondedge=p1+p2

```

Lingo Program for Solving Equivalent Deterministic Problem

```

max=a1*5+a2*6+a3*3;
t1=10;
pi = 3.1415926535;
@FREE(x1);
m11=a1*5+a2*4+a3*8;
m21=(a1^2)*25+(a2^2)*16+(a3^2)*64;
m31=2*(5*a1)^3+(4*a2)^3+(8*a3)^3;
m41=6*(5*a1)^4+(4*a2)^4+(8*a3)^4;

```



```

x1^m21-(t1-m11)^2=0;
y1-(x1)^.5=0;
t2=20;
@FREE(x2);
m12=a1^10+a2^2+a3^20;
m22=(10*a1)^2+(2*a2)^2+(20*a3)^2;
m32=2*(10*a1)^3+(2*a2)^3+(20*a3)^3;
m42=6*(10*a1)^4+(2*a2)^4+(20*a3)^4;
x2^m22-(t2-m12)^2=0;
y2-(x2)^.5=0;
% -----ED-----;
!(@exp(-k11*t1)*k21^k31*(k31-k21)-@exp(-k21*t1)*k11^k31*(k31-k11)+
@exp(-k31*t1)*k11*k21*(k21-k11))/
((k21-k11)*(k31-k11)*(k31-k21));=0.05;
!k11-1/(a1^5)=0;
!k21-1/(a2^4)=0;
!k31-1/(a3^8)=0;
!(@exp(-k12*t2)*k22^k32*(k32-k22)-@exp(-k22*t2)*k12^k32*(k32-k12)+
@exp(-k32*t2)*k12*k22*(k22-k12))/((k22-k12)*(k32-k12)*(k32-k22))
;=0.10;
!k12-1/(a1^10)=0;
!k22-1/(a2^2)=0;
!k32-1/(a3^20)=0;
%!-----NA-----;
!t1-m11>=1.64485362695147*m21^.5;
!t2-m12>=1.2815515655446*m22^.5;
!-----FE-----;
!@PSN(y1)+@EXP(-x1/2)*m31*(1-x1)/(((2*pi)^.5)^6*m21^1.5)>=0.95;
!@PSN(y2)+@EXP(-x2/2)*m32*(1-x2)/(((2*pi)^.5)^6*m22^1.5)>=0.90;
!-----SE-----;
@PSN(y1)+(m31*(1-x1)/(6*m21^1.5)-(m41)*(y1^3-3*y1)/(24*m21^2)
-m31^2*(y1^5-10*y1^3+15*y1)/(72*m21^3))*@EXP(-x1/2)/(2*pi)^.5>=0.95;
@PSN(y2)+(m32*(1-x2)/(6*m22^1.5)-(m42)*(y2^3-3*y2)/(24*m22^2)
-m32^2*(y2^5-10*y2^3+15*y2)/(72*m22^3))*@EXP(-x2/2)/(2*pi)^.5>=0.90;

```

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Chapter 2

Erçetin and Açıkalmın's New Women Leadership Model: Development and Training



Şefika Şule Erçetin and Şuay Nilhan Açıkalmın

Abstract Given the intrinsic nature of leadership and the challenges thereto, it becomes pertinent to have all stakeholders on board; and that includes women. However, to expect women to partake within the conventional leadership terrain is to make their leadership life rather complex. This is because the conventional leadership system is so manly, aggressive, and rough generally with little consideration of diversities and realities abound. The law of the jungle applies as survival is for the fittest only. It thus becomes imperative to develop a leadership model suited to a woman in order to aid women in leadership. Such a leadership model, however, cannot rise out of the blue. It goes through an organized and effective educational/training process both at the grassroot in communities and lower educational levels. This formed the basis of this paper: indeed, the need to propose an educational or training programme to develop a leadership model premised on women values and etiquettes. The proposed model brings out the key aspects of leadership, presents the conventional setting, and engages an infusion of women's perspective to each in order to garner an ideal conceptual view of women leadership. This is not only critical but a sacred point of departure in the process of leadership transformation.

2.1 Introduction

Indispensability of leadership with social transformation, economic prosperity, and political growth is never in doubt; indeed, nothing takes place within a leadership vacuum. That is why leadership is a major powerhouse in delivering societies or

Ş. Ş. Erçetin (✉)
Hacettepe University, Ankara, Turkey

Lancaster University, Lancaster, UK
e-mail: sefikasule@gmail.com

Ş. N. Açıkalmın
International Relations Department Middle East Technical University, Ankara, Turkey

Lancaster University, Lancaster, UK
e-mail: suaynilhan@gmail.com

communities to sustainable development which often times proves elusive. Leadership makes sure that citizens are empowered and tailor-made to suit global challenges, complex world in tandem with societies' social contexts.

Nevertheless, challenges to leadership are insurmountable. In fact, according to Fajardo (2014), there are two reasons and these are acceptance of a leader on the part of employees and being able to stay competitive in leadership structures and/or power corridors. There is also an acute failure on the part of all stakeholders to understand what leadership is at first. Sometimes leadership is mistaken quite erroneously with management and political systems.

Failure to deliver tranquillity has been the toast of contemporary leadership systems because they cannot "sufficiently address the needs of complex environments". Accordingly, therefore, the search for effectiveness takes shape. In this search, however, what is crystal clear is that a "shift from the industrial age to knowledge place" is long overdue in leadership. Meanwhile, an overhaul of leadership systems can also better serve efforts of transforming leadership potential within various communities.

The gender dimension, thus, comes into play. Women have been lauded as better leaders in various exegeses. According to Bisaso (2016), this is "interwoven with a woman's character itself born of patience, a sense of appeal, proper handling of people, empathy, belief to one's self, respect of procedure, orderliness, touch of beauty, supportiveness as well as resilience and dedication as a result of marginalization that has engulfed women for ages" (p. 238). The presence of women, indeed, has and continues to play an increasingly important role in the growth and development process and shaping major trends for a strategic and ideal future change.

Claim is that the styles they apply are more realistic compared to those of men, but this is still largely clouded in mystery, a mystery that is painstakingly being engaged by studies seeking to establish the most ideal gender for leadership. Such studies have shown the gender diversity in the realm of leadership. Eagly and Carli (2007) argue that the differences must be done with perception.

Some are in favour of women leaders, for example, Levy (2010) who contends that women leaders adopt more "leadership participative styles and are more transformational leaders" than men who adopt more "directive and transactional" leadership styles. Erçetin (1997) is of the view that women need slight motivation to do well as leaders compared to men. Fjaerli (2015) claims that male leaders need more leadership attributes and skills in order to be considered successful and outstanding compared to female leaders. Forsyth (2010) argues that women tend to connect more with their group members. This, according to the author, is by exhibiting behaviours such as smiling, maintaining eye contact, and being more diplomatic with their comments. Kim and Shim (2003) meanwhile believe that in a similar organizational setting, female leaders tend to adopt a "distinct leadership style from male leaders". Cliff (2005), thus, said that a leader's sex plays an important role in the "organizational design and management".

Nevertheless, a host of studies point to male leaders as being better than female leaders (Cueto 2015); yet others seem to sit on the fence and maintain that this leadership potential is realistically circumstantial with men doing better in certain circumstances as opposed to women and the vice versa. In this realm, Conner (2014) posits that “top leaders have critical strength in strategic perspective and vision whether woman or man”. Andersen and Hansson (2011) contend that there are some differences in styles of decision-making based on gender but none were great enough to be considered significant”. Van Engen et al. (2001) stated no commendable or significant gender differences are worth mentioning in leadership. However, differences have been claimed in the leadership traits of male and female leaders. The following table shows the various leadership traits of female and male leaders (Table 2.1).

Accordingly, women have been found to have clear and impeccable leadership styles or traits worth mention. Despite the claims, women still nurse a variety of drawbacks to women leadership. Some are from their nature as women such as women choices, gender roles, and delivery challenges, while others are from technical angles like lack of proper networking among women, inflexible workplaces, and gender imbalances in career development. Sometimes this could also be spelt by attitudinal dispositions on either side.

While some are farfetched, premised on criticism, and bordering on perception as well as obtaining within gender subjectivity, stereotypes, in-group favouritism, and old paradigms still prevail in some circles.

According to the OECD (2013), persistent challenges abound: “unequal representation of women in high level jobs, difficulty of reconciling family and working life is a continuous Achilles heel, and a persistent gender wage gap”. Women may thus continue to be present in tertiary level education, despite the room for improvement if nothing commendable and tangible is done.

That is why a women leadership model that addresses all incongruities abound is long overdue. The model in question should be able to infuse the ever-present questions in the following ways:

- Managing cultural issues
- Addressing gender perspectives
- Managing religious issues
- Addressing racial discrepancies

Table 2.1 Female and male leadership traits

Female leadership traits	Male leadership traits
Transformational	Transactional
Prefer flat organizational structures	Prefer hierarchical structure
Promote cooperation and collaboration	Focus on performance
Indirect communication	Direct communication
Mentoring and training others	Like to create competition

Adapted from Krinzman (2015)

2.1.1 *So Why a Women Leadership Model?*

Women leadership has to be definite, that is, it has to command a fitting profile. Erçetin and Bisaso (2016, 140) call it “women leadership profile” that fits within an ideal “gender sensitive paradigm”. This can then insulate women against gender stereotypes abound. The final result may be a challenge dished out to men to rise to the occasion.

Justification of this is imbedded within a number of critical reasons: recognition of women in each country as an essential human resource, a strong commitment to equip women with managerial skills necessary to range and empower them in their decision-making role, and institution of women leadership model suited to the needs of social development across all spheres (Banerjee 2011; Calvo 2013). Also, women are always criticized for being manly, aggressive, and/or rough. They thus tend to feel out of place as a result. Equally, mothers train men to become what they are, and this dully shows that women have the power and natural ability to oversee the growth of systems effectively. If they can take care of men as young ones, why not take care of society?

There is no doubt that women command an array of values that can promote and realize social justice quite effortlessly. This being the most challenging aspect of society today means that women leaders are indeed long overdue. However, this should be in the realm of their own leadership model not just what is happening. This calls for an exclusive women leadership model. The figure below shows the proposed model for women leadership (Fig. 2.1).

The model shows that women are simply great when it comes to exhibiting the required competence and skills to deliver an effective leadership package. Those offered by Erçetin (2016) are the following:

- Consciousness as well as taking action spontaneously.
- Connectivity and social networking during complex times.
- Evolving and coevolving conditions in situations of management.
- Adaptation skills especially in chaotic situations.
- Self-organization skills depend on needs and circumstances.
- An emergent strategy with forecasting skills and adjustment skills.
- A deliberate strategy with planning skills and learning ability of leaders.
- Dynamism skills which supports evolutionary dynamics (p. 265).

For this to be possible, however, education and training have to be engaged. Also, the available knowledge or experience is not enough in applying newer leadership models in practice. There is no gain saying, therefore, that it will not only take continued education but also leadership development which is tailor-made to suit the peculiar “characteristics of women”, to hasten the rise of female leaders and close the disparity gap. This is an effort that education should consider worth making on every front, moreover, urgently for that matter.

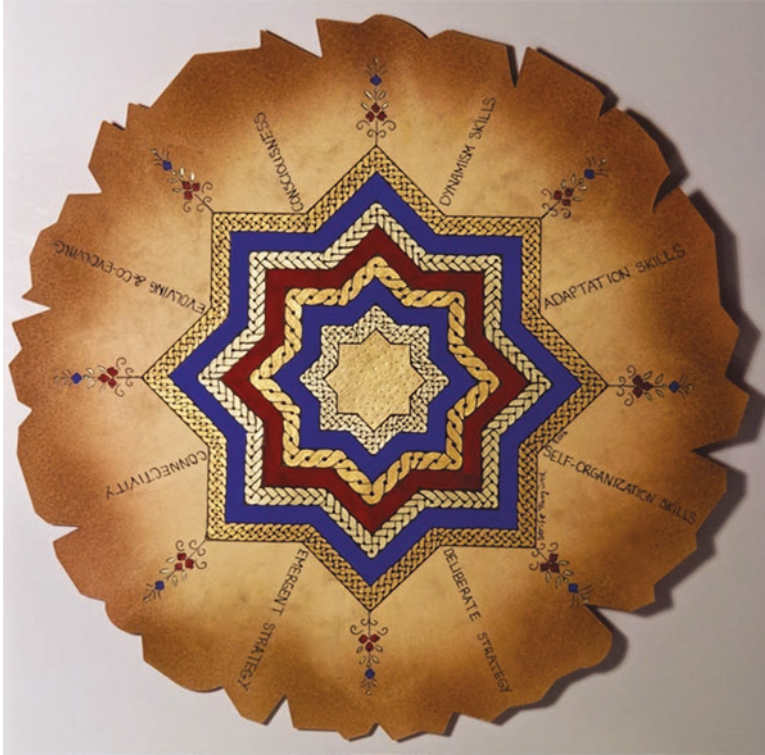


Fig. 2.1 Proposed model for women leadership. Idea developed by Şefika Şule Erçetin and Şuay Nilhan Açıkalin based on readings. Designed by Artist of Ottoman Tezhip; Şerife Tangürek (Sources: Erçetin 2016: 264)

2.2 Educational/Training Programme for Women Leadership Development

According to Tyler (1949), for any educational or training programme to be effectively executed, aims and objectives, content, methods, and evaluation should be thought about in earnest. Meanwhile Skilbeck (1979) adds learning experiences.

The aims or goals to achieve are reflected within the rationale for such a leadership model. The question is why teach leadership to women? The answer to such a question is premised on the following assumptions based on views adapted from the British Council (2015) as well as Chakrabarti (2014):

- Developing leadership skills among women now and for the future
- Preparing women to take up leadership roles in the school and community
- Preparing women for all forms of tasks in the workforce
- Promoting good citizenship among all gender mainstreams

- Increased knowledge and understanding about the concept of leadership on the part of women and girls
- Enhancing leadership skills among women and girls
- Fostering enabling environments for gender sensitivity and leadership of women
- To promote the capacity for women's advocacy and involvement
- Building capacity to train and mentor women leaders
- To create women leaders' sustainable networks to provide a leadership chain

The leadership content to be exposed to learners is of paramount significance. The content must be tailor-made to suit a "woman perspective" while also bringing on board the conventional approaches to leadership. The conventional leadership aspects or ideas can be viewed from a number of authors such as Bisaso (2016), British Council (2015), Care (n.d.), Chakrabarti (2014), DuBrin (2013), Erçetin and Bisaso (2016), ILO (2005), Kouzes and Posner (2006a, b), and the Technology Student Association (2012). These conventional leadership aspects include:

- Leadership competencies
- Leadership skills
- Leadership values
- Leadership qualities and attributes
- Leadership commitment
- Leadership styles
- Leadership elements and processes
- Leadership advocacy and lobbying
- Leadership participation and inclusiveness
- Universal set of leadership standards
- Accountability and political leadership
- Inspirational leadership practices
- Emotional intelligence

Conversely, women leaders should know what entails the leadership system or terrain while infusing a female character and identity within in order to make it look different. Such a perspective would render the women leaders more successful than their male counterparts as they would command both the conventional leadership potential and a female ingredient to the leadership. The following table is a summary of the kind of leadership-related content worthy of exposure to prospective women leaders during training (Table 2.2).

These abilities are more prevailing in female leaders. The proposed model can also usher in the empowerment of women which may be reflected within the following aspects and effectively deal with complexity in leadership organizations (Bisaso 2016):

- Involvement in decision-making processes
- Deal with administrative roles or tasks
- Advocacy skills
- Representation of women in critical academic majors

Table 2.2 Content of the women leadership model and educational and training programme

Leadership aspect	Key elements	Teaching method
Consciousness	Self-awareness	Introspection
	Knowing the situation around	Observation
	Emotional intelligence	Self-reflection
Connectivity	Understanding social media	Social interaction
	Social network abilities	Discussion
	Effective communication flow	Group assignments or exercises
		Worksheets
Interviews		
Evolving and coevolving conditions	Relationships and interaction	Experimentation
	Trace of origins	Exemplification
	Distributed behaviour	Worksheet
		Mimicry and camouflage
Adaptation skills	Adaptation to change	Experiential learning
	Adaptation to people	Real play exercises
	Adaptation to systems and processes	Creativity and problem solving
	Building upon foundations	Comedy improvisation
	Emotional competence	
Self-organizing skills	Individual self-organization	Demonstration
	Group self-organization	Learning activity
	System self-organization	Self-learning
	Specified roles	Collaborative learning
Emergent strategy	Planning orientation	Experimentation
	Basic and structural dynamics	Self-correcting
	Responses to unexpected opportunities and problems	Self-reflection
	Strategic choice	Discovery
	Strategy analysis	Design thinking
	Strategy implementation	
	Impact on other systems	
Future implications		
Deliberate strategy	Planning orientation	Experimentation
	Basic and structural dynamics	Self-correcting
	Process of negotiation, bargaining, and compromise	Self-reflection
	Choice, analysis, and implementation of strategy	Discovery
	Pattern of strategy development	Design thinking
	Impact on other systems	
	Future implications	
Dynamism skills	Dynamic skills development	Interpersonal communication
	Individual skills	Discovery experimentation
	Group skills	
	Skills management techniques	

- Advocating for equal pay at workplaces
- Encountering gender stereotypes
- Harnessing discrimination and turning it into a potential
- Realizing the power within
- Gaining appropriate legitimacy
- Belief in the power of change

There is no way such content and empowerment can be realized without undergoing instructional pedagogy. The teaching and learning methods applied to any teaching or training programme play a crucial role in determining the direction thereto. Focus attention on creating learning partnerships for the training programme to be effective. For the programme being proposed, the other teaching and learning techniques viable are the following: self-evaluation or self-reflection (based on leadership qualities), role-modelling activity, self-discovery (minds across), ranking tasks (for leadership skills), discussion and review, writing activity, teamwork/collaboration, leadership interview activity, brainstorming, monitoring and steering, group exercises, focus group discussions, buzz groups, plenary sessions and presentations, role play and demonstration (modelling), and workshops.

The teaching and learning resources to be encountered are critical to the success of the programme at play. Accordingly, the teaching and learning resources in this case may reflect:

- Handouts
- Training manuals
- Worksheets
- Supplies
- Stationery materials
- The environment itself
- People

The evaluation or assessment of the teaching and learning process should be well designed if the programme is to register any form of success. In tandem with this view, evaluation and assessment may feature the following aspects:

- Peer evaluation
- Scales
- Interview
- Performance appraisal

Rogan and Grayson (2003), however, posit that any programme being implemented must possess answers to issues of implementation and should seek support from outside agencies to avoid a plausible breakdown at a later stage. The profile of implementation will have to be well thought out and crafted if success is to be achieved. The training ought to be at all levels of education especially high school through to universities as well as local community settings. Here adaptation efforts have to be carefully drawn. This would make women leadership a major feature in every community, institution, and individual.

The support from outside agencies may feature existing political leaders at all levels of the political spectrum, non-governmental organizations, women groups, individual players, and educational institutions.

2.3 Conclusion

While it is true that women are at present being involved in leadership systems at different levels, it is also imperative to note that they are serving within a more male-laden leadership dispensation. They either have to compromise on their attributes as women in order to survive or risk being seen as incompetent. The necessary point of departure here is developing a women leadership model to guide women through the leadership terrain. This will create the capacity to support innovation and transform the leadership terrain premised on the gender-based competition ushered in. The proposed model can without doubt transform leadership for the better, through a system of checks and balances. Women can be taught or trained in leadership aspects at all levels, times, and places. Most crucially, this can start at an early age or stage in their lives. This is why an educational or training programme has been proposed in this paper.

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Chapter 3

The Influence of Leadership Awareness of Future Teachers on the Development of Their Managerial Competencies



Kadisha Kadyrovna Shalgynbayeva and Alimbekova Anar Aimoldanovna

Abstract This study examines the influence of leadership awareness of future teachers as a condition for development of their managerial competencies. It describes the concept of “leadership”; it also determines the importance of leadership awareness on the part of future teachers in the development of management competencies. The theoretical and methodological foundations of the research are systemic, student-centered, and competence-based approaches. In the study the notion of “management” is regarded as a subject of philosophical, psychological, and pedagogical analysis. It highlights the distinctive features of management of the educational process and the requirements for effective management. The concept of “managerial competence of the teacher” and its main components are introduced. The stages of development of leadership within students are equally presented.

3.1 Introduction

Today, there are new requirements for the professional educators. The modern school is undergoing changes, so the teacher should possess knowledge and qualities that would enable him or her to effectively manage the pedagogical process which would in turn provide conditions for maximum internal capacity development of personality, as well as effective socialization of students. Development of management competence of a teacher is important because a teacher with strong management skills is able to provide quick adaptation of the organization to a rapidly changing environment for effective management of the pedagogical process.

K. K. Shalgynbayeva (✉) · A. A. Aimoldanovna (✉)
Eurasia National University named after Gumilev L.N., Astana, Republic of Kazakhstan
e-mail: santik@mail.ru; alimbekova_66@mail.ru

3.2 The Teacher as a Manager of the Educational Process

The modern teacher is a manager of the educational process. The traditional positioning of the teacher as a simple source of knowledge has become extinct in the modern stage of education development. The teacher is a manager, who builds relationships with people, makes contacts, and establishes effective interactions with the child to manage his development. From this perspective, the teacher is a professional leader.

Leader is the member who recognizes the right to make responsible decisions in important situations, i.e., is the most respected person actually plays a central role in organizing joint activities and regulates the relationships within the group. “A leader is a person who is able to lead people, to awaken interest in a case and to organize its implementation” (Vulfov 1991).

Leadership is the social–psychological process in which one member of a group, community, or society (the leader) organizes and directs others to achieve a specific common goal (Nemov 2001).

According to Parygin (1971), “leadership is the process of managing the small social group that affect the achievement of common goals in optimum time and with optimum effect, deterministic dominant social relations.”

Zherebova (1973) presents leadership as “a process of interaction: the leader affects the guided and back, but the level of influence of the leader and subordinate is different.”

Soloveva (2008) in the textbook *Psychology of Leadership* proposes a consideration of leadership not only as the art of management and how the phenomenon of intragroup differentiation is achieved, but also as a personal quality, providing a person with the possibility of a high level of development, the achievement of life and career growth, as well as personal success.

The essence of the concept of leadership in management studies is the management of interaction (in this case between the leader and followers), based on the most effective situation as well as the combination of different sources of power aimed at encouraging people to achieve common goals (Kudryashova 1996).

When the organization envisions the future and possible probabilities, it will challenge change and uncertainty and will make chaos an opportunity to success (Erçetin and Kayman 2014). According to Erçetin (2000), a leader should be able to:

1. Accept the problems emerging during the change or challenge as normal and natural
2. Find different solutions to different problems
3. Motivate the school members to create new ideas and behaviors
4. Develop an atmosphere containing innovative and creative thoughts and actions
5. Take risks for the organizational objective(s)

The coincidence of the sense of activity, purpose of teacher and leader should imprint on professional–personal formation of a future teacher, educator, or head of an educational institution.

However, the professional training of students within a pedagogical university does not involve focusing on and developing their leadership. The possibility to realize themselves as a leader of the younger generation appears during pedagogical practices, as well as with the help of the role of chairman in various youth associations. This fragmented experience leaves a strong emotional trace in the memory and has a determining influence on professional and personal development of future teachers.

The degree of awareness of their own leadership and the need for its further expansion are key to the development of managerial competencies of the teacher.

Initially, in the mid-1950s of the twentieth century, cybernetics were claimed to be the role of the science of management, thanks to the fundamental works of Norbert Wiener and his associates (Wiener 1961). Management in cybernetics is such an influence on the object (process) that is selected from a plurality of possible impacts taking into account its purpose, the state of the object (process), and its characteristics which leads to the improvement of the functioning or development of the object. The idea of management allows you to select any process which has at least two components:

1. The activity object to implement the goals in accordance with a predetermined rule (program)
2. The activities of a dedicated body—the subject of management to ensure monitoring and adjustment of these processes

In the future, the prevailing scientific term is “management,” denoting a government in the quality of certain actions of the subject-manager, and theoretical reflection of this reality—the science of management.

3.3 Management as a Subject of Philosophical Analysis

Management as a subject of philosophical analysis, according to Mirzoyan (2010), represents the set of specific effects of the subject of management on the managed object. The science of management is a theoretical-practical reflection of meaningful regulation of the relationship of subject and object. Management philosophy claims to be a synthesis, conceptual-semantic analysis of the theoretical and methodological problems of management, to clarify methodological starting with the concepts of management and evolution of the major paradigms and formulate behavioral and ethical code effective functioning of the organization. Underestimation of the role of philosophy gets a specific scientific theoretical quest in a methodological impasse. The term “the philosophy of the organization or management philosophy” is a set of organizational principles, moral and administrative rules and regulations, staff relations, system of values and beliefs perceived by the whole staff and it subordinates also the global objectives of the organization. It, in compliance with the relevant philosophy, ensures the success

and well-being in the relationship of staff and results into an effective development of the organization. Violation of the philosophical tenets of the organization leads to conflicts between management and employees, reduces the effectiveness of the organization's functioning, its image, and may lead to bankruptcy, because the staff is its main asset (Mirzoyan 2010:1).

In psychology of personnel management, the focus is on management whose main goal is to increase productivity by creating favorable conditions for staff (GFD 2004:559).

3.4 Management as a Subject of Pedagogical Analysis

Introduction to pedagogy of the concept of governance has in many ways changed the understanding of the content of teacher's activity and methods of its implementation. According to Stolyarenko (2003), pedagogical act is a managerial activity. The author notes that related to the educational process management is the systematic impact of a teacher on a team of students and individual student to achieve the specified learning outcomes. To control is not to suppress, not to impose the process of a move which is contrary to the nature of the student, but on the contrary, it is to take into account the nature of the process, and to coordinate every action of the process with logic.

The distinctive features of management of the educational process are:

- Conscious and systematic influence, which is always preferable to natural regulation
- The presence of causal relationships between the management subsystem (teacher) and the object (student)
- Dynamism or the ability of the managed subsystem to move from one qualitative state to another
- Reliability, i.e., the ability of control systems to perform specified functions under certain process conditions
- Sustainability—the ability of the system to keep moving along the trajectory, to support the planned mode of operation, despite the various internal and external perturbations

The management process is both cyclical and continuous, creating simultaneous and sequential execution of many control cycles. Management cycle begins with setting goals and identifying objectives and ends with their decision, as well as achievement of a goal. Upon reaching some goal, there is a new management style needed and the cycle repeats itself. Goal - action-result - new target—this is a schematic picture of the continuous management process. It is applicable to scientific and educational processes.

Effective management of the learning process is possible if certain requirements are in force (Bulanova-Toporkova 2002:80–81):

1. Formulating learning objectives
2. The establishment of the initial level (condition) of the managed process
3. Development of the program of action, identifying the main transition states of the learning process
4. Obtaining information on the state of the learning process (feedback) by using specific parameters
5. Processing of information received on the feedback channel, the development and introduction of corrective actions in the educational process

Talyzina (1957) focuses on the distinctiveness of learning as a system of governance and notes that a managed learning process, assimilation, is always specific to a person. The complexity and variety of personal factors is so great that in the preparation of the core curriculum, they cannot always be taken into account. When mass education is the main program, at best it can only be adapted to some typical system features to a particular group of students. In the process of training a specific group of students, some additional features can be found, and these will allow them to quickly reach a goal. In the process of management learning, the teacher needs to establish whether the students learned to summarize and compare the facts, to draw conclusions, to critically analyze the information obtained, to know how they learn the textbook material, and to check if they engage time for assimilation, and so on. To implement effective learning, a theory is required, which treats learning as the formation of cognitive activity of students, having a system independent of the characteristics of this activity and knowledge of the main stages of its formation as the transition from plan experience to public plan experience of an individual (Bulanova-Toporkova 2002:82–83).

The theoretical and methodological basis of our research is systematic, student-centered, and competence-based approaches. The use of these approaches in solving the problem of formation of managerial competence of students allows for a consideration of pedagogical activity as a whole system, to organize the learning process as a unit of the management activities of the teacher and student learning activities, to create a model for the formation of managerial competence of students, and to identify its structure. The competence approach puts professional activities from the intuitive level to the reflective level. This means that the effective management of the educational process does not depend on the exceptional abilities of a small number of talented individuals, and the level of training of each specialist as a manager at his workplace and, therefore, can be mass.

Under the aspect of competency, the combination of those social features that man possesses in the implementation of socially significant rights and obligations of a member of the society, social group, as a collective are found. From this perspective, competence can be defined as the totality of what a person has, and the competence—the totality of what he owns.

From the administrative competence of pedagogues what we understand is an integrative set of professional and personal abilities as well as operational-technological characteristics of management skills that ensure management decisions.

Thus, the main components of managerial competence, as explored by Khrapova (2009:5), are:

1. Cognitive component—knowledge about management as the leading activity of the teacher-professional; pedagogical management; the manner and forms of professional self-development, synthesis and transfer of experience and self-presentation.
2. Operationally-technological—the ability to perform material resources; the ability to design goals for the student and for the teacher in the management language; the ability to plan the learning process from the ultimate goal; the ability to organize, conduct, and analyze; the ability to continue professional development; the ability of analysis and synthesis of own experience through articles and speeches; and the ability to choose the direction and forms of activities for professional growth.
3. Personal, positional-value is the integral formation of professionally significant personal qualities: professional-pedagogical orientation, professional motivation, professional value orientation, and teaching abilities.

As shown by the study of pedagogical practices, the majority of young teachers believe that the implementation of managerial functions is extremely imperfect, they experience difficulties in communicating with children, do not know how to form a team, have tendency to possess a focus on getting the end result, creating an attractive educational environment, use the explanation of student behavior that leads to a loss of interest in learning in a significant proportion of the younger generation instead of their own dissatisfaction.

The survey of graduate students of the Institute of Psychology and Pedagogy of the Kazakh National Pedagogical University named after Abai confirmed that 11 % are familiar with the basic ideas of management only at the level of fragmentary views, 25 % are not given special values management, and 64 % understand the significance of managerial competence for the teacher and, however, do not possess this competency. You can thus rightly say that management as a professional competence is not perceived by the future teachers as a resource for improvement of the educational process and as a “tool” for development of the personality of the teacher.

All of the above lead to the conclusion that the leadership of the students contributes to the effective development of managerial competence of future teachers. First of all, leadership is a reflection of certain features that someone needs in order to fulfill the requests of the group.

According to John Maxwell (2013), “Our position becomes our ally in life in general and leadership in particular. A correct position by itself may not make you a great leader, but without it one never realizes their potential to the fullest. This is the very” and in addition “that gives us a head start compared to the people thinking negatively. Leadership is about influence. People catch our attitudes like a runny nose, when they are in contact with us. I never think about the responsibility of a leader. For me it is very

important to always have a correct position: it is necessary not only for my personal success, but for the benefit of others. I have to look at leadership not only with our eyes but through the eyes of other people” (Maxwell 2013).

3.5 Leadership Development

Chaos is a source of life and also a reality for organizations and people as living and self-organizing systems (Erçetin et al. 2014) and also for leadership and management. Theoretical and practical works on leadership and management have discussed the topic in terms of chaos and order; and these two concepts of leadership and management are mutually interrelated and can transform into one another (Erçetin et al. 2013). If principals cannot manage crisis situations and chaos in work environment, that organization should not function (Erçetin and Kayman 2014) so the teachers as the leaders of their classrooms and also principals should develop their capabilities and qualities as educators in line with the developing world if not they cannot adapt to the new generation. There are several stages of leadership development:

The first stage of development is a leadership position which requires that future teachers develop skills of self-regulation. They must learn to manage themselves, their own internal state, and their external expression. The teacher-leader is required to learn the basics of time management and the culture of self-organization. The most important acquisition at this stage should be the ability to motivate yourself to work and willingness to make self-improvement.

At the second stage, the teacher learns to position himself or herself as a leader leading in any situation of interpersonal interaction. Space leadership behavior becomes intragroup communication, in which the teacher begins to take the initiative in their hands. The development of skills of self-presentation, techniques, and ways to influence partners to respond effectively to the teaching task is essential. At this stage, the teacher-leader must be able to encourage moving forward with the implementation of socially significant tasks of individual members of a group of children.

The third stage expands the space of leadership behavior of the teacher to the scale of the teaching staff, to practice indirect, consequential control of children’s choir. The teacher/leader acts as captain, is able to form his own team of like-minded people and to coordinate their actions to achieve common goals. In addition to new knowledge in the field of social psychology and psychology of management, the teacher must have an understanding of such categories as social responsibility and emotional intelligence. This level of leadership involves a developed ability to understand own emotions and emotions of others and manage them. The development of social-perceptual abilities of the teacher is connected with the actualization of social sensitivity, i.e., the ability to intuitively assess the overall group expectations in different situations.

All these allow the professional to withdraw from the direct presentation of pedagogical requirements for children’s groups. The support of social initiatives of the

asset students and the technique of parallel steps in the development of command relationships are the tools of leadership behavior at this stage. These same mechanisms allow for forming a team of associates in the teaching staff.

The fourth stage of the evolution of leadership is linked to the practice management system teams, school team, or the whole educational community (e.g., community inhabitants of one village). The proliferation of personal influence on the masses of people is provided by the active civil position of a teacher in the socio-cultural and sociopolitical life of the country.

John Maxwell in the scientific work of “Raise a leader” offers his own method of change leadership, which consists of six stages in change leadership (Maxwell 2013):

1. You will identify problem feelings. This is the first and the easiest stage to perform.
2. Identify the problematic behavior; now you start to go deeper inside yourself. What causes problematic feelings? Record your actions that generate problematic feelings.
3. Identify problematic thinking. Psychologist William James said, “That thing which holds our attention determines our actions.”
4. Identify the right mindset on a sheet of paper; write down what thinking is correct. As you want to think, remember that our feelings come from our thoughts, so we can control the feelings by changing thoughts.
5. In the presence of other people start to plan on how to manage the intention to think positively. The intention, stated aloud in the presence of others, becomes the intention.
6. Create a transition plan to positive thinking.

Accordingly, your plan should include:

- Recorded definition of right thinking
- A way of measuring progress
- Daily measurement of progress

3.6 Conclusion

Thus, the presented status quo of the leadership position of the teacher reveals the process of expanding space in his or her professional and personal influence on others, as well as the increase of social importance of his or her educational activities. Transition to a new stage of leadership behavior is due to conscious efforts of the teacher to develop their professional competencies. Perverted and narrow views of entities on the part of the teacher lead to negative phenomena in the educational process and affect the transformation of the personality structure of the teacher-leader.

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Chapter 4

Erçetin's Plasma Leadership Model in the Context of Education and School Administration



**Bilge Burçin Karaca, Ayşe Aygin Silsüpür, Nalan Sıdıka Alyamaç,
Dilber Gizem Serter, and Ernur Serter**

Abstract Leadership remains the fountain of educational institutions and the education system. There is no way one can discuss education and educational institutions without a leadership vacuum. Leadership has, thus, attracted researchers at all times seeking to establish the most ideal leadership style or approach. Nevertheless, research continues to stall in lieu of situational issues influencing leadership. That explains why studies on leadership have gone beyond being ordinary to feature applicability of hitherto external aspects to the concept of leadership. One of such attempts led to the concretization of plasma leadership through a model developed by Erçetin (Understanding Recep Tayyip Erdoğan and Turkey with plasma as a metaphor of the fourth state of matter. In Ş.Ş. Erçetin (Ed.), *Chaos, complexity and leadership 2014*, (pp. 1–13). Springer, Switzerland, Ch 1, DOI: 10.1007/978-3-319-18693-1, 2016). This article, therefore, examines Erçetin's plasma leadership model (Erçetin, Understanding Recep Tayyip Erdoğan and Turkey with plasma as a metaphor of the fourth state of matter. In Ş.Ş. Erçetin (Ed.), *Chaos, complexity and leadership 2014*, (pp. 1–13). Springer, Switzerland, Ch 1, DOI: 10.1007/978-3-319-18693-1, 2016) which creates a new theoretical framework in the field of leadership. This is done in the context of school and educational management.

4.1 Introduction

The concept of leadership is defined differently both in the historical and other time periods. In each of these time periods, different interpretations, explanations and debates were made in terms of the development process of leadership, and each

B. B. Karaca (✉) · A. A. Silsüpür · N. S. Alyamaç · D. G. Serter · E. Serter
Hacettepe University, Ankara, Turkey
e-mail: bilge_burcin@hotmail.com; silsupurayse@gmail.com

definition brings about varying perceptions about what should be coined as characteristics of a 'good' leader (Bennett et al. 2003: 9). In the early periods, such discussions did not focus on the characteristics of the leader. Then later, there was focus on both the characteristics as well as behaviours of the leader, and as a result, leadership has been expressed in different definitions throughout the transformation process.

Leadership has been described as a phenomenon that differs according to the situation, especially through the introduction of modern theories aimed at the description of leadership. The paradigmatic changes in leadership as well as the modern approach have been defined by different characteristics all in the direction of the principle of situationality. Today, the need for different definitions of leadership is increasing because of the structure of many different organizations that have a common working purpose or aim and a common working structure. Leaders or managers constantly encounter different problems and have to apply different methods to solve them each time (Demir 2012). Changes in the role of the leader have created new needs for leadership.

When research on leadership is examined, it is understood that leadership is approached based on different academic disciplines. For example, in the field of anthropology, social psychology, human relations/research, sociology, education, political science and business, leadership and its profound characteristics have been explored. Researchers working in these disciplines have offered different leadership approaches by attaching different attributes to their leadership conceptions. Every discipline defines leadership in a different way or it adds a different meaning to leadership (Turan and Bektas 2014, 296). In the studies related to leadership, different aspects of the concept are being investigated with an aim of shedding light on these different aspects.

4.2 The Place of Plasma Leadership in Education

To put plasma leadership into context, it is important to first explore what plasma refers to. Plasma is largely taken to be the 'fourth state of matter'. The three other well-known states are solid, liquid and gas. Plasma in general is 'a cloud of protons, neutrons and electrons where all the electrons have come loose from their respective molecules and atoms, giving the plasma the ability to act as a whole rather than as a bunch of atoms'. Although a plasma is closely related to a gas unlike any of the other states of matter since the atoms thereof are not in constant contact with each other, it should be noted that it behaves quite differently from a gas. It has what scientists prefer to call 'collective behaviour'. Plasma, as a matter of fact, can flow like a liquid, yet at the same time, it can contain some areas that are like 'clumps of atoms sticking together'.

The major purpose of plasma is to act as a transporter of nutrients, hormones and proteins to the various parts of the body depending on need. Accordingly, plasma

helps in the removal of waste from the body and aids the movement of all the elements of blood through the 'circulatory system'.

There is a close relationship between elements of plasma and organizational structures which ultimately informs leadership. If the body were taken to be an organization or system and nutrients, proteins and hormones are considered to be aspects of leadership, then plasma leadership would be concerned with transporting elements of leadership to all the departments or sections of the organization depending on how they are actually needed.

With plasma leadership, therefore, the needs and necessities within the organization determine the flow of leadership functions and focus at all times. This kind of leadership serves the organization the way it seeks to be served and thus creates a level of equating the requirements with a fulfilment in order to improve the efficiency and effectiveness within the organization. Plasma leadership has indeed started making inroads within modern leadership research and studies though still new.

'Plasma leadership' which was initiated by Erçetin (2016) has been very effective thus far. According to Erçetin, what is ideal in leadership within the context of a chaotic environment is to know and develop an appropriate type of leadership to use. Plasma leadership as a new type of leadership, therefore, is detailed in different bases and conditions. For the first time, the reflections of plasma leadership in the study of critical and extraordinary determinations of new horizons that Z branch opens to its teachers have been put into consideration in this study. In the study of Erçetin (2016), plasma is defined as a new leadership profile which is formulated within chaotic conditions in order to deal with those chaotic situations.

As emphasized in the work of Erçetin et al. (2013), the expectations of a plasma leader are in tandem with the following leadership aspects:

- Getting to know the system first
- Discovering the basic elements that effect the system
- Discovering the relationship between those elements periodically affecting the system
- Taking this network into account when taking administrative decisions (Erçetin et al. 2013, 100)

Again, according to Erçetin (2016) the most important aspect is to draw a leadership profile beyond all leadership styles and models. This profile should include the ability to use all types of leadership and models according to the situation multidimensionally. Perhaps most of all, this has triggered the formation of different types of leadership. For this reason, leaders in the management of education should be able to dissolve all differences and contradictions in the same pot so that they can combine all parties within a minimum level of common sense.

While discussing plasma leadership in terms of educational management, different particle types, neutrons and electrons in the plasma should be considered in the context of the fact that people with different types of characters and intelligences in the community live together with different behaviours. Plasma is constantly in

interaction with the structure and creates freedom of movement within a system. In plasma, particles do not behave like the first three states of matter.

This is the case in Erçetin's (2016) study which contends thus: 'In an ordinary matter, the electron tends to bind to an atom. From time to time one is free. But it immediately imitates another nucleus. In plasma, however, no electron is bound to a single nucleus'. In this context, if we set out to argue that plasma leadership reflects on the concept of leadership in education management, the need for new types of leaders who are different from usual leaders becomes clear in such a situation. The strong interaction between the plasma and the electrical and magnetic fields, as stated by Erçetin (2016) in 'plasma leadership', which is equally applicable to the management of education, provides us with an opportunity to look at the concept of leadership from a different point of view. Leaders in educational management should be able to support the developments in the world and try to apply what they see fit.

Another issue that Erçetin pointed out in the work in question is this: *the disintegration, ionisation and restructuring events that are the opposite of these phenomena in plasma are constantly coming to fruition. What is critical here is the necessity of constantly reconstituting the sum of the disassociation and ionisation that takes place in the plasma for constant power combustion of the plasma.* We can say that the only way a person can become a plasma leader in educational management is by establishing a positive relation with the people who work with him in the process. This, of course, requires a common vision and strong faith and commitment to realizing the vision.

Recently, research on the cognitive and affective characteristics of managers in instructional leadership behaviours of school administrators seems to be increasing. However, it is important to note that the concept of instructional leadership does not respond to the school administrators' new expectations. The synergies created by the highly energetic and constantly changing environment of the school environment suggest that school leaders need a shift from instructional leadership to plasma leadership in their basic managerial roles. This change not only alleviates the ambiguity about educational methods and goals but also the design of a school structure to support this change, as well as the change in the technological dimension of education. Indeed, instructional leadership behaviours expected from the school administrator to achieve professionalized teaching are differentiated to meet changing parent and student values.

Plasma leadership style involves constantly renewed freedom of movement and interaction. President Tayyip Erdoğan postulated in his speech thus: 'Turkey is a country where different cultures, different ethnic groups, different sects, different beliefs and cultures have lived together for centuries. These differences are a wealth for us, and these different elements are all essential elements of this country. Within these elements, one cannot have superiority over another person, and no one has a higher priority over another' (Erçetin 2016).

As far as conceptualization of plasma leadership in education is concerned, it is necessary for school administrators to identify the vision for the future, to implement the vision of the future, to instil it into the school staff, to be respectful to the

teachers by dealing with their feelings and needs and to encourage the formation of minds that can increase performance steadily. The values demonstrated by plasma leadership in the development of school cultures can be influential without disrupting organizational structures in the decision-making process and establishing good relationships with a wide community that serves the school without creating an environment of chaos within the established equilibrium.

We consider the differences within the school as a wealth and think that each child will be a leader in the future, and all these different elements as a whole should be aimed at developing the energy that every child possesses. The school manager's plasma leadership quality is to be a leader who is open, vigorous and timeless enough to determine ambiguities, creative and informative enough to share information, transformative enough to capture the rich varieties and diversity within the system as well as being strong and flexible enough to encounter uncertainty (Erçetin 2016). This is because the plasma leader creates an effective structure by providing a high level of identification, creating a clear agenda and constantly improving the school staff.

Today's educational institutions should be educational and training institutions that will influence the emergency of plasma leaders who have the responsibility to initiate change; they should not be a unit that implements the change desired by policymakers. More emphasis should be placed on the views of teachers as a group of experts rather than the opinions of experts in foreign countries and foreign examination bodies. This is because different characteristics of people in each country have features that can support improvement, just like the energy of different particles forming the structure of the same material, as well as being in the form of plasma dissipating the complex subatomic structure by combining heat and energy, revealing simple structures (Erçetin 2016).

Future leadership features such as keeping and controlling different values together, providing individual support, being unaffected by bureaucratic structure, problem-solving and being energetic will be sought from future school administrators. The current protective leadership behaviours will not be effective in the future world. It is very important for school administrators to embrace a change of leadership in today's world where there is a radical change beyond change. In this sense, plasma leadership will open a different door for teachers in school management who train and direct the future of the society in transition. In order for the school administrator to become a plasma leader, this transformation and the needs of the society that are constantly changing must be integrated within the global changes in education using their own change strategies.

The fact that school leaders can effectively manage the other leaders, as well as the teachers and staff who work in the school environment, is not enough; there should be an effort to demonstrate and develop the characteristics of plasma leadership by being interested in the parents and the general school community as a whole. The technology and communication breakthroughs that come into being are responsible for the difficulties of expressing oneself; also economic troubles, together with the energy explosions that each family experiences, will lead to the necessity of different personality traits and needs to emerge in the future and the necessity of

individual education of a person who is a social entity. Keeping all the learners together is going to be even harder to achieve, the leadership features of the school manager will change and each individual will choose his own plasma leader and will complete education and training in light of the leader's guidance.

In plasma leadership, therefore, the task of the leader is to identify the major components of the organization and in this case the school, key stakeholders, structural aspects, input systems, major clients, key relationships and so on and equate them with the ideal leadership tasks and functions to bring out effectiveness. Plasma leadership is, thus, more about affecting leadership functions and duties or responsibilities in accordance with the need and necessity within the organization.

Indeed, for leaders to realize an effective plasma leadership potential and task in the school system, they ought to be abreast with the following:

- The vision and mission of the school
- The key school values
- The feelings of members in the school
- The needs within the school system
- Performance indicators in the school
- Diversity within school cultures
- Stringent organizational structures
- Decision-making processes
- Key relationships within the school
- Resources required in various settings
- The challenges encountered by the school
- Attitudes of the school's key stakeholders
- Defined roles of key stakeholders

Knowing and keeping up to speed with the above can help the plasma leader come up with commensurate decisions, set appropriate processes in motion, determine ideal and situational leadership approaches or styles, allocate compatible tasks to the followers, undertake commensurate reinforcement of staff, develop critical relationships among stakeholders and communicate effectively. This makes plasma leadership both easy and complex at the same time, because it requires a situational conceptualization of the school system and coming up with ideal leadership approaches to game the situation. So, everything in the school system has a critical role to play in influencing the kind of leadership style to be adopted. The plasma leader is thus comfortable with a host of leadership styles and approaches and knows when to adopt which approach or style for effective leadership to be realized. The essence of plasma leadership is to serve leadership the way it is required in the system.

4.3 Conclusion

Plasma leadership is going to be a type of leadership that every sector needs in our times, and given today's situation where structural transformations are going on, we need specific leaders to guide and direct these processes. We can say that all the individuals working in our educational institutions need a different leadership understanding than the conventional educational leadership, especially for a country with big targets and a very high energy prowess like Turkey. This is because, the world is changing and many things we learn lose their validity in a very short time. We can say that reaching the level of 'extraordinary civilizations' pointed out by Great Atatürk will be through a changing world, of course, by adapting to the changing rules of the changing world and we are in a state of total chaos if we look at the present situation of our changing world. To observe the individuals who have different leadership qualities which are viable enough to manage energy and to understand how they are handling the masses, we can explore the article titled 'Understanding Recep Tayyip Erdogan and Turkey with Plasma as a Metaphor of the Fourth State of Matter' which is a brain child of Erçetin.

Nevertheless, developing a plasma leadership model as well as concretization of effective plasma leadership characteristics and attributes requires an education system which is well structured and managed. There is need for proper training of leaders who fit within the plasma leadership dimension. This kind of training or education is not only an urgent necessity but long overdue given changing trends and challenges to the leadership system especially in educational institutions.

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Chapter 5

Contemporary Educational Management Through the String Theory Lens



Şefika Şule Erçetin and Ssali Muhammadi Bisaso

Abstract Educational management is at crossroads; the old management paradigms seem to offer no practical solutions to the ever-changing educational dynamics. Theories once trusted and relied upon for answers to daunting educational questions seem dead and extinct. Managers and indeed leaders of educational institutions are embroiled in a state of quagmire and have to “think outside the box” for appropriate solutions or approaches to the dictates of the times. Tellingly, this implies searching from outside of education’s arsenal. This paper dwells on this, indeed, and explores the applicability of string theory – borrowed from physics to education in general and educational management in particular. It dissects the elements of string theory and draws on their relationship with educational settings. The authors, thus, claim that if educational managers and leaders dig deep into string theory, they are likely to learn, quite extensively and intensively, the necessary techniques of dealing with challenges to education that have since become an Achilles’ heel. String theory, it should be largely claimed, renders educational management a free visa to transformation of the education system as a whole.

5.1 Introduction

Education is inextricably interwoven with chaos and complexity (Erçetin et al. 2015; Kara 2008) which renders it largely unpredictable especially at a time when contemporary paradigms seem unstable and ever changing with varying patterns (Erçetin and Bisaso 2016; Jamali 2004; Sıgır 2010). The said chaos is at all levels

Ş. Ş. Erçetin (✉)
Hacettepe University, Ankara, Turkey

Lancaster University, Lancaster, UK
e-mail: sefikasule@gmail.com

S. M. Bisaso
Islamic University in Uganda, Mbale, Uganda
e-mail: bisasossali@yahoo.com

and indeed, all systems within education with no exception whatsoever. The chaos and complexity, thus, affect all stakeholders in the education system alike.

Education, therefore, has to grapple with daunting questions whose answers seem to elude many, an educator, researchers, and other key stakeholders in the education system alike. The media is full of reference to failing schools (Ornstein and Hankins 2004) as much more teachers contemplate abandoning their careers. But far from these, the key questions in this perspective as fronted by Griffiths and Portelli (2015) are the following: whether childhood has a future or a past, what society expects from schooling, how far the state should interfere in education, why children in school misbehave, how children are taught, why pupils underachieve in education, and whether sex and relationship education should be part of the school curriculum. Some of the issues of contention cited are also fronted by Wiles and Bondi (2007).

Equally, challenges to education have been widespread. The most critical ones according to Luneburg and Ornstein (2012) are the following:

- How outcome-based learning can be achieved in the education system.
- Alternative schooling arrangements (home schooling) and their compatibility with the conventional teaching and learning system.
- Bilingual/bicultural education in the wake of mother tongue interference issues in the education system.
- Educational censorship: what should be retained and what should be thrown out of the current education system.
- Gender and education: redefining gender mainstreaming issues in the education system without gender biases and misconceptions.
- Health education and its place in an education system born of rights on the part of learners (“modern learners”).
- Diversity and multiculturalism in education in the wake of calls for cultural sensitivity on one hand and cultural reproduction on the other.
- Privatization of education and the expected impact or effect on the quality of education at all levels.
- Provision for exceptionalities in education and how these may impact (positively or negatively) on the education system.
- Religion in public education in terms of whether it should be full blown or in parts as well as which form of religious denomination to allow.
- Scheduling of school arrangements (double shift system, multigrade teaching) and their impact on the education system (positive or negative).
- Assessment system: this brings in issues of how to adopt continuous assessment and reflect it in final grades of students; consideration of a partition system for marking students’ examinations in order to do them justice, i.e., rural private, rural government, urban private, urban government, etc; and whether learners can be adopted in school evaluation as a whole.
- Moral education movement in the education system as opposed to rights of learners (sometimes considered to be mature enough).
- Technology in education and how it can be utilized to improve both the process and output system. This may of course carry both positive and negative implications which educational managers should be aware of.

- Politics in education (both direct and indirect). Critical to this is an understanding of the how and when political influence may be felt in the education system and how education has to respond.

Ornstein and Hankins (2004) makes his quest for such trends that are rocking the education system contemporarily by equally posing a number of questions that are critical. Such questions according to Ornstein serve as drop shots or thinking points for revisiting the education system; the quest is in the following realm: whether educators can really reinvent the school and its curriculum; whether students can be engaged in meaningful interactions with adults; why educators should show increased concern for creating curricula that address spirituality, through which conceptual approaches to teaching morals to students ought to be adopted; why moral education is still a challenging issue for educators; why multiculturalism is so central to education and curriculum; what reasons explain the increase in political action regarding decision making in education; and whether there are potential benefits in using more technology in the school curriculum as well as what potential liabilities ought to be thought about in using technology in the school curriculum.

Suffice to say, therefore, education has been brimming with crucial efforts from all stakeholders to come up with a comprehensive approach to dealing with the challenges that engulf the system as well as coming up with appropriate answers that augment the intricate questions thereof. The *Achilles' heel*, though, has been the fact that these questions defy present logic, and there is no gain saying that most, if not all, are largely crowded in mystery. Realistically, therefore, much as the educational problems and challenges are well known and documented, finding the right solutions has not been a bed of roses for many, a contemporary educational manager.

Indeed, for so many years now, education has been witnessing the rise of major efforts to revitalize its quality, efficiency, and effectiveness across the gender, geographical, and leadership divide. Such critical efforts have been seen in programs coming to the fore in the shape of No Child Left Behind (MDE 2003), Education for All (Global Monitoring Report 2012), Educational Reform (Zhao 2009), Education and Technology (Glenn 2008), Education at a Glance (OECD 2008), and much emphasized in Education for Sustainable Development (Nevin 2008; UNESCO 2009). Realistically, none of these programs and initiatives, although they have indeed catapulted education to better heights, has been in position to erode or at least abrogate the glaring challenges and obvious questions that continue to permeate through the enclaves of education at all times.

Accordingly, it became imperative to develop theories that can dissect the challenges in question and offer realistic answers to the ever-prevalent questions posed in education. However, the most daunting prospect is viewed in the fact that the process of developing a theory has been painstakingly taken on to no optimum or realistic avail. Thus, theory development has failed to bail education out of mediocrity especially at a time when old theories have lost providence in the face of contemporary challenges. This has truly left educational managers at crossroads.

In tandem with the above, the only appropriate choice remaining is the adoption of an applicable theory to such an educational conundrum from another field. Such a

theory should possess in its arsenal, that is, the unanswered questions and undealt, with challenges in the education system. Issuing from the foregoing view, key theories have been adopted in explaining educational matters. These reflect quantum theory (Hall 2008), fractal theory (Raye 2012; Shoham et al. 2005), chaos and complexity theory (Trygstad 1997), etc. All these have offered priceless steps toward improvement and transformation of the education system but have equally left a lot to be desired in many, a way. The obvious implication being a missing link in the puzzle is a severe lack of comprehensiveness to grapple with all educational challenges abound.

Of recent, however, one theory has attracted the attention and efforts of educators and researchers alike; it is string theory. The theory has been accorded a number of names along the way. String theory has lots of names that changes over time, and some of the more used names are also string theory's different types. Some versions of string theory have more specific variations, and these different variants are related in complex.

The key names according to Sahoo (2009), Zimmerman and Robbins (2010), and Ibanez and Uranga (Ibáñez and Uranga 2012) are the following:

- Bosonic string theory
- Superstring theory
- Heterotic string theories
- M-theory or matrix theory
- Brane world scenarios or Randall-Sundrum models
- F-theory

Popularized by Heisenberg (1943), string theory has developed through a number of lens and stages to what it is to date. Each stage is influenced by the key developments in knowledge at that particular moment in time. The key steps are the following (Table 5.1):

Table 5.1 Chronological flow of landmark developments in string theory

Year	Key idea
1968	Gabriele Veneziano originally proposes the dual resonance model
1970	String theory is created when physicists interpret Veneziano's model as describing a universe of vibrating strings
1971	Supersymmetry is incorporated, creating superstring theory
1974	String theories are shown to require extra dimensions. An object similar to the graviton is found in superstring theories
1984	The first superstring revolution begins when it's shown that anomalies are absent in superstring theory
1985	Heterotic string theory is developed. Calabi-Yau manifolds are shown to compactify the extra dimensions
1995	Edward Witten proposes M-theory as unification of superstring theories, starting the second superstring revolution. Joe Polchinski shows branes are necessarily included in string theory
1996	String theory is used to analyze black hole thermodynamics, matching earlier predictions from other methods

Adopted from: Zimmerman and Robbins (2010)

The theory attempts to explain intricate issues in both physics and other sciences leaving no stone unturned. This is because we actually live in wonderful complex universe (Huffington Post 2014), and we are curious about the universe. It also seeks to answer the most challenging questions about the universe in a comprehensive manner. Such questions include, but not limited to, why are we here? Where did we and the world come from? It is a privilege to live when enormous progress has been made toward finding answers to such questions (Zimmerman and Robbins 2010). String theory is the most recent attempt to answer the said questions.

With all this, therefore, it is no surprise that in the last few decades, string theory has emerged as the most promising candidate for a comprehensive theory to explain nature patterns. Equally, it is infinitely more ambitious; thus, “it attempts to provide a complete, unified, and consistent description of the fundamental structure of our universe” (Zimmerman and Robbins 2010). It is for this reason that it is sometimes, quite arrogantly probably, referred to as a “theory of everything” although scientist Strominger (1980) prefers calling it “a theory of something.” Nevertheless, it is quite understandable despite the varying perspectives attached to the claim.

Indeed, exegeses that have explored string theory are many and include the following: “the official string theory website; the elegant universe; particle adventure; the science of matter, space, and time; Einstein’s unfinished symphony; strings pictures; quantum gravity; duality; space-time and quantum mechanics; the theory of strings; a detailed introduction, string reviews, string theory, and the unification of forces; the second superstring revolution; black holes, quantum mechanics, and string theory; ITP teachers’ educational forum on string theory: is it the theory of everything?; M-theory which is the theory formerly known as strings; string theory in a nutshell; what is string theory?; superstring theory; as well as M-theory: strings, duality, and branes.”

Given such qualities and background in place, string theory can offer education the ultimate gift of explaining and understanding the prevalent challenges as well as answering some of the questions abound. This is so because like education, the theory prides itself in bringing to the fore, an approach that is both comprehensive and intensive in nature and action. With such credibility, key explanations to the daunting questions and challenges within the education system may be realized. This is not only inevitable but an urgent necessity given that previous attempts have been largely less fruitful.

This paper dwells on exploring the potential of applying string theory to education as a rubric for dealing with the unenchanted questions and challenges marauding the floor, that is, education. This is why it has been referred to as “Education management through the string theory lens” by the authors. The authors feel that when the ideas and dictates of string theory are adopted and applied to education, it becomes easier to conceptualize, sift, and transform the education system as a whole and educational management in particular. This is based on the view that string theory is comprehensive in nature and operation and so is the education system as well as its subsystems.

In keeping with the above claim, therefore, this paper has explored the plausible relationship between string theory and the education system and how the relationship obtains in educational management through a number of dimensions to the following effect:

1. The need for string theory in education
2. What string theory and education attempt to accomplish: the basic features
3. The basic elements of string theory and their relationship with education: reflective of how educational managers can adopt them for practice

The paper examined each of these dimensions by presenting the status quo, setting, or structure of the dimension as protracted by string theory and then engaging an applicability of the same to the education system to inform educational managers as a result. This procedure was maintained throughout the course of the analysis. The key issue was all about seeking an applicability of the theory to education and especially educational management and school administration.

5.2 Relevance of String Theory to Education

This can be viewed from the perspective of what string theory and education attempt to accomplish. To understand this though, an exploration of the basic features of both string theory and education suffices. Many knowledge proponents stake a claim to the effect that the aim of string theory is to be a “theory of everything” (Zimmerman and Robbins 2010), that is, to be the single physical theory that can describe all physical reality at the most critical and fundamental level. This would make it a theory of something for everything (Strominger 1980). String theory could explain many basic questions on the universe as well as systems therein. The relevance of string theory to education, therefore, can be viewed from the following perspective:

5.2.1 *Explaining Matter and Mass*

Explaining matter and mass thus becomes a central theme of string theory. This is exacerbated by the failure of other theories to effectively do so. Put in the realm of education, it is imperative to establish what truly matters in as far as the education system is concerned. This should be a prime concern of every contemporary educational manager. Things that matter in education abound, but the top three things that matter most in education are learning to learn (UNESCO 2012), critical thinking, and subject mastery (Glossary of Educational Reform 2013).

However, other profound things that do matter and thus are portrayed as “mass” in the education system accordingly are the following:

- *Financial literacy* – this is at the top of the list of things that impact learners most in their practical lives (OECD 2012).
- *The three Rs – reading, writing, and arithmetic* (Curtis 1800). Learners need a good foundation in these three, and after that, the sky is their limit. Since this is an age where information is infinite, the concept of learning to learn has always been coined.

- *Relationships and conflict resolution* (Crawford 2013) – life and people make up the education system and since education is maintained by people, for people, and with people. Relationships form the crux and bedrock of educational institutions.
- *Problem-solving* (OECD 2004) – there are two choices as we live life, complain and despair, or finding solutions to inevitable problems.
- *Character education* (Centre for Curriculum Redesign 2015) – diligence, honesty, and integrity are the traits that serve children well, bringing them success in their endeavors.

Educational managers, therefore, ought to make sure that the things that matter in education in general and educational institutions in particular are well served. The success or collapse of the education system depends entirely on how the “mass” of education is dealt with. In relation to string theory, therefore, educational managers ought to make sure that financial management is at its highest best, conflicts well resolved, key educational problems well solved, and character well installed within learners.

5.2.2 *Defining Space and Time*

In the many versions of what is referred to as string theory, the extra dimensions of space are compactified into a minute size, accordingly, and also unobservable to the current technology (Ibáñez and Uranga 2012; NGA 2015; Sahoo 2009; Shing-Tung and Nadis 2010; Zimmerman and Robbins 2010). Owing to this, trying to look at space which is smaller than this compactified size would provide results that do not match a proper understanding of space and time.

Educational space is one of the contemporary issues in the education system. Like string theory, defining educational space is as intriguing as it is challenging. There are new ideas about learning spaces (Edutopia 2014); these represent an opportunity to make “learners and learning more successful.” Furthermore, they can meet the needs and expectations of the most recent generation of students; this is the “Net Generation” (Oblinger and Oblinger 2005). Since learning is the core mission of education, “learning and the space in which it takes place are of the utmost importance.” In order to best serve the educational enterprise, learning spaces must be designed in a way that optimizes the convergence of the “Net Generation, current learning theory, and information technology.”

Learning space should be able to motivate learners and promote learning as an activity, and should be flexible in the face of changing needs ... (JISC 2006)

Educational space finds its abode in learning as a concept. Where learning takes place spells what educational space is. The constructivist theory (Mills and Francis 2006) has interesting implications for learning. The theory implies that learning is best served when it is contextual, active, and social.

Educational managers ought to be aware that both defining and designing an educational space can be a daunting proposition (JISC 2006). The concept of appropriate learning space becomes a central theme in education systems. Without effective learning space, the joy of learning is lost and students' completion rates go down. However, institutions under the auspices of educational managers can create learning or educational spaces that will “transform their ability to teach current and future students” by taking the following steps:

- Identifying the organizational context in which learning is to take place
- Specifying key learning principles applicable to that context
- Defining learning activities in tandem with the principles
- Establishing and developing explicitly articulated design principles
- Determining a standard success evaluation methodology (JISC 2006)

Generally, therefore, while string theory seeks to define space and time as a way of understanding the universe and hence to answer critical questions of life, educational management should seek to define what educational and learning space is viable to education within the contemporary settings. This is a central theme on the agenda of every educational manager indeed. Learning spaces should be designed to activate the wonder and innovation within the community and school (Ruppert 2010). The school should reinforce the notion that students must feel safe and secure in order to reach their full potential for creation and productivity.

5.3 The Basic Elements of String Theory and Their Relationship with Education: Lessons for Educational Management

There are five main ideas of string theory. Becoming familiar with these key elements of string theory is indispensable with contemporary researchers. Imperative to point out is the fact that the same ideas are applicable to education and can indeed be utilized by educational managers to transform the education system. They can thus effectively be labeled as “go to places” on the part of educational managers and players. These elements are the following:

5.3.1 *Strings and Membranes*

The mentioned strings came in two forms: closed strings and open strings (Ibáñez and Uranga 2012; Sahoo 2009; Shing-Tung and Nadis 2010; Zimmerman and Robbins 2010). An open string, it should be noted, has ends that do not touch each other, while a closed string is simply a loop with no open end. It was eventually found that these early strings, called type I strings, could go “through five basic types of interactions.”

Similarly, in education there is a tendency to explore the strings that bind education together. These are sometimes referred to as values without which the entire education system is likely to crumble. The availability of resources both human and material may not be enough to spell effectiveness and efficiency in the education system if the strings that bind them together are not overtly and covertly managed.

The paradigm of values is the most contemporary in education (Erçetin and Bisaso 2016). Without values, it becomes hard to develop the system. These values or strings in education are the following:

- Customized learning materials to foster a new way of teaching and learning
- Unique lesson plans for each teaching setting to reflect individual differences among learners in the education system
- Individualized learning experiences to favor learners' potential
- Empowerment of students and teachers to explore their abilities
- Vision, ethos, and strategy that can catapult the education system to greater heights (Lovat 2013)

Like string theory that tries to explore key strings and membranes to explain interactions, educational management should seek to focus on the key strings that bind education together. These strings or values determine effectiveness of the education system and without these, even the availability of other resources may not be enough to transform the education system. Contemporary paradigms dictate that education is context-based.

The implication of these, therefore, is that having a structure and resources is not enough to keep the education system aloft. There are other key strings that serve the purpose of holding or keeping the education system intact. Some of these could be invisible and others covert. Effective educational managers, then, must adhere to such strings whenever possible in order to achieve transformation of education system.

5.3.2 *Quantum Gravity*

Modern physics has two basic scientific laws as quantum physics and general relativity. These laws represent “radically different” fields of study (Ibáñez and Uranga 2012; Sahoo 2009; Shing-Tung and Nadis 2010; Zimmerman and Robbins 2010). Quantum physics studies the very smallest objects in nature, and relativity studies nature on the scale of planets, galaxies, and the universe as a whole (Zimmerman and Robbins 2010). Theories that attempt to unify the two are theories of quantum gravity, and the “most promising of all such theories today is string theory.”

Similarly, education system, reference being made to the public sector, lacks a gravitational pull that makes it unattractive and non-retentive for the children. It is important to ask about this lack of gravitational pull in the education system and why we need the gravitational force in education. Answering these questions may warrant and deserve a detailed treatment and elaboration.

Crucially, a symptom as a powerful natural phenomenon usually compels us to realize and further appraise an issue. Symptoms of lack of gravitational pull in the education system abound. One of the symptoms is that every year the education system has to go through a rigorous exercise, i.e., enrollment campaign (NGA 2015). The simplest possible explanation for the enrollment campaign in question can be that the “governments want to attract the children towards schools with a view to improving the profile of education which is currently pathetic and alarming:” this is because millions of children are out of school as of now. Hence, every year, the governments launch various campaigns to pull as many children to schools as possible.

On the other hand, the enrollment campaigns adequately reveal that “there is something fundamentally wrong with the system” that not only keeps a high number of children out of school, but also “it compels the system to make a plea for enrolment” every year. Other issues that border on gravity in education and have of late started attracting interest include fitness and cross training in education (Clayton et al. 2015). Too many, a school, have to contend with improvising some attractive programs in order to capture the attention and interest of learners as well as attract others to their respective schools. The competition thereto has rendered education a place where gravity has to be defined, explored, and implemented.

The challenge of educational managers in that regard is to make sure they get to terms with what pulls learners and teachers to schools. Only then can they be successful in managing schools. Attracting and retaining the best teachers call for a proper understanding of human resource gravitational factors (Loeb et al. 2012) on the part of educational managers. These gravity issues may reflect motivation, payment systems, the social environment, independence of opinion, value placed on people, etc. Education as of now and for sometime indeed will be defined by a gravitational divide.

5.3.3 *Unification of Forces*

As a question of quantum gravity, string theory attempts to “unify the four forces in the universe” as the electromagnetic force, the strong nuclear force, the weak nuclear force, and the gravity force together into one “unified theory” (Ibáñez and Uranga 2012; Sahoo 2009; Shing-Tung and Nadis 2010; Zimmerman and Robbins 2010). String theorists believe that these forces are “all described by strings interacting with each other” in the early universe.

As far as education is concerned, there are forces which need to be united in order for the system to work effectively and efficiently. This becomes the primary target and focus of the contemporary educational managers. These range from individuals to groups and material to nonmaterial forces, and they include:

- Educational standards to be followed across the education system
- Educational decisions that inform practice
- Educational stakeholders and their clinical roles
- Professional associations and their expected influence

- Policy makers who set the tone for provision of education
- Delivery models that inform learning
- Accountability and transparency systems that define progress
- Educational revenues that facilitate operations and educational programs (Fullan 2000)

Issuing from the above premise, Barbour, Barbour, and Scully (Barbour et al. 2008) identify population diversity, globalization, technology, and religious and spiritual variables as key unifying forces in education. On the other hand, culture, curriculum, and leadership are hailed as key unifying forces in education. Looking at education in isolation of these unifying forces is committing suicide on the part of the educational manager, and underestimating their role in promotion of educational tranquility is sheer managerial incompetence.

Educational managers ought to note, therefore, that like string theory, understanding the unifying forces in the education system is critical to its efficiency, effectiveness, and consequent transformation at all times. Otherwise, a lot of time and other resources may be wasted in planning for the improvement of the education system and educational institutions but to no avail. Understanding the root cause of something as well as producing plausible solutions is as good a step as solving the problem itself.

Realistically, therefore, educational standards, educational decisions, educational stakeholders, professional associations, policy makers, delivery models, accountability, and transparency systems as well as educational revenues should all be fine-tuned and brought together to inform educational processes. They are unifying forces and at the same time forces which require unification. The educational manager, thus, should unify the issues at hand and then utilize them to unify others in the system.

5.3.4 *Supersymmetry*

All particles in the universe can be divided as bosons and fermions. String theory predicts that a type of connection which is called supersymmetry exists between these two particle types (Ibáñez and Uranga 2012; Sahoo 2009; Shing-Tung and Nadis 2010; Zimmerman and Robbins 2010). Under supersymmetry, a fermion must “exist for every boson” and vice versa.

As regards education, relationships also exist between various elements. Without these relationships, the whole education system is always bound to be a looming failure or virtually on the edge of chaos (Erçetin and Bisaso 2015). Supersymmetry in education, therefore, can be conceptualized from the following perspective:

- Leadership and resource management
- Teaching and learning management
- Leadership and research innovation
- Leadership and outreach processes (Loeb et al. 2012)

If the relationships between the above factors are not well set, there is a likelihood of failure of the education system. The factors are indispensable with one another and aid the progress and effectiveness of each other. The task of educational managers, therefore, becomes quite simple and clear, thinking of ways as to how to utilize management and leadership potential to realize the cardinal roles of educational institutions.

The only challenge encountered by educational institutions today is the fact that the three aspects of teaching and learning, research, as well as outreach are normally fragmented in the education system. Some educational institutions simply comply with some while forgetting or side-lining others. To achieve a supersymmetry in education, as proposed by string theory, the three cardinal roles ought to be effected within the education system. Realizing the best way of doing this would be critical to an educational manager and would indeed, quite simply, define a better educational manager.

5.3.5 *Extra Dimensions*

Another mathematical result of string theory is that the theory “only makes sense in a world with more than three space dimensions.” The universe has three dimensions of space such as left/right, up/down, and front/back (Ibáñez and Uranga 2012; Sahoo 2009; Shing-Tung and Nadis 2010; Zimmerman and Robbins 2010).

Like string theory, education has found itself having to contend with certain extra dimensions. They may not be the major focus of the system per se, but ideally, all stakeholders in the education system have to be concerned with these extra dimensions since they define the gap between excellence and non-excellent settings within education systems.

The extra dimensions in education are the following:

- Language
- Skills
- Attitudes
- Values
- Competencies (Centre for Curriculum Redesign 2015; OECD 2004)

The way education has always been planned and managed shows that most of the concepts of string theory are in existence, if not all. However what has been lacking is having all these aspects put together in a theory or approach form. Accordingly educational planners and managers would simply refer to that approach or theory and the component elements thereof to achieve educational transformation. That is why the concept and/or phrase “string education” should be coined and dully implemented.

Interesting to note, the term string has already found its way into the education system. Concepts like string schools, string instruction, and string model (Lucas n.d.) are now becoming quite familiar. Yet the ever-present question is how and where can this applicability be possible, effective, and realistic. Suffice to say, we are indeed living in a period or age of “string education” with “string schools” and “string instruction.”

The concept of “string education” has already found its way into the educational vocabulary. The focus is on how students learn (Lucas n.d.). Other key issues calling for focus in string education are:

- Effective string programs (the string program) – the aim of these programs is to improve string instruction. String programs offer a model for string teaching. It also reflects rehearsals made for teaching.
- String teaching situations (the string teacher) – opinions and attitudes that influence teaching and learning.
- String learning situations (the string learner) – opinions and attitudes that influence teaching and learning.
- String class pedagogy – teaching sequence involving assessment, diagnosis, and prescription. Teacher improvisation is also at its highest best.

Even more crucially, indeed, the Bornoff (1968) approach to string education is already in place and based on Gestalt psychology. It therefore:

- Uses exercises in cycle form
- Moves from the large motion to the refinement of small detail that was designed specifically for class instruction
- Focuses on process
- Focuses on connections
- Uses creative review, constants and variables, and meaningful repetition
- Focuses on individual performance in group

Of recent “String Theory Schools” have come into offing with a largely different and diverse approach to education. They seek to offer an education system which differs significantly from the others so as to cause a larger impact on the lives of learners. The string theory school model according to (Lucas n.d.) is home to certain principles. The principles in question have long been proposed by Ofsted (2001) as a guide to the school system. The principles are the following:

Plan of action (Ofsted 2001): equally, the string theory school model in this case is reproducible and sustainable. There should be a clear way forward and *modus operandi* to guide the school system on a regular pattern.

To inspire and be inspired: redefining the classroom (Ofsted 2001): string theory schools also strive to “bring the world of possibilities to its students” by offering spaces for learning, inventing, collaborating, creating, and performing that will stimulate and inspire students so that, in turn, the students will inspire the nation.

Creation: the imagination at work (Ofsted 2001): the string theory schools offer life experience, academics, and the arts, forming a well-rounded educational approach. The balance between artistic development and academic preparation is at the heart of the schools’ philosophy. This brings out imagination at work within the learners.

In general, in string theory schools, students are prepared to become the thoughtful and creative citizens who care the world needs.

5.4 Conclusion

All the issues and trends rocking the education system today are controversial. Debate will continue over them well into the future and certainly they should. The issues have no clear solutions and no simple all-inclusive answers. Educational planners as well as managers must be willing listeners and alert to the social, political, cultural, technological, and scientific contexts within which they work and schools exist. Curriculum workers, educational managers, and educators in general must realize that the extant issues are dynamic and ever changing with no clear-cut answers.

There is worth in something to be learned from string theory though. This does not mean we have to accept everything put forward by the theory since it is, in the first place, adopted from a scientific (especially physics and mathematics) perspective. This adds to the complexity of educational management and school administration but, equally, to its excitement. It is consequently evident from the discussion of the issues and trends in string theory and their position in (applicability to) education that decision as well as policy makers should create educational programs that are characterized by fluidity, pedagogies that truly recognize educational complexity, and leadership approaches that are flexible and adaptive. Borrowing ideas from string theory and twisting the education terrain around them are not only urgent necessities in terms of educational transformation but indeed long overdue.

This paper was only a conceptualization of educational management from the perspective of string theory lens. It offers no extant and expertise view regarding the technical nature of the theory but draws on the surface view by isolating key ideas and principles of the theory and how they can inform educational management.

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Chapter 6

Staff Experiences Regarding Student Engagement in Active Learning and Social Environments in New Generation Universities



Şuay Nilhan Açıkalm and Şefika Şule Erçetin

Abstract The quest for improved student engagement in active learning and social environments in new generation universities surpasses all prior teaching and learning commitments of educational institutions. While educators are expected to undertake effective steps towards realizing this engagement, it is also incumbent upon students themselves to partake in active learning processes. In tandem with the above, this study was done to establish views of academic staff at the Public University in Ankara, Turkey, regarding the practices of students geared towards realizing student engagement in active learning and social environments. This was done basing on five major dimensions: making student learning meaningful, fostering a sense of competence and autonomy, embracing collaborative learning, establishing positive educator-student relationships and promoting mastery learning orientations. In the findings, dimensions like making students' learning meaningful as well as promoting mastery learning orientations were found to be highly successful, while fostering a sense of competence and autonomy as well as establishing positive educator-student relationships was found to be moderately successful. Embracing collaborative learning, meanwhile, was found to be at a low level of success. Equally, some statistical differences were found in academic staff's demographic variable of academic qualification in the dimensions of making students' learning meaningful as well as promoting mastery learning orientations. However, no statistically significant result was obtained in the gender and professional experience variables.

Ş. N. Açıkalm (✉)

International Relations Department of Middle East Technical University, Ankara, Turkey

Lancaster University, Lancaster, UK

e-mail: suaynilhan@gmail.com

Ş. Ş. Erçetin

Hacettepe University, Ankara, Turkey

Lancaster University, Lancaster, UK

e-mail: sefikasule@gmail.com

6.1 Introduction

There is no doubt that living in a changing world at all times coincides with a multiplicity of events that affect the world constantly. Some of the events in question are directly related to our lives, while others are related to life in general. Suffice to say, this is a routine, and if we look at the history of the world from these lenses, everything is changing, and perhaps nothing is changing. To put this into perspective, therefore, we are all living in change itself. The way the world has evolved to come into how we know it today, as reflected in lifestyles, destinies as well as paradigms and viewpoints, has been through a continuous process of change.

This implies that people have to learn in tandem with the dictates of the times in order to remain relevant. This renders traditional educational institutions like universities archaic and requires a reconceptualization of the universities into new generation universities equipped with the potential to ride the tide of change. The challenges brought to bear on the education system by old university systems are reflective of a dramatic worsening of staffing for teaching and research, with implications for both capacity and the conditions underlying quality, issues of teaching and research capacity and quality across all disciplines and an overall level of public investment in higher education (Marginson 2011 cited by Reid and Hawkins 2003, 7–8).

Conversely, therefore, change is not only a necessity but an urgent need. Bokor (2012) present “contestability of markets and funding, democratization of knowledge and access, digital technologies, integration with industry and global mobility” as key drivers of the change in question. They, thus, opine that there is need for development of a new model in which there is quality and academic excellence, academic talent, workforce structure, commercial skills, change management, speed levels compatible with market settings and relationship with government. This new model is only possible with new generation universities.

New universities coincide with the generation of people occupying the world as of now and especially born between 1982 and the 2000s. Such people have of late attracted the attention and interest of researchers. According to Veen and Staalduinen (2010), this new generation is growing up with modern communication technologies shaping their views on the world around them. This explains why these new generation universities are characteristic of many features. Reid and Hawkins (2003) offer “expectations of new generation universities” in terms of being “key catalysts for regional development, pathways to higher education for students of diverse backgrounds, developing innovative and applied research which addresses contemporary social and economic issues, and being at the forefront of education across a spectrum of emerging professions” (p. 8).

New generation universities are born of many characteristics. Selingo (2013) postulate that the said universities are in distinct state context, house differences in funding and differ in terms of local demographics and governance arrangements. Meanwhile, they are also known for intentional student-focused vision, fast and large-scale innovation, going online, growing enrolment, scaling technology to serve students, changing faculty perceptions about the role of education, creation of

partnerships, student and staff transfer programmes as well as diverse revenue sources. The most critical characteristics of new generation universities are that they are intelligent organizations. Such universities cherish networking, hold modern models of instruction in high esteem, own challenging profiles of students as well as leaders and are home to new technologies.

The burden of managing change and preparing staff for the same in new generation universities falls on the shoulders of leaders (Erçetin et al. 2013). According to Erçetin (2000), therefore, “leaders should be able to accept the problems emerging during the change or challenge as normal and natural, find different solutions to different problems, motivate the school members to create new ideas and behaviors, developing an atmosphere containing innovative and creative thoughts and actions, as well as taking risks for the organizational objectives”.

One key aspect of new generation universities is that they are activated by active learning processes and social environments which also change in response to forces affecting them just as other educational institutions (Hargreaves 2003). This is because self- and societal transformation can only be possible through active learning in new generation universities. Active learning can indeed transform people and organizations since it brings in “conscientiousness and knowledge” in all endeavours. That is why it is a fundamental tool in bringing about effectiveness and sustainability of quality both within and outside of institutions especially educational ones.

In active learning environments, students’ learning and teaching staff’s instruction activities improve because these environments are student centred and enhance the student experience. Goldman et al. (1992) state that “Rich environments for active learning are designed to invite the kinds of thinking that help students develop *general* skills and attitudes that contribute to effective problem solving, plus acquire *specific* concepts and principles that allow them to think effectively about particular domains (p. 1)”.

Grabinger and Dunlap (1995) contend that the main attributes of rich environments for active learning that support the goals of constructivism are (1) student responsibility and initiative, (2) generative learning activities, (3) authentic learning contexts, (4) authentic assessment strategies and (5) cooperative support. This aids improvement of the student’s role in the teaching and learning process.

Students utilize active learning environments as an opportunity to develop depth in critical thinking and learning. Also, this is important for universities as they prepare students for employment, research or graduate education better. In universities, active learning environments and social environments complement each other. We can say that social environments are also instructive. Student clubs, cinema, theatre, concerts and other activities that students hold together to enjoy are instructive. Students develop their relationships, experiences on life and the opposite sex and friendship; they learn sharing in their lives. Because university environments are the place to live for the first time apart from their families, most students learn life experiences as well as lessons at university. So, social environments are also active learning environments.

A good learning environment is where “students are engaged in self-directed and co-operative learning activities, and the physical environment is planned so that it can be routinely re-organised to mediate learning” (Partnership for 21st Century

Skills 2002 cited by Lippman 2010, 2). In a proper learning environment, therefore, students learn from their own discoveries (Lippman 2010, 3). The design of the environment can support the “transactions that take place routinely in them so that people may develop and this allows learning to take place as well” (Lippman 2010, 3). To Higgins (2005), the environment affects attendance, well-being, engagement and attainment of students in the end.

Active learning, therefore, follows a pattern which connotes the reconstruction of knowledge and experiences systematically developed under the auspices of the university to enable the student increase his or her “control over knowledge and experiences” from time to time (Tanner and Tanner 2007). All active learning settings, however, are composed of certain elements which distinguish them from the ordinary learning environments.

Active learning and the social environment, nevertheless, are intertwined and move hand in hand. Higgins (2005) contend that the causal chain between environmental change and changes in students’ attitudes, behaviours and achievements is a fairly complex one taking in issues of choice and autonomy in consultation processes, increased self-worth and morale for staff and students based on the investment of time and money in their ideas and their working space, the “fitness for purpose” of innovations for particular contexts and the process of trialling, testing and embedding new practices shaped by environmental change (p. 6). Also, Chism (2006 cited by Cox 2011, 198) proposes that learning space needs flexibility, comfort, sensory stimulation, technology support and decentredness to promote positive student experiences. These student experiences are very pertinent to effective teaching and learning. This is because they spell effective student engagement in active learning and social environments.

Major aspects of student engagement reflect attention, curiosity, interest, optimism and passion that students exhibit during the process of learning (The Glossary 2016). This improves their level of motivation for the learning tasks. Indeed, “learning improves when students are inquisitive, interested, or inspired, and that learning tends to suffer when students are bored, dispassionate, disaffected, or otherwise disengaged”. The other terms attached to student engagement could be student-based learning, enquiry-based learning and problem-based learning. The concept, thus, draws on the social constructivist theory.

The more students are engaged in their work, the better they like school, and the more they succeed (McCormick 2012). Student engagement is currently used to refer to student engagement in learning activities. This term was initially used by researchers and later adopted by policymakers as it appears to be spot-on (Ashwin and McVitty 2015). Studies show that students become more disengaged from school as they progress from elementary to middle to high school (Steinberg and Almeida 2004). Coates (2007) describes engagement as “a broad construct intended to encompass salient academic as well as certain non-academic aspects of the student experience”, comprising the following: “active and collaborative learning; participation in challenging academic activities; formative communication with academic staff; involvement in enriching educational experiences; feeling legitimated and supported by university learning communities”.

Trowler (2010) offers typologies of engagement which include student engagement styles, institutional engagement types and student representatives' motivations, while the key dimensions can be behavioural, emotional and cognitive. Trowler (2010) still argues that engagement grapples with the "what" question, and this reflects specific student learning aspects/processes, learning design, tools for online-/classroom-based learning, extracurricular activities and institutional governance. The Partnership for 21st Century Skills (2002) looks at structure, time, tools, communities and policy as the critical to the what question, while Higgins (2005) focus on systems and processes, products and services as well as communication strategies and ideas. Engagement also answers the "why" question which coins the need to improve learning rates and retention, equality/social justice, curricular relevance, institutional benefit and marketing (Trowler 2010, 22–27). Engagement also dissects the "whom" question where students (as individuals and collectively), educational managers, industry, the higher education system and society are reflected. This makes students, staff, local context, institutions, educational ideology and national policy remain the major critical success factors for student engagement (Trowler 2010, 36–41).

Trowler (2010), meanwhile, alludes to the key strategies for engagement which include institutional strategies, involving blended professionals, institutional engagement plans, individual staff interventions and frameworks for action. Ahlfeldt et al. (2005) also continue that the key benchmarks include level of academic challenge, active and collaborative learning, student interactions with faculty members, enriching educational experiences and supportive campus environment (p. 8).

Bonwell and Eison (1991) claim that the key strategies for student engagement include thinking critically or creatively, speaking with a partner or group, expressing ideas, exploring personal attitudes or values, giving and receiving feedback, reflecting upon the learning process, purposive questioning and knowledge demonstrations. Students are thus actively involved in building knowledge and understanding in response to learning opportunities presented or provided by the educator.

Academic staff however play a more professional role in the learning process, design of activities and materials as well as development of students' potential, a process so central in university systems and many individual academic staff at all levels of education and or instruction, and draw on their own experiences in order to plan for the teaching and learning process (instruction) in order to make a meaningful contribution towards the lives of their students (Connelly and Micheal 1988). To some extent indeed, the academic staff teaches what he is in him- or herself, and students always remember the character of their academic staff long after they have forgotten the content they were taught (Bestor 1990).

Issuing from the above premises, it is obvious that the active learning process can be a great success or a dismal failure depending on the academic staff. They are key persons who, alone, can make the instructional design achieve what it was designed to achieve (Morgan 2008). If they are dedicated, hardworking, diligent and imaginative, they can enliven what would otherwise be dull and lifeless. Of all the personnel involved in the educational cycle, the academic staff is certainly the most important since he or she is the one who implements the ideas and aspirations of the

other stakeholders in education (Silverman and Subramanian 1999). Academic staff can make student engagement possible through plans and approaches that are compatible with the understanding of students since they know the students better. Without student engagement, the teaching and learning process is likely to end up as a looming failure indeed.

In tandem with this, therefore, the purpose of the study was to determine the practices of students geared towards students' engagement in active learning and social environments according to the views of academic staff. The specific questions for the study are the following:

1. What is the level of student engagement in active learning and social environments in new generation universities according to academic staff's views?
2. Do academic staff's views regarding student engagement in active learning and social environments in new generation universities differ according to demographic variables?

The relevance of the study is viewed from the perspective of aiding the academic staff's cause regarding ways of improving and transforming student engagement in active learning and social environments by earmarking the right starting berths to build on. Without knowing what students do in the realm of engaging active learning, it becomes significantly hard to understand how educators and the institutions can aid their progress.

6.2 Methodology

6.2.1 Research Model and Participants

The research obtains within quantitative research models. Descriptive statistics as well as inferential data were analysed in the study. Demographic characteristics were explored and significance of data responses calculated at different levels. A survey model was, thus, adopted for the study in question. Both single and relational survey techniques were applied. The Public University Department of Educational Sciences was selected as a study area for this research due to its representativeness. All the 38 academic staff in the department took part in the study. Accordingly, the characteristics and statistics regarding the respondents to the study are presented in the Table 6.1.

6.3 Research Instrument

The scale used for data collection in this study was developed by the researcher. The scale was for academic staff to determine their views on active learning and social environments in new generation universities. Six elements of student

Table 6.1 Characteristics of respondent academic staff ($n = 38$)

Demographic variable	Personal characteristics	No. (n)	Percentage (%)
Gender	Male	16	42.1
	Female	22	57.9
Academic qualification	Assistant professor	13	34.2
	Associate professor	14	36.8
	Professor	11	28.9
Professional experience	10 years and below	4	10.5
	11–20 years	13	34.2
	21–30 years	13	34.2
	31 years and above	8	21.1

engagement and active learning environments adopted from Edutopia (2014) were used in the development of the instrument, *making student learning meaningful, fostering a sense of competence, providing autonomy support, embracing collaborative learning, establishing positive educator-student relationships and promoting mastery orientations*. However, after careful study and consultation, the two elements, “fostering a sense of competence” and “providing autonomy support”, were merged. Also, promoting mastery orientations was revised to promoting mastery learning orientations. Accordingly, the instrument was designed basing on five (5) key elements. Other sources were also used to develop and bolster the instrument (Coates 2007; Edutopia 2012; Goldman 1992; Grabinger and Dunlap 1995; Pike and Kuh 2005; Taylor and Parsons 2011; The Glossary of education reform 2016; The University of Sheffield: principles of student engagement; The University of Washington: Centre for teaching and learning). The instrument was piloted on a representative population and sample in order to establish its validity as well as reliability.

6.4 Data Analysis

In order to ascertain the practices of students in relation to student engagement in active learning and social environments based on views of academic staff, frequencies, percentages and arithmetic means were utilized. The weight of scores in this regard were as follows: 4.50–5.00 representing high success, 3.50–3.99 as moderate success, 3.00–3.49 as low success, 2.50–2.99 as weak success, 2.00–2.49 as unsuccessful and 0.00–1.99 as highly unsuccessful. In order to establish differences in views of academic staff regarding practices of students in relation to student engagement in active learning and social environments based on gender, academic qualification and professional experience as key demographic variables, the independent sample t-test statistical technique was applied to variables with two groups, while the one-way analysis of variance (ANOVA) statistical technique was applied to variables with three or more groups.

Levene's test was also conducted to determine the homogeneity of the variances of various groups obtained at the end of each statistical test. In cases where the variances were homogeneous, LSD (Fisher's least significant difference) test was applied to ascertain which group the difference came from. In the study, all statistical computations were pegged on the 0.05 significance level. Conversely, all statistical computations were done using the "SPSS 23.0 for Windows packet" analysis programme.

6.5 Results and Discussion

The findings of the study were presented in tandem with the key themes earlier on set. These were descriptive views of academic staff, views based on academic staff's gender, views based on academic staff's academic qualification and views based on academic staff's professional experience.

6.5.1 *Analysis of the Descriptive Views of Academic Staff Regarding Student Engagement in Active Learning and Social Environments in New Generation Universities*

The views of academic staff regarding the practices of students towards student engagement in active learning and social environments in new generation universities were computed based on the various dimensions adopted in the study. Bearing in mind that the items in the instrument were very many, a computation of the means and standard deviations of the dimensions as a whole was made and has been considered in this paper. The views in question are presented in the Table 6.2.

According to Table 6.2, the views of academic staff were as follows: making student learning meaningful ($x = 4.15$), fostering a sense of competence and autonomy ($x = 3.52$), embracing collaborative learning ($x = 3.444$), establishing positive educator-student relationships ($x = 3.55$) and promoting mastery learning orientations ($x = 4.09$). Premised on the views, it can be argued that according to the academic

Table 6.2 Views of academic staff regarding student engagement in active learning and social environments in new generation universities

Descriptive statistics			
Dimensions	<i>N</i>	Mean	Std. deviation
Making student learning meaningful	38	4.1541	0.32944
Fostering a sense of competence and autonomy	38	3.5226	0.49070
Embracing collaborative learning	38	3.4474	0.41903
Establishing positive educator-student relationships	38	3.5526	0.60351
Promoting mastery learning orientations	38	4.0902	0.28653
Valid <i>N</i> (listwise)	38		

staff, the students are active in making their learning meaningful and promoting mastery learning orientations at a highly successful level, fostering a sense of competence and autonomy and establishing positive relationships with educators and students at a moderate level of success, while they are embracing collaborative learning at a low level of success in tandem with the yardstick earlier on set in the study.

6.5.2 Differences in Views of Academic Staff Regarding Student Engagement in Active Learning and Social Environments in New Generation Universities Based on Demographic Variables

In order to find out whether there are statistically significant differences among views of academic staff regarding student engagement in active learning and social environments in new generation universities, three independent demographic variables were tested. These were gender, academic qualification and professional experience. Appropriate statistical tools were applied in regard to each of the cases under scrutiny.

6.5.3 Views of Academic Staff Regarding Student Engagement in Active Learning and Social Environments in New Generation Universities Based on the Gender Variable

In order to find out whether statistically significant differences existed among views of academic staff regarding student engagement in active learning and social environments in new generation universities in relation to the gender variable, an independent samples t-test was adopted in the analysis. Gender, in this case, was used to coin the male and female academic staff. A summary of the findings in relation to gender is presented in the Table 6.3.

As reflected in Table 6.3, a statistically significant difference was not found among views of academic staff regarding student engagement in active learning and social environments in new generation universities in terms of gender. This can be argued for all the dimensions adopted in the study. The views of female and male academic staff respondents regarding student engagement in active learning and social environments in new generation universities in lieu of the dimensions in question were somewhat similar. Meanwhile, a closer look at the average means of descriptive statistics of all the dimensions would reveal some difference, but in statistical terms, the difference is not significant. In these descriptive statistics, female academic respondents tended to have more positively inclined views regarding student engagement in active learning. This can be attached to their plausible handling of students in a more welcoming and inspirational manner.

Table 6.3 T-test results for differences in views of academic staff regarding student engagement in active learning and social environments in new generation universities based on the gender variable

Group statistics							
	Gender of respondents	<i>N</i>	Mean	Std. deviation	Std. error mean	<i>t</i>	<i>p</i>
Making student learning meaningful	Male	16	4.1161	0.34688	0.08672	-0.602	0.551
	Female	22	4.1818	0.32151	0.06855		
Fostering a sense of competence and autonomy	Male	16	3.4107	0.46620	0.11655	-1.206	0.236
	Female	22	3.6039	0.50253	0.10714		
Embracing collaborative learning	Male	16	3.4107	0.38288	0.09572	-0.455	0.652
	Female	22	3.4740	0.45043	0.09603		
Establishing positive educator-student relationships	Male	16	3.4464	0.58292	0.14573	-0.923	0.362
	Female	22	3.6299	0.61982	0.13215		
Promoting mastery learning orientations	Male	16	4.0982	0.34094	0.08524	0.145	0.886
	Female	22	4.0844	0.24806	0.05289		

6.5.4 Views of Academic Staff Regarding Student Engagement in Active Learning and Social Environments in New Generation Universities Based on the Academic Qualification Variable

In order to find out whether statistically significant differences existed among views of academic staff regarding student engagement in active learning and social environments in new generation universities in relation to the academic qualification variable, an ANOVA test was adopted in the analysis. The academic qualification in this study was categorized as assistant professor, associate professor and professor. The findings based on the ANOVA test are presented in the Table 6.4.

After a general ANOVA test was conducted, a statistically significant difference was found among views of academic staff regarding student engagement in active learning and social environments in new generation universities in terms of academic qualification. The difference was observed in two dimensions as follows: making students' learning meaningful ($p = 0.009$) and promoting mastery learning orientations ($p = 0.030$).

Effort was then made to establish the subgroup from which the obtained difference originates. Before doing so, however, Levene's test for equality of means was conducted, and after finding the means homogeneous, an LSD (Fisher's least significant difference) was set in motion. The results of the LSD test are presented in the Table 6.5.

Premised on the findings in Table 6.5, the significant difference in the dimension making student learning meaningful originates from the assistant professor and the

Table 6.4 ANOVA results for differences in views of academic staff regarding student engagement in active learning and social environments in new generation universities based on the academic qualification variable

ANOVA						
Dimensions		Sum of squares	df	Mean square	<i>F</i>	Sig.
Making student learning meaningful	Between groups	0.939	2	0.470	5.342	0.009
	Within groups	3.077	35	0.088		
	Total	4.016	37			
Fostering a sense of competence and autonomy	Between groups	0.157	2	0.079	0.315	0.732
	Within groups	8.752	35	0.250		
	Total	8.909	37			
Embracing collaborative learning	Between groups	0.211	2	0.106	0.588	0.561
	Within groups	6.285	35	0.180		
	Total	6.497	37			
Establishing positive educator-student relationships	Between groups	0.353	2	0.177	0.471	0.628
	Within groups	13.123	35	0.375		
	Total	13.476	37			
Promoting mastery learning orientations	Between groups	0.334	2	0.167	2.162	0.030
	Within groups	2.704	35	0.077		
	Total	3.038	37			

professor categories of academic staff respondents. The professor category of academic staff holds a highly positive view of their students regarding the dimension in question, while the assistant professor category holds the lowest average score.

The significant difference in the dimension promoting mastery learning orientations also stems from the assistant professor and the professor categories of academic staff respondents. The assistant professor category of academic staff holds a highly positive view of their students regarding the dimension in question, while the professor category holds the lowest average score. The general view here is that the academic qualification has a direct influence on students' views. The expectations and views attached to a lower academic qualification are undoubtedly different from a higher academic qualification. Academic staff at a particular academic qualification level would put a varying number of aspects and factors into context when analysing their students.

6.5.5 Views of Academic Staff Regarding Student Engagement in Active Learning and Social Environments in New Generation Universities Based on the Professional Experience Variable

In order to find out whether statistically significant differences existed among views of academic staff regarding student engagement in active learning and social environments in new generation universities in relation to the professional experience

Table 6.5 LSD test results for the dependent variables: making student learning meaningful and promoting mastery learning orientations

Multiple comparisons					
Dependent variable	(I) educational qualification	(J) educational qualification	Mean difference (I-J)	Std. error	Sig.
Making student learning meaningful	Assistant professor	Associate professor	-0.19623	0.11419	0.095
		Professor	-0.39660*	0.12146	0.002
	Associate professor	Assistant professor	0.19623	0.11419	0.095
		Professor	-0.20037	0.11946	0.102
	Professor	Assistant professor	0.39660*	0.12146	0.002
		Associate professor	0.20037	0.11946	0.102
Promoting mastery learning orientations	Assistant professor	Associate professor	0.10597	0.10705	0.329
		Professor	0.23676*	0.11386	0.045
	Associate professor	Assistant professor	-0.10597	0.10705	0.329
		Professor	0.13080	0.11198	0.251
	Professor	Assistant professor	-0.23676*	0.11386	0.045
		Associate professor	-0.13080	0.11198	0.251

*Mean diff. is significant at the 0.05 level

variable, an ANOVA test was adopted in the analysis. The professional experience in this study was categorized as 10 years and below, 11–20 years, 21–30 years as well as 31 years and above. The findings based on the ANOVA test are presented in the Table 6.6.

After a general ANOVA test was conducted, a statistically significant difference was not found among views of academic staff regarding student engagement in active learning and social environments in new generation universities in terms of professional experience. This goes for all the dimensions adopted in the study. The implication is that the views of academic staff based on professional experience are somewhat similar or rather close. Realistically though, a closer look at the descriptive statistics reveals that the 21–30 years' experience category of academic staff had more positively inclined views regarding student engagement in active learning and social environments than their other counterparts, but such a difference was not found statistically significant.

Table 6.6 ANOVA results for differences in views of academic staff regarding student engagement in active learning and social environments in new generation universities based on the professional experience variable

ANOVA						
Dimensions		Sum of squares	df	Mean square	<i>F</i>	Sig.
Making student learning meaningful	Between groups	0.492	3	0.164	1.583	0.211
	Within groups	3.523	34	0.104		
	Total	4.016	37			
Fostering a sense of competence and autonomy	Between groups	0.708	3	0.236	0.979	0.414
	Within groups	8.201	34	0.241		
	Total	8.909	37			
Embracing collaborative learning	Between groups	0.208	3	0.069	0.374	0.772
	Within groups	6.289	34	0.185		
	Total	6.497	37			
Establishing positive educator-student relationships	Between groups	0.739	3	0.246	0.657	0.584
	Within groups	12.738	34	0.375		
	Total	13.476	37			
Promoting mastery learning orientations	Between groups	0.091	3	0.030	0.348	0.791
	Within groups	2.947	34	0.087		
	Total	3.038	37			

6.6 Conclusion

A number of findings and results were reached during the study in question. Students are engaged in active learning and social environments according to their academic staff. However, this varied from dimension to dimension; some were found to be highly successful like making students' learning meaningful as well as promoting mastery learning orientations, while some were found to be moderately successful like fostering a sense of competence and autonomy as well as establishing positive educator-student relationships. Embracing collaborative learning was, however, found to be at a low level of success.

The study was a pioneer one to be precise, and, accordingly, it only serves as a backdrop to research in the area of student engagement in active learning and social environments in new generation universities. Other aspects of student engagement should be explored like factors influencing student engagement and the perceived effect of student engagement on students' performance. Equally, other approaches can be adopted to study student engagement. More demographic variables of academic staff apart from gender, academic qualification and professional experience can be explored in other studies. Owing to the nature of student engagement in active learning and the call for social environments in new generation universities, this study is, without doubt, a filler of a lacuna in literature.

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Chapter 7

Deontological Training of Specialists as the Basis for the State Anti-corruption Strategy



Kertayeva Kaliyabanu and Meirkulova Aida

*Refrain from crimes not
through fear but through duty*

Democritus

Abstract The problem of deontological training of specialists as means of ensuring the state's well-being in general and the strategic tool in anti-corruption policy of the country is looked upon in this article. Thus, as an indicator of the general professional readiness, it should be the complex characteristic containing not only knowledge, abilities, skills, and competence but also the personal qualities providing necessary aspect in professional activity.

7.1 Introduction

Any globalization in economy, education, and politics also brings the globalization of corruption. Corruption is a threat both to political, social ranks of the state through the destruction of social institutions and to the world economy as a whole.

Transparency International, an international nongovernmental organization, published its annual *report* "Corruption Perceptions Index," which indicates the level of corruption in countries around the world. Kazakhstan, along with Russia, Iran, Honduras, Guyana, and the Comoros, ranked 133 among 176 countries. Having received 28 points out of 100 possible, our country in fighting with corruption has moved to one point compared with previous *results* (Corruption perceptions index 2012).

There is corruption in multilevel educational system. In this case it represents a symbiosis of the monopoly of power, professional authorities, and lack of legal

K. Kaliyabanu · M. Aida (✉)
Eurasia National University named after Gumilev L.N., Astana, Republic of Kazakhstan
e-mail: kertaeva@mail.ru; aida_meirkulova@mail.ru

accountability and controllability of continuous teacher's actions. Corruption in this area is particularly dangerous, as it destroys the entire system of moral and ethical education of the future generation, thereby hindering the social and economic development of the country contributing to the growth of organized crime.

In Roman law, the notion of corruption ("corruptire") meant an unlawful act and was treated as "to mutilate, to destroy, to damage, to falsify, to bribe." Dictionary of foreign words characterizes corruption as bribery, the venality of public and political figures and officials (Dictionary of foreign worlds 1989).

There are political, economic, social, and cultural factors influencing the spread of corruption. They are authoritarianism in governance, weak legal institutions, regionalism, and high level of bureaucratization of society. One of the most important factors of the spread of corruption is dominating material values, i.e., economic basis. It is proved by the cases of the solution of financial problems at expense of the life, health, or liberty of person: there occurred *doctors* who can make a false diagnosis so as not to miss a rich patient or write a prescription for the expensive medications that are sold at his pharmacy; *there are journalists* who can illuminate "in his own way" any situation for a certain fee and thereby stir up the society; *there are teachers* who can teach something non-completely in the lesson and then do it as tutor; *there are psychologists* who can put a healthy person into mental hospital at the request of a wealthy or influential person for prominent rewards; *there are social workers* who find "creative" ways to assign money from state not very rich funding these zones, etc. The most terrible thing is that they don't have remorse, and the police is loyal to them.

Currently there is such a factor that public authorities are mainly focused on combating the effects but not the causes of corruption. Measures to prevent corruption are not systematized and do not have neither scientific rationales nor procedural characteristics. Therefore, special attention should be given to the strategy of systemic elimination of the causes of corruption, continuous counter through the establishment of preventive space. To create such space, it is necessary to bring up the deontological consciousness of society as a whole, in particular experts. The relevance of deontological upbringing of the society is determined by the severity of the problem of compliance with ethical and professional code of conduct in the process of interaction between unequal parties. It follows that deontological training of specialists should take worthy place in the anti-corruption strategy of the state.

The term "deontology" (from Greek *deonthos* – proper) was introduced in the eighteenth-century by English philosopher J. Bentham, which describes education about proper behavior, actions, and conduct. Originally J. Bentham put into this concept the rather narrow religious and moral content meaning of the duties and responsibilities of the believer to God, religion, and religious community and then used it to refer to the theory of morality as a whole. Soon the concept "deontology" began to be used in different senses as a term denoting the *proper behavior*, deeds, and actions of the individual or professional.

This shows that deontology may become a major weapon in an anti-corruption policy. Corruption, in practice, gave rise to the misuse of authoritative power by civil servants and their violation of law, mafia, family bail, and other woes. But if people will put their duties above those temptations, corruption can be prevented. These priorities are taught by deontology.

As it is known, any science is characterized by the process of differentiation stemming from specification of its substantive scope. This process is typical for deontology where depending on the content of the professional duty of people of different specialties, one can select the following sectors: legal, psychological, journalistic, educational, medical, social, or veterinary. In our researches, we consider professional deontology as the science about behavior of specialists of “man to man” system in accordance with their professional duty. Russian scientist (Mardakhayev 2010), professionally motivating, offers to expand horizons of the use of deontological upbringing in all specialists. Deontological consciousness (of civil servant, teacher, doctor, journalist, lawyer, etc.) will facilitate perception of professional duty as own beliefs. Duty is a moral form of awareness of the need for action. As said by Victor Hugo: “Man does due act voluntarily. Understanding of the need to fulfil its duty requires oblivion of self-interest.”

One of the first medical deontology has made a long and difficult way of development (Deontology in medicine 1988). Its history is rich in vividness, sometimes dramatic events and facts. Thinker and doctor Hippocrates (about 460–370 BC) in his famous “Oath” for the first time formulated the moral-ethical standards of the medical profession. The Hippocratic Oath is used in many countries around the world and sets high moral bar for personality and activity of doctor.

In 1946, the founder of Soviet Oncology, Nikolai Nikolaevich Petrov, wrote a book about surgical deontology. Since then the foundations of medical ethics is taught in medical universities. But the behavior of certain medical workers (as evidenced by repeated coverage of such facts in mass media) and their attitude toward patients show that we cannot reach good results by just studying deontological disciplines (From the history of deontology 2012). Therefore, we must not only learn the basics of professional deontology but also comprehensively, purposefully bring up the deontological consciousness.

Fundamentals of journalistic deontology were laid by Mikhail Lomonosov. He first introduced moral obligations of journalists and proved their practical necessity. Belonging to public professions such as journalism reinforces the need for harmony of the individual and society, transferring the objective contradiction between them from the private affairs of an individual employee of the media to the problem of public importance and relevance.

Many quality studies, doctoral thesis, are being carried out in legal, judicial, and social deontology at the moment. A special place in the system of deontological upbringing is given to *pedagogical deontology*. Opportunities to form deontological consciousness of future specialists and, in particular, educators are theoretically reasoned and practically developed in various dissertation researches, educational and methodological publications on deontology (Kertayeva 2009). The most powerful lever of influence on moral and moral-ethical orientation of society is in the hands of teachers.

Deontological readiness of a teacher, i.e., willingness to carry out professional duty, is a very facet of professional activity of the subject of education, which is directly linked to his worldview, his social, political, and humanistic orientation. Therefore, the need for absolute update of content and form of multilevel vocational

education, moving from a position of knowledge, skills, and competencies formation to the position of deontological readiness formation, providing *quality features of professional consciousness*, is becoming more relevant today. As Cicero's saying, "Only he lives freely who finds joy in the performance of his duties" should become the leitmotif of the entire system of vocational education.

Deontological readiness of a specialist is a state of mind that will help him to break free from the weight of the material slavery and when due in the professional activity will be inviolable and compulsory. The concept of deontological readiness of a specialist means the unity of theoretical and practical competence and professional ethics in holistic structure of personality and characterizes the conscious aspect of his professionalism.

Deontological readiness is a result of deontological training and education of future specialists in university environment in the course of which:

- A future specialist becomes aware of his or her professional duty.
- Deontological consciousness and deontological culture are being formed out of knowledge of rational types of professional activity norms and principles.
- Deontological self-consciousness is formed through the knowledge of humanity and meanness, justice and injustice, duty, honor, and conscience.
- Knowledge and self-consciousness transform into faith, belief, and creed.

To carry out this threefold task of modern education, that is, to ensure the monolith of relevant personal, subject, and meta-subject result of deontological upbringing, it is necessary, firstly, to make sure that teacher staff and the whole atmosphere in the educational institution work toward the effective solution of this task; secondly, teaching of any discipline should also focus on that.

Here are some brief suggestions for organizing deontological upbringing in educational institutions:

1. At the departments of multilevel education system to give attention to the deontological preparation of future specialists as to a very important issue, introduce the corresponding changes in the content of the theoretical courses and practical training in all academic disciplines.
2. Introduce relevant disciplines, special courses "basics of pedagogical (legal, psychological, journalistic) deontology," "deontological basics of teaching," "applied pedagogy," "professional psychology," "professional ethics," etc.
3. Prepare, publish, and disseminate these lectures' courses on these disciplines for wide use.
4. Organize systematic research of the problems of pedagogical, social, medical, legal, etc. deontology.
5. Introduce to the themes discussed by the Academic Council of the University questions on organization of deontological upbringing as a critical issue of the educational and upbringing process.
6. Plan and conduct the scientific and theoretical, scientific-methodical (international, republican, university, oblast-level, municipal, etc.) conferences, and seminars on the issue of a deontological upbringing and introduction.

7. Accept documents of applicants to educational institutions, taking into account the deontological image of their chosen profession.
8. Solve the problem of the implementation of the rules of professional deontology in the practice of the teacher.
9. Take into account the requirements of professional deontology in qualifying characteristics when awarding a specific category.
10. Open at the pages of specialized pedagogical newspapers and magazines a column “Pedagogical (legal, psychological, journalistic, pedagogical, medical) deontology”; publish the opinions of scientists, educators, philosophers, and psychologists on various issues of the topic.

Deontological component in the specialists training should become critical, central core, determining the level and the success of their professional activity, an element of their vocational training. The critical importance of the entire body of changes in the vocational training of future specialists in the social sphere, proposed in researches on deontology, raises no doubt.

Regulations and instructions in society were always recorded from two positions: the first is the rule of law, and the second is moral-ethical norms. Deontology applies to the second part. The more civilized the society is, *the more moral regulators of conscious human activities will act, and the more they will tower over the material.*

Several dissertations of Kazakhstani and Russian scientists are dedicated to the topic of forming deontological readiness of specialists of the “human to human” system, i.e., future teachers, doctors, journalists, social workers, lawyers, etc. However these works remain in academic research framework so far. Today it’s time to introduce the results of these researches into the educational and upbringing process of vocational education with a view to build an intellectual nation. It is obvious that the primary role in the social and economic progress of the country should be given to the system of professional education.

Therefore, following the example of the Japanese education system, priorities in vocational education should be given to upbringing rather than education, i.e., to bring up to learn, self-understand the future professional space, and create the strategic, pedagogical conditions for this. The fact that upbringing the consciousness can dramatically change people’s minds can be proved by both positive and negative examples (communists, Komsomol, terrorists, Wahabis, etc.), so why not use this opportunity to improve conscious characteristics of society. A positive conscious characteristic of a society is a pillar of the state’s welfare in general.

7.2 Conclusion

The above characteristics of the deontological training of specialists as the basis of nurturing their deontological consciousness and deontological readiness are consistent with the articles of the Law of the Republic of Kazakhstan “on anti-corruption,”

with special emphasis involving civil society organizations in anti-corruption activities, formation of legal *consciousness*, and legal *culture* in complying with anti-corruption legislation (Law of the Republic of Kazakhstan 2015).

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Kertaeva Kaliyabanu Makhmetovna, doctor of pedagogical sciences, professor, honorary head of a department of S. Toraighyrov Pavlodar State University, academician of the APSK, corresponding member of IASPE, corresponding member of the IAAS, professor of Gumilyov Eurasian National University in Astana, Kazakhstan

Chapter 8

The Viability and Reliability of the Fractal Leadership Practices Scale



Şefika Şule Erçetin and Ssali Muhammadi Bisaso

Abstract Leadership has undoubtedly become the fulcrum of educational institutions in a bid to transform the education system. It remains the most critical process at all levels of education and in all forms of educational institutions. The way leadership is served is directly related to the success or otherwise of a particular educational institution. This explains why all leaders at various levels have been grappling with establishing the best way of leading their followers and institutions alike. The outcome of such efforts has been the emergence and re-emergence of leadership styles and approaches within the education system from the traditional (autocratic, bureaucratic, democratic and laissez-faire leadership), modern (transformational, transactional and charismatic leadership) to the more contemporary ones which are born of specificity (servant, people, shared, values based, ethical, service, quantum, plazma and fractal leadership among others). In order to establish the fractal leadership practices of school principals, a scale was developed by the authors following ten adopted constructs. This paper, therefore, aimed at exploring the validity and reliability of the fractal leadership practices scale. The validity was computed via responses of experts, and the reliability was analysed basing on views of respondents using the statistical package for the social sciences (SPSS) programme. First, a general reliability measure was undertaken for all the items in the scale, and later, the reliability of each of the ten constructs was also measured. The items found as desired based on their Cronbach alpha scores were excluded, and the scale was remeasured. The scale was found suitable enough to measure fractal leadership practices of school principals.

Ş. Ş. Erçetin (✉)
Hacettepe University, Ankara, Turkey

Lancaster University, Lancaster, UK
e-mail: sefikasule@gmail.com

S. M. Bisaso
Islamic University in Uganda, Mbale, Uganda
e-mail: bisasossali@yahoo.com

8.1 Introduction

For a long time now, institutions across the world have been coming to terms with the growing trend of leadership. The trend constitutes a contemporary agenda that espouses choice and regulation in the execution of leadership duties and tasks. This amounts to a restructuring of the way leadership is professed in various institutions. The trend thus implies that institutions are increasingly redirecting the execution of leadership and promoting a more conscious leadership system.

Education systems whose mandate is to preserve and transmit their nations' unique cultures (Blum and Ullman 2012) have been affected by leadership liberalism. Much as school principals are appointed by a central authority, they have to fit within the status quo. This means being flexible enough to uphold the tenacity attached to their power and authority as well as dictates of the school and community at large. Indeed, the idea that educational institutions respond well to free leadership ideas and practices has become widely accepted. This means dealing with views and opinions of various organs and units within the school or education system.

It is, however, the rise of leadership initiatives in education systems that is not primarily out of public policy design but shaped by limitations of public policy (Chepyator-Thomson 2014; Musisi 2012; Payne 2008). Rising demands on effective service delivery rendered the emergence of new leadership systems a natural evolution. It is not what the governments and leaders want that matters now. Certainly, it is what the community and the led desire that sets the agenda.

Today, leadership is executed in competitive ways. The leader and the led have to interact more vigorously for efficient performance to prevail (Zhang and Zhou 2014). The split between effective and less effective leaders is increasingly becoming clear. Leadership in this case is executed through smaller leadership units whose ideas are brought together to promote and achieve progress in various institutions. While inefficient leaders struggle, efficient leaders sail through the conundrum quite naturally.

Thus, a school's ability to hold on to competent staff, good students (Musisi 2012) and efficient performance (Too et al. 2015) depends on the quality of leadership in the school. This intensifies the need for effective leadership at all levels of the education system. This need ushers in the acute inevitability of creativity on the part of leaders. Realistically, a good educational leader creates a sense of belonging among the people he or she is working with. This goes an extra mile in promoting organizational citizenship behaviour. Even in turbulent times, one of the coping strategies of effective leaders is the establishment of cohesiveness within the system (Bisaso and Saeed 2016).

Accordingly, therefore, leadership advocates agree that effective leadership has many unique attributes differentiating it from average leadership and so are the leaders. But what is crystal clear is that traditional leadership systems like autocracy or authoritarianism or dictatorship (Lester 1975) and free rein (Lewin 1935 cited by

Russell 2011) cannot survive the current wave of leadership even at the lowest levels. This is because education has to be served in better and more sophisticated ways than before.

Many leadership settings thus have come to the forefront. Some are born of charisma (Bass 1985), transaction (Covey 1992; Martin 2015) and transformation (Burns 1978; Bass 1985; Martin 2015). Others are in line with specificity of leadership like servant leadership (Dansereau et al. 2013; Van Dierendonck 2011), authentic leadership (Avolio and Gardner 2005; Boekhorst 2015), responsible leadership (Waldman and Galvin 2008), strategic leadership (McDaniel 1997), performance leadership (Buytendijk 2011), people leadership (Hollins 2006), ethical leadership (Brown et al. 2005), visionary leadership (Goleman 2000), spiritual leadership (Baloğlu and Karadağ 2009; Erçetin 2000), implicit leadership (Epitropaki et al. 2013; Fein et al. 2015) and dissonant leadership (Goleman 2000).

Contemporary leadership styles have however blown the leadership system wide open. These reflect quantum leadership (Curtin 2011; Erçetin 1999; Erçetin and Kamacı 2008; Hall 2008), plazma leadership (Erçetin 2016) and fractal leadership (Edwards 2015; Erçetin and Bisaso 2015; Raye 2012; Shoham et al. 2005; Tripathi 2013; Vodicka 2015). These leadership settings completely change the way leadership is perceived and executed. They liberate the leader and the led at the same time. They offer flexibility and agility to leadership, hitherto an alien philosophy.

Fractal leadership therefore has become a key feature today and has been in existence either consciously or unconsciously depending on practices of those in the systems or institutions. The style or model of leadership professed by a leader is not dependent on a pronouncement or paper document. It is rather defined by the practices of the leader. Leaders who are still stuck in the jam of traditional leadership settings risk failure in the contemporary times. Those who look beyond the horizon end up in a sea of leadership choices to choose from and even lessen the leadership burden on themselves.

Furthermore fractal leadership models have the following characteristics (Erçetin and Bisaso 2015; Raye 2012):

- No top-down hierarchy.
- No scale of power since even a smaller spectrum of power or authority has similar impact on system.
- Everybody is equally responsible and accountable to organization and has authority level to preside over.
- Work is equally distributed among employees.
- All levels have desirable members.
- No overdependency syndrome.
- Every member acts and reacts upon another.
- Self-supervision or peer supervision is highly promoted.

8.2 A Conceptual View of Fractal Properties

To place this study in the fractal conceptual framework, the authors engaged definitions to the key properties in fractal literature. The key terms related to fractals and imbedded within a fractal system were fully defined. The definitions in this case reflect the technical perspectives. Fractals can only be conceptualized through fractal properties. These properties are reflected in the basic traits of fractals. The series include the following:

Self-similarity: a typical property of fractals. Scale invariance is an exact form of self-similarity where at any magnification, there is a smaller piece of the object that is similar to the whole (Glickman 2001 cited by Kara 2008).

Iteration: a repetition of process or utterance. It is also a repetition of a mathematical procedure applied to the result of a previous application (Teichler 2002).

Self-organization: a process that has some form of overall order or coordination that arises out of the local interactions between smaller component parts of an initially disordered system (Mennin 2010).

Dynamic process: a series of dynamic processes which reflect the growth and evolution of structure. It portrays the still form and important evolutionary mechanism of dynamics (Fischer et al. 2002).

Simple regularization: tuning or selecting the preferred level of model complexity so your models are better at predicting (generalizing). The models may be too complex and overfit or too simple and under-fit, either way giving poor predictions (Hoffman 2010).

Emergence: the ability of individual components of a large system to work together for giving rise to diverse behaviour (Dean 2000). The emergence in this case is neither planned nor controlled by anyone.

Co-evolution: systems exist within their own environment, and they are also part of that environment. When they change, their environment changes, and as it has changed, they need to change again, and so it goes on as a constant process (Erçetin et al. 2015). The systems in this case exist alongside other systems in the environment.

Suboptimal: a system has to be slightly better than its competitors, and any energy used on being better than that is wasted energy. A fractal system here is less perfect but effective.

Requisite variety: a repertoire of responses which help in dealing properly with the diversity of problems the world poses (Mennin 2010). A fractal cannot be in one single setting. There are many units from where responses come from.

Connectivity: this is important to survive the system, because it is from these connections that the patterns are formed and the feedback disseminated. The relationships between the agents are generally more important than the agents themselves (Erçetin et al. 2015; Mennin 2010). The fractal units here interact and connect with one another.

Simple rules: the rules that govern the function of the system are quite simple. No matter the complexity, an element of simple rules is maintained (Dean 2000; Hoffman 2010). Though complex, they follow simple rules.

Edge of chaos: this is somewhere between order and disorder or between a chaotic and complex situation. It is the best place to be for a system because there is a higher degree of “creativity and innovativeness” (Praught 2004 cited by Erçetin et al. 2015). A system in this case is close to landing into chaos. However, it is quite positive.

Nested systems: systems are nested within other. Thus, no system is absolute and self-reliant at any level (Teichler 2002). The implication is that each system is a subsystem of another.

Whether the school principals adopt a contemporary approach to their leadership practices poses a bigger question. And whether male and female school principals differ in their application of fractal leadership practices is another interesting question. Nevertheless, proving whether the school principals practice contemporary leadership styles (fractal leadership) may not be easy. This being threatened by subjectivity on the part of the school principals vis-à-vis the knowledge of fractal leadership on the part of the followers.

The idea therefore was to design a scale that could help with exploring the fractal leadership-related practices of the school principals and also enable a comparative analysis of the fractal leadership-related practices of male and female school principals in secondary schools. The study also sought to establish whether the tool can favour a comparative analysis of the respondents’ views on fractal leadership practices in terms of gender and other key demographic variables like country of respondents, school placement, age, level of education, marital status and professional experience. The procedure was considered viable in enabling an effective utilization of information obtained in order to adopt the scale for data collection and utilization in the field of educational leadership.

8.3 Method

The two largely fundamental and necessary characteristics of data collection tools are “validity and reliability”, and we attempted to develop a tool that has high levels of both. Validity refers to the extent to which the test you develop measures that characteristic that you wish to measure. Reliability is a measure of the consistency with which individuals give answers to your questions.

8.3.1 Participants

The key participants in this study were educational experts and secondary school teachers. The teachers were drawn from Turkey and Uganda in order to enable a comparative advantage in view of the perceptions or beliefs of teachers regarding their school principals’ fractal leadership practices. Equally, the demographic

variables underpinning respondent teachers were also explored in terms of country, school, gender, age, level of education, professional experience and marital status.

The tables below give a summary of the respondents' demographic variables deemed critical in the pilot study (Tables 8.1a, 8.1b, 8.1c, and 8.1d).

As per the tables, a total number of 304 school teachers were involved in the study, with 156 school teachers from selected secondary schools in Uganda and 148 school teachers from selected schools in Turkey. At the same time, 169 of the school teachers were involved in the pilot study where 135 of them were female. Meanwhile, the other tables indicate that the teachers considered owning commendable academic qualifications as well as professional experience. This put them in the right stead to respond to the items with proper knowledge and expertise.

Table 8.1a Country of respondents

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Uganda	156	51.3	51.3	51.3
	Turkey	148	48.7	48.7	100.0
	Total	304	100.0	100.0	

Table 8.1b Gender of respondents

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Male	169	55.6	55.6	55.6
	Female	135	44.4	44.4	100.0
	Total	304	100.0	100.0	

Table 8.1c Academic qualification of respondents

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Bachelor's degree	242	79.6	79.6	79.6
	Master's degree	60	19.7	19.7	99.3
	Doctorate	2	0.7	0.7	100.0
	Total	304	100.0	100.0	

Table 8.1d Professional experience of respondents

		Frequency	Percent	Valid percent	Cumulative percent
Valid	1–10 years	139	45.7	45.7	45.7
	11–20 years	118	38.8	38.8	84.5
	21–30 years	41	13.5	13.5	98.0
	31 years and above	6	2.0	2.0	100.0
	Total	304	100.0	100.0	

8.3.2 Procedure for Scale Development

A number of sources were used in developing the instrument in question. These are divided into two: some were used to develop the key themes and dimensions (constructs) of the scale and these were Shoham and Hasgall (2005) and Raye (2012). Accordingly, the fractal leadership functions adopted from Raye (2012) and used to set the apparatus for the instrument are the following:

1. Shared purpose and values that create pattern integrity
2. Universal participation in ideas and solutions for continuous improvement
3. Decision-making at functional levels
4. Leadership devoted to employee development as a source of intellectual capital
5. Competition energy directed outward instead of inward

Meanwhile, the fractal leadership functions adopted from Shoham et al. (2005) are the following:

1. Synchronization of the goals of each employee as a fractal with the system as a whole
2. The ability to cope with the environment
3. Decentralization of power and resources
4. Work processes and knowledge transfer
5. Self-development of each fractal

Other sources were used to develop the subthemes and statements (items) underpinning fractal leadership-related practices, and these included Erçetin and Bisaso (2015), Galbraith (2004), Yan-zhong (2005), Powers (2011), Binsztok and Krzysztof (2006) and Tripathi (2013). Based on the review of the literature in question, therefore, a pool of 110 items under the 10 constructs was put together. Following views of experts, some of the items were removed, and some were dully replaced with others.

8.3.3 Validity and Reliability

The results of the scale development process are premised on validity and reliability of the constructs and individual items in the scale.

8.3.3.1 Content Validity

In order to realize the validity of the items contained in the instrument, the authors submitted the instrument to three (3) educational management experts who analysed the items critically and made telling comments regarding their validity. The experts were asked to indicate against the items very relevant, relevant but needs

improvement and irrelevant. Those items which required improvement were revised accordingly in terms of grammar, arrangement, vocabulary and context following the views of experts. Meanwhile, the items that were labelled irrelevant were removed from the instrument and others put in their place based on recommendations of experts.

Then the relevant and very relevant items were subjected to a content validity test or index to establish the content validity. This is consistent with the approach used by Lartey (2007). The items were treated to a content validity index (CVI) where the following formula was used:

$$CVI = \frac{VR / R}{K}$$

where:

VR means = items indicated by very relevant

R = items indicated by relevant

K = total number of items in the questionnaire

The very relevant and relevant items were 100 out of 110 culminating into 91 %. If this is converted to a decimal point, it comes to 0.91 which is highly credible. The formula was adopted from Morgan (2008).

8.3.4 Reliability

Nevertheless, the content validity may not be enough to establish credibility of an instrument. Accordingly, a reliability test remains inevitable.

To calculate the tool's reliability, we look at its Cronbach alpha value. According to Streiner (2003), if the Cronbach alpha difference is greater than 0.9, the tool measures at an excellent level. If it is between 0.9 and 0.8, it measures at a "good" level. Between 0.8 and 0.7 is acceptable, between 0.7 and 0.6 is questionable, between 0.6 and 0.5 is poor and below 0.5 is unacceptable. Streiner (2003) contends that Cronbach's alpha is the most widely used index of the reliability of a scale. However, he also warns against that its use and interpretation can be subject to a number of errors. That is why higher values are always preferred to lower values.

8.4 Results

The results of the scale measurement and analysis process are basically in three major forms. First, the means and standard deviations of all items in the instrument were computed, and then a general reliability measure was undertaken highlighting the Cronbach alpha for all the individual items. Important to note however is the fact

that the general reliability scores may portray the instrument as extremely good, while the story may be different when examined at construct level and or vice versa. Issuing from this premise, therefore, the instrument was subjected to construct reliability tests.

The results of the scale measurement and analysis process in the pilot study are presented in the following sections.

8.4.1 Descriptive Statistics for the Items

The means and standard deviations of the individual items in the scale were computed. The results of this computation are presented in the following summary table.

Means and standard deviations of items in the fractal leadership practices scale $N = 304$ (Tables 8.2a, 8.2b, and 8.2c)

8.4.2 General Reliability Scores

All the items were measured at first, and then following the column of *Cronbach alpha if item is deleted*, some instruments were removed and the reliability was recomputed. The following tables depict the Cronbach alpha scores of the items before and after deleting some items found wanting (Table 8.3).

Based on the reliability test conducted on the items in the scale, the general coefficient of the scale is 0.981 which is extremely reliable; however items A5, A9, A10, B6, B9, B10, C3, C5, C10, D1, D9, E1, E2, F2, F6, G2, G6, G8, H1, H2, H3, I5, 19, J2 and J3 were removed as per the recommendations of the SPSS analysis in order to improve and increase the general consistency of the instrument.

The Cronbach alpha was accordingly recomputed after removing the items found weak, wanting and thus affecting the consistency levels of the instrument. The subsequent results of the recomputed reliability test of coefficient values are presented in the following table (Table 8.4).

According to the table, therefore, the final general consistency coefficient of the scale is 0.977 (considered for 75 items). This indicates that the scale is extremely reliable indeed.

8.4.3 Construct Reliability Scores

In order to ascertain whether the scale was reliable at all levels, a specific reliability measure was undertaken at construct level given that the general alpha may be misleading. The results of this analysis are thus being presented in the following table (Table 8.5).

Table 8.2a Means and Standard Deviations of Items in the Fractal Leadership Practices Scale

Item	M	SD	Item	M	SD	Item	M	SD	Item	M	SD
A1	3.2697	1.12558	B1	3.1678	1.12933	C1	3.2434	1.17733	D1	3.1546	1.16002
A2	3.3125	1.08289	B2	3.5362	1.06489	C2	3.2862	1.05634	D2	3.2993	1.05267
A3	3.0789	1.14912	B3	3.3684	1.09716	C3	3.4079	0.99739	D3	3.2632	1.09446
A4	3.1316	1.12684	B4	3.2566	1.11986	C4	3.3289	1.06722	D4	3.1743	1.10169
A5	3.4474	0.93899	B5	3.2105	1.17528	C5	3.4507	0.99048	D5	3.1414	1.06383
A6	3.5132	1.06543	B6	3.7697	0.83623	C6	3.4803	1.14592	D6	3.6217	1.00739
A7	3.5691	1.00255	B7	3.3454	1.07282	C7	3.6250	1.04042	D7	3.4408	1.10046
A8	3.4276	1.02189	B8	3.2697	1.16591	C8	3.5296	1.04949	D8	3.1941	1.10437
A9	3.5954	0.91780	B9	3.5724	0.96542	C9	3.5533	1.04347	D9	3.2434	0.97452
A10	3.6283	0.94920	B10	3.7928	0.91548	C10	3.4013	0.98678	D10	3.2138	1.04218

Table 8.2b Means and Standard Deviations of Items in the Fractal Leadership Practices Scale

Item	<i>M</i>	SD	Item	<i>M</i>	SD	Item	<i>M</i>	SD
E1	3.5954	0.96341	F1	3.2928	1.08537	G1	3.0987	1.13603
E2	3.4375	0.99969	F2	3.1447	1.17121	G2	3.5033	0.98503
E3	3.3783	1.01392	F3	3.2961	1.10707	G3	3.1974	1.09025
E4	3.2796	1.05810	F4	3.2763	1.07904	G4	3.2467	1.10877
E5	3.1382	1.09935	F5	3.3059	1.06326	G5	3.2928	1.14745
E6	3.3914	1.09668	F6	3.4013	1.16755	G6	3.5099	0.98084
E7	3.4605	1.02369	F7	3.5888	1.00757	G7	3.3388	1.09319
E8	3.4145	1.07749	F8	3.4934	1.03086	G8	3.2763	1.15868
E9	3.3914	1.03792	F9	3.1941	1.08629	G9	3.3717	1.10951
E10	3.4737	1.01440	F10	3.3586	1.07770	G10	3.3289	1.06412

Table 8.2c Means and Standard Deviations of Items in the Fractal Leadership Practices Scale

Item	<i>M</i>	SD	Item	<i>M</i>	SD	Item	<i>M</i>	SD
H1	3.2368	1.11241	I1	3.2467	1.10280	J1	3.4408	1.05764
H2	3.5000	0.98168	I2	3.2829	1.13984	J2	3.5757	0.93035
H3	3.1086	1.18212	I3	3.3092	1.12125	J3	3.4079	0.99739
H4	3.1809	1.10959	I5	3.6546	1.00286	J4	3.1447	1.13689
H5	3.3026	1.09629	I5	3.7138	0.97848	J5	3.1612	1.18726
H6	3.3092	1.10345	I6	3.5362	1.04613	J6	3.4836	1.10790
H7	3.2763	1.07290	I7	3.5000	1.07476	J7	3.4178	1.06852
H8	3.3586	1.02109	I8	3.2401	1.13375	J8	3.2664	1.09517
H9	3.3487	1.08552	I9	3.3684	1.18675	J9	3.3158	1.16280
H10	3.3322	1.10720	I10	3.4211	1.12298	J10	3.3882	1.03757

Table 8.3 General Cronbach alpha values of the fractal leadership practices scale (before deleting some items)

Reliability statistics	
Cronbach alpha	No. of items
0.981	100

Table 8.4 General Cronbach alpha values of the fractal leadership practices scale (after deleting some items)

Reliability statistics	
Cronbach alpha	No. of items
0.977	75

Table 8.5 Cronbach alpha values of the major constructs

Item statistics			
Elements	Mean	SD	Alpha
Shared purpose and values that create pattern integrity	3.3974	0.68298	0.945
Universal participation in ideas and solutions for continuous improvement	3.4289	0.71648	0.941
Decision-making at functional levels	3.4507	0.70317	0.942
Leadership devoted to employee development as a source of intellectual capital	3.2747	0.79933	0.940
Competition energy directed outward instead of inward	3.3961	0.71549	0.949
Synchronization of the goals of each employee as a fractal with the system as a whole	3.3352	0.77582	0.941
The ability to cope with the environment and change	3.3164	0.82650	0.939
Decentralization of power and resources	3.2954	0.79978	0.942
Work processes and knowledge transfer	3.4273	0.78636	0.942
Self-development of each fractal or unit	3.3602	0.81145	0.943

Table 8.6 Average reliability coefficient score for the elements in the instrument

Reliability statistics	
Cronbach alpha	No. of items
0.948	10

According to the table, the Cronbach alpha reliabilities for the constructs or sub-dimensions identified as a result of the component analysis were determined. The reliabilities vary between 0.939 and 0.949 with the lowest construct being the ability to cope with the environment and change and the highest construct being competition energy directed outward instead of inward.

However, on average, the general reliability score for the ten (10) elements is 0.948. This is reflected in the following table (Table 8.6).

8.5 Discussion

The results of this study confirm that the definitions, properties and functions attached to fractal leadership can be measured and tested. Most importantly, the scale is a valid and reliable tool for measuring the fractal leadership practices of school principals. The scale was tested at three levels:

- Firstly, the means and standard deviations of responses on individual items were computed. The results indicated that the items highly correlated to one another and were capable of measuring the dimensions for which they had been intended.

- Secondly, a general consistency reliability test was conducted for the individual items. Results here indicated that the Cronbach alpha for the items was ideal and showed a high level of reliability at 0.977.
- Thirdly, a construct reliability test was applied to the ten (10) individual constructs to establish their reliability via a stand-alone setting. Results showed that each of the constructs was reliable with Cronbach alpha scores ranging from 0.939 to 0.949.

Meanwhile, the demographic variables relevant to the pilot study were also analysed, and the key information related to the school teachers was fully presented in terms of frequencies. The major demographic variables considered in this case are the country of respondents, school placement, gender of respondents, academic qualification and professional experience of the school teachers.

At the same time, the scale is a way to measure the differences in responses based on demographic variables thereof in terms of country, schools, gender, age, professional experience, level of education, marital status, etc. among respondents. There is no gain saying in the claim that the scale is ready for use. Determining whether the scale can be used in different leadership contexts and systems other than educational institutions is deemed an invaluable and priceless addition to both theory and practice in the field of social sciences.

8.6 Conclusion

In future, educational administration should expect to introduce mathematical models and symbolic analysis to get rid of the penalties of obscurity and coarseness so as to help in development and transformation of the education system. There is nowhere more critical in trying to achieve this than leadership arena. It, in this regard, goes without saying that incorporating fractals into the process of school leadership is not only critical but an urgent necessity indeed. The proposed scale is thus a groundbreaking move in the direction of measuring the prevalence of fractal leadership practices among school principals. This is only but a simple first step, and future research should render a non-tiring effort towards expounding on the same. Future research should therefore be all about exploring fractals within unenchanted territories.

8.7 Elements and Items in the Instrument

The items in the instrument which were subjected to a test are presented below. The items reflect the school principal's practices regarding every dimension explored. Those in italics reflect the items recommended for removal by the statistical technique employed in analysis.

8.8 Shared Purpose and Values that Create Pattern Integrity

- A1 Enables all units of the school to navigate towards a common vision through shared activities
- A2 Creates a compelling team vision that guides and brings together all members of staff to work for a common good
- A3 Respects the common vision guiding all members in the school
- A4 Describes the current reality in the school honestly
- A5 *Identifies key strategies that are supported by the staff*
- A6 Involves all staff members in school programmes
- A7 Establishes effective communication with all members of the staff
- A8 Has developed a collaborative leadership team in the school
- A9 *Emphasizes the utilization of the shared purpose among the staff members in the school*
- A10 *Has established a collegial management understanding in the school*

8.9 Universal Participation in Ideas and Solutions for Continuous Improvement

- B1 Engages the followers in problem-centred leadership
- B2 Encourages every staff to participate during meetings
- B3 Provides opportunities to stakeholders in order to explain their ideas and approaches to school improvement freely
- B4 Partners with academicians to investigate ideas and approaches that can improve the school
- B5 Adopts professional communication among the staff in order to obtain ideas and approaches to develop the school
- B6 *Is good at sharing key school development strategies with all stakeholders*
- B7 Establishes effective consultation programmes with all key stakeholders in the school
- B8 Encourages the use of free digital tools in order to improve performance in the school
- B9 *Encourages and supports teachers to manage school-related data for use in school development programmes and transformation*
- B10 *Is open to ideas of different people that can help in school improvement*

8.10 Decision-Making at Functional Levels

- C1 Gives opportunity to people in the school to execute their responsibility without interruption
- C2 Takes immediate decisions regarding key staff needs

- C3 *Takes effective decisions regarding improvement of workflow processes*
- C4 *Allows staff to decide on which resources are critical to the school*
- C5 *Takes quick decisions in relation to handling of emergence cases in the school*
- C6 *Allows decisions to be taken at individual level*
- C7 *Encourages decision-making at committee level*
- C8 *Involves teams in taking key decisions that aid school progress*
- C9 *Allows decisions to be taken at departmental level*
- C10 *Uses analogy in decision-making to achieve compatibility between the decision and the situation at hand*

8.11 Leadership Devoted to Employee Development as a Source of Intellectual Capital

- D1 *Supports development of staff as educators and as leaders in the school system*
- D2 *Demonstrates new knowledge for school improvement to the staff*
- D3 *Shows followers how to apply and integrate the new knowledge in their various departments*
- D4 *Has established professional learning communities to improve teachers' performance*
- D5 *Teaches employees to network as a way of developing knowledge and ideas for school improvement*
- D6 *Gives staff the right experiences to develop their competence and improve their performance*
- D7 *Attaches junior staff to senior staff for guidance and growth*
- D8 *Acts as a mentor to the staff so as to improve on their competence*
- D9 *Creates an ownership mentality within the staff at the school*
- D10 *Organizes professional development programmes for staff to improve on their performance*

8.12 Competition Energy Directed Outward Instead of Inward

- E1 *Encourages school members to show responsibility for the work processes carried out for the benefit of clients*
- E2 *Exposes areas of potential competition to all staff in the organization*
- E3 *Uses competition policies to determine allocation of tasks to staff in the school system*
- E4 *Uses competition policies to determine monetary incentives to the staff*
- E5 *Uses competition strategies to determine promotion of staff*
- E6 *Uses competition to determine leadership status among staff in the school system*

- E7 Uses competition as a yardstick for support of developmental programmes among staff and departments
- E8 Offers regular advice on competition among staff
- E9 Encourages voluntary initiatives that promote competition among staff
- E10 Takes the lead in planning competition programmes among staff

8.13 Synchronization of the Goals of Each Employee as a Fractal with the System as a Whole

- F1 Asks staff to write down their goals and compares them with those of the school
- F2 *Probes needs of all staff members and aligns them with school needs*
- F3 Asks people in the school to give regular feedback about what has been done to be used in school planning
- F4 Investigates team goals and aligns them with those of the school
- F5 Tries to harmonize the school goal with those of individuals
- F6 *Shows respect to personal goals in relation to that of the school*
- F7 Monitors teachers' activities in order to establish their goals and interests in relation to the school
- F8 Assesses teachers' cliques as a way of understanding their goals and interests
- F9 Builds a team climate in order to bring out each member's goals and interests
- F10 Evaluates previous works of teachers to establish their goals and interests

8.14 The Ability to Cope with the Environment and Change

- G1 Best functions in a turbulent environment characterized by fast dynamics of change
- G2 *Intervenes within the environment to allow stability in the school*
- G3 Makes sure that staff are able to recognize disorder in the organization
- G4 Makes sure that staff are comfortable with change both turbulent and easy
- G5 Forecasts future issues and trends within the school
- G6 *Responds to crises in the school naturally*
- G7 Communicates every challenge to the staff to prepare them for change
- G8 *Encourages flexibility in actions and attitude among the staff which prepares them for the hard times*
- G9 Maintains a strong network among the staff in order to prepare them for change
- G10 Spends time and other resources in planning for change

8.15 Decentralization of Power and Resources

- H1 *Guarantees a high level of freedom in resource utilization to the staff*
- H2 *Uses flexible forms of work that allow decentralization of power and authority*
- H3 *Allows fiscal or financial decentralization in the school*
- H4 Allows power and resource decentralization to staff at various levels
- H5 Considers gender issues in decentralization of power and resources
- H6 Plans for communication decentralization to allow effective flow of information
- H7 Institutes openness and transparency in the decentralization programme
- H8 Develops strategies for capacity building to allow decentralization in the system
- H9 Exposes staff to various technical skills required for decentralization
- H10 Develops strategies for coordination and networking in decentralization of power and resources

8.16 Work Processes and Knowledge Transfer

- I1 Activates and evaluates existing knowledge as a foundation to new knowledge
- I2 Allows full access to dynamic flow of information
- I3 Uses knowledge transfer to continuously transform organizational structures
- I4 Encourages collaboration among staff in work processes and knowledge transfer
- I5 *Conducts monitoring of work processes and knowledge transfer to make them easy*
- I6 Organizes workshops for training and development of knowledge among the staff
- I7 Develops strategies for consultancy and research to improve on the knowledge and work processes of staff
- I8 Provides coaching and mentoring of staff to improve on their knowledge levels and work processes
- I9 *Encourages networking of staff with key people for ideas that can improve their knowledge and performance*
- I10 Promotes student projects and placements to improve on knowledge levels of students

8.17 Self-development of Each Fractal or Unit

- J1 Encourages self-organized and autonomous groups
- J2 *Influences learning processes, self-development and improvement of members' qualifications*
- J3 *Encourages staff to organize themselves into development-oriented units to improve on qualifications and learning processes*
- J4 Creates an excitement for learning which improves on staff competence
- J5 Organizes skills development programmes to improve staff competence in various fields
- J6 Facilitates school units in order to improve on their performance
- J7 Develops strategies towards involvement of parents as a key unit of the school
- J8 Engages strategies towards development of a teaching model among the teachers
- J9 Strives to improve on the awareness and attitude of staff members
- J10 Develops strategies aimed at building self-confidence among staff members

8.18 Key Terms and Definitions

Fractal: a curve or geometrical figure, each part of which has the same statistical character as the whole. They are useful in modelling structures (such as snowflakes) in which similar patterns recur at progressively smaller scales and in describing partly random or chaotic phenomena such as crystal growth and galaxy formation.

Leadership: the action of leading a group of people or an organization or the ability to do this. It is thus the influential increment over and above mechanical compliance with routine directives of the organization.

Fractal leadership: focus is no longer a hierarchy system but more of a web design, encouraging people to highlight their strengths and being confident enough to make a difference.

Validity: the quality of being logically or factually sound: soundness or cogency. It can also be referred to as the state of being legally or officially binding or acceptable. According to the free online dictionary, validity is described as the degree to which a research study measures what it intends to measure. Validity encompasses the entire experimental concept and establishes whether the results obtained meet all of the requirements of the scientific research method.

Reliability: the degree to which an assessment tool produces stable and consistent results. A tool is considered reliable if we get the same result repeatedly. Reliability refers to stability, accuracy and precision of measurement or the potential of the results to be replicated. Reliability is both internal and external.

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Chapter 9

Talent Management Practices A Trajectory and Ingenuity in Higher Education Institutions: A Meta-analysis Review of Literature



Farooq Miiro and Azam Otham

Abstract The purpose of the article is to identify talent management practices in higher educational institutions. Meta-analysis literature review was undertaken in order to evaluate the role of talent management in successful attainment of institutional staff quality performance. Through literature review, it was found out that talent management has its share in modern organisational human resource management practices. The study revealed that human resource undoubtedly is an unpredictable resource with multi-coloured responses and attributes towards work; if these attributes are truly discovered, developed and utilised well, then they definitely have an added value on institutional total quality services. The paper also contended that there is a need to investigate its true practice currently embarked on in operations so as to find a suitable theory for the subject and its implication for organisational transformation and excellence.

9.1 Introduction

With the globalisation trends and the influence of post-modern knowledge economy that have been engulfing and merging the world into one village, human life has become unstable and unpredictable. Every day, the world experiences new dimensions and forces that call for swiftness in human resource management from the known traditional approach to organisational elites. These forces whose clear direction is not well defined surface in human life with unclear

F. Miiro (✉)

Islamic University in Uganda, Mbale, Uganda

International Islamic University Malaysia, Kuala Lumpur, Malaysia

e-mail: miirofarooq@gmail.com

A. Otham

International Islamic University Malaysia, Kuala Lumpur, Malaysia

ways through which these turbulent moments in the society should be addressed, for example, conflicts, climate changes, health and water management, to mention but a few.

Moreover, when such issues arise, normally the ball is thrown to higher education institutions to find means through which sanity can be restored in the society with respect to human rights. These paradigm shifts cut across both developed and developing countries. Thus, to find a suitable and sustainable culture of the present generations and the future, the education system has begun to realise the need for talented human resources who are agile, privy and astute in nature with an aim of addressing the millennial demands using higher education as a tool for real-life solutions (Sahney et al. 2004). The complex and heterogeneous world that calls for massification and internationalisation of higher education institutions can be attributed to technological hastening and global village that demand for intellectual stature.

Looking at the above given explanations, there is no doubt that the only way to address global work force sustainability growth in higher education institutions is through talent management practices. This is because the way of thinking among institutional leaders to survive in this global era is far different from yesterday in terms of capacity building and the knowledge economy issues. It is equally important to note that the well-trained and skilled staff are the only pivotal point that can be able to produce graduates with vast knowledge. The globalisation goals and education standards require a flexible human intellect that can easily handle dynamism and millennial issues through quick and adjustable decision-making implementation (Fraynas et al. 2006; Barsade and Donald 2007).

However, the issue of finding and grooming talented human resources is still an enormous challenge faced by higher education institutions due to the fact that there are two paradoxical situations experienced (Iqbal et al. 2013). There is worldwide surplus of talented human resources but with a shortage at local institution level. This is still worsened by the scarcity of talented young people and abundance of aged people within the education arena. For instance, many universities have more than enough qualified staff, whereas others are understaffed with fewer specialists to boost the institution's corporate image and governance.

That notwithstanding, nowadays, universities are still lagging behind in terms of attracting young people who are talented and skilled. This is attributed to the nature of their life whereby the young graduates are harder to locate and nurture, fragile, too demanding and easier to dissipate and lose (Hernaus 2008). Other studies so far done posit that global companies and multinational firms virtually have no sufficient talent and potential employees to drive their aspirations and strategies ahead (Ready and Conger 2007; Bjorkman et al. 2012). Thus, it is against this background that the paper aims to analyse previous studies' findings on the same matter to establish the role of talent management practices towards higher education transformation so as to compete in the global economy.

9.2 What is Talent Management Practices (TMP) and Its Challenges?

The tempestuous world and its continuous influences appear to suggest changes in beliefs, attitudes and institutional psychology demonstrating that there is a need for transfiguring them so as to cater for concerns of total quality management within higher education institutions (HEIs). However, this point of view looks not to be achievable without talented staff who can cater for curriculum redesigning and quality services. This is because the nature of past university with its traditional approaches towards staff development and its performance cannot possibly withstand the challenges of the Internet that students face in this century and the future generations to come (Scott 2000). In order to play a leading role in addressing transformation challenges, HEIs must reflect on the current situations in the world as a basis to underpin the promise of every child and the generations to come.

Today's generation demands require masses to be holistic and well-developed in terms of critical thinking, communication, innovation, problem solving, entrepreneurship and teamwork so as to fit in a mobile, diverse and non-boundaries culture and place (Al-Atari and Rosnani 2015; Schuler et al. 2011; Scullion et al. 2010; Stahl et al. 2012). As a result, many higher education institutions have moved from the traditional way of managing university business to new direction of focusing on talent management in order to cater for both institutional and stakeholder's interests (Collings et al. 2009; Garavan et al. 2012; Vaiman et al. 2012).

The issue of talent management can be traced way back to old days of 1865 (Simonton 2011); however as time went on, changes and demands of different styles in organisational management came into existence questing for improved services towards workforce reward management. The terminology has also been affected with the changes of the time to fit the broader meaning of what should entail human resources towards revamping organisational performance and image. Talent management is a new phenomenon in the field of millennial human management and education. The aim is to ensure that educational institutions remain relevant to out-compete their sister institutions in the world market through skilled staff that can uphold succession, career planning and growth of both human resources and the institution (Afiouni 2009; Allen 2004; Cappelli 2008).

The study done in the early 1990s, by McKinsey termed as "war on talent", brought new life and face in the field of managing employee shortages towards competitive advantage, organisation excellence and sustainability (Ingham 2006; Tarique and Schuler 2010), thus resulting into several phrases coined from the traditional human resource management systems so as to retain and cut shortages of employees for future quality sustainability. For instance, terms like talent acquisition, retention and management, attraction and development were all brought on board, hence leading to global talent management outcry so as to enhance organisational transformation of employee concerns in order to fit in the competitive knowledge economy and changes in the world market.

Talent management is all about planning, recruiting and developing systematic ways through which employee training and career growth can be enhanced and sustained towards achievement of educational institutional goals (Othman and Sumardi 2009). The reason behind these constraining efforts by an institutional leadership is to ensure that the mission and vision of the institution is realised through applicability and flexibility to address global challenges (Annakis 2014). The excellence of higher education institutions can be observed through rebranding and reshaping the economic transformation of a nation through inventory of new academic programmes, research and facilities that attract internationalisation (Isahak 2007).

As stated above, the term talent management practices is still in its early stages with no clear-cut boundaries of what should entail. However, many studies so far done in these few years have tried to come up with several detailed meanings. For example, Collings et al. (2009) refer to it as a strategy of filling key positions of organisational chart with suitable persons of high potential performance calibre to enhance organisational performance excellence in the dynamic competitive environment. This can only be achieved through continued development of employees for sustainability and commitment towards organisational transformation. It is also important to note that key vacancies do not only imply top management positions but they combine all influential parts of the systems that enhance organisational development since both leaders and managers co-work towards achievement of targeted goals.

Since talent management practices involve salient key issues of talent identification, talent development, talent culture and competencies, Davies and Davies' (2010) model on talent management ensures succession planning and functioning systems and structures. There is no way out how higher education institutions can distance themselves from investing in human power for sustainable leadership and quality services management. However, there are still some disturbing issues on what should entail this terminology (Lewis and Heckman 2006). In a survey study conducted in the UK about human resource professionals, the findings revealed that 51% knew what talent management practices is all about whereas 20% only were vividly operating in a known definition by CIPD (2006). Hence, many schools of thought are defining it in a manner that suits their research coverage due to lack of theoretical framework to guide these definitions (Boundreau and Ramstad 2005).

Talent management can further be viewed as potential skilful employees for sustainable competitive advantage (Becker and Huselid 2006). It is about succession management planning and strategies so as to maintain organisational excellence. Talent management in detailed meaning is viewed as the process of developing and attracting skilled employees to boost the institutional vision and mission. This is done through identifying the gaps within influential positions purposely for succession planning and recruitment. It is implemented within higher education institutions as a motivating factor in order to retain and attract staff commitment towards organisational transformation (Gutheridge et al. 2008; Ringo et al. 2008).

Nevertheless, other authors define it as identification of good things to invest in good people within an organisation to enhance both staff and institutional develop-

ment within them capitalising on their strength (Garrow and Hirsh 2008). It is embedded within a combination of sharp minds, leadership skills and ability to attract and inspire young blood towards better service delivery (Chuai et al. 2010). Even though studies and scholars have divergent views on the definition of what talent management practices should entail, they all share certain aspects in common. For instance, the goal of talent management is to attract, recruit, develop and retain employees for creating succession plans so as to achieve organisational goals through staff commitment and use of tactical skills and experience (Goffee and Jones 2007; Ingham 2006; Cheese et al. 2008).

Given the fact that so far there is no propounded theory on which all scholars zero on to define talent management and practices, the researchers summarised their definitions within one statement to fit this study. Talent management practices mean planning and identification of potential personnel for recruitment and development to transform organisational performance through retention and commitment secured from the staff with in higher education institutions. On the other hand, many studies conducted on this topic in both academic and business sectors have found divergent results still on this matter. The review below is for both studies done in business and higher education sector.

9.3 Findings of Studies Done in Higher Education Institutions

In a study done on Malaysian universities by Annakis et al. (2014) with a sample size of 166, 80% response rate, the findings revealed that four factors emerged explaining 68.6% of the variation, with KMO value of 0.812, which exceeded the recommended value of 0.6. This is by far the threshold required. On this basis, talent management competency levels for academics are significantly higher if there is integration with the known HR systems, for example, identification of value, team measurement and individual performance, etc. In the same study, findings revealed that there was a relationship between talent management practices in terms of talent identification; therefore, talent development and talent culture seemed to play a critical role towards institutional transformation.

In another study done in Africa, it is evidently clear that from an empirical study done in Botswana by Rudhumbu (2014) using 300 samples of both administrative and teaching staff, 62% of higher education institutions within that country were providing staff development programme opportunities to enhance their skills and knowledge. Another 42% agreed that their institutions were able to attract good personnel to occupy important positions of influence, and 33% had won staff commitment whereas 47% were performing well.

However, disparities were still experienced from some human resource departments where 57% did not work hand in hand to support in identifying key institutional talent. Moreover, elsewhere in the world, respondents felt that talent

management practices are important for organisational performance and development. Whereby, there are particular positions that are special and require special talent competencies to boost organisational directions and achievement. Competency mapping can improve recruitment and selection through identification of the key personnel. Talent acquisition through competency mapping can also be practised in educational sector to ensure right talent at right place. This study was done in India on 50 faculties as sample in higher education sector (Nair 2012).

The study conducted in India by Tiwari and Shrivastava (2013) on the managers and subordinates with a P value of 0.087 and 0.056, it was found out that there was a significant difference in the impact played by each of TM practices towards level of employee's satisfaction and achievement of organisational targets.

Barkhuizen et al. (2014) in his survey conducted with the main objective of finding out the determinants of the relationship between talent management, work engagement and service orientation of support staff in a South African higher education institution suggested that all the talent management practices are poorly applied for support staff. The same study states that there were gaps between the current applications and the perceived importance of between talent review process, retention practices, talent development and management commitment. However, the same study found out that there is a significant positive relationship between some talent management and work engagement dimensions. This was based on the value at a 95% confidence interval level ($p \leq 0.05$) that was attained in the findings.

Nevertheless, a critical review done on some studies by Lyria (2013) in Kenya, on the role of talent management on organisational performance in companies listed in Nairobi security exchange in Kenya, reveals that talent management studies had no direct link talent management with the organisational performance. In the paper presented by Waheed (2012), he alluded to the view that many organisations still act in traditional ways when it comes to human resource management practices and organisational manpower issue. Moreover, the Y generation management challenges are too demanding in that to overcome them, it can only be addressed through talent management at the moment (an internal "talent pool" within the organisation), and he proposed four approaches to use that other studies also suggest.

In a review conducted by Barkhuizen et al. (2014) while investigating the relationship between talent management, work engagement and service quality orientation of support staff in higher education institutions, a sample of 60 support staff was done in the quantitative manner using exploratory factor analysis and Cronbach alpha coefficient. The findings of the study reveal that the mean value ranged between 1.7477 and 2.9372. This meant that TM practices seemed lacking and problematic in these institutions. Moreover, the respondents indicated low levels of experience towards TM practices. Therefore, the significant difference existed between their practices and what the ideal situation should be towards institutional performance.

Moreover, this enormous challenge was more felt due to Janus faces and situation experienced, whereby young talents are so scarce and unstable in station of work coupled with high demands from the employer, while the existing human

resources are ageing and nearing the retirement moment, hence calling for investigation of more scholarships. For instance, in 2010 alone, 303,000 scholarships were awarded for the same effect.

In the USA and Canada, study findings seem to not be so different from what has been established elsewhere in the world. HANOVER research (2010) in its findings about best practices in HRM and TM by higher education institutions reveals that higher education respondents lagged behind in key areas of implementing HRM practices. However, there were hopes that if these institutions change their style of operation to the desired environment, efficient ways to cope up with the time and address the stressing factors of shrinking budgets and ageing workforce.

On the contrary, Nutakki et al. (2015) in their study done on relationship between TM and psychological contracts in HEIs in India, data was collected from a sample of 400 employees, the Cronbach alpha measured 0.092 after exploratory factor analysis and regression analysis, the results reveal there is a correlation between TM practices and psychological contracts. Meaning the way the two are handled by human resource officers strengthens or weakens the practice. However, the demographic issues were not considered to establish its influence in the whole process.

The qualitative study design findings got from 40 people through interviews and observations insinuated that there was no systematic process to management of talents. The onus was left to ownership of the institutions to influence the practices through advertisements and recommendations from the referees. This meant that the issues of career planning and succession planning skills were found to be at disarray due to the fact that skills development and retention are not done within the institution itself. On the positive side, it can be said that performance appraisal was done but still at a level of implementation. Through observation, it was deduced that these institutions cannot perform on the world stage market due to low levels of employees' standards.

In addition, in South Africa, the situation seemed to give similar results as per prior reviews done though varied in population and the place where the quantitative study was done. This was an experimental cross-sectional survey with an aim to establish how relevant is TM in South African local government institutions. The analysis was done using ANOVA and MANOVA on a sample population of 578 in which 56.2% were females, with 74.4% having working experience on the same job. The findings disclosed that TM practices were not given due attention as seen in previous studies. The study done using exploratory factor analysis provided 66.88% with 95% confidence of variance interval greater than p value ($P < 0.05$) (Barkhuizen 2014).

Another study on the similar variable with the main objective of exploring the application of talent management practices in local government institutions confirmed that talent practices were not receiving sufficient attention in the public sector due to its poor application and the lack of commitment from the management. The same survey revealed that demographic factors determine a significant difference on their demographic characteristics. This was done through exploratory factor analysis with 66.88% and component matrix. The result of sampling adequacy was

0.927. MANOVA had a lambda value for age equal to 0.911 [$F(32,2088.900) = 1.667$, $p < 0.05$].

What is more, a qualitative study was done still in Kenya by Gakure et al. (2013) with an aim of finding out whether reward management influences talent management in Kenyan universities. The finding revealed that universities had attracted committed staff and managed to retain them. However, challenges were still in place due to inequality and unfairness of the same reward system used. This system seemed to be affected by the payment and recruitment of part-time staff. In the USA, the population studied still revealed that the best way to improve organisational performance was through talent management. This was generated from a sample composed of 61.4% males and 38.6% females. The study aimed at establishing the contribution of awareness and development of talent management within construction companies. The same study reveals that effective and skilled human capital can be enhanced through talent practices to increase productivity and quality services both on the side of the organisation and customer. This can be done through collaboration in terms of sharing knowledge and teamwork.

In addendum to the above, in 2014, a study was done by DA magazine and Cornerstone on Demand, with the purpose of establishing how the districts were managing the biggest challenge of human resources and how they could address the issues of the time. The survey question of multiple choice collected from 316 revealed that 25% of the principles, 26% administrators and 19% superintendents were still handling talent in a traditional manner. Whereas 49% and 15% were satisfied with the mode of operation even though they were unsure of the alternative for unified management practices, 28% of the district used talent management systems, and 80% were either concerned or highly concerned about the teacher quality and student outcomes.

Similarly, in a study done in India on embryonic need for talent management systems in technical institutions, in their qualitative study which aimed at exploring growth of an organisation are dealing with this new talent context, their findings deduce that talent availability and quality are now tangible imitation to strategic growth of an organisation. This is because there is a clear shift from its full establishment; however its barriers were also found perhaps to be human resource itself who work at risk fighting the challenges than embracing it in the UK.

A study conducted by Jacob et al. (2014) has the purpose of examining the factors that influence the poor retention rate of academic staff at selected universities in South Africa. A population sample of 80 academic staff with more 10 years working experience was surveyed. The results revealed that the factors motivating staff involved both intrinsic and extrinsic issues which made respondents to consider an academic profession as a meagre-paying profession, of which its resources influence with little opportunity for growth. However, strings were attached on the salary as a concern, even though the profession is considered as a superior reputation in society. More so, many academics believe that a heavy workload makes it difficult to meet promotion requirements and poor mentoring and capacity development, which would benefit from academic support, unambiguous promotion guidelines

and clear, homogenous salary packages, hence killing the whole agenda of talent development practices. The same study revealed that the student/lecturer ratio was quite impressive at comparisons among 23 universities; however, when it is cascaded at the individual university level, the matter of fact is that the challenge is different, as lecturers are overloaded depending on the department or programme headcount. Therefore, this whole matter reflects the impact of academic staff recruitment and retention.

9.4 A Leaf Borrowed from the Findings of the Business Sector

However, in their study done on 17 leaders of state-owned enterprises in China revealed that members had knowledge about TM leadership practices even though there was a gap in practice and actualisation of its systems. This qualitative study done with interviews and grounded theory approach to interpret and analyse data further reveals that TM practices require to be demonstrated at all levels within an organisation for better quality performance and quality services delivery.

Other studies, for example, Kibui (2015), with the main objective of establishing the effect of talent management on employees' retention in Kenya's state corporations, the study finding generated through descriptive survey using exploratory factor analysis from 382 sample population with a value of 0.951, divulge that organisational processes related to retaining high-performing employees, with competencies, are now a focal point, so as to help organisations become successful and understand where to focus resources such as incentives, coaching and training programmes. Moreover, Namusonge, Kibui and Gachuanga's study findings on the Role of Talent Management on Employees Retention in Kenya in 2014 on 299 employees seemed to be alarming, whereby it was discovered that 38% of talent staff left government jobs in favour of private enterprises. However, in their conclusion it was observed that most of those who had gone away were quality staff, meaning that the success of any organisation mostly depends on the talented human resources.

Farahas' study in 2014 proposed a model that could provide possible solutions to Saudi Arabia's tourism sector. The sector seemed to have had challenges rotating on talent management and organisational performance. Therefore, to optimise turnover quality performance, he suggested a model for talent practices.

Equally in another study done by Iqbal et al. (2013) with an aim of establishing the relationship between different talent management activities and traditional human resource management practices, data were collected from 130 HRM professionals in 25 companies and analysed using regression and mean, standard deviation and correlation results. Results revealed reward management that ($r = 0.43^{**}$, mean = 3.48, SD = 0.82; $P < 0.05$) talent management practices ($r = 0.588^{**}$, mean = 3.51, SD = 0.73; $p < 0.05$) and workforce planning ($r = 0.611^{**}$, mean = 3.67, SD = 0.71; $p < 0.05$) have a positive relationship with organisational performance,

whereas, employees' emotional stability mediates relationship between TM practices and OP (organisational performance) ($r = 0.65^{**}$, mean = 3.51, SD = 0.72; $p < 0.05$); employees' emotional stability mediates relationship between work.

In the same study, results reflected that talent management practices ($r = 0.588^{**}$, mean = 3.51, SD = 0.73; $p < 0.05$) are positively related with the performance of organisation. Further still employees' emotional stability mediates relationship between TM practices and OP ($r = 0.65^{**}$, mean = 3.51, SD = 0.72; $p < 0.05$). This meant that there is a significant relation between skill full, competent staff and organisational performance. Therefore, the impact of grooming talents should not be underestimated by higher educational institution authorities due to its outcomes for the future betterment and sustainability of qualified staff.

9.5 Summary of the Findings

From the literature reviewed related to talent management practices, the study highlights the major best practices of the system, and some of the literature has been on talent and job satisfaction, organisational performance, retention, and turnover reward management but all trying to allude that talent practices have a lot of influence on the employee and organisational performance. The best practices are highlighted as enumerated in the studies reviewed sticking on Davies and Davies (2010); talent identification is the process and activities defining and discovering the required human resources needed for improved organisational performance. It involves recruitment of high calibre people, who will be enthusiastic and highly capable to deal with global challenges facing the institutions without affecting its values, identity, beliefs and mission.

Talent development can be concluded as a process of enabling learning and skills development in line with the organisations' development agendas so as to occupy the leadership vacuum. Institutions inject capital into staff professional development in line with the university mission and vision with the view of meeting quality services.

Talent culture: these are planned activities to enhance replacement of aged and retiring staff. Institutions prepare staff who are loyal and committed in the form of retention with the purpose of developing them to step up forces to enable the institution to achieve its agendas.

9.6 Recommendations

Basing on the challenges cited above, higher education institutions need to lay out strategies of addressing talent management through the following ways.

Collaboration and networking with one another to boost capacity building. This can be done through the use of links between both developed and undeveloped universities, local and international, to sustain future quality demands.

Leadership also needs to come to grips with talent management strategy since it is the only way through which sustainability and stability of higher education institutions can survive in the world market.

9.7 Conclusion

In today's competitive environment, higher education institutions should constantly invest in human capital so as to remain relevant in the changing world market. It requires both the top management officials and HR professionals to co-work so as to attract, hire, develop and retain high potential young talents for leadership sustainability and improved organisational quality services. However, management should also put into consideration the fact that talent management is chaotic in nature, hard to maintain, fragile and scarce. This is because young blood with skills and abilities are unstable, easy to lose and too demanding. This has not only constituted a major obstacle in TM process for organisational stability but also has led to systems failure in terms of quality control and customer service delivery. Future-oriented higher education institution (HEI) leadership must review their policies through examination of the available workforce trends so as to keep on the stage of the world market economy. The influential unstable trends include changing demographics and global supply mechanisms, summed up with scarcity of younger talent and abundance of older workforce and growing migration of talented individuals which must be approached differently basing on the locality and status of the institution in order to achieve sustainable competitive success and transformation.

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Chapter 10

Student Engagement in Active Learning and Social Environments in New Generation Universities: Experiences of Students



Şefika Şule Erçetin and Şuay Nilhan Açıkalın

Abstract The rise of globalization has brought an unprecedented wave of change whose major effect has been witnessed in a number of paradigm shifts within the education system. Such shifts have meant that the old educational institutions are no longer considered viable in regard to causing transformation of the education system. Consequent to this, the universities have taken on a new dimension in the shape of new generation universities. These universities are characteristic of active learning and social environments that transform the students via the cognitive, affective and psychomotor domains to inform a holistic development. Nevertheless, for such to be realized, academic staff in these new generation universities ought to partake in student engagement in the active learning and social environments by making and enabling the students to play a lead role during the teaching and learning process in order for them to control and be responsible for their own destiny. Issuing from the above premise, this study was done to establish views of undergraduate and post-graduate students at Hacettepe University in Ankara, Turkey, regarding the practices of academic staff geared towards realizing student engagement in active learning and social environments. This was done basing on five major dimensions: making student learning meaningful, fostering a sense of competence and autonomy, embracing collaborative learning, establishing positive educator-student relationships and promoting mastery learning orientations. Findings indicate that some dimensions were found to be highly successful like making students' learning meaningful as well as promoting mastery learning orientations, while some were found to be moderately successful like fostering a sense of competence and autonomy as well as establishing positive educator-student relationships. One dimension,

Ş. Ş. Erçetin (✉)
Hacettepe University, Ankara, Turkey

Lancaster University, Lancaster, UK
e-mail: sefikasule@gmail.com

Ş. N. Açıkalın
International Relations Department of Middle East Technical University, Ankara, Turkey

Lancaster University, Lancaster, UK
e-mail: suaynilhan@gmail.com

embracing collaborative learning, was found to be at a low level of success. Equally, some statistical differences were found in students' demographic variables like gender, age and level of education in the dimensions of making students' learning meaningful, fostering a sense of competence and autonomy, embracing collaborative learning as well as promoting mastery learning orientations.

10.1 Introduction

Education is virtually “the most influential social institution in any society and virtually the most important in human development”. This is because education, in general, transmits a “common set of beliefs, values, norms, and understanding” from generation to generation. It thus remains one of the institutions the human race has created to serve certain development inclined needs, but like all human institutions throughout history, it responds to certain dictates within the environment. One of such dictates is in the form of paradigm shifts brought to bear on education as reflected in democratization, globalization and transitional exams between academic levels, organizational structure and management processes and schools as strategic institutions. This implies that we are living in a changing world at all times. In the changing world, there have been events affecting the world constantly. Some of the events in question are directly related to our lives, while others are related to life in general. Suffice to say, this is a routine and if we look at the history of the world from these lenses, everything is changing and perhaps nothing is changing. We are all living in change itself. The way the world has evolved to come into how we know it today has been through a continuous process of change. This has largely been a reflection of lifestyles, destinies as well as paradigms and viewpoints.

As living organisms, all kinds of institutions including higher education institutions are affected by the events that lead to change in the world as well as people. Since the 1980s, three major developments have affected the higher education institutions landscape; these are globalization, growing requirements for lifelong learning and fast and intense developments in information and communication technologies. In fact, these forces have not only shaken up almost all sectors of the economy but have equally exacerbated competition as well as mobility within the confines of higher education.

The key dimensions of this growing globalization in higher education can be summarized in the following analysis:

The ever-more-intense recruitment of students and faculty; the swift spread of university campuses; the well-financed efforts to create world-class universities, either by upgrading existing institutions or by building brand-new ones; the innovative efforts by online universities and other for-profit players to fill unmet needs in higher education markets around the globe; the closely watched rankings by which everyone keeps score. (Wildavsky 2010)

In this worldwide marketplace, therefore, more and more people will have the chance, slowly but surely, to advance based on what they know rather than who they

are. This renders traditional educational institutions like universities archaic and requires a reconceptualization of the universities into new generation universities equipped with the potential to ride the tide of change. The challenges brought to bear on the education system by old university systems are summarized in the following analysis:

A dramatic worsening of staffing for teaching and research, with implications for both capacity and the conditions underlying quality; a lop-sided developmental framework in which priority goes to a narrow band of marketable courses generating an equally narrow range of private goods, at the expense of teaching and research capacity and quality across all disciplines; an overall level of public investment in higher education, and rate of growth of domestic participation, increasingly uncompetitive in world terms. (Marginson 2011 cited by Reid and Hawkins 2003, 7–8)

This, therefore, means that change is not only a necessity but an urgent need. Bokor (2012) argue that the drivers of change are “contestability of markets and funding, democratization of knowledge and access, digital technologies, integration with industry and global mobility”. They, thus, opine that there is need for development of a new model in which there are quality and academic excellence, academic talent, workforce structure, commercial skills, change management, speed levels compatible with market settings and relationship with government. This new model is only possible with new generation universities.

10.2 New Generation Universities and Their Features

The universities coincide with the generation of people occupying the world as of now and especially born between 1982 and the 2000s. Such people have attracted the attention and interest of researchers. According to Veen and Staalduin (2010), Homo Zappiens is the new generation that is growing up with modern communication technologies shaping their views on the world around them. Needs, expectations, lifestyles, coping strategies and experiences are different, because they are Homo Zappiens or the new generation, so their universities will be also different; we call these universities “the new generation universities”. As each new technology and each new generation of learners arrives, researchers and educators continue asking what these new digital resources for children’s informal learning might mean for future schooling (Facer 2011).

This explains why these new generation universities are characteristic of many features. Reid and Hawkins (2003) offer “expectations of new generation universities” as “catalysts for regional development, pathways to higher education for students of diverse backgrounds, developing innovative and applied research which addresses contemporary social and economic issues, and being at the forefront of education across a spectrum of emerging professions” (p. 8).

Meanwhile, Selingo (2013) also reflect on the characteristics of new generation universities. They postulate that the said universities are in distinct state context, house differences in funding and differ in terms of local demographics and gover-

nance arrangements. Meanwhile, they are also known for intentional student-focused vision, fast and large-scale innovation, going online, growing enrolment, scaling technology to serve students, changing faculty perceptions about role of education, creation of partnerships, student and staff transfer programmes as well as diverse revenue sources.

The most critical characteristics of new generation universities are that they are intelligent organizations. Features of new generation universities can be viewed or conceptualized from the following perspective:

1. *Higher education in the future will be very internationalized* with intensive networking among institutions, scholars, students and with other actors such as industry, that is, a system based on collaboration than on competition.
2. *Changing student profiles*. New generation students are completely relaxed about online education. Nondigital systems seem fairly historical to them. The first are personal characteristics, such as autonomy, responsibility, curiosity, self-efficacy (Keegan 1996) and “an internal locus of control” (Rotter 1989), which lead the learner to persist in educational endeavours (Cavanaugh et al. 2004). The second set are environmental variables such as study environment, access to technology, access to support and materials, the learner’s role identification and sense of connection or isolation, and the third are learning characteristics (Burns 2011) among future students.
3. *Traditional models of instruction are now history*. New instruction models must be developed, so qualifications of teaching staff in the future will also be different.
4. *Changing Profiles of Leaders*. It has been argued that the leaders of the future will be ones who can manage change and prepare their staff for it (Erçetin et al. 2013). According to Erçetin (2000), leaders “should be able to accept the problems emerging during the change or challenge as normal and natural, find different solutions to different problems, motivate the school members to create new ideas and behaviors, developing an atmosphere containing innovative and creative thoughts and actions, as well as taking risks for the organizational objectives”.
5. *New technologies* have brought about changes in approaches to teaching, especially at undergraduate level, with standardized courses often delivered online, and different use of classroom time with more small seminars and interactive discussions, and more time spent with students on their individual projects (OECD 2008).

Accordingly, new generation universities are activated by active learning processes and social environments which also change in response to forces affecting them just as other educational institutions (Hargreaves 2003). It should be noted that self and societal transformation can only be possible through active learning in new generation universities. Active learning can indeed catapult people and their respective organizations to better heights since it brings in “conscientiousness and knowledge” in all endeavours. It is, thus, a fundamental tool in bringing about effective transformation and sustainability of quality both within and outside of institutions.

10.3 Active Learning and Social Environments

The definition of active learning or even the quest for it has tasked many, an educator or author as its dimensions and images continue not only “influencing but actually dictating the direction” of the effort. In a broad way, nevertheless, active learning represents a “redefined student role during the teaching and learning process”. During such active learning situations, students engage with the material, participate in the class and collaborate (The Glossary 2016). So, students do not simply listen and memorize but demonstrate a process, analyse an argument and are able to apply a given concept to a real-life situation. The students in this case are more in control of the learning situation, and the teacher or educator is more of a guide.

Students’ learning and teaching staff’s instruction activities improve in active learning environments, because these environments are student centred and enhance the student experience. Goldman et al. (1992) state that: “Rich environments for active learning are designed to invite the kinds of thinking that help students develop *general* skills and attitudes that contribute to effective problem solving, plus acquire *specific* concepts and principles that allow them to think effectively about particular domains” (p. 1).

According to Grabinger and Dunlap (1995), the main attributes ascribing to “rich environments for active learning” that support the goals of constructivism are (1) student responsibility and initiative, (2) generative learning activities, (3) authentic learning contexts, (4) authentic assessment strategies and (5) co-operative support.

Relatedly, based on Bonwell and Eison (1991), some of the major characteristics associated with active learning strategies are summarized as follows:

Students are involved in more than passive listening, students are engaged in activities like reading, discussing and writing, less emphasis is placed on information transmission and greater emphasis placed on developing student skills, there is greater emphasis placed on the exploration of attitudes and values, student motivation is increased especially for adult learners, students can receive immediate feedback from their instructor and students are involved in higher order thinking (analysis, synthesis, evaluation) (p. 2).

Active learning environments are, thus, an opportunity for students to develop depth in critical thinking and learning. Also, this is important for universities, as they prepare students for employment, research or graduate education better. In universities, active learning environments and social environments complement each other. We can say that social environments are also instructive. Student clubs, cinema, theatre, concerts and other activities that students hold together to enjoy are instructive. Students develop their relationships, experiences on life and the opposite sex and friendship, and they learn sharing in their lives. Because university environments are the place to live for the first time apart from their families, most students learn life experiences as well as lessons at university. So social environments are also active learning environments.

A good learning environment is where “students are engaged in self-directed and co-operative learning activities, and the physical environment is planned so that it can be routinely re-organised to mediate learning” (Partnership for 21st Century Skills 2002 cited by Lippman 2010, 2). In a proper learning environment, therefore, students learn from their own discoveries (Lippman 2010, 3). The design of the environment can support the “transactions that take place routinely in them so that people may develop and this allows learning to take place as well” (Lippman 2010, 3). To Higgins (2005), the environment affects attendance, wellbeing, engagement and attainment of students in the end.

Active learning, therefore, follows a pattern which connotes the reconstruction of knowledge and experiences systematically developed under the auspices of the university to enable the student to increase his or her “control over knowledge and experiences” from time to time (Tanner and Tanner 2007). All active learning settings, however, are composed of certain elements which distinguish them from the ordinary learning environments.

Simply put, an ideal active learning process for new generation universities should therefore entail a demonstration of objectives, activities and proper assessment; provide connections within and across various disciplines and in-depth study of critical topics, supporting continuous review based on data and research; address individual learning styles; and support academic staff in the development of exemplary lectures that encourage multiple ways to teach various courses but all of which are meant for the “transformation of student experiences and engagement” in the learning since effectiveness of learning is much about the effort, what is covered and how it is delivered (Covey 1998).

Active learning and the social environment, nevertheless, are intertwined and move hand in hand. Higgins (2005) contend that:

The causal chain between environmental change and changes in students’ attitudes, behaviours and achievements is a fairly complex one taking in issues of; choice and autonomy in consultation processes, increased self-worth and morale for staff and students based on the investment of time and money in their ideas and their working space, the ‘fitness for purpose’ of innovations for particular contexts and the process of trialling, testing and embedding new practices shaped by environmental change. (p. 6)

The social environment is also defined by the educational space available to the students. This is why it is contended that there is interest in educational or learning space on the part of researchers. This interest according to Cox (2011) has been tied to a wave of new building, new learning centres and libraries, and is driven by competition for students and a growing ideology of student-centred learning (p. 197). Also, Chism (2006 cited by Cox 2011, 198) proposes that learning space needs flexibility, comfort, sensory stimulation, technology support and decentredness to promote positive student experiences. These student experiences are very pertinent to effective teaching and learning.

10.4 Students' Experience

Adaptation to the new generation is a real problem for universities, students and teaching staff for our century. Because, if some universities or students or teaching staff cannot adapt to the process, unfortunately they cannot partake in the new world. Providing students with effective and enriched university experience is important, because universities prepare youths for the life. So, universities should give life experiences to students.

Temple (2014) point out four major aspects of student experience in new generation educational institutions thus:

- *The application experience*: covering the interactions between potential students and the institution.
- *The academic experience*: students' interactions with the institution associated with their studies.
- *The campus experience*: student life not directly connected with study, which may include activities away from the actual campus.
- *The graduate experience*: the institution's role is assisting students' transition to employment (p. 3). To them, however, management of the experiences is the most sacred undertaking that educational managers ought to pay homage to.

Student experience in new generation universities is indeed spelt by how much the students feel part of the institution both inside and outside of the lecture rooms. But all these experiences are only possible with an effective and active learning process since whatever students do experience is always a making of the learning process. Such an active learning process, therefore, is likely to be the centre for transformation of not only the student experiences and the education system but the entire humanity as a whole or at least in the process.

We can enrich the university experience of students by providing them with effective learning and social environments. Students should gain from this by providing them with residential and non-residential living-learning communities, good academic and career guidance, developing activities and programmes which enrich student experience and developing places of social activities. We should create for them environments in which they develop their skills and apply them to the real world.

According to Hellsten and Prescott (2004), therefore, there is acute need to "increase cultural understanding that is reflected in the ways in which pedagogy and practice are mediated between IS and academics". Equally, "opportunities for discussion between IS and staff about the communicative differences that constitute pedagogy, and the way in which these are reflected in the university teaching settings" calls for revision (p. 345). Most crucially, active learning and student experience notions are only possible when "students are fully engaged in the teaching and learning processes of new generation universities".

10.5 Student Engagement in Active Learning and Social Environments

Student engagement reflects attention, curiosity, interest, optimism and passion that students exhibit during the process of learning (The Glossary 2016). This improves their level of motivation for the learning tasks. Indeed, “learning improves when students are inquisitive, interested, or inspired, and that learning tends to suffer when students are bored, dispassionate, disaffected, or otherwise disengaged”. The other terms attached to student engagement could be student-based learning, enquiry-based learning and problem-based learning. The concept, thus, draws on the social constructivist theory.

A more broader description of student engagement is offered by Trowler (2010) thus:

Student engagement is concerned with the interaction between the time, effort and other relevant resources invested by both students and their institutions intended to optimise the student experience and enhance the learning outcomes and development of students and the performance, and reputation of the institution. (p. 3)

McCormick (2012) shows that the more students are engaged in their work, the better they like school and the more they succeed. Student engagement is currently used to refer to student engagement in learning activities. This term was initially used by researchers and later adopted by policymakers as it appears to be spot-on (Ashwin and McVitty 2015). Studies show that students become more disengaged from school as they progress from elementary to middle to high school (Steinberg and Almeida 2004). Coates (2007) describes engagement as “a broad construct intended to encompass salient academic as well as certain non-academic aspects of the student experience”, comprising the following: “active and collaborative learning; participation in challenging academic activities; formative communication with academic staff; involvement in enriching educational experiences; feeling legitimated and supported by university learning communities”.

Typologies of engagement as offered by Trowler (2010) include student engagement styles, institutional engagement types and student representatives’ motivations, while the key dimensions can be behavioural, emotional and cognitive. Trowler (2010) still argues that engagement grapples with the “what” question, and this reflects specific student learning aspects/processes, learning design, tools for online/classroom-based learning, extracurricular activities and institutional governance. The Partnership for 21st Century Skills (2002) looks at structure, time, tools, communities and policy as critical to the “what” question, while Higgins (2005) focus on systems and processes, products and services as well as communication strategies and ideas. Engagement also answers the “why” question which coins the need to improve learning rates and retention, equality/social justice, curricular relevance, institutional benefit and marketing (Trowler 2010, 22–27). Engagement also dissects the “whom” question where students (as individuals and collectively), educational managers, industry, the higher education system and society are reflected. This makes students, staff, local context, institutions, educational ideol-

ogy and national policy remain the major critical success factors for student engagement (Trowler 2010, 36–41).

Meanwhile, the key strategies for engagement according to Trowler (2010) include institutional strategies, involving blended professionals, institutional engagement plans, individual staff interventions and frameworks for action. Ahlfeldt et al. (2005) also continues that the key benchmarks include level of academic challenge, active and collaborative learning, student interactions with faculty members, enriching educational experiences and supportive campus environment (p. 8).

Pike and Kuh (2005, 202) came up with seven types of engaging institutions from “National Survey of Student Engagement” results, these are:

1. Diverse, but interpersonally fragmented: Students at these colleges have numerous experiences with diversity and tend to use technology but do not view the institution as supporting their academic or social needs nor are their peers viewed as supportive or encouraging.
2. Homogeneous and interpersonally cohesive: Students at these colleges have relatively few experiences with diversity but view the institution and their peers as supportive.
3. Intellectually stimulating: Students at these colleges are engaged in a variety of academic activities and have a great deal of interaction with faculty inside and outside the classroom.
4. Interpersonally supportive: Students attending these institutions report high frequency of diversity experiences and view their peers and the campus as supportive of their efforts.
5. High tech, low touch: Information technology rules at these universities to the point of muting other types of interactions.
6. Academically challenging and supportive: Faculty set high expectations and emphasize higher-order thinking in traditional ways. Little active and collaborative learning is required.
7. Collaborative: Peers rely on and are generally supportive of one another for learning, mediated somewhat by technology.

Bonwell and Eison (1991) claim that the key strategies for student engagement include thinking critically or creatively, speaking with a partner or group, expressing ideas, exploring personal attitudes or values, giving and receiving feedback, reflecting upon the learning process, purposive questioning and demonstrating knowledge. Students are thus actively involved in building knowledge and understanding in response to “learning opportunities presented or provided by the educator”.

Academic staff however play a more professional role in the learning process, design of activities and materials as well as development of students’ potential, a process so central in university systems, and many individual academic staff at all levels of education and or instruction draw on their own experiences in order to plan for the teaching and learning process (instruction) in order to make a meaningful contribution towards the lives of their students (Connelly and Michael 1988).

While discussing the pertinent role of the academic staff in the instructional process, it is equally important to recall that learning is not so much of what is found in the printed guides or syllabi, as what the academic staff makes of it in the lecture room. It is the academic staff's adaptation of it to meaningful learning experiences that really impacts on learning. The meaning is only possible through a strong student engagement policy and practice. The academic staff should be the guide as a framework and must feel free to apply teaching methods in the best way that can bolster success in the teaching and learning process (Brown and Oke 1990).

The academic staff also has an important role to play outside of the lecture room; his/her informal contacts with the students elicit valuable information about the characters and personalities of the students, while students also make value judgment of the academic staff. To some extent indeed, the academic staff teaches what he or she is in himself or herself, and students always remember the character of their academic staff long after they have forgotten the content they were taught (Bestor 1990).

Following up from the above statements, it is obvious that the active learning process can be a great success or a dismal failure depending on the academic staff. They are key persons, who alone can make the instructional design achieve what it was designed to achieve (Morgan 2008). If they are dedicated, hardworking, diligent and imaginative, they can enliven what would otherwise be dull and lifeless. Of all the personnel involved in the educational cycle, the academic staff is certainly the most important since he or she is the one who implements the ideas and aspirations of the other stakeholders in education (Silverman and Subramanian 1999). Academic staff can make student engagement possible through plans and approaches that are compatible with the understanding of students since they know the students better. Without student engagement, the teaching and learning process is likely to end up as a looming failure indeed.

According to Ashwin and McVitty (2015) engagement can be distinguished basing on three broad objects of engagement: engagement to form individual understanding, engagement to form curricula and engagement to form communities. In this research, the focus is on student engagement in active learning and social environments. Student engagement is related directly to university experience; students experience university life in teaching and learning environments and social environments with friends. These experiences construct the university life of people, and finally university experiences of people affect their working life and future life itself.

The purpose of the study, therefore, was to determine the practices of academic staff geared towards students' engagement in active learning and social environments according to the views of students. The specific questions for the study are the following:

1. What is the level of student engagement in active learning and social environments in new generation universities according to students' views?
2. Do students' views regarding student engagement in active learning and social environments in new generation universities differ according to demographic variables?

The importance of the study can be viewed from the fact that university managers in charge of universities, faculties, departments and disciplines can improve on the new generation university profile, as well as student and teaching staff profiles in new generation universities so that they can develop new strategies for learning and social environments of the school and can foresee ideal new generation university environments for students to live with good university experience. This is also crucially important for the image of the universities in future.

All in all, policy research is a niche area in higher education, and educational policy research has generally highlighted the ways in which policies shape research because policies play a crucial role in shaping higher education practices (Smith 2010; Tight 2012). So, understanding the new generation universities in terms of management, students, teaching staff, learning and social environments as well as other key aspects is our mission in this century, because the next years and the next century will be shaped by the new generation. This study highlighted students' views regarding practices of academic staff in tandem with student engagement in active learning and social environments in new generation universities as a starting point. To sum up, this research is important for all scientific disciplines.

10.6 Methodology

10.6.1 Research Model and Participants

The research obtains within quantitative research models. Accordingly, descriptive statistics as well as inferential data were treated to analysis in the research. Since demographic characteristics were explored, significance of data responses was calculated at different levels. A survey model was thus adopted for the study in question. Both a single and relational survey technique was applied. Hacettepe University was selected to its representativeness. Accordingly, the research sample consisted of 126 graduate and undergraduate students of Hacettepe University in Ankara. The sample featured 71 female students representing 56.3% and 55 male students representing 43.7% of whom those in the category of 20 years and below were 69 (54.8%), 21–25 years were 19 (15.1%), 26–30 years were 24 (19%) and 31 years and above were 14 (11.1%). Meanwhile, 69 (54.8%) students were pursuing bachelor's degrees, 32 (25.4%) were at master's level and 25 (19.8%) were at Doctorate level.

10.6.2 Research Instrument

A scale was developed by the researcher to be used for data collection in this study. The scale was for graduate and undergraduate students to determine their views on active learning and social environments in new generation universities

in terms of their university experience. Six elements of student engagement and active learning environments adopted from Edutopia (2014) were used in the development of the instrument. *Making student learning meaningful, fostering a sense of competence, providing autonomy support, embracing collaborative learning, establishing positive educator-student relationships and promoting mastery orientations*. However, after careful study and consultation, the two elements “fostering a sense of competence” and “providing autonomy support” were merged. Also, promoting mastery orientations was revised to promoting mastery learning orientations. Accordingly, the instrument was designed basing on five (5) key elements. Other sources were also used to develop and bolster the instrument (Coates 2007; Edutopia 2012; Goldman 1992; Grabinger and Dunlap 1995; Pike and Kuh 2005; Taylor and Parsons 2011; The Glossary of education reform 2016; The University of Sheffield: principles of student engagement; The University of Washington: Centre for teaching and learning). The instrument was piloted on a representative population and sample in order to establish its validity as well as reliability.

10.7 Data Analysis

In order to ascertain the practices of academic staff in relation to student engagement in active learning and social environments based on students' views, frequencies, percentages and arithmetic means were utilized. The weight of scores in this regard were as follows: 4.50–5.00 representing high success, 3.50–3.99 as moderate success, 3.00–3.49 as low success, 2.50–2.99 as weak success, 2.00–2.49 as unsuccessful and 0.00–1.99 as highly unsuccessful. In order to establish differences in views of students regarding practices of academic staff in relation to student engagement in active learning and social environments based on gender, age and educational level as key demographic variables, the independent sample t-test statistical technique was applied to variables with two (2) groups, while the one-way analysis of variance (ANOVA) statistical technique was applied to variables with three (3) or more groups.

At the end of the statistical tests, Levene's test was conducted to determine the homogeneity of the variances of various groups obtained. In cases where the variances were homogeneous, LSD (Fisher's Least Significant Difference) test was applied to ascertain which group the difference came from. In the study, all statistical computations were pegged on the 0.05 significance level. Conversely, all statistical computations were done using the “SPSS 23.0 for Windows Packet” analysis programme.

10.8 Findings and Discussion

The findings of the study were presented in tandem with the research questions earlier on set. These were: (1) What is the level of student engagement in active learning and social environments in new generation universities according to students' views? And (2) do students' views regarding student engagement in active learning and social environments in new generation universities differ according to demographic variables?

10.8.1 Analysis of the Views of Students Regarding Student Engagement in Active Learning and Social Environments in New Generation Universities

The views of students regarding the practices of academic staff towards student engagement in active learning and social environments in new generation universities were computed based on the various dimensions adopted in the study. Bearing in mind that the items in the instrument were very many, a computation of the means and standard deviations of the dimensions as a whole was made and has been considered in this paper. The views in question are presented in the following table.

According to Table 10.1, the views of students were as follows: making student learning meaningful ($x = 4.12$), fostering a sense of competence and autonomy ($x = 3.53$), embracing collaborative learning ($x = 3.42$), establishing positive educator-student relationships ($x = 3.51$) and promoting mastery learning orientations ($x = 4.08$). Premised on the views, it can be argued that the academic staff are making student learning meaningful and promoting mastery learning orientations at a highly successful level, fostering a sense of competence and autonomy and establishing positive educator-student relationships at a moderate level of success while they are embracing collaborative learning at a low level of success in tandem with the yardstick earlier on set in the study.

Table 10.1 Views of students regarding student engagement in active learning and social environments in new generation universities

Descriptive statistics			
Key dimensions	N	Mean	Std. deviation
Making student learning meaningful	126	4.1224	0.31021
Fostering a sense of competence and autonomy	126	3.5340	0.44819
Embracing collaborative learning	126	3.4252	0.38734
Establishing positive educator-student relationships	126	3.5193	0.56470
Promoting mastery learning orientations	126	4.0884	0.28391
Valid N (listwise)	126		

10.8.2 Differences in Views of Students Regarding Student Engagement in Active Learning and Social Environments in New Generation Universities Based on Demographic Variables

In order to find out whether there are statistically significant differences among views of students regarding student engagement in active learning and social environments in new generation universities, three independent demographic variables were tested. These were gender, age and level of education. Appropriate statistical tools were applied in regard to each of the cases under scrutiny.

10.8.3 Views of Students Regarding Student Engagement in Active Learning and Social Environments in New Generation Universities Based on the Gender Variable

In order to find out whether statistically significant differences existed among views of students regarding student engagement in active learning and social environments in new generation universities in relation to the gender variable, an independent samples t-test was adopted in the analysis. Gender in this case was used to coin the male and female students. A summary of the findings in relation to gender is presented in the following table.

As reflected in Table 10.2, a statistically significant difference was found among views of students regarding student engagement in active learning and social environments in new generation universities in terms of gender. This can be argued for the elements fostering a sense of competence and autonomy ($p = 0.000$) as well as embracing collaborative learning ($p = 0.000$). The views of female student respondents regarding student engagement in active learning and social environments in new generation universities were more positively inclined compared to those of male student respondents in lieu of the dimensions in question. Meanwhile, a closer look at the average means of descriptive statistics of the other dimensions would reveal some difference, but in statistical terms, the difference is not significant.

10.8.4 Views of Students Regarding Student Engagement in Active Learning and Social Environments in New Generation Universities Based on the Age Variable

In order to find out whether statistically significant differences existed among views of students regarding student engagement in active learning and social environments in new generation universities in relation to the age variable, an ANOVA

Table 10.2 T-test results for differences in views of students regarding student engagement in active learning and social environments in new generation universities based on the gender variable

Group statistics							
Dimensions	Gender of respondents	N	Mean	Std. dev.	Std. error mean	T	Sig.
Making student learning meaningful	Male	55	4.0701	0.30845	0.04159	-1.678	0.096
	Female	71	4.1630	0.30762	0.03651		
Fostering a sense of competence and autonomy	Male	55	3.3299	0.30722	0.04143	-5.163	0.000
	Female	71	3.6922	0.47727	0.05664		
Embracing collaborative learning	Male	55	3.1896	0.31593	0.04260	-7.096	0.000
	Female	71	3.6076	0.33695	0.03999		
Establishing positive educator-student relationships	Male	55	3.5065	0.53932	0.07272	-0.223	0.824
	Female	71	3.5292	0.58723	0.06969		
Promoting mastery learning orientations	Male	55	4.0442	0.38281	0.05162	-1.420	0.160
	Female	71	4.1227	0.16781	0.01992		

test was adopted in the analysis. The age in this study was categorized as 20 years and below, 21–25 years, 26–30 years as well as 31 years and above.

After a general ANOVA test was conducted, a statistically significant difference was found among views of students regarding student engagement in active learning and social environments in new generation universities in terms of age. The difference was observed in two elements as follows: making students' learning meaningful ($p = 0.004$) and fostering a sense of competence and autonomy ($p = 0.003$).

Effort was then made to establish the sub-group from which the obtained difference originates. Before doing so, however, Levene's test for equality of means was conducted, and after finding the means homogeneous, an LSD (Fisher's Least Significant Difference) was set in motion. The results of the LSD test are presented in the following table.

Based on the findings in Table 10.3, the significant difference in the dimension making students' learning meaningful originates from the 26 to 30 years as well as the 31 and above years' category of student respondents. The 31 years and above category of students holds a highly positive view of their academic staff regarding the dimension in question, while the 26–30 years' category holds the lowest average score. The argument is that the conceptualization of teaching and understanding of learning processes for an older group of students is quite higher. They may also put a number of factors into consideration when analysing their academic staff. That is why their views differ significantly from the views of other student respondents involved in the study.

Meanwhile, the significant difference in the dimension of fostering a sense of competence and autonomy originates from the 26 to 30 years as well as the 20 years

Table 10.3 LSD test results for the dependent variables: Making students' learning meaningful and fostering a sense of competence and autonomy

Multiple comparisons					
LSD					
Dependent variable	(I) Age of respondents	(J) Age of respondents	Mean difference (I-J)	Std. error	Sig.
Making student learning meaningful	20 years and below	21–25 years	-0.15648 ^a	0.07696	0.044
		26–30 years	0.04089	0.07040	0.562
		31 years and above	-0.27033 ^a	0.08707	0.002
	21–25 years	20 years and below	0.15648 ^a	0.07696	0.044
		26–30 years	0.19737 ^a	0.09122	0.032
		31 years and above	-0.11386	0.10463	0.279
	26–30 years	20 years and below	-0.04089	0.07040	0.562
		21–25 years	-0.19737 ^a	0.09122	0.032
		31 years and above	-0.31122 ^a	0.09990	0.002
	31 years and above	20 years and below	0.27033 ^a	0.08707	0.002
		21–25 years	0.11386	0.10463	0.279
		26–30 years	0.31122 ^a	0.09990	0.002
Fostering a sense of competence and autonomy	20 years and below	21–25 years	-0.06277	0.11109	0.573
		26–30 years	-0.38639 ^a	0.10161	0.000
		31 years and above	-0.08962	0.12568	0.477
	21–25 years	20 years and below	0.06277	0.11109	0.573
		26–30 years	-0.32362 ^a	0.13167	0.015
		31 years and above	-0.02685	0.15102	0.859
	26–30 years	20 years and below	0.38639 ^a	0.10161	0.000
		21–25 years	0.32362 ^a	0.13167	0.015
		31 years and above	0.29677 ^a	0.14419	0.042
	31 years and above	20 years and below	0.08962	0.12568	0.477
		21–25 years	0.02685	0.15102	0.859
		26–30 years	-0.29677 ^a	0.14419	0.042

^aMean diff. is significant at the 0.05 level

and below category of student respondents. The 26–30 years category of students holds a highly positive view of their academic staff regarding the dimension in question, while the 20 years and below category holds the lowest average score. The argument is that the conceptualization of teaching and understanding of learning processes for an older group of students is quite higher. The young students sometimes face an identity crisis in the teaching and learning process since they may simply want easier stuff and seek fun instead of technical values. That is why their views differ significantly from the views of other student respondents involved in the study.

10.8.5 Views of Students Regarding Student Engagement in Active Learning and Social Environments in New Generation Universities Based on the Level of Education Variable

In order to find out whether statistically significant differences existed among views of students regarding student engagement in active learning and social environments in new generation universities in relation to the level of education variable, an ANOVA test was adopted in the analysis. The level of education in this study was categorized as Bachelor's degree, Master's degree and Doctorate.

After a general ANOVA test was conducted, a statistically significant difference was found among views of students regarding student engagement in active learning and social environments in new generation universities in terms of level of education. The difference was observed in three elements as follows: fostering a sense of competence and autonomy ($p = 0.036$), embracing collaborative learning ($x = 0.034$) and promoting mastery learning orientations ($p = 0.003$).

Effort was then made to establish the sub-group from which the obtained difference originates. Before doing so, however, Levene's test for equality of means was conducted, and after finding the means homogeneous, an LSD (Fisher's Least Significant Difference) was set in motion. The results of the LSD test are presented in the following table.

Premised on the findings in Table 10.4, the significant difference in the dimension fostering a sense of competence and autonomy originates from the master's degree and as well as the bachelor's degree category of student respondents. The master's degree category of students holds a highly positive view of their academic staff regarding the dimension in question, while the bachelor's degree category holds the lowest average score.

Meanwhile, the significant difference in the dimension embracing collaborative learning originates from the doctorate degree and as well as the master's degree category of student respondents. The doctorate degree category of students holds a

Table 10.4 LSD test results for the dependent variables: Fostering a sense of competence and autonomy, embracing collaborative learning and promoting mastery learning orientations

Multiple comparisons					
LSD					
Dependent variable	(I) Level of education of respondents	(J) Level of education of respondents	Mean difference (I-J)	Std. error	Sig.
Fostering a sense of competence and autonomy	Bachelor's degree	Master's degree	-0.21526 ^a	0.09405	0.024
		Doctorate	-0.19329	0.10265	0.062
	Master's degree	Bachelor's degree	0.21526 ^a	0.09405	0.024
		Doctorate	0.02196	0.11737	0.852
	Doctorate	Bachelor's degree	0.19329	0.10265	0.062
		Master's degree	-0.02196	0.11737	0.852
Embracing collaborative learning	Bachelor's degree	Master's degree	0.04930	0.08124	0.545
		Doctorate	-0.20248 ^a	0.08867	0.024
	Master's degree	Bachelor's degree	-0.04930	0.08124	0.545
		Doctorate	-0.25179 ^a	0.10139	0.014
	Doctorate	Bachelor's degree	0.20248 ^a	0.08867	0.024
		Master's degree	0.25179 ^a	0.10139	0.014
Promoting mastery learning orientations	Bachelor's degree	Master's degree	-0.03824	0.05836	0.514
		Doctorate	0.19801 ^a	0.06370	0.002
	Master's degree	Bachelor's degree	0.03824	0.05836	0.514
		Doctorate	0.23625 ^a	0.07284	0.002
	Doctorate	Bachelor's degree	-0.19801 ^a	0.06370	0.002
		Master's degree	-0.23625 ^a	0.07284	0.002

^aMean diff. is significant at the 0.05 level

highly positive view of their academic staff regarding the dimension in question while the master's degree category holds the lowest average score.

While the significant difference in the dimension of promoting mastery learning orientations originates from the master's degree as well as the doctorate degree category of student respondents, the master's degree category of students holds a highly positive view of their academic staff regarding the dimension in question, while the doctorate degree category holds the lowest average score. The general view here is that the level of education has a direct influence on students' views.

A lower level of education would attract mere attitudes and assumptions bordering on utopia, but a higher level of education would warrant a critical analysis that brings a number of aspects and factors into context.

10.9 Conclusion

A number of aspects were unearthed during the study. Students are engaged in active learning and social environments by their academic staff. However, this varied from dimension to dimension; some were found to be highly successful like making students' learning meaningful as well as promoting mastery learning orientations, while some were found to be moderately successful like fostering a sense of competence and autonomy as well as establishing positive educator-student relationships. One dimension, embracing collaborative learning was found to be at a low level of success.

The study was a pioneer one to say the least and thus becomes a door opener to research in the area of student engagement in active learning and social environments in new generation universities. Other aspects of student engagement should be explored: the factors influencing student engagement and the effect of student engagement on students' performance. A similar study can also be conducted from the perspective of academic staff themselves to draw on their views too. Meanwhile other approaches can be adopted to study student engagement. Effort can also be made to bring on board more demographic variables apart from gender, age and educational level explored in this study. Given the intricate nature of student engagement in active learning and the call for social environments in new generation universities, this study is, without doubt, a ground-breaking one.

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Chapter 11

The Perceived Effect of Delegation on Employee Performance at Stanbic Bank Uganda Ltd., Mbale Branch



Rashid Kinsambwe and Zabia Kauma

Abstract The study was about an analysis of the effect of succession planning on the performance of employees at Stanbic Bank Uganda Ltd., Mbale branch. The study was guided by the following objectives: to establish the effect of delegation on employee performance at SBU Ltd., Mbale branch, to analyze the effect of job rotation on employee performance at SBU Ltd., Mbale branch, and to examine the effect of mentoring/coaching on employee performance at SBU Ltd., Mbale branch. The study adopted both case study and descriptive research designs where both qualitative and quantitative approaches were used. A census survey technique was applied. Questionnaires, interviews, and documentary reviews were used to collect data. The findings generally revealed that there was a reduced number of shortages and absenteeism among employees as a result of delegation. It also established that employee delegation contributes to customer care and timeliness in service delivery which led to decreased complaints from clients toward the kind of services offered to them. As regards job rotation, findings revealed that there were improved interpersonal skills, reduced number of shortages, and improved customer care among employees. However, it was established that delegation did not reduce absenteeism or enhanced creativity among employees at SBU Ltd., Mbale branch. In light of the above findings, the researchers recommended that the heads of units should delegate responsibility and authority without feeling threatened; management should create more branches in the new districts like Manafwa and Bulambuli to reduce pressure on the Mbale branch, due to large number of clients.

R. Kinsambwe (✉) · Z. Kauma
Islamic University in Uganda, Mbale, Uganda
e-mail: shidkins@gmail.com

11.1 Introduction

Conceptually, delegation has been attached to a number of definitions by varying authors. The most comprehensive view of delegation, however, comes from Yukl and Fu (1999); they contend thus, “delegation is a complex, multi-faceted process that includes assigning important new tasks to subordinates, giving subordinates responsibility for decisions formerly handled by the manager, and increasing the amount of latitude and discretion allowed subordinates in how they do their work, including the authority to take action without getting prior approval” (p. 1). Meanwhile FME (2013) looks at successful delegation as the most critical in which the knowledge, skills, and attitude of team members to whom delegation is meant should be properly established. Also, effective delegation has been given considerable thought by researchers (Yukl and Fu 1999). In handling delegation, authority, responsibility, and accountability, tasks are dished out, and the manager ought to select the right task and right person for delegation and then give clear directions and effect monitoring. Being an effective delegator, however, calls for trust, honesty, and communication.

Nelson (1994) argues that delegation, once effective and successful, contributes to the highest level of motivation and increased employee morale among the employees. The employees selected for delegation usually feel respected, appreciated, and trusted. The employees who participate in decision-making experience gaining morale, motivation, and job satisfaction. Lean (1987) cited by Chester et al. (1998) contends that delegation motivates the employees who are subordinates because they see themselves as being trusted and capable of doing the work assigned by their supervisors. This in itself motivates the delegated employees, which boosts their performance.

Performance is a key aspect of any organization since it is virtually the determinant of output levels. Performance according to Armstrong (2006) is defined as the achievement of quantified and qualitative objectives. Improved customer care, reduced number of shortages, increased number of vouchers worked on in a day, increased number of new accounts opened per day, timelessness in service delivery, and reduced absenteeism are some of the performance indicators at Stanbic Bank, Mbale branch (SBU Annual Report 2009).

Roger (2010) argues that performance is a function of an organization’s ability to meet its goals and objectives by exploring the available resources in an effective and efficient way. To Advian (2007), performance entails effectiveness which refers to the organization’s ability to serve and produce what the market requires at a particular time and efficiency which means meeting the objectives at the lowest possible cost with the highest possible benefits. Therefore, in the context of this study, performance is used to relate to a person’s ability to accomplish or perform all the tasks and duties assigned by the supervisor required for a specific job. Improved customer care, reduced absenteeism, reduced number of shortages, and

timeliness in completing tasks are some of the performance indicators at Stanbic Bank (U) Limited.

The perceived impact of delegation on various human institutions especially in the realm of performance and service delivery has attracted research from a number of authors (Armstrong 2009; Aswathappa 2002; Axley 1992; Campion 1994; Rothwell 2010). Delegation, therefore, brings about trustworthiness and capability among the employees. Furthermore, Armstrong (2009) asserts that delegation motivates employees by providing them with challenges and helping them to achieve career goals. The increased morale and motivation may also result into reduced employee turnover rates, and it also helps to build a more competent and motivated team, hence improving employee performance in the organization.

According to Axley (1992), delegation builds mutual trust and confidence. Trust and confidence are fostered through successful experiences with delegated tasks. When trust is demonstrated in someone, most people reciprocate with actions which show that the trust was justified. Through effective delegation, a working environment can be created with trust among the recipients of delegated tasks which can later result into promotion.

It can further be observed that when human resources are trusted with duties, it increases the potential for promotion. An employee who receives extensive delegation will be ready and able to advance to new positions, hence career advancement. In this regard, therefore, delegation serves both to train and test an employee (Nelson 1994). In addition, Aswathappa (2002) contends that delegation helps the employees to prepare them for career advancement. It also determines who steps in, if a position is suddenly vacated, or who can move across the organization to fill a vacant role.

Campion et al. (1994) argue that delegation through various departments and function is frequently used as part of the promotion and career development process. He further asserts that broad experiences are brought about by delegation and linked to promotion as a result of employee acquisition of organization performance, skills, and knowledge. This can be achieved through organizational culture of transfer and promotion of staff from within. Delegation is therefore important for personal development since it provides administrative succession up and down the department (Rothwell 2010). Delegation of authority and responsibility is essential if managers are to provide opportunities for the development of their employees. The employees will be motivated with improved competence to perform the periodic opportunities to participate in institutional decisions.

Stanbic Bank is one of Africa's leading bank and financial services organizations in Standard Bank Group. Standard Bank is a financial services company based in South Africa and is the largest bank in Africa. SBU is also the largest financial institution in Uganda licensed under the Financial Institutions Act 2004 to provide financial services to people. The bank's major vision is "to grow business influence in the continent as well as making a difference in each of the countries where the bank

operates.” The bank is also committed to ensuring long-term sustainability by being relevant to the customers and the communities so that it can provide products and services that suit their needs and demands.

As shown in its vision and values, Stanbic Bank is a clearly customer-oriented bank. This is further expressed in their service code of conduct, which is “to go an extra mile to provide superior levels of service to the customers, to take ownership in resolving customer concerns, queries and make a difference in the areas the bank operates and deliver good services to the customers.” SBU operates 100 branches and has a growing automated teller machine (ATM) network of close to 170 all over Uganda. Its head office is located on Plot 17 Hannington Road, Kampala ([http://:www.stanbicbank.co.ug](http://www.stanbicbank.co.ug)).

However, despite the bank’s efforts, the customers are not satisfied with the services offered to them due to the long lines in the banking halls, dismal performance, and inefficiency. It is no wonder that the customers are always complaining of poor customer care, rudeness, and employees being slow, among others, which are indicators of poor service delivery (SBU Annual report 2009). In addition, the employees make shortages and receive counterfeit notes and are made to pay for the shortages from their monthly salaries (SBU Annual report 2009). It is therefore against this background that a study to analyze the effect of succession planning on employee performance at SBU Ltd., Mbale branch, was very important.

11.2 Methodology

The study was conducted to examine the effect of delegation on employee performance at Stanbic Bank Uganda Ltd., Mbale branch, which lies in the Eastern Region of Uganda. The study sought to analyze the effect of succession planning by examining its different elements of employee trainings which include job rotation, mentoring/coaching, and delegation on the performance of employees in terms of improved customer care, reduced number of shortages, and increased number of vouchers and accounts at Stanbic Bank Uganda Ltd., Mbale branch. The study covered a time period between 2007 and 2012 because that is when the performance of the bank deteriorated despite the existence of succession planning.

The study adopted both descriptive and case study research designs. The researcher preferred these designs to others because of their description of the phenomena as they exist and the in-depth study of an organization, respectively. The study also used both qualitative and quantitative approaches of data collection methods through questionnaires, interviews, and observations.

11.3 Findings of the Study

11.3.1 The Effect of Delegation on Employee Performance at SBU Ltd., Mbale Branch

The effect of delegation was discussed in terms of responses on shortages the teller gets in a day, effect of delegation on absenteeism, effect of delegation on customer care, and effect of delegation on timeliness and promptness on service delivery as follows.

11.3.2 Responses on Shortages the Teller Gets in a Day

Results from the study indicated that 67.6% of the respondents generally agreed that delegation as a way of preparing them to succeed others greatly contributed to the reduction of number of shortages among the employees more especially the tellers, 23.5% disagreed, and 8.8% were undecided on which opinion to give. The implication of the findings is that the intended outcome of employee delegation is to increase their knowledge and skills to perfect a particular task which was greatly achieved. This is reflected in the responses gathered from the respondents where majority of them held a positive view on reduction in shortages in the bank as a result of delegation. However, some of the respondents disagreed, and this could be attributed to factors such as some having not been delegated to or when they were delegated to, their decisions were reversed. For that matter, they may not see any meaning in delegation.

The findings are in consonance with the observation of Nelson (1994) who argued that employee delegation makes the organization to make the best use of the available human resources and therefore achieves the highest possible rate of productivity. Baer (1999) also adds that employee delegation leads to acquisition of desired skills for succession in an organization. Basing on his argument, the employees who are chosen for delegation get opportunities to improve on their skills and also assume responsibility.

An interview with one of the line managers revealed that employee delegation is encouraged at SBU Ltd., Mbale branch, though not effective. Some employees get opportunities to be delegated when the colleagues/manager is not around, but the major decisions are made by the manager. If a subordinate makes a decision, it will not be taken without a second guessing by the manager since he is accountable, so in his absence, the issue pends until he is back in office. In further probing of the manager revealed that with the presence of machines, the shortages are minimal, and the employees are more careful while dealing with money.

Also, it was added that if someone is going for leave, he is asked to choose a person who will replace him/her so the person chosen must have been on training before. If the person who has been working hand in hand with him/her is chosen, the shortages are likely to be minimal. In addition, the employees are more careful while money handling so it will automatically lead to reduced shortages. This will also leave the bank with successors in case need arises like transfers, leave, or retirement of an employee.

From a general point of view, the employees of SBU Ltd., Mbale branch, agreed that delegation as a form succession planning is offered, and it had generally contributed to reduced number of shortages in the bank. Employee performance had generally improved since there is continuity in leadership at SBU Ltd., Mbale branch, especially in key positions such as customer consultant, branch loan officer, and many others.

However, 23.5% of the respondents disagreed to the statement. This could be a result of not being involved in delegation. 8.8% of the respondents were undecided, so they did not comment on the topic. This could be spelt by their lack of critical knowledge regarding the delegation process at the bank.

11.3.3 The Perceived Effect of Delegation on Absenteeism

Results on the above indicated that 47.1% of the respondents agreed and 26.3% strongly agreed implying that in totality, 73.4% of the respondents generally agreed that employee delegation had led to reduced absenteeism among the employees at SBU Ltd., Mbale branch. The general response under this section revealed that employees were motivated to perform their duties well in the organization without dodging work. Motivation to perform their duties is a result of delegation from their immediate superiors meaning that it would give them bonuses and recognition; hence, they make extra effort to give excellent performance.

Yet the small percentage of the respondents who disagreed cannot be underestimated. This could be a result of being delegated without clear guidance from the superiors that could have helped them to advance in boosting their ability to perform better.

An interview with the manager revealed that when someone is delegated to do some tasks, that means that the person will have slightly more tasks to perform, so there will be no absenteeism among the employees. In an addition, when one is going on leave, he/she is asked to identify a person who will replace him/her. In this case of delegation, therefore, there will be no absenteeism in case one is delegated some tasks which he/she has to perform with some deadlines.

In an interview with one of the employees, the researcher established that though delegation is encouraged and practiced, the decisions made by employees are not taken unless they have been delegated by the manager. This means that decision-making on vital issues is done by the manager, and in his absence, they have to wait

for him for some cases because he will be held accountable. This therefore acts as a demotivating factor to the employees who have been delegated.

In-depth probing of the manager revealed that employee delegation increases commitment and teamwork among the employees and also feel motivated which leads to reduced absenteeism among employees at SBU Ltd., Mbale branch. This therefore improves employee performance so succession planning grooms the employees, so there will a ready pool of employees in case of retirement or leave. It also leads to increase in productivity since the employees are always available to perform and also reduce on complaints from the customers, thus improved employee performance.

Nevertheless, 23.5% of the respondents disagreed to the statement, and this is a result of some employees/managers having a tendency of not working as a result of delegation, so they will delegate their tasks and give lame excuses for their absenteeism. Some of them only delegate hard tasks to their subordinates which they have failed to do. 2.9% of the respondents were not decided. This is a result of their unwillingness to comment on the topic of delegation.

11.3.4 The Effect of Delegation on Customer Care

Results from the study indicated that 64.6% of the respondents generally agreed to the statement that delegation at SBU Ltd., Mbale branch, enhanced customer care against 35.4% who disagreed to the statement. It can be seen from the respondents above that the biggest percentage of employees were happy with the delegation due to the fact that it has provided them with necessary guidance to improve their performance and other key skills toward customer care, but the 35.4% of respondents (employees) who disagreed cannot be overlooked because some customers and employees seemed to be on the other side due to long queues that are always in the bank. This could be a result of some clients not even knowing what to expect of a good customer service. It may be that they were taking long in the banking hall regardless of the traffic; they may complain of poor customer care instead of appreciating what the employees are actually doing to speed up the process.

The implication of the study findings is that customer care at SBU Ltd., Mbale branch, had improved as far as service delivery is concerned. It was pointed out that in 2007, the quality of services delivered to clients was generally insufficient, and it resulted into long queues in the banking hall most especially during the peak sessions. However, with the inception of training employees through delegation geared toward preparing them for succession, customer care started improving beginning in 2008 onward. The above findings concur with Baer (1999) who argues that employees who are chosen for delegation get opportunities to improve on their skills and also assume greater responsibility. Suma (2004) argued that in order to retain the customers, the employees should be properly trained through delegation based on the job description. The trained frontline employees would therefore

understand the characteristics of their job and would be more efficient while serving the customers, and this leads to customer satisfaction.

On the other hand, 35.4% of the respondents disagreed to the statement. This might be a result of insensitivity by some fellow employees, since customer care is a service and a service has a property of variability. Some employees may offer good and poor customer care at different times.

When the same question was posed to the clients of SBU Ltd., Mbale branch, the response indicated that 70% of the respondents disagreed to the statement that customer care had improved against 30% who agreed to the statement. Basing on the findings from the clients, who receive the services directly from the employees at SBU Ltd., Mbale branch, as regards customer care, they generally disagreed and based their argument on the fact that SBU has a wider clientele base which seems to be unmanageable as far as offering instant services is concerned. This meant that the ratio of employee to customer is 1:588 which is big for the staff to manage. In addition to the above, still the services offered in SBU have not yet met the expectations of their clients compared to other banks.

The clients specifically pointed out that “some employees at the till are rude, absent minded while serving customers, some of them are very slow even in counting notes and verifying whether they are genuine or not and most of them are not well conversant with their jobs as far as giving the right and relevant information as may be required by the customer.”

Penrose (1959) considered managerial talent to be the most crucial component in her characterization of a firm as a collection of resources. Although physical resources are important, the services that resources will yield depend on the capacities of the men using them. Nonetheless, through observation by the researchers, it was evident that there were some complaints emanating from clients highlighting the insufficient services offered by the bank. These complaints also seemed to be affecting the productivity of work and service delivery on the side of the staff; attribution to such services can only be associated with lack of proper training for future purposes.

Considering the above findings, it can generally be interpreted that the customer care the employees claim to have does not satisfy the needs of their customers, and the levels of employee performance cannot be measured by considering responses from the employees' side only. It is very important to always confirm the responses from the employees with those from the clients.

Therefore, the customer care in SBU Ltd., Mbale branch, has not improved to the expectations of their customers. For example, SBU lacks instant services, thereby delaying most of the things which would have been done instantly. In this case, a client said that “people's requests for changing branch, signature and application for ATM cards take long compared to other banks in the same region with their head offices in Kampala.”

11.3.5 The Effect of Delegation on Timeliness and Promptness in Service Delivery

Results on the above indicated that 73.5% of the respondents (employees) generally held a positive response on the statement that there is timelessness and promptness in responding to customer needs by delegated employees, against 26.5% of the respondents who disagreed to the statement. When the same question was posed to the clients to solicit more information and also to confirm the responses given by the employees at SBU Ltd., Mbale branch, the responses show that 64.1% of the respondents generally held a negative response to the statement, 26.2% of the respondents agreed, and 9.6% of the respondents were undecided.

The implication of the findings is that employees at SBU generally accepted that customer needs are responded to promptly. This means that work is performed in a fast and appropriate manner because it is costlier to acquire new customers than it is to retain existing customers. Retaining of customers therefore requires customer service staff in banks to provide service that is quick, error -free, and convenient. The examples of customer requests include but not limited to the following: opening up accounts, working on their checks, knowing their balances on their accounts, and replacement of ATM cards, among others.

However, 64.1% of the clients at SBU Ltd., Mbale branch, disagreed to the statement. This was justified with an argument that their requests take a longer period of time without being responded to due to the bureaucratic structure which SBU operates. The depth probing of the clients also revealed that it could be a result of the large clientele the bank has. The findings are contrary to Nelson (1994) who argued that employee delegation avails information to the employee and enables them to take decisions and provides the necessary solutions to customer challenges in a timely fashion. Furthermore, he adds that the system of delegation can only operate successfully if the decision-makers (employees) have full and rapid access to the relevant information.

11.4 Conclusion

From the findings of the study, it can be concluded that employee delegation has significantly contributed to the daily business of the bank, for example, reduced absenteeism and enhancement on the increment of vouchers worked on in a day. Yet it has contributed little to customer care, has not reduced shortages due to training needs assessment (TNA) programs and favoritism coupled with bureaucratic tendencies, and also has not enhanced on timeliness and promptness in service delivery in addressing customer needs and complaints.

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Chapter 12

The Utilization Level of Social Capital Approach in Tabriz Universities



Sabri Çelik and Nazila Ahmedimoayyed

Abstract The purpose of this study was to determine academic staff's utilization levels of social capital. This study is a kind of quantitative research. The working group of this study is limited to Iran Tabriz Universities and the private Islam Azad University's academic staff. A total of 92 academic staff were the key participants in this research. Of these, 32 academic staff also have some administrative duties. During this research, social capital scale was used in order to collect data. According to some findings, there are no statistically significant relationships between social capital utilization level and academic staff's gender, education level, and seniority. But there is a meaningful statistical relationship between social capital utilization level and academic staff's title. The meaningful difference has been detected between professors and lecturers.

12.1 Introduction

Nowadays social capital is known as human capital, and it is regarded as a supportive notion to economic capital. Social capital has been defined differently by different thinkers. Pierre Bourdieu is one of the leading thinkers to be preoccupied with social capital. Pierre Bourdieu's definition of social capital is very old and is also regarded as the first systematic analysis. According to Pierre Bourdieu, social capital is the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition (Field 2006).

S. Çelik (✉)

Gazi University, Faculty of Gazi Education, Ankara, Turkey

e-mail: sabric@gazi.edu.tr

N. Ahmedimoayyed

Gazi University, Education Sciences Department, Ankara, Turkey

Bourdieu focuses attention on resources which are obtained from networks, and he also emphasizes mutuality between organizations and human (Seçer 2009). Bourdieu regards social capital as an investible resource which enables some favorable gains. According to him, there is a positive correlation between cultural and financial capital. Under the auspices of social capital, one can gain prestige, and he/she can transform this social capital into financial capital. James Coleman, as a leading theoretician of rational choice theory, tried to explain the social capital notion and how people can work together. James Coleman, by using this notion, aimed at finding some optional solutions to the question of how people can be in collaboration even under intense competition (Field 2006).

According to James Coleman, social capital is a collective production. In other words, somebody else can benefit from social capital apart from its producers. In addition, social capital is a production which can affect somebody else who is unknown by social capital's producers (Devamoğlu 2008). Although social capital contains many forms, there are two main common sides of these forms. The first of these forms is composed of social structure, and second of these forms makes actors' works easy in this structure (Nahapiet ve Ghoshal'dan cited by Devamoğlu 2008).

Robert Putnam is also regarded as a famous thinker and actor in social capital who also made social capital very popular. In his "Bowling Alone" study, he attracted attention of the academia to the issue of impairment of social capital in the United States. According to Putnam, social capital explains some quantitates of organizations such as social trust, norms, and networks which eases collaboration and coordination for mutual advantage.

According to Putnam in his Bowling Alone study, humans have to live together in order to satisfy needs, and this situation calls for compulsory collaboration and coordination in society. Thus, when people engage in some form of collaboration, they get some benefits. When this collaboration starts enlarging, people can realize important partnerships and benefits. We can easily notice in the reality of life that capital is part of the life of humans. But when people do not use this capital effectively and productively, they are bound to encounter some financial and social losses.

Social capital is a source of wealth for every country. Physical and cash resources are not adequate for a country in order to raise welfare levels and increase the quality of living of citizens. At the same time, it is required that social capital is used effectively. In our days there are many good examples of social capital's ability in increasing welfare levels. Also, even if one country has many physical and cash resources, if the government does not use the social capital productively, physical and cash resources may be lost soon.

Leaders of countries with a rich social capital base convey much happier life to their citizens. Such society's people have good relationships and also have more democratic processes in daily life. In addition, their life is more modern and regular than others. Many managers have noticed that real working occurs by social interaction though there are official organization lines which show how work should be done. In literature it is known as social connections, social networks, and social capital (Bhardwaj et al. 2008).

Universities as centers of higher education institutions have to use social capital qualitatively and effectively. Using, developing, and directing social capital and human potential which is compatible with organizational goals may strengthen universities. Correct use of social capital in universities will affect educational outcomes directly or indirectly. In this study there was an aim to find out the level of social capital usage in Tabriz University as a higher educational institution.

12.1.1 Work Organization and Chaos

Work organizations are dynamic systems which are directed by indirect relationships. The basic side of indirect relationships is the cumulative nature of input which is not equal to output. This situation means that there is an obligation of taking into consideration the whole framework of the organization in order to understand human behaviors, because two plus two does not always equal to four. This can be coined as a synergy or holism, and this means total effect is greater than parts. Only in direct systems parts act by both themselves and together. Another quality of indirect systems is that the greatness of input does not evenly reverberate to output. Little and unimportant changes sometimes may create gigantic effects, and also at times little quakes may cause chaos in systems. Chaos theory claims that dynamic systems are not in the oncoming linear equilibrium condition but, on the contrary, in the three situations of stable equilibrium, limited instability, and chaotic instability (Aslanoğlu 1998 cited Serdar Öge). Stable equilibrium means providing a stability and balance for a short time, even though in a system there is a balance disorder. The situation of business life up to the beginning of the 1980s is a good example for this definition.

12.1.1.1 Regularity or Irregularity (Chaos)? A Short Analysis in Terms of Sustainability of Organizations

Limited instability (chaos) is a situation that depicts simultaneous regularity and irregularity. In a system many unpredictable actions and changes can come true. Explosive instability means absence of any order or any general trend. As indirect dynamic systems, work organizations have some conclusions below (Latif 2002):

- Work organizations are chaotic systems. In a short time, they may live many actions. So in time they act in differently.
- Long-term prediction of work organizations' behaviors is impossible especially at a global level.
- Many negative results can be occurring due to interactions and little changes among the different parts of organizations.
- Work organizations are depending on internal, and external factors and they are sensible. Also they are sensible to starting conditions.

There is no life in the whole irregular environment. Organizations which are unstable and irregular have no long life. And they have no organizational identity, vision, or goal. These kinds of organizations have an orientation problem to the environment. Also, they cannot catch occasions in order to change themselves. Neither extreme regularity nor extreme irregularity is good for an organizational life ongoing. In an organizational life, there should be equilibrium. Between regularity and irregularity, organizations should create a balanced and dynamic position. Chaos theoreticians claim that currently there is a limited instability instead of old balanced stability.

12.1.2 Purpose

The main purpose of this study was twofold: first, to explain the social capital notion and determine the level of social capital usage in Tabriz University and Azad Islamic University and, the second, to make some appropriate suggestions based on the research results. In order to achieve the aforementioned purpose, some sub-aims were formulated. The sub-aims in questions are presented below:

1. In a state university, what is the level of social capital usage according to the views of:
 - (a) Administrators
 - (b) Academic staff
2. In a private university, what is the level of social capital usage according to the views of:
 - (a) Administrators
 - (b) Academic staff
3. What are the similarities and differences within views of academic staff and administrators about social capital usage in universities?

12.1.3 Limitation

This study's data was collected during the 2014–2015 academic year. Thus the study was limited to Tabriz University and the Private Islamic Azad University's academic staff and administrators. It focused on the views of respondents on social capital use in their respective universities.

12.1.4 Assumptions

In this study, it was assumed that the selected sample group responded to the measurement items correctly and impartially.

12.1.5 Method

12.1.5.1 Model of Study

This study was aimed at finding out the level of social capital usage in Tabriz Universities as well as getting some relational findings between some variables and social capital. Thus the study was found suitable for relational screening model.

12.1.6 Population and Sample

The population of the research consists of generalizable findings. Also, the population of the research composed of some units with common qualifications. The sample of the research is cluster of units which was selected by using suitable methods. The said sample represents the population (Ural and Kılıç 2006). There are 111 academic staff in Tabriz University's faculty of education, faculty of medicine, and faculty of science. In Islamic Azad University's selected faculties, there are 100 academic staff. This study encompasses all the 211 academic and administrative staff. Thus, the total participants of this study are 92. Also 32 of the 92 academic staff have administrative duty.

12.1.7 Data Collection

Data of this study was collected by the researcher after covering enough survey. The researcher went to both universities and then collected surveys from academic staff. A total of 110 survey forms were copied and delivered to academic staff. But 18 of the 110 did not give back the forms or did not fill in them suitably. So, the correctly filled survey rate is 83.63%.

12.1.8 Data Collection Tool

Basically, literature was used in order to collect data. Besides literature, the social capital scale, which was developed by Namalır (2015), was used. This scale has four subdimensions. These are trust in school organizations, norms in school organizations, participation in school organization, and commitment in school organization. Factor analysis of this scale has been done by Namalır (2015) and again tested for this study. The Cronbach's alpha coefficient of this study is enough in terms of reliability measurement.

12.2 Findings and Comment

In this study, views of academic staff of two different universities, Tabriz University and Islamic Azad University, regarding social capital utilization were examined. Subdimensions of social capital, *trust in school organizations*, *norms in school organizations*, *participation in school organization*, and *commitment in school organization*, were statistically examined in lieu of several demographic variables.

Social capital: Even though there is no standard definition of social capital, it can be explained according to five main approaches:

1. According to anthropology literature, the source of social capital is human's instinct in order to be in a society. For example, Fukuyama (1998) emphasizes social capital's biological roots in human nature.
2. Sociology literature regards social norms and incentive phenomena as a source of social capital.
3. According to financial literature, the source of social capital is one's acts and connection with others in order to increase and maximize his individual benefits. Also, these acts provide continuity to some group activities.
4. According to politic literature, social capital has a role on human behaviors in several organizations, and also social capital has an effect on creating social and politic norms.
5. A recent research of World Bank about eradicating poverty and sustainable development claims that social capital has a great effect on social regulation, social trust, and social networks.

12.2.1 Descriptive Statistics

Table 12.1 shows the sample group's gender-based sampling distribution. According to this sampling distribution in Tabriz State University, 43.47% of participants ($n = 20$) are females, and 56.53% of participants ($n = 26$) are males. In Private Islamic Azad University, 45.65% of participants ($n = 21$) are females, and 54.36% of participants ($n = 25$) are males. Of the whole participants', 44.56% are females

Table 12.1 Sampling distribution (gender based)

C			
Type of university	Female	Male	Total
Tabriz State University	20	26	46
Islamic Azad University	21	25	46
Total	41	51	92

Table 12.2 Sampling distribution (academic title based)

Academic staff's title					
Type of university	Prof.	Assoc. prof.	Assist. prof.	Others	Total
Tabriz State University	17	10	12	7	46
Islamic Azad University	11	13	6	16	46
Total	28	23	18	23	92

Table 12.3 Sampling distribution (latest degree of graduation)

Academic staff' graduation degree			
Type of university	Master's	Doctorate	Total
Tabriz State University	6	40	46
Islamic Azad University	7	39	46
Total	13	79	92

($n = 41$), and 55.44% are males ($n = 51$). It can be said that participants' gender-based distribution is almost equal.

Table 12.2 shows the sample group's academic title-based sampling distribution. According to Table 12.2 in Islamic Azad University, in the 92 academic staff, there are 11 professors (23.9%), 13 associate professors (28.3%), 6 assistant professors (13.0%), and 16 lecturers or research assistants (34.81%). In Tabriz State University, there are 17 professors (37.0%), 10 associate professors (21.7%), 12 assistant professors (26.1%), and 7 lecturers or research assistants (15.2%). In a total of 92 academic staff, there are 28 professors (30.44%), 23 associate professors (25.0%), 18 assistant professors (19.56%), and 23 lecturers or research assistants (25.0%). According to this distribution, professors are the largest group and assistant professors are the smallest group.

Table 12.3 shows the sample group's latest academic degree-based sampling distribution. According to Table 12.3 in Tabriz State University, of the whole participants, 6 staff's last degree is master's (13.05%), and 40 staff's degree is PhD (86.85%). In Islamic Azad University of the whole participants, 7 staff's last degree is master's (15.21%), and 39 academic staff's last degree is PhD (84.79%). Among all participants, there are 13 master's degree graduate academic staff (14.13%), and there are 79 PhD degree graduate academic staff (85.87%). Majority of the participants have a PhD degree.

Table 12.4 Sampling distribution (occupational seniority)

Academic staff's occupational seniority						
Type of university	1–5 years	6–10 years	11–15 years	16–20 years	21–30 years	Total
Tabriz State University	7	6	7	14	12	46
Islamic Azad University	14	6	9	9	8	46
Total	21	12	16	23	20	92

Table 12.4 shows the sample group's last occupational seniority-based sampling distribution. According to Table 12.4 in Tabriz State University, of the whole participants, 7 staff have 1–5 years (15.21%) occupational seniority, and 6 staff have 6–10 years (13.04%) occupational seniority. Seven academic staff have 11–15 years (15.21%) occupational seniority, 14 academic staff have 16–20 years (30.43%) occupational seniority, and 12 academic staff have 21–30 years (26.08%) occupational seniority. In Islamic Azad University, of all participants 14 academic staff have 1–5 years (30.43%) occupational seniority, and 6 staff have 6–10 years (13.04%) occupational seniority. Nine academic staff have 11–15 years (19.56%) occupational seniority, 9 academic staff have 16–20 years (19.56%) occupational seniority, and 8 academic staff have 21–30 years (21.39%) occupational seniority. Among all participants 21 academic staff have 1–5 years (22.82%) occupational seniority, and 12 staff have 6–10 years (18.18%) occupational seniority. Sixteen academic staff have 11–15 years (17.39%) occupational seniority, 23 academic staff have 16–20 years (25.00%) occupational seniority, and 20 academic staff have 21–30 years (21.73%) occupational seniority. Most of the participants have 16–20 years occupational seniority. According to Table 12.4, attention is drawn to the fact that Tabriz State University's majority of academic staff has great occupational seniority. In Islamic Azad University, younger academic staff are crowded than older academic staff. Younger academic staff's occupational seniority is less than older academic staff. In state universities, older and senior academic staff may regard educational climate as much more suitable than private universities. Therefore, state universities have more older and senior academic staff than private ones. Besides, private universities may need younger and dynamic academic staff. Therefore, private universities have younger academicians than state universities.

12.2.2 Social Capital's Subdimensions

Under this title, there are some relational findings between social capital's subdimensions and some demographic variables of participants.

Table 12.5 shows *t*-test results of social capital usage according to participants' gender in Tabriz State University. *T*-test shows whether or not there is a differentiation between the two genders.

Table 12.5 *T*-test results of social capital use according to gender (Tabriz State University)

Subdimensions	Gender	<i>N</i>	\bar{X}	<i>S</i>	<i>Df</i>	<i>T</i>	<i>P</i>
Trust in school organization	Male	26	3.00	0.63	44	0.44	0.66
	Female	20	3.08	0.66	44		
Norms in school organization	Male	26	3.24	0.65	44	0.44	0.66
	Female	20	3.15	0.59	44		
Participation in school organization	Male	26	3.09	0.60	44	0.59	0.55
	Female	20	3.20	0.55	44		
Commitment in school organization	Male	26	3.43	0.78	44	0.26	0.79
	Female	20	3.36	0.81	44		

According to Table 12.5, there is no statistically meaningful differentiation between the two genders and the four subdimensions of social capital. According to subdimensions, in the first subdimension, trust in school organization, female academic staff ($\bar{X} = 3.08$) have higher average mark than male ($\bar{X} = 3.00$). This differentiation may be derived from intense academic dedication of females. Female academic staff may be much more active during administrative process, thus female's average mark may increase naturally.

According to norms in school organization, in the second subdimension, female ($\bar{X} = 3.15$) academic staff has lower average mark than male ($\bar{X} = 3.24$). Due to less occupational seniority, female academic staff may not be occupied with university's norms. This situation may create average differentiation between female and male. According to subdimension of participation in school organization, female academic staff's average mark ($\bar{X} = 3.20$) is higher than male ($\bar{X} = 3.09$). Male academic staff's communication abilities may be lower than female academic staff. This situation may cause the average differentiation between two genders. Male academic staff may be in low interaction with other shareholders. Also, they may rarely participate to administrative processes. Therefore, average mark between two genders is in favor of females. According to commitment in school organization subdimension, female academic staff's average mark ($\bar{X} = 3.36$) is lower than male academic staff ($\bar{X} = 3.43$). Due to less internalization of academic activities by females and less activation during academic studies, these may create disadvantage for females.

Table 12.6 shows *t*-test results of social capital usage according to participants' graduation level in Tabriz State University. According to Table 12.6, there is no statistically meaningful differentiation between the four subdimensions of the main dependent variable and graduation levels of academic staff in Tabriz University. Master's degree graduate academic staff have lower average mark ($\bar{X} = 2.85$) than doctorate degree graduate academic staff ($\bar{X} = 3.06$) in the subdimension of trust in school organization. Average point's differentiation may occur because of doctorate degree graduate academicians' high intellectual acquisition. Also, due to doctorate degree graduate academicians' being frequently participating in academic activities, this may create differentiation.

Table 12.6 *T*-test results of social capital usage according to graduation level (Tabriz State University)

Subdimensions	Graduation	<i>N</i>	\bar{X}	<i>S</i>	Df	<i>T</i>	<i>P</i>
Trust in school organization	Master's	6	2.85	0.81	44	0.77	0.44
	Doctorate	40	3.06	0.61	44		
Norms in school organization	Master's	6	3.04	0.57	44	0.67	0.50
	Doctorate	40	3.22	0.63	44		
Participation in school organization	Master's	6	2.90	0.67	44	1.09	0.28
	Doctorate	40	3.17	0.56	44		
Commitment in school organization	Master's	6	3.33	1.02	44	0.23	0.81
	Doctorate	40	3.41	0.76	44		

Table 12.7 *T*-test results of social capital usage according to being an administrator or not (Tabriz State University)

Subdimensions	Administration	<i>N</i>	\bar{X}	<i>S</i>	Df	<i>T</i>	<i>P</i>
Trust in school organization	Executor	30	2.99	0.61	44	0.59	0.55
	Non-executor	16	3.11	0.70	44		
Norms in school organization	Executor	30	3.12	0.56	44	1.17	0.24
	Non-executor	16	3.35	0.70	44		
Participation in school organization	Executor	30	3.08	0.55	44	0.97	0.33
	Non-executor	16	3.25	0.62	44		
Commitment in school organization	Executor	30	3.41	0.71	44	0.87	0.93
	Non-executor	16	3.39	0.94	44		

According to subdimension of *norms in school organization*, master's degree graduate academic staff have lower average mark ($\bar{X} = 3.04$) than doctorate degree graduate academic staff ($\bar{X} = 3.22$). Doctorate degree graduate academic staff intensely take part in the process of academic activities, so their internalization of academic process may be much more than others. This situation may create some differentiation between academic staff. According to subdimension of *participation and interaction in school organization*, doctorate degree graduate academicians have higher average mark ($\bar{X} = 3.17$) than master's degree graduate academicians ($\bar{X} = 2.90$). In the subdimension of commitment in school organization, master's degree graduate academicians have less average mark ($\bar{X} = 3.33$) than doctorate degree graduate academicians ($\bar{X} = 3.41$). Due to doctorate degree graduate academicians' intensely being involved in administrative process, their academic commitment degree may be higher than others.

Table 12.7 shows *t*-test results of social capital use according to participants' whether or not being administrators in Tabriz State University. According to Table 12.7, there is no any statistically meaningful differentiation between four subdimensions of main dependent variable and to be or not to be an administrator in Tabriz University. Nonexecutive academic staff's average mark ($\bar{X} = 2.99$) is lower than executive academic staff ($\bar{X} = 3.11$) in the subdimension of trust in school

Table 12.8 *T*-test results of social capital usage according to gender (Islamic Azad University)

Subdimensions	Gender	<i>N</i>	\bar{X}	<i>S</i>	<i>Sd</i>	<i>T</i>	<i>P</i>
Trust in school organization	Male	25	2.92	0.77	44	1.10	0.27
	Female	21	3.16	0.63	44		
Norms in school organization	Male	25	3.17	0.61	44	1.39	0.17
	Female	21	3.39	0.40	44		
Participation in school organization	Male	25	3.09	0.65	44	1.20	0.23
	Female	21	3.29	0.44	44		
Commitment in school organization	Male	25	3.25	1.01	44	1.37	0.17
	Female	21	3.61	0.68	44		

organization. Executive academic staff has higher trust sense to their organizations due to their executing duty. Executing academic organization may increase trust sense of executors.

Nonexecutive academic staff's average mark (\bar{X} = 3.12) is lower than executive academic staff (\bar{X} = 3.35) in the subdimension of norms in school organization. University's norms and values may be much more interiorized by executive academic staff than nonexecutive academic staff. Executive academic staff are much more hand in glove due to their special duty. Therefore, their sense of internalization naturally may be stronger than others. Besides, in state universities there are many senior academic staff than private universities. Senior academicians should have been much more integrated with university's values and norms than others.

According to *participation and interaction in school organization* subdimension, non-executor academic staff have lower average mark (\bar{X} = 3.08) than executor academic staff (\bar{X} = 3.25). Executor academicians are in much more interaction with other shareholders than non-executors. Therefore, naturally it is expected that executor academicians are in more interaction with each other. Owing to all reasons, above, average point between executors and non-executors is different. Non-executors in Tabriz State University have almost equal average mark (\bar{X} = 3.41) with executor academic staff (\bar{X} = 3.39) according to subdimension of commitment in school organization. In state university, there may be good administrative politics which strengthen staff's commitment sense to their organization.

Table 12.8 shows *t*-test results of social capital use according to participants' gender in Islamic Azad University. According to Table 12.8, there is no any statistically meaningful differentiation between two genders and four subdimensions of social capital. According to first subdimension, *trust in school organization*, female academic staff (\bar{X} = 3.16) have higher average mark than male (\bar{X} = 2.92). This differentiation may derive from intense academic dedication of females. According to *norms in school organization*, the second subdimension, female (\bar{X} = 3.39) academic staff has lower average mark than male (\bar{X} = 3.17). Due to less occupational seniority, male academic staff may not be occupied enough with university's norms. This situation may create average differentiation between female and male academicians. According to subdimension of *participation and interaction in school organization*, female academic staff's average mark (\bar{X} = 3.20) is higher than male (\bar{X} = 3.09).

Table 12.9 *T*-test results of social capital usage according to graduation level (Islamic Azad University)

Subdimensions	Graduation	<i>N</i>	\bar{X}	<i>S</i>	<i>Sd</i>	<i>T</i>	<i>P</i>
Trust in school organization	Master's	7	3.01	0.50	44	0.08	0.93
	Doctorate	39	3.03	0.75	44		
Norms in school organization	Master's	7	3.24	0.54	44	0.14	0.88
	Doctorate	39	3.27	0.54	44		
Participation and interaction in school organization	Master's	7	3.07	0.54	44	0.56	0.57
	Doctorate	39	3.20	0.57	44		
Commitment in school organization	Master's	7	3.30	0.80	44	0.36	0.71
	Doctorate	39	3.43	0.91	44		

Male academic staff's communication abilities may be lower than female academic staff. This situation may cause the average differentiation between two genders. Male academic staff may be in low interaction with other shareholders. Also, they may rarely participate in the administrative processes. Therefore, the average mark between two genders is in favor of females.

According to *commitment in school organization* subdimension, female academic staff's average mark is ($\bar{X} = 3.61$) lower than male academic staff ($\bar{X} = 3.25$). Due to less internalization of academic activities of males and less activation during academic studies, these may create a disadvantage to them.

Table 12.9 shows *t*-test results of social capital use according to participants' graduation level in Islamic Azad University. According to Table 12.9, there is no any statistically meaningful differentiation between four subdimensions of main dependent variable and graduation levels of academic staff in Islamic Azad University. Master's degree graduate academic staff have lower average mark ($\bar{X} = 3.01$) than doctorate degree graduate academic staff ($\bar{X} = 3.03$) in the subdimension of *trust in school organization*. Average point is almost equal.

According to subdimension of *norms in school organization*, master's degree graduate academic staff have lower average mark ($\bar{X} = 3.24$) than doctorate degree graduate academic staff ($\bar{X} = 3.27$). Doctorate degree graduate academic staff's being intensely active in the process of academic activities enabled their internalization of academic process to be much more than others. This situation may create some differentiation between academic staff. According to subdimension of *participation and interaction in school organization*, doctorate degree graduate academicians have higher average mark ($\bar{X} = 3.07$) than master's degree graduate academicians ($\bar{X} = 3.20$). In the subdimension of *commitment in school organization*, master's degree graduate academicians have less average mark ($\bar{X} = 3.30$) than doctorate degree graduate academicians ($\bar{X} = 3.43$). Doctorate degree graduate academicians' intensely being in administrative process might have caused their academic commitment degree to be higher than others.

Table 12.10 shows *t*-test results of social capital use according to participants' whether or not being administrators in Islamic Azad University. According to

Table 12.10 T-test results of social capital usage according to being or not an administrator (Islamic Azad University)

Sub-dimensions	Administration	N	\bar{X}	S	Df	T	P
Trust in school organization	Executor	30	3.05	.74	44	0.24	0.80
	Non-executor	16	3.00	.68	44		
Norms in school organization	Executor	30	3.23	.54	44	0.76	0.45
	Non-executor	16	3.35	.52	44		
Participation in school organization	Executor	30	3.18	.60	44	0.23	0.98
	Non-executor	16	3.18	.52	44		
Commitment in school organization	Executor	30	3.38	.90	44	0.36	0.72
	Non-executor	16	3.48	.89	44		

Table 12.10 there is no any statistically meaningful differentiation between four subdimensions of main dependent variable and to be or not an administrator in Islamic Azad University. Nonexecutive academic staff's average mark (\bar{X} = 3.00) is lower than executive academic staff's (\bar{X} = 3.05) in the subdimension of *trust in school organization*. Executive academic staff have higher trust sense to their organizations due to their executing duty. Executing academic organization may increase trust sense of executors.

Nonexecutive academic staff's average mark (\bar{X} = 3.23) is lower than executive academic staff's (\bar{X} = 3.35) in the subdimension of *norms in school organization*. University's norms and values might have been much more interiorized by executive academic staff than nonexecutive academic staff. Executive academic staff are much more hand in glove due to their special duty. Therefore, their sense of internalization naturally may be stronger than others. According to *participation and interaction in school organization* subdimension, non-executor and executor academic staff have equal average mark (\bar{X} = 3.18). Non-executors in Islamic Azad University have lower average mark (\bar{X} = 3.38) than executor academic staff (\bar{X} = 3.48) according to subdimension of *commitment in school organization*.

Table 12.11 shows statistically meaningful differentiation between academic title and social capital use. According to Table 12.11, there is a meaningful differentiation between academic title according to subdimensions of *trust in school organization* [$F(3, 88) = 2.99, p < 0.05$] and *norms in school organization* [$F(3, 88) = 3.50, p < 0.05$]. In order to determine the source of differentiation, among post hoc tests, the Tukey test has been done. According to the Tukey test, there is a meaningful differentiation between lecturers and professors. In *trust in school organization subdimension*, the average of lecturers is (\bar{X} = 2.80) and the average of professors is (\bar{X} = 3.31). In *norms in school organization subdimension*, lecturers have (\bar{X} = 3.09) average mark and professors have (\bar{X} = 3.47) average point. There is no any statistically meaningful differentiation between academic staff's title and subdimension of *participation and interaction in school organization* [$F(3, 88) = 2.71, p > 0.05$] and subdimension of *commitment in school organization* [$F(3, 88) = 2.525, p > 0.05$].

Table 12.11 One-way analysis of variance (ANOVA) according to academic title and social capital use

Subdimensions	Variance source	Sum of squares	Mean square	Fd	F	P	Tukey
Trust in school organization	Between groups	3.867	1.289	3	2.995	0.03	1-4
	In groups	37.872	0.430	88			
	Total	41.739		91			
Norms in school organization	Between groups	3.257	1.086	3	3.506	0.01	1-4
	In groups	27.248	0.310	88			
	Total	30.505		91			
Participation in school organization	Between groups	2.537	0.846	3	2.716	0.49	
	In groups	27.397	0.311	88			
Commitment in school organization	Total	29.934		91			
	Between groups	5.076	1.692	3	2.525	0.63	
	In groups	58.972	0.670	89			
	Total	64.048		65			

Professors are in universities for a long time. Because of this long seniority, their internalization of academic process may be higher than others. Professors take critical decisions about universities. So they are much more effective than other academicians. Long occupational seniority paves the road for integrating in university's values and norms.

Table 12.12 shows statistically meaningful differentiation between academic title and social capital use. According to Table 12.12, there is no meaningful differentiation between academicians' occupational seniority and social capital use. In the first and second subdimensions of social capital, *trust in school organization* [$F(4, 87) = 1.33, p > 0.05$] and *norms in school organization* [$F(4, 87) = 1.55, p > 0.05$], no meaningful differentiation was found. In the third and fourth subdimensions, *participation and interaction in school organization* [$F(4, 87) = 0.93, p > 0.05$] and *commitment in school organization* [$F(4, 87) = 1.02, p > 0.05$], there is no statistically meaningful differentiation. Senior academicians may share their experiences about social capital use with less senior academicians. Hence there may be an interaction among them. This interaction may cause no meaningful differentiation among senior and less senior academic staff.

Table 12.13 shows social capital use average marks and standard deviation rates. According to Table 12.13, Tabriz State University has $\bar{x} = 3.04$ average point, and Islamic Azad University has $\bar{x} = 3.03$ average point in first dimension. In this subdimension, *trust in school organization*, both universities almost have the same average. From this point of view, it can be claimed that both universities' human sources politics are almost the same, and both universities want to give a sense of

Table 12.12 One-way analysis of variance (ANOVA) according to academic occupational seniority and social capital use

Subdimensions	Variance source	Mean square	Sum of squares	Df	F	P
Trust in school organization	Between groups	2.406	0.602	4	1.331	0.26
	In groups	39.333	0.452	87		
	Total	41.739		91		
Norms in school organization	Between groups	2.030	0.507	4	1.550	0.19
	In groups	28.476	0.327	87		
	Total	30.505		91		
Participation and interaction in school organization	Between groups	1.237	0.309	4	0.937	0.44
	In groups	28.698	0.330	87		
	Total	29.934		91		
Commitment in school organization	Between groups	2.871	0.718	4	1.021	0.40
	In groups	61.177	0.703	87		
	Total	64.048		91		

Table 12.13 Subdimensions of social capital use

Subdimensions	N		□		S	
	Tabriz Univ.	Islamic Azad Univ.	Tabriz Univ.	Islamic Azad Univ.	Tabriz Univ.	Islamic Azad Univ.
Trust in school organization	46	46	3.04	3.03	0.94	0.10
Norms in school organization	46	46	3.20	3.27	0.91	0.79
Participation and interaction in school organization	46	46	3.14	3.18	0.85	0.84
Commitment in school organization	46	46	3.40	3.41	0.11	0.13

trust to their staff. According to the second subdimension, *norms in school organization*, while Tabriz University has $\square = 3.20$ average, Islamic Azad University has $\square = 3.27$ average. There is a little differentiation between two universities. But this differentiation is not statistically meaningful. From this point of view, it can be claimed that both universities give the same values and norms to their staff.

In the third subdimension, *participation and interaction in school organization*, while Tabriz University has $\square = 3.14$ average, Islamic Azad University has $\square = 3.18$ average mark. Both universities' average marks are almost equal. There is a little differentiation. From this point of view, it can be said that both universities have the

same administrative processes, the same decision-making processes, and the same interaction among the whole staff. In the fourth subdimension, *commitment in school organization*, Tabriz University has $\bar{x} = 3.40$ average and Islamic Azad University has $\bar{x} = 3.41$ average.

In the subdimension both universities have almost equal average points. From this point of view, it can be said that both universities give the same commitment sense to their staff. Also it can be claimed that both universities' academicians have strong commitment to their organizations.

12.3 Discussion and Conclusion

Academicians have above average point scores on the four subdimensions: *trust in school organization*, *norms in school organization*, *participation and interaction in school organization*, and *commitment in school organization*. This finding is similar to the research findings of Ersözlü (2008), Uçar (2010), Şimşek (2013), and Eker (2014). But Ekinci and Yıldırım (2011) found different findings in their research. According to their research, universities' social capital usage level is very low.

Female academic staff have higher average point scores than male academicians in the subdimensions of *trust in school organization*, *norms in school organization*, *participation and interaction in school organization*, and *commitment in school organization*.

One of the possible causes of this differentiation is that female academicians may have strong commitment sense to their universities. Also, they may have internalized values and norms stronger than males. Female academicians may be more active in the decision-making processes. Thus they wishfully work and engage themselves in the activities of universities.

According to Eker (2014), male academicians have more social capital usage than female academic staff. Besides this, female academic staff use more bridging social capital than males. Ersözlü (2008) and Ekinci (2008) found that social capital use has no differentiation in terms of educators' gender. This finding is parallel with our study's findings. Namalır (2015) found different findings. According to his research, which is done in low-level schools, social capital use statistically differs in terms of educators' gender. Male educators have higher social capital usage level than female educators. Additional to this, male executors have much more social capital usage level than female executors. Also in the study of Toprak and Bozgeyikli (2011), there is a similar finding. In their research, social capital use is meaningfully in favor of female educators.

Academicians' latest academic qualification is not meaningfully different according to subdimensions of *trust in school organization*, *norms in school organization*, *participation and interaction in school organization*, and *commitment in school organization*. From the view of average marks, academicians who hold a doctorate degree have higher average mark than other academicians. One of the possible causes of this differentiation is that doctorate degree staff have more interaction with students than master's degree academic staff. So, doctorate

degree staff use more social capital because of their intense interaction. Also, they use students' experience for enriching the education process. But according to Eker (2014), in terms of latest academic qualification, social capital use is meaningfully different.

Being in executing duty statistically does not differ in terms of academicians in the subdimensions of *trust in school organization*, *norms in school organization*, *participation and interaction in school organization*, and *commitment in school organization*. Executing a faculty or a department is an extra duty for academic staff. Sometimes this may be so tiring for them. This extra situation sometimes may not allow interaction with other shareholders. Benefiting from social capital sometimes will help to reach organizational goals easily. According to Bilgin and Kaynak (2008), there is a positive correlation between social capital and work performance in universities in terms of practitioners.

In terms of academic title, use of social capital meaningfully differs in the subdimensions of *trust in school organization*, *norms in school organization*, *participation and interaction in school organization*, and *commitment in school organization*. Professors are at the top of the academic pyramid. Lecturers and research assistants are below professors. According to findings, professors use social capital more effectively than lecturers and assistants. Professors are in universities for a long time. This long occupational seniority helps professors to be active in the process of educating and managing. This great experience helps professors to use social capital more than others. From all these reasons, social capital use is in favor of professors. Besides this finding, academicians' work experiences do not meaningfully differ in terms of subdimensions of social capital.

Effective use of social capital in higher education institutions paves the way for an increase in academic success, stronger communication in organizations, an easy attainment of organizational goals, and increased work performance and quality. According to some researches (Neri and Ville 2008; Miracle 2013; Bilgin and Kaynak 2008), there is a positive correlation between social capital use and academic performance. In the research of Bryk and Schneider (cited Ekinci 2012) which was done in universities, social capital use directly increases student academic success. According to Özmen et al. (2014), social capital importantly predicts job satisfaction. In universities, executors have an important and critical duty in order to develop social capital. Leaders, practitioners, and department chiefs should try to enrich social capital in their universities in order to increase academic success and in order to create a positive learning climate.

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Chapter 13

A Paradigmatic Frame in the Definition of Leadership: “Transformational Leadership”



Aynur Saran

Abstract In our age, individuals who can establish effective communication with their social environment, who can think critically, who are skillful in problem-solving, who bear responsibility, who can find access to actual or critical information, who can think and produce, and who are open to change and development are sought for. It is thought that humanity has started to understand or become aware of change for the first time by Heraclitus’s saying “Everything is in constant transformation and flux and nothing remains unchanged.” There is no doubt that this process which is called as change or transformation has influenced the cultures of all of the social systems regarding life, ongoing rapid change, and transformation in technology and the knowledge accumulation together with rapid development and communication. Hence the leadership phenomenon was brought to the agenda in this transformation process. After it became apparent that the conservative leadership concept was not sufficient in explaining the leadership understanding, it became necessary to restructure its understanding. Thus, it is asserted that this restructuring need brought forward the transformational leadership concept. In this process of change which has been continuing in an uninterrupted manner, transformational leadership is accepted as the best solution for overcoming the challenges that are encountered in all of the sectors. By starting from scientific or empirical facts which defined leadership as a set of acquired characteristics and also from the principle of power and inevitability of change, the school administrators are required to internalize the behaviors of transformational leadership by following up the change and transformation in education. The objective in this study is to analyze the theoretical and applied scientific aspects of transformational leadership concept. In line with this objective, the related literature and the other related research findings shall be utilized in order to reach to a conclusion in this paper.

A. Saran (✉)
Hacettepe University, Ankara, Turkey
e-mail: aynursaran@gmail.com

13.1 Introduction

Many people spend a large part of their lives in groups, while they are learning, playing games, raising children, and developing social status. Being in a group can leave them to become leader. For example, many people become parents and teachers, work in a commission, can be supervisors or sports coaches, or may be a president of a voluntary organization such as scouting.

Throughout history, some individuals have been given superiority over other individuals in society and have been dragged behind the big masses. People feel obliged to act in groups to reach their personal goals and fulfill their own needs and desires. At this point, they need a person who is able to persuade, influence, trust, and create a vision for the future, who can focus on specific goals and focus on acting together. We call these people “leaders.”

13.1.1 *Leader and Leadership Concept*

It can be said that the emergence of the word of leader extended to the 1300s. It can be said that a clear distinction cannot be made between leader and leadership in the definition of leadership. Because leader expresses individuality, leadership emerges as a behavioral method. In addition, in a leadership considered as an influencing process to group, the leader is considered as an individual who activates group by influencing them. In this context, the differences between the leader and the manager are also determined. The manager tries to maintain politics by affecting the group members with authority, while the leader sets policies with a broad perspective.

The concept of leadership has begun to be used since the early nineteenth century. It has been influenced by military, political, and economic changes that have taken place over the years, and therefore the definitions of leadership have changed in this context. Considering the definitions made, it seems that the basis of the leadership process is the power of one person to influence others. Leaders have features that can successfully influence their followers. In the traditionally defined leader concept, we regard it as the whole of the ability to collect a certain group of people around certain aims and to have the qualities, talents, and experiences that can activate others.

However, today’s developing technology, changing environmental conditions, and sociocultural changes have changed the concept of leadership, eject leader as the person who create thoughts and followers as people who do work, and make the concept much more complex (Bayrak 1997:356). Today, we can say “Who is the leader?”

The leader can be described as a person who creates synergy by bringing together the scattered forces and scattered information, which directs individuals toward common goals, adopts goals, and creates a bridge of hearts between individuals. A leader:

- Is a questioner and patient
- Is not always ahead and sometimes can stand behind
- Struggles with difficulties
- Has principles
- Sees moral rules in front of his/her profits
- Is open to change
- Can create change
- Has communication skills
- Believes in team spirit
- Has words and attitudes that are in harmony
- Knows his/her weaknesses

When we look at the historical process, we see that leaders are creators and practitioners of great plans, and people who have vision Cengiz Han, Kanunî Sultan Süleyman, and Fatih Mustafa Kemal Atatürk are some of them.

There are many theoretical and practical studies on leadership. We can gather these studies under four groups:

- Features approach
- Behavioral approach
- Contingency approach
- Alternative approaches

Alternative approaches are diversified as:

- Charismatic leadership approaches
- Transactional leadership approaches
- Transformational leadership approaches
- Instructional leadership approaches
- Cultural leadership approaches
- Super leadership approaches
- Moral leadership approaches
- Visional leadership approaches
- Quality leadership approaches
- Team leadership approaches
- Educational leadership approaches
- Global leadership approaches
- Plasma leadership approaches
- Quantum leadership approaches
- Perceptual leadership approaches
- Fossil leadership approaches
- Wise leadership approaches

13.1.2 Transformational Leadership

It is not possible to adapt to this change process with the old, classical leadership behaviors today, when the moment of intense change is experienced. Emerging technology, changing environmental conditions, and sociocultural and economic transformations lead to new leadership understanding and the emergence of leadership roles and behaviors that can respond to the needs of twenty-first century. This new understanding is considered as a paradigmatic model of transformational leadership. It is argued that transformational leaders can adapt to this pace of change.

Transformational leaders have emerged as change-based. Transformational leadership has entered this literature relatively new. This concept has become an important concept in leadership literature since the 1980s, and it emerged in 1978 with the concept of interactive leadership. In the early 1990s, it was at the center of the leadership scene and was eventually updated as a version of the charismatic leadership theory (Meindl 1993, 96).

Transformational leadership was first described in Dawston's (1973) Rebel Leadership study. Then the intellectual foundations were laid in 1978 by James MacGregor Burns. Burns is a Pulitzer-awarded researcher. He has opened new horizons for scientists in his field and has directly affected them. Burns' opinion was later developed by Bernard Bass. It is thought that transformational leadership approach aims to contribute to individual development and organizational development of leaders and followers (Aydm 2014, 309). According to Burns, the leader is a master of change (Burns 1978). Because the leader is foresighted, she/he creates a better future, creates a vision, and invites everyone to adopt it and pass it on life. A leader, who creates high morale, motivation, and performance on the followers, has the ability to open new areas in modern organizations. Transformational leaders are leaders who can change their environment. These leaders are not affected by their surroundings, they do not react, and they create a new environment (Atwater and Bass 1994).

Burns invited leadership researchers to abandon leader-centered approaches. It is stated that the cause of the leadership crisis is rooted in the traditional and historical leadership perspective that leadership is an adjective to the elites. He developed a new approach by bringing a moral dimension to leadership understanding, as well as the idea that real revolutionary leaders must help the development of ethical ideas has also been adopted. Bass and Steidlmeier (1999, 186) came to an understandable conclusion that they are really the "revolutionary leader" when leaders realize what is good, right, and important; they really meet the needs of their followers, develop the moral maturity of the followers, and come to the point where they can give up their will for the good of the group members.

Burns entered into the distinction of political leadership as transformational leadership and transactional leadership, under the influence of Weber and Herbert Simon. Transformational leadership theory emerged when transactional leadership was not successful on social and economic conditions. Bernard Bass then moved Burns' new theory to an understandable and measurable point by preparing a

Table 13.1 Features of transactional and transformational leadership

Transactional leadership	Transformational leadership
Rewarding	Give the lead to environment
Manage using gaps (active)	Give inspirational motivation
Manage using gaps (passive)	Intellectual stimulation
Liberal	Providing individual support

Table 13.2. Transactional and transformational leadership

	Transactional	Transformational
Time orientation	Short, today	Long, future
Coordination mechanism	Rules and directives	Unity of objectives and values
Communication	Vertical, from top to bottom	Multidirectional
Focusing	Financial targets	Customer (internal and external)
Rewarding system	Organizational, external	Individual, internal
Power source	Authority	Followers
Deciding	Centralized, from top to bottom	Participated, from bottom to top
Employee	Act like goods	Enhanced resource
Obedience	Order	Rational explanation
Attitude toward change	Avoidance, resistance, protection of status	Do not avoid, adoption
Routing mechanism	Gain	Vision and values
Supervision	Extreme compliance	Self-regulation
Perspective	Internal	External
Task design	Partitioned, individual	Enriched, grouped

“multidimensional leadership questionnaire.” Tables 13.1 and 13.2. show the differences between the transformational and transactional leadership and the relationship between these leadership styles and organizational success.

When Bass opened the debate on the Transformational Leadership Theory, he argued that transformational leadership is three behavioral elements as charisma, intellectual stimulation, and individual respect (Erçetin 2008, 58). However, when the text was scanned, it appears that some authors did not distinguish between charismatic leadership and transformational leadership, while others acknowledged differences and claimed that the charismatic leadership included transformational leadership. Although all researchers’ “transformational leadership” definitions were similar, there were different views on the relationship with other leadership approaches. These are (Çelik 2001, 42–43):

- Sashkin: Ways and importance to create vision in transformational leadership
- Hause, Trice, and Beyer: Charisma
- Burns, Bass, Howell, and Avolio: Emphasize moral dimension

In our country, it is seen that the efforts related to the transformational leadership have increased in recent years. In this issue, Şimşek (1997, 164) made the following definition: “The work of transformational leaders is to create a new vision, worldview or reality, to develop harmonized new standards, boards, norms and behaviors related to this new reality.” In this context, we can summarize the main features and roles of the transformation leader under the following headings (www.tanzuargun.com):

- Creating and sharing a common vision
- Mental stimulation and creativity
- Having charismatic influence
- Effective communication and high motivation
- Be a representative of change
- Emotional endurance, courage, risk taking
- Reinforcement (authorization)
- Flexible management approach (dynamic organization)
- Reliability and self-confidence

We can see the transformational leadership process in Fig. 13.1.

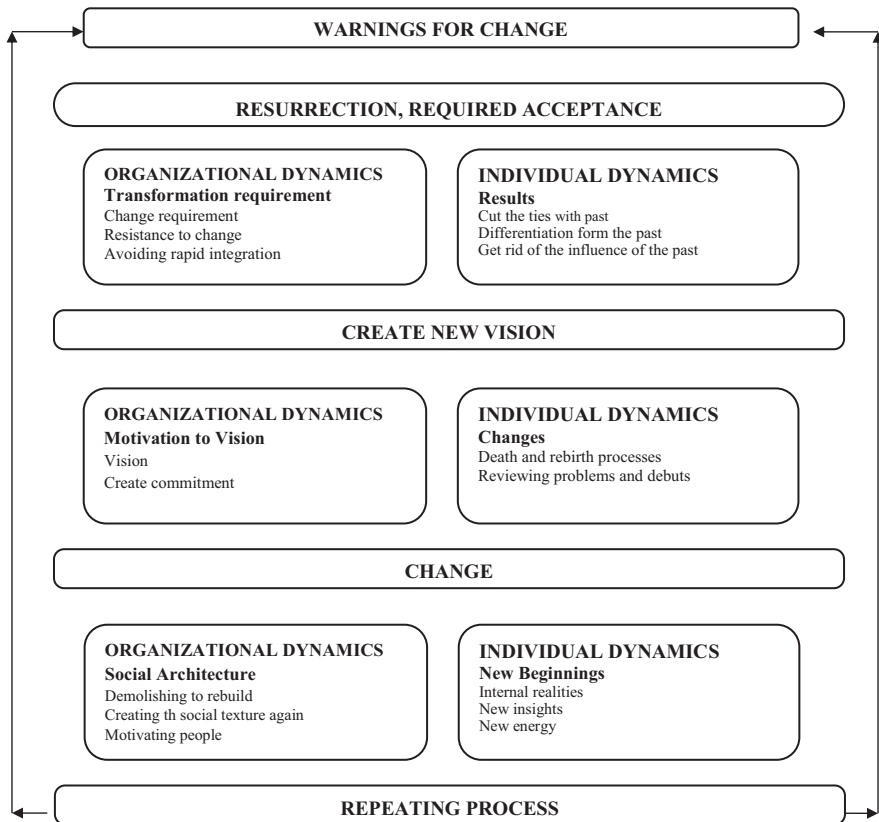


Fig. 13.1 Transformational leadership process

13.2 Effects of Transformational Leadership to Education in Terms of Management

In all definitions of leadership, leadership is seen as an influential power. It can be said that the leader is a person who has vision and courage, who can take precise decisions in place and on time by using his knowledge and experience, and who can motivate his team by applying strategic and tactical plans. The manager can be defined as a “formal leader” who tries to realize organizational goals, has a certain position within the hierarchical structure, and exercises authority over the group with its authority (Table 13.3).

The school manager is a formal educational leader but can be defined as “informal leader” in terms of his/her values and orientation and can motivate the teachers. Manager may have a charismatic gentleness, but we cannot think of this feature for every manager.

From the manager’s point of view, vision is the heart of the manager in decision-making, communication, renewal, and modeling for action. Vision is designing the future balancing the facts. Vision is to differentiate with values and to integrate values with heartfelt power. Vision is to communicate and share, to enter into risk, and to manage risk (Erçetin 2000, 92–97). In this context; we can say that the school manager has to keep up with changing society.

The school manager has to keep up with changing society. Alterations in the structures of the societies thus necessitate a change in the education and training system, in particular the thinking and behavior of the school administrator and the teaching staff. This situation requires school administrators to make a change and transformation toward school leadership rather than management. In this context, the school administrator adapts and develops the objectives determined by the Ministry of Education, taking into account the environmental conditions of the school, by developing a common mission based on strong values and creating a common point of view with teachers, families, and the school environment. This

Table 13.3 Leader and manager

Leader	Manager
Deals with change	Deals with protect the structure
Can lead	Can manage
Writes the text of the speech him/herself	Reads the text of the speech
Based on moral authority	Based on bureaucratic authority
Instills the spirit of struggle to followers	Protects happy community
Has vision	List and budget owner
Has power which is based on shared reason	Has power which is based on rewards and punishment
Can motivate	Can control
Inspires	Regulates
Illuminates	Coordinates

Resource: Starratt 1995, 10

mission, as Erçetin said, is an understandable and shared result (Erçetin 2000, 109). This means clearly providing for participatory and shared goals integrity in the rapid resolution of educational problems for everyone involved in the school, in the setting of new goals, in the development of creative thinking, and in the creation of new and effective perspectives for problem solutions. The most important point that should not be forgotten here is to include students in the interpretation of this change, transformation, and development. School administrators are transformational leaders in terms of ability to adapt to change but also an instructional leader at the same time as in effective communication, building a good vision, implementing management strategies, determining priority programs in the program and teaching, and using time effectively.

Again, the school principal has to play the role of “cultural leadership” in order to act collectively, to meet expectations of teachers – students and parents – to balance in doing all these things and to give a static school culture.

The school administrator is also the person who has responsibilities toward self, against organization and society. From this point of view, the school administrator, of course, has some ethical principles and rules personally. If these rules are internalized, they do not have the problem of non-principledness, but when it is dealt with from the organizational point of view, it is also necessary that the basic laws of the school’s work and work ethics should be reported to employees and explained and interpreted together. The school administrator should be able to explain the spirit of these ethical rules to the students by preparing suitable environments. Because of the increasingly shrinking world, the changing values depending on the developing and rapidly spreading mass media bring with it the global ethical problem, so this does not only affect the school administrator but also the behavior of teachers and students. In this respect, school administrators have to play the roles of “ethical leadership” by resolving the rising and falling ethical values in the world from the rational ways.

In addition, the school administrator must be flexible, changeable, and open leader to teachers as a lifelong learner. School administrators should be a pioneer in understanding the systemic forces shaping change for teachers, their students, their surroundings, and their families. In this sense, they should internalize the role of “learning leader.”

13.3 Roles and Duties of Managers and Teachers in Terms of Transformational Leadership Features

The concept of transformational leadership was first expressed in 1978 in McGregor Burns *Leadership* book but became popular in the 1990s. In the 1990s, there was a need for intense change. In this context, efforts to reorganize schools have led school administrators to show an evolution toward transformational leadership.

Because the most important point in transformational leadership is to keep pace with change. In this respect, transformational school principle:

- Challenges confusion, creating an effective agenda.
- Creates a vision to gain a new identity for the school.
- Exceeded the created vision to the school staff.
- Prepares the ground for the cooperation of the teachers.
- Is respectful to teachers and sensitive to the needs of teachers and students. He tries to understand their feelings.
- Encourages the formation of ideas that will gain momentum by taking precautions that will increase the performances of teachers and students.
- Encourages teachers and students to develop common goals in order to keep their goals high.
- Activates the team spirit and includes the common purpose of the student and parents.
- Shares leadership and strength with teachers.
- Strives to professional development of teachers, helps them to solve their problems, and gives importance to job satisfaction.

Transformational leaders are very good problem-solvers, a thought expert, and a person who can make successful changes (Evers and Lokomski 1996, 397).

13.4 Discussion and Recommendations

As a philosophical approach that was carried to this day from years ago, “Society is dynamic, we are self-defeating” explains that our dynamism is unchangeable and indispensable in all organizations. Throughout history, people have set their statues as being guided in groups or in directors. Over time, the most prestigious issue in the field of management has been the leadership with the development of scientific management thinking. Previously, characteristics of leaders had been taken into account, and then behavior dimension began to be examined. Especially after the 1980s, many leadership approaches, as well as the “transformational leadership” approach, have increased the expectation of managers to have leadership qualities in modern organizations of our time. Transformational leadership has been adopted as a model of leadership needed by every industry in the twenty-first century.

In this context, our school administrators should act on the fact that the transformational leadership behaviors can be learned and strengthen their confidence by raising the goals of the school and social environment of the school, teaching staff, parents, and students, focusing on the school mission and interlocking with joint studies. When it comes to the place, it should of course be able to use the initiative – in accordance with the law and the principles – in line with these aims.

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Chapter 14

Role of Geospatial Mashups in the Development of Rural Tourism: A Study from West Bengal, India



Nilanjan Ray and Somnath Chaudhuri

Abstract Rural tourism is the category of tourism that focuses on rural locations highlighting the rural art and culture, heritage and lifestyle, thereby helping the local community in economic and social development and cultural exchange. The rural tourism destinations have huge potential to turn into important tourist centres. But lack of detailed information about the locations like transportation, place of interest and on-spot available facilities is acting as barrier in this transition. The tourism industry has extensively adopted Web geographic information system (Web GIS) to provide improved service and information to the tourists. Geospatial Mashup is a field of collaborative and interactive Web applications that impeccably integrate datasets retrieved from diverse Web-based resources to create user-friendly and innovative Web GIS applications. This research paper highlights on the application of Geospatial Mashup in rural tourism promotion and development. The present study is conducted for a rural tourism site of West Bengal, India, to analyse the existing online information and the tourist inflow. It discusses the geo-referenced procedures of providing additional online information using Geospatial Mashups and its potential benefits. In the final segment of this paper, some suggested Mashup maps of the current research location are depicted that can be implemented for online promotion of the rural tourism site.

N. Ray (✉)

School of Management, Adamas University, Kolkata, West Bengal, India

e-mail: drnilanjanray@gmail.com

S. Chaudhuri

Maldives National University, Malé, Maldives

e-mail: som.rtc@gmail.com

14.1 Introduction

According to the United Nations World Tourism Organization (UNWTO), tourism is the act of travelling for the purpose of recreation and the provision of services for this act. Tourism plays an important role in the economic development of the nations. The countries enriched in valuable heritage, rich historical legacy, traditional culture and natural resources like mountains, seabeach, river, forests, etc. can utilize these sustainable resources as the primary capital for the development of tourism. Tourism industry is one of those rare industries which help in earning foreign currency without exporting any indigenous product outside the country. Cultural exchange infused by tourists from different countries amplify the effect of globalization. Thus, helping in overall socio-economic development of any tourism enriched the nation. Rural tourism is the form of tourism that focuses on rural sites highlighting the rural art, culture, heritage and lifestyle, thereby strengthening the local economy and enabling social and cultural exchange. More than 75% of Indian population lives in the village, and according to Census report 2011, there are 638,691 villages in India, and the total rural population is 741,660,293 with an average population of 1,161 per village. The rural tourism destinations have huge potential to turn into important tourist centres. Scenic beauty includes rivers, forests, mountains, paddy field and lakes, valuable heritage, rich historical legacy and traditional culture; this rural hoard of treasure helps in the growth of rural tourism. But lack of detail information about the locations and related infrastructures is acting as barrier in this transition. The tourism industry has widely adopted information technology (IT) to provide improved service and information to the tourists. It integrates between tourism products and requirement of the tourists. Information and Communication Technology (ICT) can lead tourism to emerge as a new mantra for alternative economic development (Buhalis 1998). Geographical information system (GIS) is a genre of interactive and collaborative Web applications that impeccably integrate datasets retrieved from diverse Web-based resources to create interactive and user-friendly Web GIS applications.

Currently, the Internet has become the inseparable part of the information and communication technology. The GIS technicians and researchers started research on how to customize the GIS features. They tried to upgrade “stand-alone” GIS to “on-the-Web” GIS. From the year 1993, the Web GIS started evolving rapidly. The online static maps slowly transformed to interactive dynamic maps over the Internet. This is the first step of Web GIS. In the year 2007, Fajuyigbe and Balogun presented a work on Web-Enabled GIS as a potential tool for sustaining tourism in western Nigeria (Balogun et al. 2010). The greatest improvement was to get rid of the installation and data sharing hazards of traditional desktop GIS. At present, anyone who has Internet access can insert new geospatial information or can update any existing information available in a publicly shared geo-referenced platform, like Google Maps, OpenStreetMap, etc.

Geospatial Mashup is the process of merging multiple-source heterogeneous data, both spatial and nonspatial, into a single integrated spatial display. These geospatial applications are increasingly becoming critical for the competitive operations

of the tourism destinations as well as hospitality organizations. The present study discusses about the architecture and the strategic application of Geospatial Mashups in tourism development and promotion.

14.2 Objectives of the Study

The main objectives of the present study are:

- I. To identify the impact of Internet-based information technology in tourism destination management and promotion
- II. To study the characteristics of Web geographic information system in general and Geospatial Mashups at Kamarpukur, West Bengal
- III. To analyse Geospatial Mashup architecture channels and recommend their application for promoting Kamarpukur as a potential rural tourism site

14.3 Methodology

The main purpose of this research paper is to systematically collect, record and analyse data about the problems related to promoting and marketing of rural tourism in the state.

14.3.1 Database

This study is based on both primary and secondary data.

14.3.2 Instrument of Data Gathering

The research is formulated keeping in mind of various essentials and requirement of given objectives of the study. There are two sets of questionnaires: the first set for the women employee who were engaged in Ramakrishna Mission Pallimangal and the second set for tourists who were visiting Kamarpukur at that time to collect up-to-date information about the subject.

14.3.3 Sample

Sample size is restricted to 130 respondents selected for the analysis to identify pattern of expenditure, percentage of expenditure and period of stay at Kamarpukur.

14.3.4 Mashup Map

Google Earth software (<https://www.google.com/maps>) has been used to capture the online Mashup map in and around Kamarpukur. The proposed Mashup map was designed by using *ArcGIS Explorer, Desktop version, 2015 (ESRI)*. Both are open-source software.

14.4 Rural Tourism in Kamarpukur, West Bengal

Kamarpukur is the holy birthplace of Sri Bhagawan Ramakrishna, and the centre was affiliated to the headquarters of Ramakrishna Math and Mission, Belur Math, in 1947. It is situated in the extreme west of Arambag subdivision of Hooghly district, West Bengal, in India with Bankura district in the west and Burdwan in the north. Considering its geographical location and historical importance, Kamarpukur has taken a vital position in the road map of rural tourism in West Bengal. Table 14.1 depicts the factors related to tourism in Kamarpukur.

14.5 Tourism Using Web-Enabled GIS

Web GIS is any geographic information system that uses Web technologies. In a narrower definition, Web GIS is any GIS that use Web technology to communicate between two components (Pinde and Sun 2011). It provides the geospatial application in tourism management, development and promotion in Ghana. It is one of the principal GIT tools in Ghana tourism market (Longmatey et al. 2002). In the Oyo State of Nigeria, Fajuyigbe and few other researchers developed a Web-enabled GIS for the management of tourism (2007). The basic architecture of this application has two sections, server-end and client-end. The client can access the geospatial information over the Internet, and the server will process and customize the query for execution. This application is to provide tourism-related information in an interactive environment. But it doesn't incorporate the virtual tourism features as the

Table 14.1 Factors related to tourism in Kamarpukur

1. Physical and personal factors	Rest house, sightseeing, historical settings, enjoyment of rural experience, safety and security, guide, travel expenditure
2. Emotional factors	Festivals, religious activity, cultural activity Spend more time with indigenous life, volunteer engagement
3. Tourism amenity factors	Room service, car parking, accessibility to the destination, transportation, ATM
4. Cultural factors	Cultural infrastructure, enjoyment of rural experience, art and folklore, historical settings, enjoying ritual customs and traditions

demand was mainly for an interactive platform where the users can have access to detailed information about the location in an interactive map format. In any online virtual tour, the information is static; the users don't have access to their specific queries. They have to depend on what the virtual tour is providing. But in this case, the designers planned to make it interactive, more effective, and user-friendly. In this process, the tourists can get detailed information about any tourist site. An implementation of Web-enabled GIS as a potential tool in sustainable tourism in western Nigeria was done by Fajuyigbe and Balogun (2007). This was an advanced version of Fajuyigbe et al.'s (2007) system. The geospatial application "eZaragoza" is built on a Mashup platform called EzWeb where application components exchange information among them (Linaza et al. 2008). The shared data provides online information about travel and transportation including specific pedestrian and bike maps, detailed information of the amenities available, current local news, weather and politics, environment and climate change, photos and media maps, recreation and entertainment like sports features, few directories for online Mashup application, etc.; all these online information are available just on a click. Having reviewed the above-cited works, the requirement for integration of multiple datasets from different independent sources in Web GIS applications has become prominent and inevitable.

14.6 Data Analysis and Interpretation

14.6.1 Tourists Inflow at Kamarpukur: Actual and Forecasted

The above figure also depicts that the regression model fit is much better because $R^2 = 0.989$, i.e. 98%. The value r^2 is a fraction between 0.0 and 1.0 here in the above figure which is near to 1, and trend line is $Y = 289.0x^2 + 9602.x + 35157$ (see Fig. 14.1). The above figure also depicts that tourist inflow is increasing every year and it is matching the actual number of tourist arrivals with a negligible difference; it indicates Kamarpukur is a potential destination for rural tourism (see Fig. 14.2).

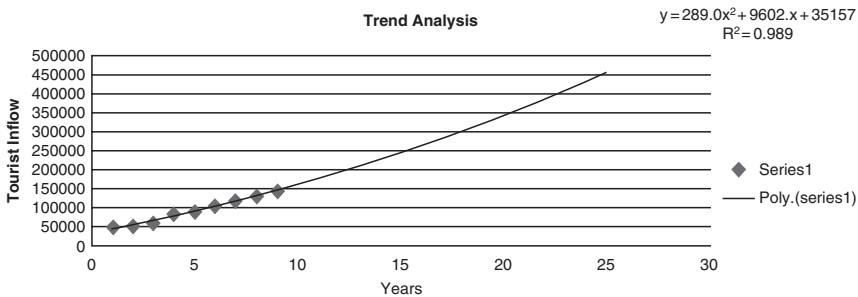


Fig. 14.1 Trend line of actual tourist inflow

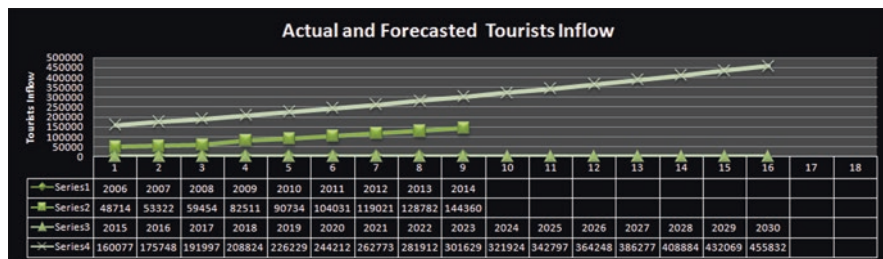


Fig. 14.2 Actual and forecasted tourist inflow

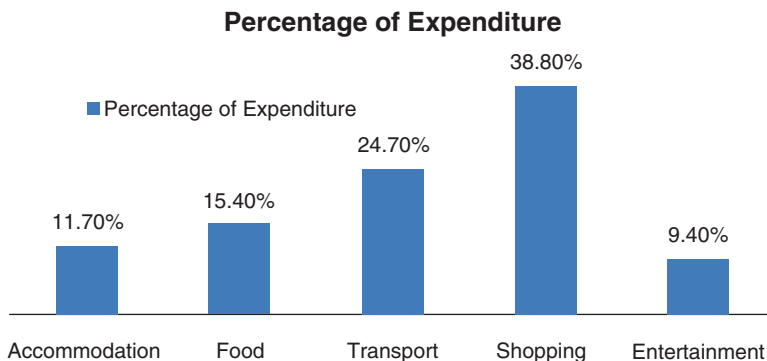


Fig. 14.3 Percentage of expenditure

The above figure depicts that tourists coming to this place normally spent more in shopping purpose (38.8%) followed by transportation (24.7%). The data also revealed that they spend on food (15.4%) followed by accommodation (11.7%) and entertainment (9.4%) (see Fig. 14.3).

Figure 14.4 depicts that expenditure in the account during festive season, nearby private lodge cum hotels, is also in demand. According to the respondents, expenditure for entertainment is comparatively low because most of the activities like bird watching, fishing, boating in country boats, etc. are indigenous. According to the respondents, transportation cost is relatively higher as the location is far from the capital city of Kolkata. As there is no government-declared fare rate, different patterns of vehicle owners charged unnecessary high rate from the visitors.

Figure 14.5 depicts that in the frequency of the visit at Kamarpukur, 47% respondents had visited for the first time and 32% had visited twice in a year, while the remaining 21% visited only in the festive seasons such as Durga festival, Ramakrishna’s birthday and Kalpataru festival.

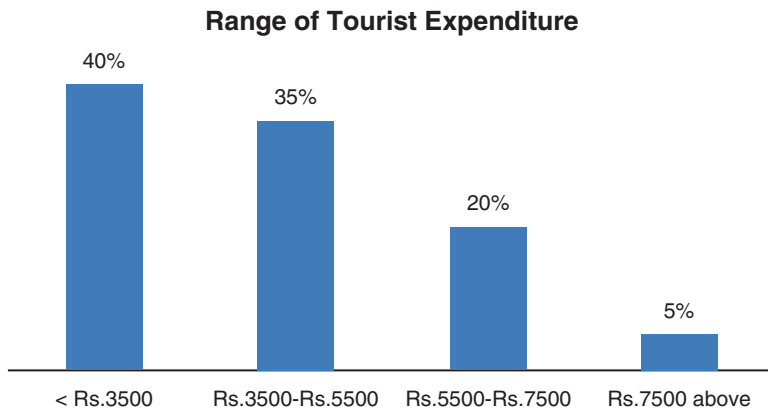


Fig. 14.4 Range of tourist expenditure

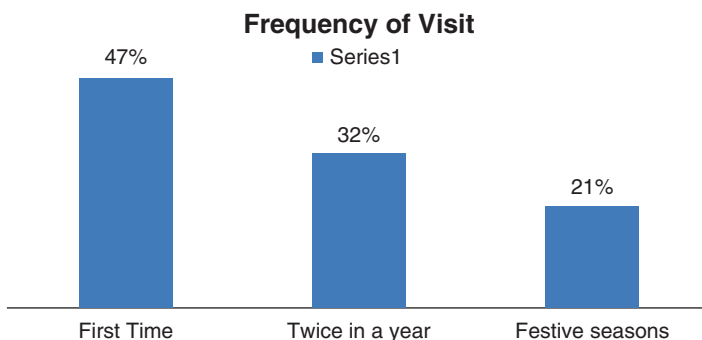


Fig. 14.5 Frequency of visit at Kamarpukur

Figure 14.6 depicts the number of days spend by tourists at Kamarpukur. Fifty-eight percent of respondents had spent 2 days or less followed by 3–4 days (20%) and 4 days or more (22%) (Fig. 14.7).

The above figure depicts that WOM (40%) is the best of creating awareness about Kamarpukur followed by the Internet (20%), tour agency (15%), travel magazine (10%), TV (6%), travel exhibition (4%), books (3%) and tourism office (2%).

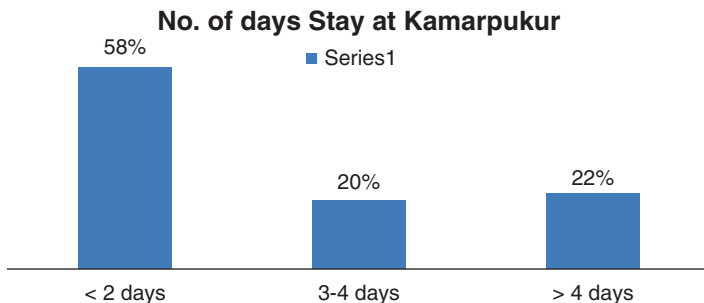


Fig. 14.6 Number of days tourists stay at Kamarpukur

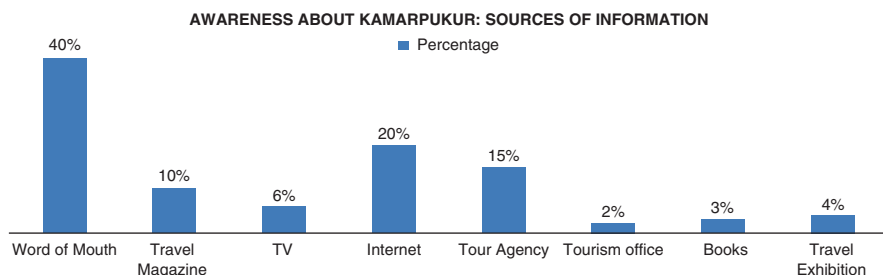


Fig. 14.7 Source of information about Kamarpukur

14.7 Web GIS and Geospatial Mashups Versus Tourism

The simplest architecture of Web GIS should have at least two components, a Web application server and one or more clients. Client can be as simple as a Web browser or a mobile client. The GIS service-providing server can be connected by the client using the Internet (HTTP). This dynamic connection is interactive in nature. Based upon the data processing in the Web GIS application, the complete workflow has been categorized into three sections, namely, *presentation tier*, *logical tier* and *data tier*. The complete Web GIS workflow is depicted as follows (Fig. 14.8):

The GIS database is the back-end support for any Web GIS application. The quality of the data in the GIS database determines the standard of the result generated by the Web GIS application. Professional applications definitely need the up-to-date, reliable and high-quality dataset. Slowly, it was becoming obvious that to maintain a quality and up-to-date Web GIS database, it needs a collaborative contribution (Chaudhuri and Ray 2016). There are clients who are accessing the system for information, but at the same time, there might be some other end users who can update the system with recent information about their locality. The first type of

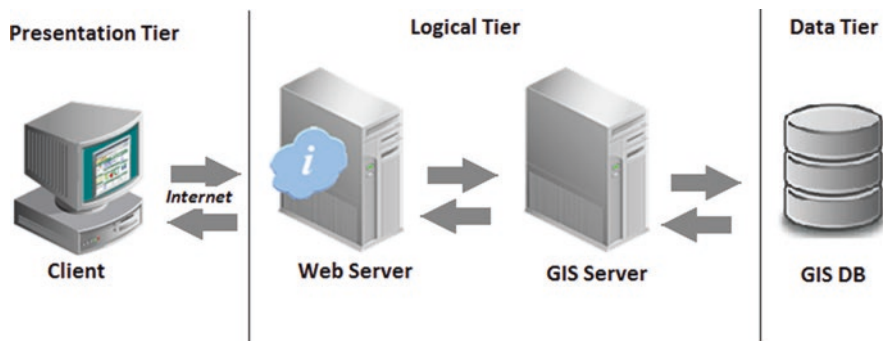


Fig. 14.8 Web GIS workflow

clients is just sending query in the system and accessing the information. They don't have any idea what is going on at the back end of the system; they don't need to know about the back-end processes. But the Web GIS system administrator slowly realized the need of another group of authenticated end users who can perform some geospatial processing tasks.

14.7.1 Map Mashup

The recent trend of Geospatial Mashup has significant impact on Web GIS. The next section will highlight on Map Mashups in Web GIS. The term has emerged partly as a result of the vast amount of public interest in online mapping and using geospatial technologies, mostly through mashing up online map or map applications (Li and Gong 2008). It is a subset of Geospatial Mashup. Map Mashup consists of at least one map data; other dataset are combined collaboratively to generate a more informative new online map. General Mashup architecture is broadly classified as the *Browser-end* and *Server-end* Mashups. But in case of Map Mashups, both the Server side and the Client side can be divided into levels based upon respective operations. According to Wong et al. (2002) any Map Mashup has two Server-side Mashups, namely, *Server-end Software Mashup* and *Server-end Data Mashup*. Client-end Map Mashup has three functions, namely, *Client-end Data Mashup* and *Client-end Software Mashup*, and the final display operation is the *Presentation Mashup*. Figure 14.9 depicts the levels of Map Mashup (Fig. 14.9):

Map Mashup follows three-tier architectural framework. Figure 14.10 represents the three-tier Mashup architecture. Different mainstream IT organizations are providing the Map APIs. Google, Yahoo and ESRI are the giant organizations in this domain. Most of these are available for free provided they are not utilized for commercial purposes. Most of the APIs are Javascript based and using AJAX technology.

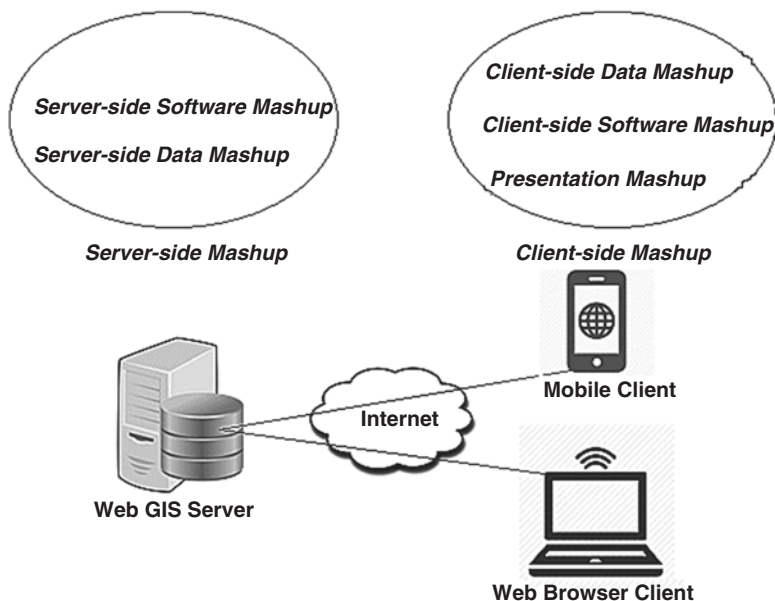


Fig. 14.9 Function levels of Map Mashup channels

Creating sophisticated Mashups often requires higher levels of programming. To design a sophisticated Map Mashup, more focus should be put on its supported functions, logical operations and data integration, and if multiple data services are to be mashed up, then technology compatibility also plays an important role. On the other hand, Mashup editors are interactive development environment, and they require a certain level of programming knowledge to use. These are graphical user-based tools which provide user-friendly interface to create Mashups more simply and efficiently. Few non-programming Mashup editing tools like MapBuilder and YourGMap are also available to make non-technical users feel comfortable in editing Map Mashups. But in these lightweight tools, there are many limitations and restrictions of functions.

The common Map Mashup design pattern consists of three components: *basemaps*, *operational layers* and *tools*.

- *Basemaps*: It provides the initial framework for any GeoMashup. It is the frame of reference like the aerial imagery maps often from the Web services of Google, Yahoo, ArcGIS Online, etc.
- *Operational layers*: It is also known as the thematic layers, usually embedded on the top of a basemaps, like café, building names, street names, bus stops, etc.
- *Tools*: It can execute logical and analytical functions.

The vast majority of contents over the Web are HTML pages and photos that don't have formal APIs, but they contain a huge amount of valuable information that can be scraped and geospatially tagged or referenced and then reused to build new and

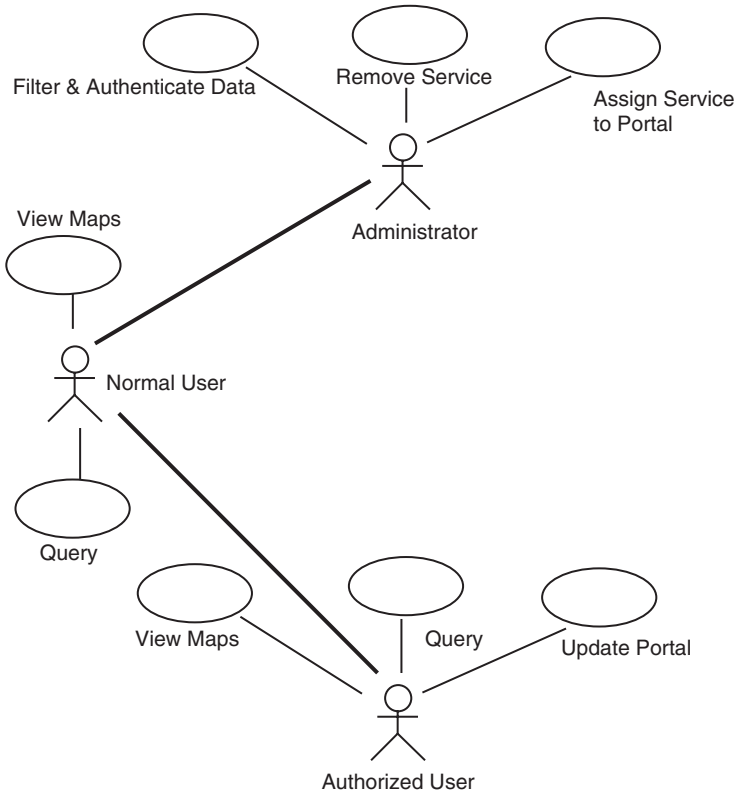


Fig. 14.10 Generic case diagram for channel perspective Mashup

value-added applications. Virtually, the whole Web can be remixed, which opens the door to unlimited value-added Mashup applications (Pinde and Sun 2011). The complete workflow in a Map Mashup application is depicted in the figure below.

The administrators are the destination managers who are in charge of the Mashup applications; final authentication is done by this level of users. Authorized users are intermediate service provider group. The destination managers can provide permission to few principal service provider, so they can reduce the overhead load of the admin and can maintain the information about their own services themselves and on the same level of the managers, for instance, the owner of a restaurant who can fill up a predefined form designed by the destination manager. This detailed information will be a part of the online Map Mashup after admin grants permission to display. Normal users can be any online user who is browsing the Internet for locational information. They are mainly the potential tourists. The normal users or the end user straightway sends request from the Mashup user interface. But they don't have any concept of what is going on at the back end; actually they don't need to know about that back-end process. To them only the speed, user-friendliness and the quality of

the report matter. On the other hand, there is another type of authenticated clients who can perform some geospatial processing tasks. Most of the data and information should be shared globally over the Web, so that the data is timely updated and customized, and the most reliable and updated data is available globally. That is why the second level of authorized clients came into play. But before being projected globally over the Internet and Web, there is one portal administrator for authentication and filtering the updated data (see Fig. 14.10).

14.8 Implications of Geospatial Mashup at Kamarpukur Tourism

It is evident from Figs. 14.1 and 14.2 that the number of tourists in Kamarpukur is in the trend of increasing. This rural tourism site is gaining popularity. Initially, the place was popular only among the local areas or at most to the people of West Bengal. But slowly the popularity of the philosophic thoughts of Sri Sri Ramakrishna has reached to every corner of India and has influenced and attracted people from different countries too. People from different parts of the world might be eager to visit this place of interest (Ray and Singh 2014). But very little information about the location has been provided in the online Mashup maps. Information like how far is it, how to reach there from nearby towns, available transports, roads, what are the available hotels or guesthouses, is there banking service nearby for easy monetary transactions, emergency health service, Internet facility, etc. are still lacking. The potential tourists will definitely try to find out about the connecting roads and the transport facilities available to plan a smooth tour there. In the era of the Internet and global communication, the tourists before making a visit will definitely try to figure out about the banking service for easy monetary banking transactions and Internet facilities for cheap and easy means of communication. Last but not the least, the tourists need to have detailed information about the hotels, guesthouses or restaurants in the location to make sure about their easy and reasonable dining and lodging. The potential tourists need most of this information when they are planning to make a tour in the site. But all these information online available are not up to the mark. In that case, the reliability issues may come. Another important factor is though the location itself is famous for Sri Sri Ramakrishna, what are the other places or site of importance there? Is there any other cultural or pilgrimage location nearby? Is there any location nearby to enjoy the rural nature? The available online Mashup maps are lagging in these too. The lack of above-mentioned information for potential tourists is clear if we check the available online Google Image of Kamarpukur location; check the figure (Fig. 14.11).

The above Mashup image is generated using Google Earth software, an online Mashup application (<https://www.google.com/maps>). On the left-hand tab of the figure (see Fig. 14.11), most of the essential tourism-related Mashup features like information about *lodging, dining, gas stations, museums, places of worship*, etc. are made active to depict the detail information about the locality in and around Kamarpukur. But still spiritual places of interest like Laha's Durga Temple, Dhani



Source: Google Earth (<https://www.google.com/maps>)

Fig. 14.11 Existing online map of Kamarpukur area (Source: Google Earth <https://www.google.com/maps>)

Kamarni birthplace, Gopeshwar Shiv temple and room of Sri Sri Ramakrishna are missing. Places where the tourists can enjoy the rural nature like the Bhutipur Khal (canal water body), Haldar Pukur (lake), playground near Bhutipur Khal, etc. are missing. So it is providing limited spatial information of Kamarpukur and the connecting roads and only a few information about the hotels or restaurants available. It doesn't provide additional information about other cultural or heritage centres. The map doesn't have any information about any local region where the tourists can enjoy the rural nature. After making a short trip to Kamarpukur area, the tourists who already visited the place can figure out how enriched it is in terms of natural, cultural, spiritual, pilgrimage and other historical assets. Those additional features are missing in the existing online map. As a result of that, there is a chance of not attracting potential tourists. To provide more detail information, a proposed rural tourism circuit keeping Kamarpukur in focus has been designed. It is depicted in the figure below.

The proposed circuit can be carefully implemented using Web GIS Mashup applications and can be uploaded in the online Mashup maps for better reference to potential tourists as a part of strategic promotion of this rural tourism site. The "Visiting places in and around Kamarpukur" mentioned in the proposed circuit if incorporated in online Mashup maps will definitely act as additional factor to attract more tourists towards Kamarpukur and its surrounding areas. A proposed Mashup map has been designed using ArcGIS Explorer software to integrate the "Visiting places in and around Kamarpukur" which are missing in the current available online map; check the figure below. The figure below has been designed using a *free Web GIS application of ESRI, ArcGIS Explorer, Desktop version, 2015*. In this figure (see Fig. 14.12), few important place of interest has been proposed. Cultural and pilgrimage locations like Laha's Durga Temple, Dhani Kamarni birthplace, Gopeshwar Shiv temple and room of Sri Sri Ramakrishna are depicted with respective

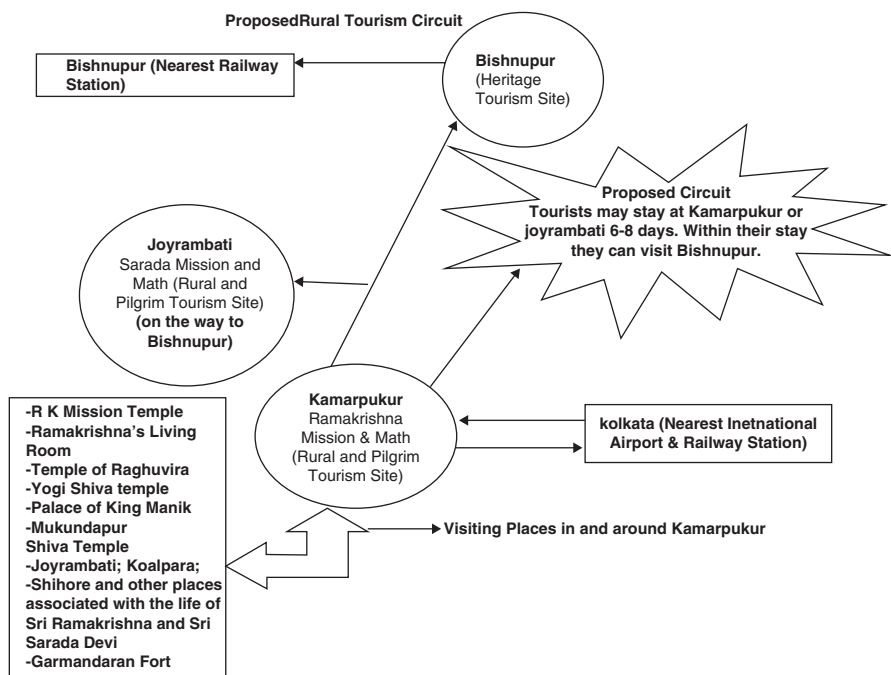


Fig. 14.12 Proposed rural tourism circuit of Kamarpukur



Fig. 14.13 Proposed map of visiting places in and around Kamarpukur (Source: Designed using ArcGIS Explorer, Desktop version, 2015 (ESRI))

map icons. Places like the Bhutir Khal (canal water body), Haldar Pukur (lake), playground near Bhutir Khal, etc. are also proposed keeping in mind of those potential tourists who want to enjoy the rural nature besides having the spiritual and cultural flavour of Kamarpukur (Fig. 14.13).

If these additional locations are available online in the Mashup maps, the participatory clients like local hotel or restaurant owners or local tourism agents can perform some geospatial processing tasks. Thus, most of the data and information can be shared globally over the Web, so that the data is timely updated and customized, and the most reliable and updated data is available globally and can attract more and more tourists and promote rural tourism in Kamarpukur. Even the tourists who have already visited the place can provide additional information using the Mashup application online. They can even upload images of the local cultural, natural and pilgrimage areas. These participatory Mashup information or images can act as virtual personal assistance for the potential tourists who are planning to visit Kamarpukur. On the other hand, these additional information and participatory images can attract tourists who are interested in rural tourism.

14.9 Geospatial Mashups and Tourism Promotion

Geo Mashup has immense potential to make possible and extend the quick development of the future interactive dynamic mapping technology in any business sector. The table below depicts the relationship between Map Mashups and tourism in general (Table 14.2).

In tourism industry, Web GIS is the information system that provides functions including visual presentation about the tourism destination, advanced analysis, etc., of digital geospatial information by processing it in an integrated manner on electronic maps of the tourist site (Chaudhuri and Ray 2015). Geospatial Mashup is an advanced interactive and collaborative application of Web GIS. It can be effectively implemented as Internet-based channel perspective promotional measures in tourism development. The initial problems that the potential tourists as well as the tourism councils and agents were having can be solved by careful application of Internet-based channel perspective promotional measures using Geospatial Mashups or Map Mashups (Longmatey et al. 2002). From the tourist point of view, this Internet-based channel perspective tool can provide up-to-date, reliable detailed information of any location in the world just on a click. On the other hand, the agents can use this channel perspective collaborative tool for promotion, strategic decision-making and overall management of tourism. Beforehand, the destination management organizations used to

Table 14.2 Relationship between Map Mashups and tourism

Function	Operations
Market analysis	Location identification for setup, transport, potential customer, economic status, etc.
Operation	Purchasing, managing supplies and services, managing value chain, supply chain management
Marketing	Catalog sales, advertising, offering free trials, direct marketing, incentive marketing
Customer relationship management	Banking, online hotel booking, booking cabs, railway reservation

maintain the informative tourism websites with location maps and other detailed information. But it was really hectic and almost impossible to maintain every in and out detail of a tourist spot by a single organization. Those sites were not updated regularly, and potential tourists might have received wrong or back-dated information. Now, while using Map Mashups, the Internet-based channel perspective targets mainly three types of users in the tourist value chain. The first lowermost basic type is the same old but steady group of the *destination management organizations*. The middle one is the *intermediate service provider* group. In the topmost level are the *tourists* or the potential clients. In terms of Internet-based channel perspective, how these three types of users are utilizing Map Mashups for tourism promotion and management can be explained briefly in the next section. The destination managers act as the admin of the system. They have the right to insert, edit, update and even delete information from the core content of the system. They can also do indexing of any destination site. But the destination managers were having tough time to update or edit all these locational information on the map single-handedly. In order to avoid all these difficulties, the intermediate service providers came into play in the channel perspective. The destination managers will give permission to few primary service providers, so that they can reduce the overhead load of the admin and can maintain the information about their own services themselves and on the same level of the managers. For example, the owner of a hotel mentioned in the Map Mashup can fill up a predefined form designed by the destination manager. That form will contain the detailed information about his hotel including room rent, amenities, booking facilities, etc. This detailed information will be a part of the online Map Mashup after admin grants permission to display. What is the advantage of having this intermediate level? Using Mashup the information is shared globally. Anyone can access the data just on a click, and all the information is shared by the intermediate level users, not a headache of the admin. It can be easily assumed that the intermediate service provider like in this case the hotel owner will definitely try to provide the best and detailed information about his own hotel. This will act as a promotional tool for his own business. It can be accessed by any online user from any part of the world. So using this Internet-based channel perspective Map Mashup, two important purposes are served.

14.10 Conclusion

It is a boom time for travel and tourism sector in India. Eastern India has emerged as the front runner in its growth chart. West Bengal is replete with business and tourism potential. The travel and tourism sector has entered a take off stage, and it is going to scale a great height in the near future. It is growing every day, every month and every year with a steady pace. West Bengal is a state with a dominant tourism destination. So, rural tourism destination development can be of great importance here. The simplicity of rural living and the timelessness of rural landscape are something unique and unexplored in this part of the state. If a proper marketing/promotional plan is done for rural tourism destination in West Bengal in general and concerned districts in particular, it could bring a lot of benefit to this state.

So, in a nutshell, we can conclude that the Web service can be used as one of the most important tools for promoting tourism as a whole by minimizing the manual work of the tourism companies involved as well as the tourists, sharing information among the tourists, promoting less popular tourist spots, maintaining relevant data in a much secured but easy accessible way and at the same time, quenching the thirst of travelling for some tourists by providing the virtual tour service, though the social networking sites are playing a vital role in this field but more involvement of virtual tour companies are required.

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Chapter 15

Claim of Values in Dictionaries: An Example of the Anarchist Islands Model



A. Hıdır Eligüzel, Yağız Alp Tangün, and K. Gediz Akdeniz

Abstract Recently, the “Anarchist Islands Model” has been proposed as a political conceptualization although it includes a geographical term. It offers a method for the current state of affairs. It is based on a statement on complexity science paradigms. Chaotic Awareness Simulation (CAS) theory coincides with the Anarchist Islands Model when it construes people’s imaginations, considerations, and behaviors in the context of ethics. In this article, as an example of efforts in claiming values in dictionaries implied in the Anarchist Islands Model, we focus on the story of the Turkish word “müsait”/available for Anarchist Islands. This word is described with a meaning of women who flirt with somebody in the dictionary of the Turkish Language Institution (TDK) (tdk.gov.tr). Some of the citizens began a campaign claiming that this word should be withdrawn from the dictionary. At the end of this campaign, TDK declared formally that the meaning of “müsait” is not the same in the new issue of the dictionary. Both TDK and other dictionaries declared formally their meanings. So, we observe the change; some citizens want not only to squat in urban areas (Gezi Park) but also protect their values.

A. Hıdır Eligüzel (✉)
Dokuz Eylül University, İzmir, Turkey
e-mail: hidireliguzel@gmail.com

Y.A. Tangün (✉)
Pamukkale University, Denizli, Turkey
e-mail: yagizalptangun@gmail.com

K. Gediz Akdeniz (✉)
Disorder Systems Institute, İzmir, Turkey

15.1 Introduction

Modernity has proclaimed irregularity, complexity, chaos, uncertainty, chance, and surprise as an enemy ever since it came to power in the seventeenth century (Akdeniz 2015). The order which modern science has examined and appreciated as knowledge is certainly what built modern power. Baudrillard's simulation (BS) theory (Baudrillard 1994) has inspired social science for new investigations. BS theory, defined for modernized societies, is a result of the search for the ways to be able to apply simulation to social systems – simulation is a common method in natural sciences. BS theory is insufficient because its principle of reality is modernity. In addition, CAS theory (Akdeniz 2010) has used *chaotic awareness* as the principle of reality authorized by modernity (Akdeniz 2015). CAS theory investigates the simulation of disorderliness derived by cosmos-chaos duality. According to CAS theory, the simulation could lead to the emergence of unpredictable changes and transformations (*zuhur*) in sensitive societies (Akdeniz & Anastasopoulos 2016).

15.2 Two Cultures: Theories of Simulation and Anarchist Islands

Anarchist Islands (Eligüzel and Tangün 2014) approach toward science and politics is built on the presence and participation of each agent that touches life. It carefully analyzes the participation and touching of each agent to life, with the help of anarchist ethics. In this sense, grassroot politics and horizontal relationships are emphasized. Such difference is due to an endeavor of understanding open systems (Wallerstein 1996).

Anarchist Islands is a metaphor which includes fractal thinking practice. It investigates imagination, production, and circulation of knowledge in life's fractal patterns. So, it researches knowledge as a primary component of nonlinear systems which are self-organized. People are able to intervene in their own lives, but if they use their own volition and lifestyle, an alternative lifestyle may come up with an equally alternative knowledge organization.

Language has got an important position in cultural heritage of human history. In that sense, it has also been used as a socialization instrument in the production and circulation of the knowledge of life. Hence, language has been included in the imagination of lifestyle. Language is used as a homogenization instrument with nation-state practices in the modern era. Thus, standardization of ideology releases a control mechanism which is a centralized work in language. Speaking rituals, which are described by nation-state, provide ownership and governance for the state-citizen relations.

It should be noted that some regulation of language is needed to create a national identity (Scott 1998). As a Turkish language example, TDK's activities are an offi-

cial foundation of regulated activities in language. Also, dictionary operations that overlap the foundation target denote TDK's central and top-down working system.

15.3 Story of Words in Human Life

Words are one of the factors of understanding vital complexity because people use them when they want to convey their emotions, ideas, and acts (De Landa 2000). Thus, words have a various sense in relation to human history. Reading story of words is like exploring the memory of humanity. Words usually evolve and accumulate in line with social status, but sometimes are utilized and are forgotten; words are always in existence with people since they can build *bridges* between different spaces. Language gives an idea not only of people's lifestyle but also their image styles.

Control and standardization in language are also valid for science. The science and knowledge comprehension of the modern paradigm are interested in universality, certainty, and measurability. Yet, knowledge is always a surprise. It has got an unpredictable, uncertain qualification with regard to this aspect. Knowledge of uncertainty is valuable in the complexity of science paradigm.

Language works in accumulation just as knowledge (Wallerstein 2004). Words can indicate a way of thinking and certain elements of history. Memory of words is kept alive with daily use or by governmental dictionary organizations which regulate operations of a word. Namely, it creates a consensus on words. However, if the power of one of the aforementioned parties gets in the way of the use of a word, consensus will be lost, and conflict will occur.

15.4 TDK Example as a Conclusion

Looking at the example of the 2013 Gezi Park protest, Prime Minister Erdoğan said it was more of *çapulcu* (meaning it's like looter) work, referring to protesters. On this occasion TDK operated on the word and changed it in the dictionary to reflect the meaning of "oppose the system and order, perturbator." Although protesters embraced the word/notion "çapulcu" and they said "we are çapulcu, every day I'm chapulling," it reversed Erdoğan's discourse. A similar reversal practice is applicable to "anarchist" in anarchist history (Kropotkin 2007).

TDK has realized a similar operation on the language and social memory. "Müsait's" meaning has changed from "women who flirt with somebody" via top-down intervention. But, TDK stepped back following reverse claims with reactions on the Internet networks as a simulation universe. TDK witnessed sexist attacks like government's discourses being blocked, and then TDK made a statement promising to make corrections to the next edition of the dictionary.

In sum, through this article one can summarize that the “Anarchist Islands” Model in the sense of CAS theory could be considered as a politics conceptualization (organization practices, social challenge) in simulation cosmos.

15.4.1 *Simulation in Social Science*

To investigate dynamics of social systems in simulation world. To understand how human behaviors have been affected in simulation world (especially social media platforms, Internet, TV, etc.)

Two Cultures It has hierarchist discriminations, but knowledge is holistic and complex. Complex connections and uncertainty of knowledge to cross the two cultures (Snow 1993).

Chaotic Awareness Chaotic awareness as simulation theory is to identify the reality of disorder simulations in societies. As a reality principle, it is related to the non-modern concepts of the society like commune-type traditions such as heterodoxy and disorder human behaviors which are neglected as social forms by modernity.

Zuhur Chaotic Awareness Simulation (CAS) theory in the context of zuhur (emergence in Turco-Arabic). In modern sense, zuhur is unidentified and non-predictable in the simulation world. Meantime zuhur can also provoke modern thinking (Western civilization) or reconstruct modern conception of reality principles in modern societies on all scales.

Anarchist Islands Anarchism is an inherent integral part of the earth like an island. It is pointed out as autonomous, up-country, utopian, and absent. Human history of anarchism is parallel with an island’s process of constitution. Anarchism is immanent, like an island; anarchism is a whole not only like an island just over the water but at the same time a piece of land underwater. Anarchist Islands want to generate epistemology and do not accept hierarchist discrimination and are always in position to adopt both nonlinear and grassroot image.

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Key Further Readings

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Chapter 16

Understanding the New-Generation Universities: Learning, Teaching, and Managing



Şefika Şule Erçetin and Şuay Nilhan Açıkalın

Abstract In the twenty-first century, technological developments completely transformed our societies and lifestyles. As expected it affects young generation and higher education that have key role as both determinants for youth and also been affected by needs of new generation. When scholars discuss how the new generation has been changed in the last 50 years, they all agreed there is no traditional youth profile; because of this, it is impossible to talk about classic university models anymore. The notion of new-generation universities will be the solution for such a chaotic situation in higher education.

16.1 Introduction

The future education is taking a shape in the effects of the relation between technological and social changes.

New-generation children were born in a technologically developed age, and because of that, they are completely different than previous generations. Veen and van Staalduin (2010) named new generation as Homo Zappiens in their study and defined Homo Zappiens as shaping the world with modern technologies. Traditional academicians cannot cope with the potentials, expectations, and demands of the new generations by classical teaching methods. Managing the new generations and new-generation universities is not easy as well. So through this paper, the main aim

Şefika Şule Erçetin and Şuay Nilhan Açıkalın contributed equally to this work.

Ş. Ş. Erçetin
Hacettepe University, Ankara, Turkey

Lancaster University, Lancaster, UK
e-mail: sefikasule@gmail.com

Ş. N. Açıkalın (✉)
Lancaster University, Lancaster, UK
e-mail: suaynilhan@gmail.com

would find an answer to the questions of whether managing and teaching new generations is chaotic or not and how people will deal with it. It would be analyzed in three dimensions: learning, teaching, and managing.

16.2 What Qualities Define Successful Learners in New Generation?

There are many major differences of the new-generation universities such as there are borders and halls and walls, but there are no distance in learning and no limitations of literature and sources in which you can reach millions of books and journals in a minute. And another important factor of the future chaotic situation will be the change in the profile of the students' nationality; most of the students will be international more than national. The most important difference is that the research will be applicable but not pure research. The universities which focus on these changes will keep up the times urgently, permanently, and constantly.

One of the major ongoing debates is about how the new-generation members would be learners in teaching environment. Bandura is one of the leading scholars who work on this issue. According to him, three primary characteristics distinguish the "successful" from "unsuccessful" distance learners (1986); these are the *personal characteristics* like autonomy, responsibility, curiosity, and self-efficacy (Keegan 1996); *environmental variables* like environment of study, accessing technology, the students' identification of role, and connection sense (Burns 2011); and *learning characteristics* which include expectations, experience with computer-delivered instruction, self-regulations, and time management (Burns 2011).

There will be new performance criteria to be successful, for example, successful distance learning means students who don't drop out complete their course. Online programs can undertake this with numerous ways (Burns 2011):

- Help learners for developing self-study and time management abilities.
- Help learners with writing.
- Help learners develop good reading skills.
- Provide some level of technology training.
- Provide structure for distance learners
- Offer blended learning opportunities.

16.3 Academicians in New-Generation Universities

Academicians' vision is a vital part of new-generation universities. Since the 1980s, three variables have been effective on institutions of higher education, and they changed the university academician's profile (Erçetin 2002):

1. *Advances in cognitive and communication technologies*
2. *Global problems and regional problems* are quite different, and solutions must be differentiated. Understanding both differences and similarities is important to find solution to the problems.
3. *The growing need for lifelong education*

We can add the virtual reality as one more new technology which will be a very important learning system and dimension very soon.

Researches about distant education suggest that online teachers face diverse and unique set of additional challenges that require extra professional help (CfCT 2008; Chickering and Gamson 1987). This support includes the following (Burns 2011):

1. *Content knowledge*: Instructors in online education must know the content in detail and know how to teach students to understand their contents in a distance environment.
2. *Blend pedagogy, technology, and content*: Programs in distance education often have difficulties to find qualified instructors who manage technology and who exhibit time management skills that enhance efficacy as distant instructors.
3. *Establish an online learning environment*: In environment of distance learning, the instructor has vital and multifaceted role. Facilitators must work to establish a welcoming presence, set a tone that encourages students, know when and when not to intervene, and summarize participant learning (Table 16.1).
4. *Literacy skill*: Online learning does not change requirement for strong literacy skills; even some online learning forms, especially distance learning, satisfy the need. Teachers and students become vulnerable with online learning systems because it is basically based on good reading and writing skill—and many teachers, like distance learners, do not like reading in both local and global languages.
5. *Effective communication*: Distance learning classes are a collection of individuals into collaborative learning community.
6. *Competency to manage learners*: Less structured forms of online learning, such as online courses or immersive environments, can be extremely challenging for students who have never been given the independence or flexibility to chart their own learning course.
7. *Preparing learners*: It is also difficult for teachers to *educate* in online learning environment and also difficult for learners to be successful online learners, especially if they are experiencing this type of education.

There are different roles and both advantages and disadvantages related these roles on academicians. Professional developments in web-based distance education also force academicians to change their roles.

All in all, according to Erçetin (2002), the profile of new university academicians due to the views of postgraduate students is shown in Fig. 16.1:

Table 16.1 Web-based distance education overview

Roles in academicians' professional development	Strengths	Limitations
Provide both structured and unstructured training and professional development for academicians	The Internet blends all modalities of distance education—print, audio, visual—with real-time communication	It depends on regular access to computers and the Internet
It supports both formal and informal academician learning	It works “any time, any place, any pace” as long as an Internet connection is available	Policymakers and planners generally see e-learning cheap and easy professional development, requiring limited personnel and support. In fact, the opposite is true
Online mentoring, online community, CMC, and social networking sites provide school-based coaching, mentoring, and follow-up for academicians	Academicians can interact with expert teachers across distances	Academicians must have computer, language, and technology skills to participate effectively
Accredited online courses help academicians upgrade qualifications or participate in enrichment or continuing education activities	Written communication can prompt more reflective and considered participation	
Within an online course, academicians can study in a cohort or alone	It supports a range of learning styles	Language of World Wide Web is English. There are comparatively limited local language offerings
	It offers scale—the potential to reach large populations of academicians	
Via telecollaborative activities and telereasearch activities, academicians can partner with colleagues across the globe	It provides academicians with experiences, resources, and human supports that might otherwise not be available	Academicians and distance teachers need release time, technology training, and professional development on how to integrate the Internet into their own instruction

Resource Gaible and Burns (2007: 67)

16.4 Managing New-Generation Universities and Chaos

As experienced in all transition and changing period, chaotic situations, successes, and failures could have been experienced in new-generation universities. Management of new-generation universities is important, but on the other hand, applications of new-generation university models and deciding which model should be used in lectures are critical to prevent destructive effect of chaos on academicians

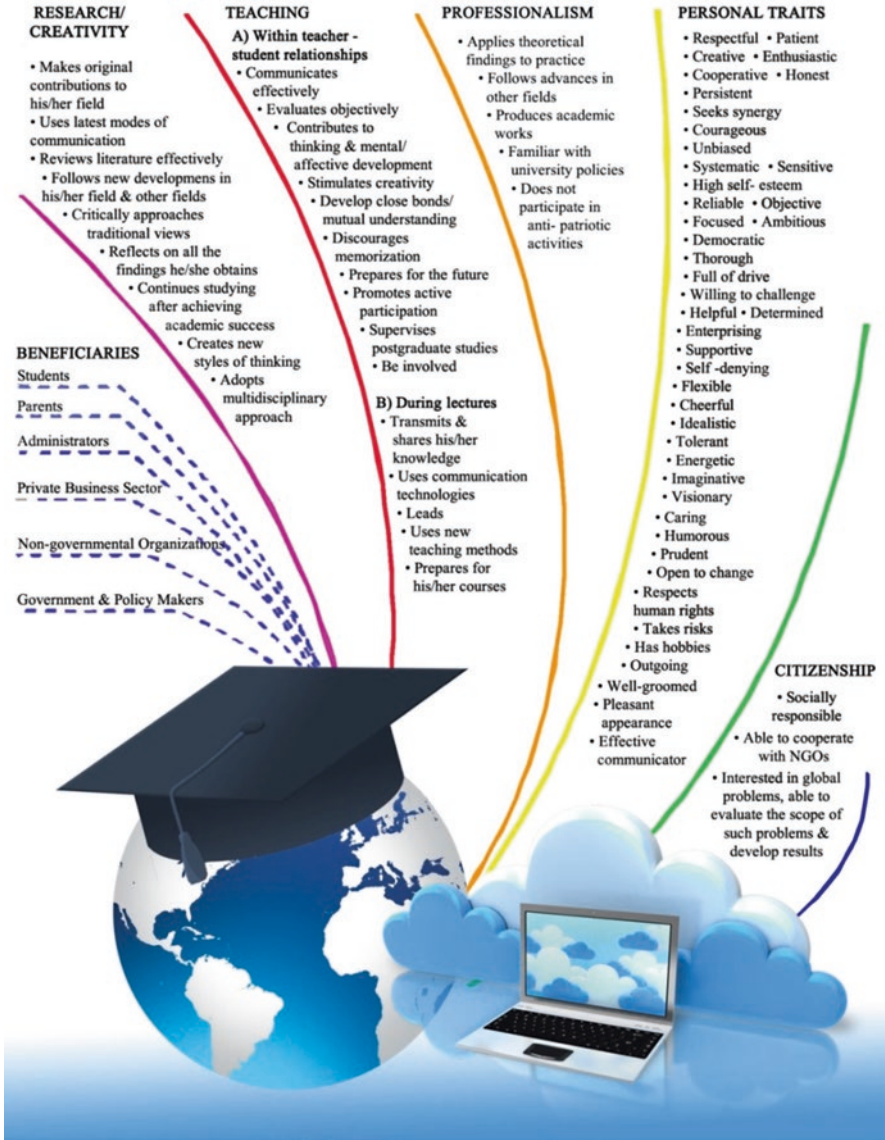


Fig. 16.1 New university academicians’ profile: Turkish postgraduate students’ views (Source: Erçetin 2002)

and students. Leaders of the future can be solution to manage effectively chaos in the transition period to new-generation universities. Leaders of the future will be the ones that can manage (Erçetin et al. 2013). New-generation university leader profile should be able (Erçetin 2000):

1. To accept emerging problems during changing process or challenging as normal and natural
2. To find various solutions to problems
3. To accept and understand international differences and similarities
4. To motivate members of school to create new ideas and behaviors
5. To develop atmosphere that contains innovative and creative ideas and behaviors
6. To take risk to achieve goals of the organization

Furthermore, deciding models of new-generation universities very depend on cultural and historical background of university and its country. The other very important point is that the program objectives in the next-generation universities should be integrated with problems and the priorities of the society. Not only cultural and historical but also characteristics of its society and needs would be determinant of new-generation universities and chaotic environment.

16.5 Conclusion

Less than a decade ago, the repute of any university and the preferences that made by learners revolved only around academic excellence, and it is perceived that organizations need more than academic distinction (Mujtaba 2012). In a very simple manner, these ideas lead to open new reflections for academic staff, and they can take attention for future profession by (Nóvoa 2013):

- Importance of a professionalism that is built inside the teaching
- Underlining professional knowledge which is elaborated in a pedagogical trip
- Emphasizing the significance of practices of professional collaboration

Consequently, there is no doubt our universe has been evolved in terms of lifestyles and perceptions about education. New-generation university models have been debated for almost 10 years. As mentioned through this article, new-generation universities should be analyzed in three dimensions which are learning, teaching, and managing.

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Chapter 17

Chaotic Method in the Process of Preparation to Transition to Higher Education and Undergraduate Placement Exams



Mehmet Özbaş

Abstract In Turkey, high schools, as well as primary and secondary schools, were included within the scope of compulsory education as of 2012–2013 academic year. As the high school education was included into the scope of compulsory education, authority and responsibilities of secondary education managements incredibly increased in terms of providing 100% schooling of secondary education generation (Official Gazette. (2012). İlköğretim ve Eğitim Kanunu ile Bazı Kanunlarda Değişiklik Yapılmasına Dair Kanun. Kanun No.: 6287. Official Gazette dated 30/3/2012, number 28261). This led to provincial and district directorates of national education, including the Ministry of National Education as the leading institution, into a complex and chaotic process in terms of the administrative aspects they had to carry out. Moreover, secondary education school managements were obliged to actualize significant chaotic managerial implementations in terms of preparation to the exams of YGS (Transition to Higher Education Exam) and LYS (Undergraduate Placement Exam). In this research, the complexity and chaos experienced in secondary education schools regarding YGS and LYS exams were tried to be evaluated analyzing through chaotic management approach. The research was carried out with 71 high school final-grade students studying at Erzincan Anatolian High School in the province of Erzincan in 2015–2016 academic year. In the research, “Secondary Education Schools Student-Centered Individual Teaching and In-Class Social Academic Development Services Scale” developed by the researcher was used. According to the research findings, it was noticed that both individual academic development ($\bar{X} = 3.52$) and social academic development based upon in-class experiences ($\bar{X} = 3.49$) were tried to be fulfilled at “much level.” The research results revealed that YGS and LYS preparation implementations for Anatolian High School students required a chaotic, competitive, complex, and conflicting management in educational organizations.

M. Özbaş (✉)

Faculty of Education, Department of Educational Sciences, Educational Administration
Department, Erzincan University, Erzincan, Turkey
e-mail: ozbas68@gmail.com

17.1 Introduction

The basic function of secondary education is preparing students to life and higher education process (Ministry of National Education-MNE 2014). Secondary education process is also within the scope of compulsory education. Students are in an intense competition environment in each of Transition to Higher Education Exam (YGS) and Undergraduate Placement Exam (LYS) included in the process of preparation for higher education. This necessitates chaotic management based upon acceptability of competition and the surrounding in a chaotic environment for students, teachers, and, especially, the school management. Chaotic management at school requires management to consider schools as a democratic open system (Erçetin 2000). Because schools are multidimensional and multivariable organizations that are open to environmental effects as organizations with open system structure. This requires management to sensitize all processes and procedures related to management toward environment in all administrative processes. The environments affecting schools make a common distribution, variety, change, and development at social, political, academic, technological, national, and international scale (Erçetin 2001). Schools are different and multivariable organizational structures consisting of numerous parties offering, providing, and receiving educational services. All these environmental and affecting factors necessitate the implementation of chaotic management.

Education and school management should internalize and accept that uncertainty, chaos, and disorder are always possible due to multi-way factors depending upon people, society, groups, and group dynamics in educational system engaging with human resources. Management is required to implement chaotic management carefully and notice uncertainty, chaos, and disorder integrally during any stage of education. In school management, each variable that is considered to be affecting school possibly should be evaluated efficiently, and the approach that is fully focused on the system is required to be implemented through a chaotic management philosophy. Because compulsory education is a basic obligation required to be met at a public dimension as well as being a fundamental right and freedom. In Turkey, secondary education, as a part of compulsory education, is one of the educational grades with social, political, economic, academic, professional, etc. functions in terms of individuals. In secondary education, the level when importance and gaining in terms of individuals and social aspects increase and education-based academic responsibilities and functions intensify in terms of management is the final grade. Secondary education final grade students experience future anxiety and uncertainties related to being placed into universities due to their being obliged to compete with over millions of candidates taking the same exams of YGS and LYS. When considered in terms of efficient and environment-based management implementations, the uncertainty and chaos experienced by the students have to be experienced by secondary education school managements as well.

17.2 Problem Status

In a democratic management system, education, in general, has the function of a subsystem with liabilities related to cultural, social, political, and economic superior systems. In whole of preschool, primary, secondary, and higher education grades, schools encounter several problems caused by uncertainty and chaos during the process of fulfilling their functions toward cultural, social, economic, and political superior systems. The situations created by chaos and uncertainty increase the necessity of chaotic management at schools (Erdemir 2006; Erdoğan 2012; Ertürk 2012; Özbaş 2016a). Chaotic management in educational system requires regarding needs, expectations, and demands of all parties, especially students, to whom schools render service as a whole, and paying attention to accomplish pluralist, participative, and accountable implementations during the multivariable process. Secondary education is one of the grades to be regarded and internalized more rather than the other educational grades as regards chaotic management implementations. Secondary education is a process that prepares students to higher education and democratic social life ensuring self-actualization at an individual level. In this sense, the level of grade in which all functions of secondary education are fulfilled and students reach the level of graduation is the final grade. In secondary education final grade, school managements are primarily expected to make sure implementations address family expectations and legal liabilities including preparation process of students to university, as the leading priority. Secondary education in Turkey has been within the scope of compulsory education since 2012–2013 academic year and completed first 4-year implementation in 2015–2016 academic year. The most important problem related to compulsory education in terms of both democratic and scientific aspects is related to the level of human and material resources serving educational purposes. One of the most important steps to be taken for overcoming this basic problem is disclosing democratic public opinion through implementing a transparent management understanding on performance indicator, level, and implementations of secondary education schools. This responsibility belongs primarily to public administration and education and schools, subsequently.

In Turkey, continuous 8-year compulsory education including only elementary education was started to be implemented in 1997–1998 academic year and maintained until 2012–2013 academic year (Official Gazette 1997). And the implementation of compulsory education including secondary education was initiated as of 2012–2013 academic year. Compulsory secondary education age population in Turkey includes students at the age group of 13.5–17.5 (Official Gazette 2012). Efficient secondary education necessitates schooling of population at this age group especially during formal education process (Özbaş and Badavan 2009). It is remarkable for education and school managements influencing all students regardless of their social class and socioeconomic level all around Turkey in formal secondary education. For that reason, it is necessary to provide students in secondary education population continue their schools as full time in order to efficiency during the

secondary education process and maintain productivity at the end of this process. The variety of school types and fields, extraordinary differences of students from each other, specific conditions of educational system, and requirements of social change necessitate chaotic management in accordance with open system understanding in high schools. In secondary education, specific properties of the educational system and changing and uncertain environmental conditions reveal multidimensional chaos and complexity for social environment with management, students, and parents (Akmansoy 2012; Özbaş 2010, 2012a, b, c, 2016a). Especially during the final grade of high schools, requirement for chaotic management reaches up to the highest level when the variables are discussed with the process of transition to university. The factors that cause the requirement for chaotic management for secondary education final grade primarily emphasize “in-class social academic development and student-centered individual teaching services.” In this sense, the conditions that include uncertainty, chaos, and disorder in terms of students and their families are basically related to individual success. Students are in a great individual competition during the process of preparing for private or social life with different choices and concentrate upon improving themselves. In this process, chaotic management activities of school managements have to focus on both individual and social academic success. Because schools and school managements have to provide equality of opportunity and availability to all students in accordance with the principle of social justice (Özbaş 2013).

In-class social academic development services: No matter what the educational grade is, from preschool teaching period until higher education, schools are formal structures responsible primarily for their students’ socialization and acculturation. This is an essential function of all educational grades. Socialization and acculturation function of schools during elementary and secondary education as compulsory education grades in Turkey is an obligation addressed with more importance rather than other educational grades. The functions related to this obligation are under the responsibility of school managements, including educational management as the leading concern. These functions have a public necessity concerning all of society in terms of all state or private educational institutions.

Educational subject and object have a structure which is of open system type based mainly upon human resources. Educational system is a type of organization that is not appropriate to be managed through a positivist paradigm based upon Newtonian view of the world. In the educational system, positivist management paradigm is an approach that subjects an organization to fallacy, failure, and uncertainty. Educational organization is a system requiring chaotic management as the dominant means though with uncertainty even when considered in terms of human resources (Gleick 2005). Education is a general subsystem liable for fulfilling the cultural, political, and economic functions of a society. Society, as a general and super system, lays many liabilities and responsibilities upon the educational subsystem for fulfilling the needs and expectations and constantly keeps change demands on the agenda for fulfilling these, moreover. In this sense, schools are obliged to meet social needs and demands during the process of fulfilling the educational functions based upon society. Primary social functions of the schools include

socialization and acculturation activities for students. “In-class learning experiences” include the implementations evaluated within the category of social academic development services as provided by the schools to their students during the educational process. In the sense of in-class social academic development services, schools have to create equal and active participation opportunities for their students in the educational process. During the process of in-class experiences, it is necessary to discover the areas where students are successful and develop students in these areas, determine the reasons for failure, and overcome the failure through taking necessary precautions. In social learning activities, functions such as schools’ focusing on cooperative academic processes, preparation for YGS and LYS, evaluation of human resources performance, full-time education opportunity and support for students, and others are regarded. Cooperative social academic education includes processes specific to chaotic management in a way providing focus on the success of all students. At schools, individual differences, needs, and expectations specific to students create uncertainty and chaos, and this increases the need for chaotic management. Especially at high school final grade, education and school managements need chaotic management more during the administrative processes.

Student-centered individual training services: Democratic management system is an administrative understanding that requires regarding individual needs, expectations, and interests in education. It requires regarding social change and development demands based upon democratic necessities, individualization acts, and subjectivity of students during their school experiences and maintaining learning and teaching experiences through a student-centered approach. Democratic pluralist societies’ abandoning oppressive understandings caused student-centered humanist understandings to be adopted in educational systems. Through the democratic social change efforts, object-oriented teaching implementations have been abandoned in educational systems, and goal-oriented educational activities have started to be regarded. The purpose of education is to provide students with terminal positive behaviors through formal learning experiences. This function of education necessitated to adopt student-centered, individual, pluralist, and democratic approaches instead of teacher-centered authoritarian approaches. Student-centered, individual teaching approach requires the implementation of chaotic management including creating solutions for uncertainty and chaotic situations regarding education and school managements considering the differences and individuality of students. When this has been discussed through an integrative approach in terms of the educational system, it becomes more remarkable for high school final grade that plays an important role upon transition to higher education as creating the final grade of secondary education.

The implementation of compulsory education that started in 2012–2013 academic year in Turkey will produce its first graduates in 2015–2016 academic year as the period we are in. Because compulsory secondary education is a new implementation for Turkey, the Ministry of National Education, provincial and district directorates for national education, and secondary education school managements have to take into account democratic public opinion based upon to what extent compulsory secondary education achieved its goals at the end of 2015–2016 academic year.

Because compulsory education is an implementation concerning all public in terms of both social gaining it provides and public liabilities. Because compulsory secondary education includes all of the secondary education generation, it directly concerns Turkey and all public. Secondary education is financed through the direct taxes of taxpayers and education expenses of the individuals who benefit from this grade. Public finance of secondary education in Turkey includes the revenues provided from indirect taxes of the public rather than the taxes taxpayers transfer directly to the public. For that reason, public and education managements have to account on sources allocated from the budget and national income for secondary education to all public of Turkey. Transparent, accountable, and controllable implementation liabilities in compulsory education necessitate the implementation of chaotic approaches in education and school managements. Chaotic management provides the management of uncertainty, chaos, and variety through an efficient understanding.

Education has two types of income, one as individual and the other as social. Educational investments have significant expenses for both individuals and the society. In Turkey, 2014 education expense was 571 million Turkish liras with a 13.2% increase rather than 2013. During the aforementioned period, the level of grade with the most increase at expenses was secondary education with 20.4% (Turkish Statistical Institute-TÜİK 2015). The reason why secondary education expenses increased so much is possibly the mass competition that appeared among secondary education students due to this educational grade becoming compulsory as of 2012–2013 academic year. This can be asserted to be the cause of increase in both public and individual expenses more than other educational grades. In addition, the fundamental reason includes policies maintained heavily for popularizing and supporting private education in accordance with neoliberal education policies through any kind of public support. The Ministry of National Education has started to promote private educational institutions with direct public support as of 2014–2015 academic year. For 2015–2016 academic year, private school incentive for secondary education (transformed from private courses) is 3,220 TL.

The incentive for secondary education (private secondary education courses except from basic high schools) is 3,750 TL. The number of students to be incentivized for both aforementioned private secondary education schools totals to 110,000 (one hundred and ten thousand). For preschool teaching, it is 2,680 TL and 20,000 (twenty thousand) students; for elementary education, it is 3,220 TL and 50,000 (fifty thousand) students; and for secondary education, it is 3,750 TL and 50,000 students. As could be seen, whereas the number of students granted with private education support in preschool teaching period together with elementary and secondary education school creating the first two grades of compulsory education totals to 120,000 (one hundred and twenty thousand), the number of students incentivized only in secondary education is 110,000 (one hundred and ten thousand). It can be noticed that the incentive for secondary education is nearly similar to the incentive for three educational grades including preschool teaching and elementary and secondary education schools (MNE 2015). The Ministry of National Education is also noticed to economically support secondary education more rather than preschool teaching and elementary education as directly and at a more rate. In a

democratic world, it is accepted that the educational grades with the highest social revenue rate among the educational grades are preschool teaching and elementary education. The educational grade with equal individual and social revenue rates is secondary education. The educational grade with the highest individual revenue rate is higher education. Grant (nonrepayable) and credit (repayable) amount paid for university students at undergraduate degree in 2016 in Turkey is 400 TL each. Grant and credit amount for higher education is 800 TL, and the amount for doctoral degree is 1,200 TL (T.R. Ministry of Youth and Sports, General Directorate of Credit and Dormitories). The economic support for higher education students is provided considering individual revenue rates rather than the social rates. The economic support provided to higher education students is annually 4,800 TL for each student at undergraduate degree, 9,600 TL for each student at master's degree, and 14,400 TL for each student at doctoral degree.

The priority for economic supporting of students through public sources in Turkey is on higher education and then on secondary education. Giving priority to higher education in public economic support implementations is incompatible with the principles of social state, social justice, and equality of opportunity and availability in education. Public economic support policies prioritizing private education institutions, higher education, and secondary education prevent efficient access of disadvantaged and poor students deprived of any opportunities primarily to preschool teaching and elementary education. This inequality and injustice minimizes the total benefit primary school teaching and elementary education with the highest social revenue provide to social development. It is clear that access of disadvantaged social class students to higher education within the conditions of poverty, deprivation, and impossibility is not possible to be provided as it should be.

The Ministry of National Education is noticed to directly or indirectly finance and economically support students and their families over a specific socioeconomic level (students and families that have socioeconomic opportunities sufficient to register for private education) and private education institutions, secondary education as the leading level. It is necessary for the Ministry of National Education to support students and families of lower socioeconomic classes. However, the ministry has no educational policy that it adequately shares with the public for supporting poor and disadvantageous individuals directly. It is clear that this will not be compatible with the principles of social justice and equality of opportunity and availability in education. This fact has a risk of creating future anxiety, negative social status, chronic poverty, inequality, and injustice for students and families who cannot meet even their basic human needs due to poverty, multi-way deprivation, and disadvantages. Significant problems appear in case the sources allocated for education are not used for efficient and productive purposes. These problems are generally related to not implementing the principles of social state, social justice, and the equality of opportunity and availability, as they should be. In addition, problematic situations create significant level of chaos in case democratic management responsibilities are not fulfilled (Kaçmaz 2005). Chaos and chaotic problems necessitate a chaotic management equipped with competences possible to manage uncertainty and chaos for democratic public management, law system, and school managements.

17.3 Purpose

Public education management has significant authority and responsibilities upon management of democratic educational system in Turkey. Public education management has to display an accountable, controllable, and transparent performance toward the public for determining to what extent the sources allocated for compulsory education have been used. In Turkey, secondary education was included into compulsory education process that only included elementary education before 2012–2013 academic year. Compulsion of secondary education necessitates full-time schooling of age generation at this grade during the formal education process. Significant problems have been experienced in schooling of students of disadvantageous sociological classes, female students, and economically abused students during the process of transition to secondary education (Özbaş 2016b). In order to overcome education-based problems, it is necessary to develop democratic solutions, use and administer required methods, and carry out comprehensive researches with theory-practice integrity during the management process. In this research, it was aimed to emphasize chaotic management compulsion and implementations needed in case of uncertainties, chaos, and problems experienced during the exams of YGS (Transition to Higher Education Exam) and LYS (Undergraduate Placement Exam) that create the significant stages of secondary education process. The research problem was expressed as below:

1. What are the chaotic management implementations during the process of preparing for the exams of YGS (Transition to Higher Education Exam) and LYS (Undergraduate Placement Exam); what are the views of students on chaotic management implementations?

17.4 Significance

In determining the performances of education and school managements, the quality of educational services and satisfaction levels of the individuals who benefit from these play a significant role. In order to evaluate management performance, it is necessary to reveal efficiency, accountability, and controllability criteria in management through objective approaches. When the educational system is discussed as a whole, compulsory education in both public and social context is more important rather than the other types and grades of education. Productivity of “elementary and secondary education” that creates the compulsory education system in Turkey in terms of social development and social return rates is more prominent rather than the “higher education” that is not included in compulsory education system. It is necessary to provide theory-practice integrity of compulsory education process that will produce its first graduates in 2015–2016 academic year upon maintaining activities in accordance with its purposes and discussing to what extent the secondary education process has been managed efficiently in further studies. Comprehensive scientific researches are theoretical studies with properties possible to determine on

what dimension school efficiency is revealed. Political decision-makers and implementers regard the results of researches related to the educational system to have significant contributions upon individual and social development.

17.5 Method

17.5.1 Research Model

Chaotic management in secondary education research was a descriptive study on the screening model in which the views of the students upon the situations that appeared related to chaos experienced during the process of preparing for YGS and LYS exams were tried to be determined. Screening studies have designs trying to explain and predict on which dimension the effects of independent variable or variables had effects on the dependent variable (Christensen et al. 2014). Descriptive studies are the ones trying to reveal the present status related to a research problem as clear as possible. The research was carried out in Erzincan Anatolian High School in 2015–2016 academic year. A total of 71 students from different fields studying at final grade in Erzincan Anatolian High School participated in the research. The independent variables of this research were gender, the studied field, the educational status of parents, and the level of income.

17.5.2 Development of Data Collection Tool

In the research, “Secondary Education Schools Student Satisfaction Scale” developed by Özbaş (2016a) and “Chaotic Management Scale” developed as revised for this research were used. During the development process of the scale, the literature was reviewed comprehensively for the efficiency in management and chaotic management understanding in secondary education. After the studies of literature review, interviews were made with the directors from science, social sciences, and Anatolian high schools within the scope of general secondary education related to the management understanding they had on the process of preparing for YGS and LYS exams. Furthermore, interviews were also made with the directors of vocational and technical secondary education schools and fine arts and sports high schools related to the management understanding they had on the process of preparing for YGS and LYS exams. Views of educational science academicians were also benefited on the conditions of the YGS and LYS exam preparation process. Moreover, analysis of the current legal and administrative regulations and implementations including the properties of the process of university preparation in Turkey was also provided. A draft scale form titled as “Chaotic Management in Secondary Education” including 41 items was developed after literature studies, analysis on the process of preparing for YGS and LYS exams for secondary education final-grade students, interviews with

Table 17.1 Chaotic Management Scale factor variance rate and Cronbach alpha coefficients

Factor	Explained variance %	Cronbach alpha
In-class social academic development	26.650	0.926
Student-centered individual training	14.489	0.889

directors, and evaluations of secondary education schools' legal and administrative regulations. In order to analyze this form in terms of its content properties, views of academicians from the departments of educational management, supervision, planning and economy, sociology, philosophy, and measurement and assessment were asked. In accordance with the views, critiques, and suggestions of the academicians, some of the items in draft scale form were combined, and the items mentioned as not being appropriate to the purpose of the research were excluded from the scale. The number of items that was previously 41 in the draft form was decreased to 32. A pre-implementation was performed with the participation of 45 students studying at different Anatolian high schools of Erzincan Province using the rest of the 32 items of the draft form. In order to determine whether factor analysis was possible to be performed or not on the data obtained after the pre-implementation, statistical processes related to Kaiser-Meyer-Olkin (KMO) test were carried out.

As result of the KMO test on pre-implementation data, KMO value was determined to be 0.790. Because this value was above the value of 0.60 that was necessary to perform factor analysis upon the data, it was determined that factor analysis was possible to be performed upon the pre-implementation data. A Bartlett test was employed in order to analyze normality distribution of the data. As a result of the Bartlett test, the level of significance was determined to be 0.000. Bartlett test results and Chaotic Management Scale data were specified to have multivariable normal distribution. For determining how many factor structures the scale had, varimax vertical rotation method was performed. As a result of this implementation, the scale was noticed to have a two-factor structure. Six out of thirty-two items noticed to be included in two factors of the scale were excluded from the scale, and the rest of the items for the implementation of the scale were determined to be 26. Variance ratio of the "in-class social academic development factor" as the first factor of the scale was 26.650%, and variance ratio of the "student-centered individual teaching factor" as the second factor of the scale was found to be 14.489%. Total variance ratio explained by the factors of the scale was revealed to be totally 41.139%. In Table 17.1, variance rates and Cronbach alpha reliability coefficients of Chaotic Management Scale were presented.

17.5.3 Data Analysis and Interpretation

Chaotic Management Scale was prepared using a five-point approach. In the scale, "none" was scored as "1," "low" was scored as "2," "medium" was scored as "3," "high" was scored as "4," and "completely" was scored as "5." Score intervals for the choices were determined as 1.00–1.79 for "none," 1.80–2.59 for "low,"

2.60–3.39 for “medium,” 3.40–4.19 for “high,” and 4.20–5.00 for “completely.” In the research, statistics related to arithmetic average (\bar{X}) and standard deviation (SD) were benefited for analyzing the descriptive data obtained from the students.

17.6 Findings and Interpretation

17.6.1 Views on Chaotic Management Implementations During In-class Social Academic Development Process

Erzincan Anatolian High School management was revealed to present high-level ($\bar{X} = 3.47$) performance in “in-class social academic development services factor.” As could be seen in Table 17.2, chaotic management implementations in secondary education are generally and especially focused on exams of preparation to university. During the process of preparation to university, school managements are obliged to manage several uncertainties and chaos. The activity titled as “making use of summer vacation for preparation to university exams” (item 1, $\bar{X} = 4.39$) in *Chaotic Management Scale In-Class Social Academic Development Services Factor* was the activity with the highest school performance. Presence reason of the school was

Table 17.2 Views on in-class social academic development ($n = 71$)

	In-class social academic development	\bar{X}	SD
1	Making use of summer vacation for preparation to university exams	4.39	0.83
2	Organizing free-of-charge weekend courses for increasing success	4.10	1.04
3	Maintaining necessary teaching activities for YGS preparations	3.88	1.10
4	Introducing rules to be obeyed at school and classrooms to the students	3.67	1.26
5	Teachers telling students that they need educational process and providing motivation	3.61	1.10
6	Providing students and families to comprehend the importance of high school final grade	3.55	1.27
7	Lecturing the courses compulsory and non-compulsory for YGS and LYS in accordance with the curriculum	3.47	1.19
8	Lecturing the courses with student-centered learning approach	3.46	1.05
9	Teachers answering the questions of the students sincerely out of courses	3.42	1.24
10	Providing equal participation opportunities into in-class experiences	3.41	1.11
11	Maintaining necessary academic preparations for LYS	3.39	1.26
12	Providing opportunities to increase success of students at courses	3.33	0.98
13	Considering the views and critiques of students during in-class experiences	3.30	1.21
14	Teachers providing students to acquire the skill of preparing for courses out of school	3.16	1.16
15	Employing in-class discipline rules among the students equally	3.03	1.47
16	Applying the assessments of students upon teacher performance	2.99	1.30
17	Taking necessary precautions for overcoming failure at courses	2.86	1.27

collected especially in final grade on passing the university exam and achieving academic functions. Students are advised to make use of their summer vacation for preparation to YGS and LYS exams before starting 12th grade. For that purpose, school managers and teachers of different branches (mathematics, literature, sciences, philosophy, or some other courses) were asked to renounce their summer vacation for the exam. Families have insignificant cultural, economic, social, psychological, etc. supports on this including the academic functions (cognitive, emotional, and psychomotor) as the leading area. According to the research findings, the study that schools had the highest efficiency in their performance was making use of summer vacation for preparation to university exams. School management and teachers deprived themselves for their students to be successful in their university exams although this was not obligatory for them, presented any kinds of efforts and contributions, and tried to advise students to make use of their summer vacations most efficiently.

For preparation to university exams, the activity of organizing free-of-charge weekend courses (item 2; 4.10) was the second activity in which schools displayed the highest performance. The students showed great interest upon weekend courses for university preparation organized for them; efforts of schools on this were considered satisfactorily with a rate close to “completely.” Maintaining necessary academic studies for YGS preparations of the students was also an activity (item 3; 3.88) managed successfully during the process of academic social development. When considered as a whole, school managers and teachers focus their interests on the process of transition to higher education. Other activities in which in-class social academic development services were carried out successfully included the activities of “introducing school and classroom rules to the students” (item 4; 3.67), “teachers’ skills of providing motivation during the teaching process” (item 5; 3.61), and “providing students and families to comprehend the importance of high school final grade” (item 6; 3.55). In all these processes, the activities regarded by the schools trying to manage chaos and uncertainty successfully included the studies related to university exams. The activities schools displayed performances close to medium level included “lecturing the courses compulsory and con-compulsory for YGS and LYS in accordance with the curriculum” (item 7; 3.47), “lecturing the courses with a student-centered understanding during the in-class experiences” (item 8; 3.46), “teachers’ answering the questions of the students sincerely out of classroom” (item 9; 3.42), “providing equal participation opportunities into in-class experiences” (item 10; 3.41), and “maintaining necessary academic preparations for LYS” (item 11; 3.39). The findings revealed that YGS was regarded more rather than LYS, everybody was expected to show the same performance through a general understanding instead of student-centered teaching during the in-class experiences, and social teaching was considered. During the process of academic activities based upon in-class social experiences, teaching depending upon individual differences was understood not to be prioritized adequately. The students are expected to have high performances like their friends instead of their self. This emphasized that academic development arisen from individual differences was not adequately regarded during the in-class social learning processes. The findings indicated that uncertainty and chaos arisen from individual differences among the students could not be handled adequately through implementing chaotic management approach.

During the in-class social learning processes, the activity in which schools had the lowest performance was “taking necessary precautions for overcoming the failure at courses” (item 17; 2.86). This finding revealed that efficient teaching activities could not be actualized for overcoming the failures students had individually during the process of fulfilling in-class learning experiences. Upon overcoming the academic failures arisen from individual differences of the students, precautions preventing and eliminating the failures during the process of in-class experiences could not be taken at a rate meeting the expectations of the students. “Applying to the assessments of the students upon teacher performance” (item 16; 2.99) was among the areas in which schools had administrative inadequacy. This revealed that “teacher supervision” during the process of in-class experiences could not be fulfilled adequately. “Employing in-class discipline rules among the students equally” (item 15; 3.03) was an activity performed at a low rate. The students considered on the process of employing the discipline rules that equality was not provided adequately and there were problems on equality during this process. Upon “teachers providing students to acquire the skill of preparing for courses out of school” (item 14; 3.16), teachers were emphasized to be inadequate in providing necessary support and help. The activity of “considering the views and critiques of students during the in-class experiences” (item 13; 3.30) was the one indicated to be of low performance by the students. This finding revealed that thoughts and critiques of students were not regarded sufficiently upon making in-class activities better. This finding also indicated that teacher-centered learning approach was still maintained. The activity of “providing opportunities to increase success of students at courses” (item 12; 3.33) was one of the activities considered to be inefficient. This indicated that general success of the students was emphasized more rather than the subjective success of the students. This finding also revealed that traditional, classical approaches were administered in classroom management. The findings related to management inadequacy were generally arisen from discussing in-class experiences through a general approach away from student views and critiques. Teacher-centered management implementations accepting only academic success as the principal target caused in-class social learning experiences to focus mostly and primarily on academic success. High academic success was prioritized and accepted to be the most fundamental indicator in YGS and LYS exams.

17.6.2 Views on Chaotic Management Implementations During the Student-Centered Individual Teaching

17.6.2.1 Individual Teaching Process

As could be seen in Table 17.3, the students perceived management competence of “individual teaching services” at high (3.48) level. It was noticed that the school had nearly the same performance level on both in-class academic social development services (3.47) and student-centered teaching services based upon individual teaching. Chaotic management fulfilled the highest performance on activities including

Table 17.3 Views on individual teaching ($n = 71$)

	Student-centered individual teaching	\bar{X}	SS
18	Providing students to comprehend that high schools are within the scope of compulsory education	3.80	1.03
19	Explaining the educational opportunities of school and benefiting from these	3.74	0.88
20	Teachers' respectful and trustful communication with the students	3.71	1.12
21	Obtaining information on student families	3.50	1.18
22	Knowing learning properties of students multidimensionally	3.44	0.99
23	Considering the success of students according to courses for determining the learning field	3.42	1.24
24	Determining the level of readiness at the beginning of academic year according to courses	3.38	1.13
25	Determining needs and expectations from school experiences	3.26	0.98
26	Listening to individual and social learning problems during guidance hour	3.09	1.39

“providing students to comprehend that high schools are within the scope of compulsory education” (item 18; 3.80), “explaining the educational opportunities of school and benefiting from these” (item 19; 3.74), and “obtaining information on student families” (item 21; 3.50). As could be seen here, the activities in which chaotic management was successful on student-centered individual teaching were informative activities. Chaotic management was noticed to be more efficient upon “teachers’ respectful and trustful communication with the students” (item 20; 3.71). The lowest performance of chaotic school management on “student-centered individual teaching” was related to “listening to individual and social learning problems during the guidance hour” (item 26; 3.09). This finding indicated that guidance services did not focus on support and assisting activities for the students. The activities including individual student properties such as “determining needs and expectations from school experiences” (item 25; 3.26), “determining the level of readiness at the beginning of academic year according to courses” (item 24; 3.38), “considering the success of students according to courses for determining the learning field” (item 23; 3.42), and “knowing learning properties of students multidimensionally” (item 22; 3.44) were the ones chaotic management was the least successful. School management could not evaluate needs, expectations, and subjectivities arisen from the individual differences of the students carefully. They could not make adequate efforts on teaching activities appropriate to the properties of the students.

17.7 Discussion, Conclusion, and Suggestions

The primary reason why secondary education schools exist is to train their students as individuals with minimum citizenship, knowledge, and skills. High schools have to equip their students with cultural, social, political, and economic competences in accordance with the functions of this educational grade. In order for secondary

education schools to provide multidimensional development of their students, they are necessary to discuss the duties allocated for them on an integrative basis. When schools focus only on their academic functions no matter what the grade, they are ignoring social, psychological, and cultural development functions. Diversification of school functions and their getting more complicated increase the necessity for chaotic management. Chaotic school management requires using all sources at schools, especially the human resources as the most efficient. The most important human resources of schools are managers, as the leading, and teaching employees and teachers, as the primary. In order to meet the needs of students as different from each other, human resources of the school should be affected by the school management; provided to take part in decision-making processes, planning, organizing, coordinating, and supervising; and provided to have communication network between them. The schools are spiral, uncertain, different educational organizations that cannot be managed through a linear logic. All these qualities necessitated chaotic approach and chaotic management at schools.

According to *Chaotic Management Research*, management functions during the secondary educational final grade focus on fulfilling the activities necessary for preparing to university. School management focuses their interest and attention on students getting into elite universities and departments and makes efforts and takes their time for this purpose. In order to pass university exams and become more prominent in the competition, summer vacations are evaluated; weekend courses are organized; and in-class academic social teaching and student-centered individual teaching services are constantly maintained during formal educational activities of the schools. The process of preparation to YGS exams is the long-term activity for secondary education final-grade students. Students have considered that the most important chaotic management performance of their school is evaluation of summer vacations. The basic factor causing chaotic management is the process of preparation to university. Introducing the rules related to in-class experiences to both students and families, improving in-class performances of the students to the highest level, and guiding students multidimensionally for academic success are the chaotic management implementations managed successfully by the school management.

The results of this research indicated that the schools, especially Anatolian high schools, regarded in-class social learning processes through a generalizing approach. During the process of in-class experiences, chaotic management implementations specific to subjective differences of the students could not be performed.

Upon student-centered individual teaching services, chaotic management implementations depend upon introducing functions and opportunities of schools and explaining the school and classroom rules to be obeyed by the students. School management regards informative activities prioritizing the responsibilities, duties, and liabilities of the students on individual teaching services. During the guidance course required to focus on overcoming the problems of students, needs, expectations, and development properties of the students are not emphasized. In-class learning experiences cannot be achieved in accordance with pre-learning and readiness levels of the students.

In accordance with the research results, the suggestions presented below were developed:

1. Schools are multivariable, democratic, individual, and socioeconomic development centers where uncertainty and chaos have been experienced much due to the reasons arisen from differences and plurality. Due to these factors, school management should be provided to gain chaotic management knowledge and skills to overcome the problems arisen from differences, uncertainty, and chaos in their schools.
2. As in any schools, opportunities appropriate to multidimensional development of students in terms of individual, social, cultural, political, and economic aspects should be created for students in secondary education schools besides their academic development.
3. Schools are sociocultural and academic development centers including the students with different sociological classes and socioeconomic properties (Özbaş 2011). At schools, administrative implementations that are possible to efficiently manage uncertainty and chaos depending upon social and cultural properties and differences of the students should be developed.

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Chapter 18

Sustainable Leadership Practices in Higher Education Institutions: An Analytical Review of Literature



Miuro Farooq

Abstract One of the key aspects in higher education institutions is sustainable leadership strategy with the need to account for the core values of the organisation and its stability. The purpose of this paper is to analyse the sustainable leadership practices towards transformation and sustainability of the higher education sector. Since there is still a gap in the existing framework utilised in higher education institutions, the study opted for empirical findings of Lambert's (2012) model to analyse the findings of the previous studies done on the same subject in order to guide the framework of the paper. Six emergent themes were identified after analytical review: depth learning and integrity value, attributed to instructional leaders' alignment to their mission; strategic vision, the length through endurance and succession, the breadth which can be achieved through collaboration and emphasised for its importance as a daily skill for information sharing; justice where personal interests are abandoned, diversity through cohesion and complexity; resourcefulness, where leaders utilise internal and external partnerships to improve local communities and maintain competitive advantage; communication, which was emphasised for its importance as a daily skill for information sharing; and lastly conservation, which requires leaders to learn from the past in order to form an ingenuity for the future progress of an institution.

18.1 Introduction

The global knowledge economy wave and its pressures today require that higher education sector services should help to shape the global trends and challenges (Davies and Devlin 2019). This is due to the interconnectedness between higher education and economic development of the world. Higher education institutions act as a pinnacle and impetus for economic transformation worldwide through human resource development research and innovation.

M. Farooq (✉)

Islamic University in Uganda, International Islamic University Malaysia,
Kuala Lumpur, Malaysia
e-mail: miurofarooq@gmail.com

Since leadership sustainability is a key aspect towards the ingenuity of higher education quality products and transformation of organisational performance, the postmodern management times require leadership with ebullient personnel who can reaffirm and ensure that stakeholders and investors' confidence are with them to continuously sustain development and protection of the institution's corporate image from fraud and scandalous damages (Avery and Bergsteiner 2010). This is because higher education is featured in immense challenges that are influenced by both internal and external factors (Leslie and Fretwell 1996; Munitz 1995). For instance, issues of improved management practices, distance learning, cultural diversity, privatisation and globalisation, etc. all these require organisations to be administered with transparency and high standard ethical values to be exhibited by both the leaders and the followers so that confidence of the investors and other stakeholders is maintained (Hilb 2006). Therefore, the leadership type required to lead and manage higher educational institutions in such an unpredicted environment is the visualised leadership which can envisage institutional growth towards business sector approach.

The turbulent world whose clear direction is not yet well defined due to dramatic changes clearly requires a foresighted corporate governance with a fundamental continual operation that aims at all means, which can enhance curriculum reform to possibly meet the challenges students face in this century and in future generations (Aras and Crowther 2008). This is because leadership steering roles are more concerned with more than just creating short-term solutions.

Today's generations require masses to be holistic and well developed in terms of critical thinking, communication, innovation, problem-solving, entrepreneurship and teamwork demonstrated by a leadership of all seasons (B.C.MoE 2012/2013), yet this can only be achieved through well-trained leadership and informed staff about the globalisation trends as well as education standards coupled with the problems and challenges of the community where educational institutions are located (Chettiparamb 2007). Sustainable leadership innings parallel to leading educational sustainability efforts through a combination of efforts with faculty and staff to significantly influence campus life and promotion of decision making that impact on the future people, planet and profiting sustainability of institution transformation. The current paper aims at critical review analysis of literature on the sustainable leadership practices in higher education institutions. The paper provides possible solutions and approaches that can be opted for to improve the image of higher education institutions especially in the Muslim world.

18.2 An Overview of Sustainable Leadership, Challenges and Practices

Today, a mammoth of studies has been carried out with the aim of establishing the framework of sustainable leadership, but the phenomenon seems to be still new in the field of education, whose history can only be traced back to 2003 (Lambert 2012). Authors' views on sustainable leadership vary; for instance, some view it as

corporate governance, whereas others define it as leadership practices towards achievement of institutional future goals and missions. For example, Kantabutra and Saratun (2013) define sustainability leadership as the ability to meet the needs of an organisation's direct and indirect stakeholders (e.g. employees, clients, pressure groups and communities), without compromising its ability to meet the needs of the future mission of the founders as well. Therefore, HEIs leadership is required to maintain and grow institutional social, environmental and economic capital bases while actively contributing to sustainability in the political domain (Dyllick and Hockerts 2002; Albert 1993).

In other words, for an institution to be considered sustainable in its functionalities, though it takes some time, it must meet the following conditions: deliverance of strong financial performance, endurance to both economic and social difficulties and the ability to maintain a leadership position in its relevant market (Avery 2005). Accordingly, sustainable leadership is a means for developing leadership capacity within organisations for future prosperity (Hargreaves and Fink 2006). Moreover, many higher education institutions seem to be failing to attract sound, quality and skilled leaders to occupy higher posts due to increased job stress, continuing cut of budget and changing student population (Hargreaves and Fink 2006). For example, the researcher believes some institutions have been trying to prepare leadership development as per the institutional agendas but owing to both internal and external forces, their efforts are always dwindled especially when they are not in good books with the state leadership.

A case in point, the above stated is sometimes fuelled by political reasons and lack of autonomy; higher education institutions are driven by the state leadership to serve their interests. Some institutions like International Islamic University Malaysia seem to have a clear plan of what they should achieve, but on account of such influences, they seem to be driven into another direction which may seem different from their original foundation mission. Another example that makes the situation worse is dependency on the government funding as this kind of funding has strings attached in most cases whereby the institutional president or vice chancellor is selected by the government so that its interests are catered for. In such a scenario, the major goal of setting up the university sometimes is lost, and the institution is led by the demands of the time. With emerging trends, passive educational leaders can no longer be tolerated, if the institution is to continue forging ahead and establish itself within the lines determined by environmental change forces coming from the outside, a CEO-like function called "visioning" becomes inevitable (Bolman and Deal 1992; Leithwood 1994).

Higher education institutions need autonomy to influence and guide the lives of the citizens for the better. However, today due to capitalism and over dependency on government funding, many institutions are diverted to the extent of ignoring the major concerns of the founding body. The best way to achieve autonomy and avoidance of disadvantaging the low-income earners is to establish endowment for these institutions to do their business without interference. For example, Islamic university in Uganda has suffered the leadership instability syndrome since its inception until 2004. However, when it got to the current leadership, both internal and external contradictions have been affecting its real progress to a point of

requesting foundation body to remove the leadership. But because the foundation body is firm on its goals, the university leadership has continued to serve to its best.

In Europe, during the credit crunch, many institutions were asked to apply for funds to boost their budgets and research: however, many of the British universities refused because the funders wanted these institutions to have different accounts for managing those funds and were always antagonising staff programmes with accountability and assignments. In addition, this kind of funding brought about two worrying developments whereby the high quality of applications could suffer and those institutions applying for unfavourable funding sources would broaden the funding gap for their research activities. With this kind of attitude, many universities abandoned the offer and left it to the new entrant of European Union like Czech republic (EUA, Republication 2011). In Asia when a similar incident happened in 1997, most of the government universities were compelled by the university to cut the budget and staff employed. This event in history checked the quality and sustainability of Asian universities. It can therefore be concluded that governments or state influence should be limited for future university sustainability.

From the author's point of view, state influence into HEIs affairs should be limited in order to avoid policies that contradict the university obligations and mission; secondly, universities need to learn from the history so that the issue of begging and receiving funds that affect their common cause is abandoned to avoid external influence. With this kind of attitude, universities will be able to shape up the government policies and human lives towards a better future.

Furthermore, it is important to note that leadership of higher education institutions is moving away from the traditional 1970s model of the seemingly simple Reduce-Reuse-Recycle to sustainable leadership towards institution change and development. This is done through recruitment and development of competent staff to enhance collaboration and networking towards educational sustainability. The study believes that some of the higher education institutions are still not handled in the best way possible to meet the stakeholders' aspirations in some parts of the world. It is clear that some institutions train staff but they have no capacity to keep them due to conflicting interests that especially crop up with uncertainties towards the institutions' future progress. For instance, some staff leave universities due to diversion from the root cause or direction, and others may be politically motivated, hence ending up with old staff without preparing new faces. A good example is IIUM where some founders of Islamisation have left and even the institute for that purpose has been closed. So, such movements bring about frustration and demining among some staff, and they decide to lay the tools down for other options in life.

Competition for ranking and recognition is another challenge faced by higher education institutions. Colbert and Kurucz (2007) highlight that many institutions both in academic and business sector are now seeking for national and international recognition for their sustainability policies. The sole aim is to achieve a high ranking on the growing number of "performance indicators", such as the Dow Jones Sustainability Index and ISO9000. An Exeter University study done in 2011 found that only in the USA, 80 % of Global Fortune 250 organisations were engaged in this competition for future sustainability and transformation. However, education

sector through sustainable leadership must reflect the current real-life situations as a basis to underpin the promise of every child without compromising their ability to meet the needs of future stakeholders as well (Dyllick and Hockerts 2002).

However, this may not be the case today especially in the Muslim world in that many institutions are working harder towards ranking, recognition and key performance indicators (KPI), while on the other side are heightening tuition fees. This kind of ranking is not measured based on the university mission and vision. Secondly, it is a mixture of issues, whereby some universities are forced to sideline the major objective of founders, especially in the Muslim world. Universities are turning into business ventures in that they are very expensive to study in, thus leaving the unprivileged Muslim students out of the academic arena.

In addition to the above, studies show that many higher education institutions are facing Janus faces in terms of staff, whereby many of the existing seniors are in their late ages, whereas the young ones are not stable at work (Magnus 2009). In such a state, the author believes that universities should move an extra mile by identifying good students from within, train and develop them for the future of the university other than recruiting old staff for KPIs. When young blood is mentored, and given chance to hold the steering with the guidance of the seniors, higher education institutions are likely to get to greater horizons. Models have been devised to address these challenges of sustainable leadership both in academic and other business venture for future sustainability and stability. However, some have been found not good or applicable in the education field.

Nevertheless, the Muslim community is at war with its self today with even support from its enemies. Muslims are seeking for asylum all over the world. Universities and knowledge heritages have been destroyed. This has been coupled with unemployment and deprivation of rights. While on the other side, the same group of survivors is being witch-hunted, traumatised and harassed in the disguise of terrorism. Moreover, the western universities are very expensive and they have continued to limit the number of Muslim who should be admitted. So, when Muslim universities follow suit in terms of tuition, it means the Muslims have killed their own in scholarly production.

Lambert (2012) states that many models are in place but cannot fit in the field of education due to their nature of being business-oriented. Therefore, this paper's analytical review will rotate on the seven-element model proposed by Hargreaves and Fink (2006) to guide leaders of higher education sector through the many different complex factors in creating a high-quality harmonious teaching and learning environment for all students, for sustainability of many years and over the course of many leaders. These include;

18.3 Depth Learning and Integrity

Learning being preparation for life and being real life, leadership is required to put it at the forefront of every institutional activity. Despite the several demands from all corners of management, leaders should be instructional so that they are not

derailed by forces other than school agendas that encourage gentle knowing and giving chance to both teachers and students to understand problem-solving, to reflect and to come to an answer or a solution on their own to ensure that there is a depth to their thinking.

Today Muslim universities are closing the chances of providing funding to students to do research especially at postgraduate level that can enhance solutions to the problems of the Muslim Ummah. This has come in place with failure to analyse the worrying situation in the community with a proactive solution. The author's belief is that the leaders at all levels should stop pointing the finger at themselves and fund these institutions to deal with their challenges at hand through higher education influence. This is because politicians have failed and they will continue to divert these institutions and their students towards the western traps.

18.4 The Length

This is done through endurance and succession. However, many institutions still find it an enormous challenge to deal with. More so, corporate world image requires successful businesses plan in advance for leadership changes. This can be done through rigorous recruitment and development of potential leaders and staff relying on a clear definition of the leadership skills they value. Therefore, education leadership changes that occur regularly put leadership task at a point to address issues of constant movements of staff and other top officials through retirements, promotions and transfers, where all should contribute to a steady shape up flow of leadership in the institutions.

18.5 The Breadth

This can be achieved through teamwork and team spirit, whereby the leader properly distributes responsibility as per someone's position docket and policy. When distribution is maximised, staff tend to appreciate leadership roles and also feel as part of the working environment. This can be helpful in driving student learning and the vision of the institution, whereby lecturers' buying into the leader's vision for the university is an integral way for leaders to influence teaching, learning, innovation and research since lecturers are always in good terms with students in delivering the learning agenda as per institution's calendar. Encouragement and empowerment of fellow staff to lead creates an enabling environment where recognition can be attained through a strong voice, with respect to professionalism, and they will help to drive positive change within the university.

18.6 Justice

Justice is another element to consider. Justice in sustainable leadership poses a big challenge in looking out for not only what is best for the leader's institution per se but also offering the best for the surrounding community. Self-serving leadership is called for in this case, so as to achieve greatness for their institutions. This can be rendered through social justice and focusing on the common good of all that is inclusive of the internal and external environment. However, difficulties may be in a competitive culture, especially in the global village where the knowledge economy competition for high-quality talented personnel is high, with so many motivated students, and less funding.

18.7 Diversity in Cohesion and Complexity

Diversity in cohesion and complexity is another important feature for sustainable leadership. It allows for institutional flourishing by promoting and drawing on the diversity based on knowledge and experience as well as teaching staff's support and willingness. Institutions are constantly changing due to staff and students' cultural backgrounds and experiences. As the people in education change environment, the institutional culture is also affected. Therefore, flexibility in standardisation of education is required for diversity purposes so as to avoid negative consequences. Thus, leadership can encourage diversity by allowing teachers to be flexible in curriculum implementation in order to focus on collaboration with their peers. Through process, the sharing of ideas, freedom can be created, and staff will stretch their own thinking and thus the thinking of their students. Leaders should endeavour to protect this gift by working hard since enabling diversity can flourish good results rather than eliminating it when faced with standardised education.

18.8 Resourcefulness

This can be attained through renewal and restraint. Visualised leadership pays careful attention to institutional resources, both financial and personal. In order for a leader to be effective, it is a requisite for him to look beyond himself and the people around them. In higher education institution's setting, where there is often outside pressure from governments and communities to improve the teaching learning and to improve research standards, leaders must protect themselves and their staff from being overwhelmed with activities that do not promote development both at the institutional and individual level.

18.9 Conservation

It requires leaders to learn from the past in order to form an ingenuity for the future progress of an institution. It is equally imperative not to romanticise the past. This can be done through creation of a longing for easier or better moments through careful reflection and scrutiny on the positives and negatives of the history of the institution. While doing so, leaders can move forward into the future with an eye opener of the past, keeping in mind what has been successful or the opposite as they search for continual improvement.

Findings done on African higher education in 2009 indicated that these institutions vary considerably in the ways through which sustainable leadership is approached whereby some concentrated on minimising their conservation impact through changes in campus operations; others emphasised sustainability in the curriculum; yet others focused on university outreach and embedded sustainable development principles in their overall development strategy. This means that little focus is put on other leadership practices that can yield better leadership and consolidation of institutional achievements in the future. The barrier associated with these challenges were the lack of funding, competent and specialised human resources to offer consultancy and quality services and the lack of awareness and information about sustainable development (Escrigas et al. 2011). From the same study, it was found that not many institutions were foresighted on their employees in staff development for sustainability and stability despite 49.2 % indicating that they have such programmes. Moreover, many of the institutions (59 %) were not involved in mainstreaming practices while 41 % indicated that they were involved.

In a study conducted by Lambert (2012), about the perception and implementation of sustainable leadership strategies in further education colleges, findings reveal that, even though it cannot be generalised, many principals were in compliance of the framework; however, they lacked business plans for future implementation of each item as mentioned. Nevertheless, the study recommended a toolkit that leaders who are in need of implementing the framework within their institutions can copy from so as to guide them to a direction of thinking around the actions which individual institutions need to take in order to maximise the benefits of the framework.

In a study carried out by Bossink (2007), on the effect of managers' leadership styles on sustainability and innovation through friendly environment, findings obtained through interviews and observation revealed that exchange of knowledge among the leadership and followers played a great role in Netherland companies towards sustainable innovation in building the institutions. Leadership sustainability brings about the required performance, while encouraging economic, social and cultural improvement at a local, regional and global level.

It is urged that the only way through which institutions can realise their value for money and innovation is through streamlining leadership challenges whereby career progression and development of individuals is implemented to ensure that they have the necessary skills for senior leadership and for maintenance of organisational sustainability and stability even though short-term fixes may be left unaddressed

(Hargreaves and Fink 2006). Empirical evidence further indicates that visionary leadership can be positively linked to follower motivations, organisational commitment and performance (Bycio et al. 1995). However, it is still a myth in many institutions to achieve coupled with the global challenges and state influence in the management of higher education institutions. Suriyankietkaew (2013) in his study about emergent leadership paradigms for corporate sustainability found out that institutions that have been flexible and have paid attention to global changes tend to be higher in performance and capable of responding more effectively to environmental change than organisations adopting the traditional leadership paradigms.

In summary, the author's idea to the Muslim education world is that a door for rigidity no longer opens in this century. Therefore, they need to cope up with demands of the time and understand what is required and provide solutions for another generation with a new culture derived from the proper use and understanding of Quran and Sunnah of the prophet (peace be upon him).

The author argues that higher education institution leadership needs to focus on the ways through which survival should not cripple or jeopardise the core mission and vision of the institution without fully absorbing the context under which global forces are operating. Globally some leadership have been found of diverting institutional agendas or practices to what has not been part of the culture before. This kind of attitude affects the institutional human resource and customer trust. For example, trends such as climate change, globalisation, demographic change and social inequality have created a significant challenge to the traditional higher education practices questing for focus on shareholder value and wider range market needs.

Wales (2013) states that issues like the "credit crunch" and corporate scandals have led to a loss of trust in the way organisations operate today. For instance, tendencies such as climate change, globalisation, demographic factors and social inequality have created a significant challenge to the traditional business model with its focus on shareholder value. Many higher education institutions are being shucked by pressures from governments, consumers, employees and investors to demonstrate that they are adopting ethical and sustainable institutional practices. However, the true direction is not defined. These pressures sometimes are contradictory with the university agendas or not realistic within a short period of time. Others are becoming business merchants, whereas customers are getting more power to determine what should be taught (Scott et al. 2003). With that withstanding, market owners, academicians and activists are in hot debate on who should do what in the business society; their call for social justice is now pitted against those arguing for unfettered managerial capitalism (Colbert and Kurucz 2007).

The history of education institutional reform and innovation is built with good ideas or policies. However, many institutions are still failing to implement them via changing lines. This is because of the knowledge change ingredient. Understanding the insight about the process of change and the key drivers that make for successful change in practice is still difficult. Moreover, its presence has not granted successful change due to several approaches used and those without have failed completely to traverse in the world market but its absence ensures failure (Fullan 2005).

18.10 Conclusion

An analytical review of relevant literature confirms that there are higher demands from both governments and the public for higher education institutions to change the way in which they conduct their affairs following the global economic crisis.

The fact that many higher education institutions seem to be so keen to be included in publicly available “performance indicators and transformation” indicates the desire to be seen as adopting sustainable leadership practices, at least in public relation terms. The growth of financial instruments based on more long-term performance may also be significant so as to create self-sustaining projects.

Clearly, higher education leadership sustainability depends on staff development with strong economic muscle and social conditions enshrined in the communities in which it operates. On the other hand, as listed above, leadership must accept that many shareholders will continue to bring up pressures and contradictory investment decisions based on short-term profit motives at the expense of long-term objectives.

However, the Harvard Business School/London Business School survey referred to in this paper (Eccles et al. 2011) concluded that pressures from all corners with different views on how institutions should be ran may not be a “zero-sum game”. The study shows for some timeframe strong leadership with high sustainability, and a clear defined agenda have outperformed their competitors in the world market when it comes to quality products and further investments, as well as the environmental demands more known traditionally in the concepts of sustainability and transformation.

As with many developments in managerial and organisational strategy continue to emerge, the concept of sustainable leadership perhaps suffers from the lack of a single approach or model. This solicits the question, are sustainability and transformation based on sustainable leadership in higher education institutions? If sustainable leadership is all about taking a longer-term view, it is possibly fitting that only time will tell in finding an answer.

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Chapter 19

Chaos, Complexity, and Leadership in the Context of Organizational Uncertainty in Education and School Administration



Müzeyyen Petek Dinçman

Abstract The economic, political, social, and technological changes encountered in recent years affect organizations to keep up with the times and to survive as much as affect the individuals. On the other hand, any change planned by determining needs brings about organizational success. The general purpose of this research is analyzing scientific papers discussing the concepts of chaos, complexity, change, corporate culture, leadership, and risk which are the fundamental subjects related to organizational uncertainty in education and school administration. Scientific papers were examined and analyzed within the context of type, content, method, findings, comments, conclusions, and suggestions. According to the results of the paper revealing shortage of studies which examine organizational uncertainty in all aspects and together with the debates on the changes in the education system in the field, one may suggest conducting scientific studies in this field.

19.1 Introduction

Uncertainty phenomenon revealed from the combination of sustainable obscurities is one of the most fundamental concepts making up the vital continuity of human life. Its continuing in all stages of the day from the moment of beginning the day in the morning to even during sleeping made this concept one of the most significant elements of the life cycle we need for taking the decisions necessary to live, to survive, and to develop life. Our failure to have sufficient information about what the situation we are in could give to us, the probabilities, and what it can take from or give to us evidences that uncertainty is observed at every point of life.

When uncertainty is deemed to be obscurity in persons, it becomes a phenomenon to be avoided by individuals, even a phenomenon ignored for protection purposes where processes are executed as such. Uncertainty was defined by Miliken

M. P. Dinçman (✉)

School of Foreign Languages, Hacettepe University, Ankara, Turkey

e-mail: petekd@gmail.com

(1987) as the failure of individuals to estimate potential events and consequences thereof. Uncertainty which is one of the shared and determining properties of all complex systems is inability to know which one of the potential future situations may realize and its potential consequences thereof. Complexity Theory emphasizes that relations in complex systems such as organizations are not linear and have such structure that unexpected consequences and unpredictable events may arise (Erçetin et al. 2013a, b). Uncertainty is generally defined as ambiguity of expressions and variability of conditions or situations where there are various comments and viewpoints that could conflict from time to time (Bakioğlu and Demiral 2013).

The concept of uncertainty is a phenomenon which predominates not only in the lives of individuals but also in organizations which are living systems. When it is admitted that uncertainty is unavoidable, one should accept that organizations affect the conditions that the organizations are in and the individuals composing the same. In this context, one should determine what uncertainty in organizations is, its reasons, and how it arises.

Chaos means the existence of disorder and turbulence lexically (Açıklın and Bölücek 2014). The best-known definition of chaos is sensitive dependence on the origin (Açıklın and Erçetin 2014). When organizations predict the future and the probabilities that may arise in the future, they can challenge change and uncertainty and transform chaos into an opportunity for success (Erçetin and Kayman 2014). Considering that change is of great importance in organizations of today, it has become significant how individuals react against uncertainties rather than how they use the knowledge they have.

When we consider education organizations as such organizations where knowledge is directly accessed and developed, and as a consequence of this, uncertainty is observed as a continuous and unpredictable situation, even uncertainty exists at all points, it is true that they have the same characteristics with the chaotic systems. Relations in chaotic systems should be considered as the integrity of relations arising as an unpredictable consequence of choices determined against unpredictable consequence rather than a linear tendency (Erçetin et al. 2013a, b). The schools which keep up with macro and micro social change are complex structures which organize them and shape the society it exists in (Morrison 2008). In this context education organizations and education systems should be considered as complex structures as a result of uncertainties they encounter (Erçetin et al. 2013a, b). The uncertainties observed in the schools can be explained as uncertainty in teaching processes (Jackson 1986), uncertainty in the content taught and materials (Schoön 1983), uncertainty in their authorization and effects (Lortie 1975), and uncertainty in the changes expected from personal development and students (Clark and Floden 1988; Erçetin et al. 2013a, b). Uncertainty in education organizations should not be limited merely to continuing practices and processes, and the fact that change and processes have a very significant place in education should be accepted.

Indeed, each individual is a potential leader in the society or in the organization; it is uncertain where, when, and under which conditions this potential shall realize and enter in a leadership process or which effects will be engaged at individual, social, or organizational level (Erçetin et al. 2013a, b). Those teachers and school

administrators who experience uncertainty and who pay effort to provide continuity and benefit in their professional life with these uncertainties may exhibit different approaches and methods of coping with. One of these is avoiding uncertainty. Behaviors of leaders are important for chaos, complexity, and coping with uncertainty (Erçetin and Açıkalın 2016). According to the result of the research conducted by Hofstede (2001), it was explained that uncertainty and avoiding uncertainty is a very significant part of culture and a determining element of social behaviors. The basis of avoiding uncertainty is accepting that uncertainty is a source of anxiety for humans. On the other hand the structures where avoiding uncertainty is low are more available for change and innovation, and loyalty to written rules and the chief monitoring application of those rules is very low (Serpın 2012). Change is no more something to be afraid of and became an expectation desired or even needed.

19.1.1 Organizational Uncertainty and Chaos

Chaos, uncertainty, and complexity are concepts with meanings close to one another. Complexity is an organizational situation emerging in systems at the threshold of chaos (Usta 2013). While chaos is defined as uncertainty and a process of unpredictable change, and it makes up one of the critical subjects of the paradigm of today (Kamacı 2010). In the theories of chaos and self-organizing complex systems which are sciences of uncertainty, dynamic and nonlinear complex systems evolve into a more complex order as a result of the process of self-organizing which starts to develop in chaotic conditions (Diker and Ökten 2009).

Chaos is the origin of life and a reality for organizations and individuals (Erçetin and Kayman 2014); order is a temporary situation which may lead to problems when it continues (Erçetin et al. 2013a, b). When organizations predict the future and the probabilities that may arise in the future, they can challenge change and uncertainty and transform chaos into an opportunity for success (Erçetin and Kayman 2014).

Today the new paradigm indicates another direction of a nonlinear world where situations of chaos, complexity, and uncertainty are deemed normal (Kamacı 2010). Uncertainty in chaos is a process to be understood, explained, and managed rather than one to be avoided (Matheson and Matheson 1999, 119). The basic elements that the organization and workers should be aware of in order to manage uncertainty (Usta 2013) are as follows:

1. *Philosophy*: Workers make use of philosophy to understand the source of uncertainty and make a decision accordingly. This element assists with understanding that decisions rather than results can be controlled. Definition of uncertainty becomes easier owing to this.
2. *Personal Perspective*: Workers deal with uncertainty in terms of their own fields of expertise. Owing to this, they have the chance to understand what could be controlled and what could not.

3. *Organization and Culture*: Estimations cannot be presented as definite knowledge in organizations embracing uncertainty. Revenue is tried to be calculated considering risk all the time in the process of decision. It is believed that there is an area that could not be controlled.
4. *Support Systems*: The system and experts of the organization assist the decision makers for assessment of the effect of probability and uncertainty.

According to Kamacı (2010), crisis management, strategic management, and project and team management are effective methods in managing chaos effectively. On the other hand the chaos characteristics corresponding to these management approaches are the sensitive dependence on the beginning status, nonlinearity, fractals and self-similarities, chaos patterns, turbulence, and random shocks. Chaos Management Model is observed in Table 19.1.

In an organization structure which is completely uncertain and non-stable, failure in vision, identity, and purpose development, failure to develop random purpose and random organization management, and failure to adapt change and to cope with uncertainty are experienced.

Table 19.1 Chaos management model

Dimensions of managing chaos	Valid management approach and technique	Corresponding chaos characteristic
Managing change/transformation (managing transition)	Change management	Strange tractors
Keeping the system at threshold building elasticity/renewal skill (destabilize the system building resilience)	Motivation management	Self-renewal and organization skill
	Time management	Fading structures
	Stress management	
	Creativity management	
Uncertainty and managing disorder (manage order and disorder and the future)	Crisis management	Sensitive dependence on the beginning status
		Not being linear
	Strategic management	Fractals and self-resemblances
	Project and team management	Chaos patterns
Turbulence		
Building and maintaining a learning organization (create and maintain a learning organization)	Learning organization	Feedback mechanism
	Knowledge and continuity management	Repetitions

Source: Kamacı (2010)

19.1.2 Organizational Uncertainty and Complexity

Abraham Moles compares uncertainty to walking in a labyrinth (Diker and Ökten 2009). Complexity theory is interested in complex systems where there are no simple cause and effect relations (Beabout 2010, 12) and reveals that complex systems can produce unexpected and unpredicted results due to the preferences and interactions (Tetenbaum 1998, 21). Furthermore, it represents an opinion emphasizing arousal of new organizational structures, diversity of the same, getting organized automatically, and uncertainty of natural events (Stacey 2007, 3). Complexity theory emphasizes that uncertainties and complexity are an element triggering creativity for a new order (Bayramoğlu 2016).

Complexity, change, and uncertainty are the phenomena encountered frequently in business life of today (Karakışla 2009). Uncertainty environment leads to a *chaos situation* which we can define as failure to notice the cause-and-effect relation between events or situations as well (Diker and Ökten 2009). Complexity and uncertainty in the events both inside and outside the organizations increase, and organizations have a fast change (Arslan 2013). Each organization has to live and learn how to live with uncertainties, risks, chaotic environment emerging from time to time, and complexity.

19.1.3 Organizational Uncertainty and Corporate Culture

“Culture is the integrity of the concepts and elements that the human adds and contributes to the nature” (Açıkalın 1994). The sum of behavioral norms of organizations peculiar to it, beliefs, and values can be defined as organization culture (Şahin 2010).

Organization culture does not only determine how the workers should behave in the organization, but it is also effective in life perspectives (Balcı 2001; Arslan et al. 2005). Behaviors of the individuals working in the organizations determine the values, norms, beliefs, customs and traditions, ceremonies, and symbols of the organization, the language used in the organization, and meetings and the symbols related to the organization. The contribution of corporate culture is significant for arranging the behaviors of workers in the organization because corporate culture provides benefit to workers, decreasing uncertainty in addition to providing facility for leaders (Argon and Kösterelioğlu 2009).

According to Alkaya and Hepaktan (2003), corporate cultures which do not tolerate making mistakes make up obstacle to change process, whereas supportive corporate cultures provide workers to have behaviors supporting and adopting change. Furthermore, trust toward top management facilitates decreasing the uncertainty, risk, and concerns arising in the change process (Kondağçı et al. 2010).

Communication is extremely effective in the creation of a positive and trust-based organization climate because effective communication between the workers

and the administrators enables the workers to gain information about change and cope with uncertainties more easily (Özmen and Sönmez 2007). Organizational communication is a significant factor in the attitudes of workers to be ready for change (Kondakçı et al. 2010). Corporate culture enables the organizations to adapt the changing conditions and to continue their existence on one hand and serves to remove the concerns and uncertainties created by the conditions in workers (Erkmen and Ordun 2001).

19.1.4 Organizational Uncertainty and Change

Humans are usually afraid of uncertainty existing within the nature of change rather than seeing the innovation brought by change and the opportunities it makes available. Administrators behave more cautiously about change under conditions where uncertainty is high, where it becomes more difficult to make long-term plans and make correct decisions (Özalp and Öcal 2000); however it is necessary for leaders to support their words on change with their actions in order to provide permanency of change (Argüden 2004).

When uncertainty is in question, it means that the process of change requirement has started. Actually, since change requirement brings about innovation from the perspective of sustainability of organizations, it becomes a compulsion in today's life. No matter how much the corporate culture and division of labor in the organizations is consolidated, no matter how much the uncertainties and threats within the organization are removed, it is not possible to avoid uncertainty when organizations being living systems are under the effect of the external environment. The developments in the economic, social, and political arenas and findings and suggestions of scientific researches affect societies and organizations and manage change (Özdemir and Cemaloğlu 1999). The events that happen in the society, particularly those having great echo, do not only affect the people in that society but also the organizations. At that point, one may say that both uncertainty and change are unavoidable for organizations today.

One may say that the normal working environment in the organization where the employees feel secure gives place to concern and uncertainty at the moment when it is announced that change process started for the first time in the organization; incline in efficiency, employee dissatisfaction, and passive resistance in employees were encountered in this process, and when the uncertainty process continued, it created risk for the organization. In this case valuable employees could be lost and reaction of customers and active resistance can be observed. Workers experience the feeling of uncertainty in the change process. Although change may be positive, the workers should be informed and concerns should be eliminated since uncertainty will arise (White 1998, 117). Dopson and Neuman (1998) define change as the activity necessary to survive in the environment of uncertainty. Uncertainty is the mental assessment process performed by the workers with respect to how they perceive change (Karakuş and Yardım 2014).

When change is managed well, negative reactions of employees toward uncertainty can be decreased. An effective change management (Argüden 2004) is as follows:

- Adoption of change in the organization and exhibiting change belief through behaviors
- Providing permanent and sustainable development in the direction of targeted change
- Enabling development of the capability of the organization to manage the next change process more effectively

Since a change environment creates uncertainty, risk, and an unpredictable situation, the administrator shall be affected by this situation for the decisions he/she will take (Bakioğlu and Demiral 2013). Siding with change means preferring “to side with” change, rather than supporting change, and performing analysis for the reasons, content, process, and results of change (Karip 2005). Thus change institutionalizes and is adopted by the employees as well, and this leads the change process to success.

If the administrators are aware in the change process that change may be difficult for workers and that this was caused by perceptions of workers (Kerman and Öztöp 2014), they act being aware that a significant part of the change management process is perception management because negative perceptions lead to reaction against change.

Most of the concerns of people in the change process are caused by uncertainty of the future (Toffler 2003). A successful change process is experienced through informing the workers by the leader, decreasing their fears and anxieties (Özmen and Sönmez 2007). Organizational change is a situation where certain results difficult to be predicted may arise (Saylı and Tüfekci 2008).

Uncertainty may both block the system of organizations and expand the dimensions of change reaction (Tunçer 2013). Generally, it may be listed as uncertainty with respect to the sources resisting to change and causes and effect of change and not desiring to leave the existing benefits (Stoner and Wankel 1986, 358). On the other hand, the reasons for psychological causes may be listed as uncertainty, prejudiced attitude, perception level of individual, and problems in human relations (Durna 2002, 158–159). Consequently, in organizational change, communication, knowledge, and learning should be paid significance and the capability to respond to fast changing environment events and uncertainty and to adapt should be given (Karakışla 2009).

Organizational change is a continuous process aiming at adaptation to uncertainty and the changing environmental condition. For this reason, the changes in the organizational environment should be reviewed, strategy should be determined, and the organization should be enabled to adapt to those changes (Taş 2009). The phenomenon of continuous change requires the development of the capability of the organization to adapt to those changes, coping with future uncertainty and disorder caused by change and providing continuity of knowledge and values within this scope (Kamacı 2010).

19.1.5 Organizational Uncertainty and Leadership

The most significant assets of countries and organizations are the leaders (Alkın 2006). Leadership was used in the field literature as a concept from the first half of the nineteenth century (Şişman 2002, 5). It is observed that different theories and opinions were suggested in the literature about leadership (Küçüközkan 2015). However at present times when change is rapid and competition is high, leadership became more important than the past because leadership behaviors and successes bring about success of the followers (Bakan and Büyükbeşe 2010). Nature of the interaction between the leader and the group and change in the organization and uncertainty are significant for the success of the leader and the organization (Eren 2001, 433).

Since the future is usually uncertain according to new management theories, actions may not always develop as planned (Usta 2013). Today, leaders feel the need of a strategic vision in an environment where complexity and uncertainty is high (Alkın 2006). At that point, those leaders who have vision and who dominate strategic management can be successful in managing uncertainty. Significance of visionary leadership is based on their success to eliminate potential uncertainties (Çelik 2000; Aksu 2009).

Administrators can no longer ignore uncertainty and admit that linear decision-making processes are no more functional (Demiral 2014). Leaders can transform those changes and uncertainties into an opportunity for organizations through reaching correct information and using the information correctly and exhibiting effective leadership behaviors (Alkın 2006). Leaders should comprehend and implement change, development, and uncertainty management against developments (Ertürk Kayman 2008).

Fiedler's effective leadership theory focuses on three dimensions, namely, leader-follower relations, task structure, and power (Erçetin 2000, 39). Looking through the dimension of leader-follower relations; the leader being loved, respected, and trusted by their subordinates is related to the power and influence of the leader on his/her followers (Yaşar Kip 2014).

As it is the case with the principle of uncertainty in chaos and quantum theory, the concept of leadership is an uncertain and unpredictable fact as well (Erçetin 1998). The words of disorder and complexity are such works suitable for explaining the situation of environment-based discontinuity and uncertainty in quantum leadership (Erçetin and Kamacı 2008). Leadership cannot be predicted according to chaos and quantum theories. This arises from an unknowable character in the leadership nature. The future situation of the system is uncertain and unpredictable beyond the effort paid in defining leadership (Keskinılıç Kara 2013).

Erçetin (1998) tried to explain the quantum leadership paradigm on the basis of the basic assumptions of quantum physics different from classical physics; the assumptions categorized in five groups were categorized in four groups as explained and given in Table 19.2 comparing to classical physics (Erçetin 2000).

Table 19.2 Leadership assumptions on the basis of classical and quantum physics

Assumptions of classical physics	Classical physics and leadership assumptions	Assumptions of quantum physics	Quantum physics and leadership assumptions
Part-wave discrimination	Leadership is the parts composing it	Part-wave dilemma	Leadership is a field of interaction in leader-audience dilemma
Cause-and-effect relation and certainties	Leadership is explained through cause-and-effect logic	Uncertainty and probabilities	Leadership cannot be structured and predicted
Continuity of energy	Leadership is a continuous characteristic attributed to one person	Discontinuity of energy	Discontinuity of leadership phenomenon
Gained acceleration equal to applied force	Leadership effect is based on power	Application of force to a specific point	Leadership effect is based on interaction

Source. Erçetin (2000)

In Table 19.1, quantum physics and leadership assumptions were explained. According to Erçetin (2000), leadership is a phenomenon which requires taking risk all the time in an unknown and unpredictable action field in today’s complex dynamic world.

19.1.6 Organizational Uncertainty and Risk

According to Raftery (1994), risk, a concept related to probability, is directly related to future because future is uncertainty and risk arises in the uncertain situations as well. Risk may be defined as a situation where the significance and results of events are relatively known well and probable results of events are valid within a logical framework (Kasperson 2008). High uncertainty in organizations brings about risk as well. Risks may start from resignation of employees and decrease in customer satisfaction and reach up to a point threatening the existence of the organization. In this case, how employees and customers perceive risk is significant in addition to how leaders manage the risk factors. According to Covello (2001), the factors affecting risk perception, familiarity, equality, understandability, and uncertainty, are the source of risk and violence.

While emotionality tendency of the groups with high attitude of avoiding uncertainty is high, their level of stress is low and their level of accepting disagreements is higher and their risk tendency is higher (Terzi 2004).

Uncertainty is defined as the situation of inability to estimate the significance of the events and results of events and their probability to realize through any anticipation where the direction of change is relatively well known, whereas risk is the

situation where significance and results of events are relatively well known and potential results of events are valid within the framework of logic (Kasperson 2008). Risk is the source of uncertainty according to another definition (Arslan 2013):

- Uncertainty is a measurement of what we do not know.
- Risk refers to the things that may arise from shortage of knowledge.

Uncertainty becomes risk when it is not managed well, and indeed this does not mean that administrators can manage all risks (Demiral 2014). Leaders and teaching leaders should be able to take risk, use change and uncertainty for supporting development, and should not avoid giving responsibility to employees (McEwan 1994) because risk and uncertainty are such experiences which have positive products for organizations and which transform into gain when managed well.

19.1.7 Significant Changes Within the Ministry of National Education from 1990 to Date

The subject of “How much were the researchers interested in the situations in daily life which have realized since 1990 and which have the potential to produce multi-dimensional significant changes in national education, did they vary their fields of interest and how much did they affect?” is the key point of this research. The year 1990 was selected as the beginning for detailed examination of the subject since it was a period when changes and innovations in our country and in the world as well as paradigmatic changes up to date in social, political, economic, and scientific fields accelerated. Dealing with the changes and reflections of the Chaos Theory and Complexity Theory, scientific developments in quantum physics in the period from 1990 to date when the effect and reflections of which developments were intense in organizations and particularly in schools and education organizations in terms of uncertainty in organization and assessment of the same in terms of the legislation accepted in legal and administrative terms shall add a new dimension to the issue. Assessment and explanation of significant developments in legal legislation issued and implemented by the Ministry of National Education shall enlighten the study in this regard.

Discussions of the issue in scientific context in the Ministry of National Education following the significant amendments in the legislation issued after 1990 and scientific literatures on the issue are extremely important for revealing practical experiences and perceptions on the issue and presenting suggestions. This point is the backbone of our study as well.

The period of transition to the credit system was started with the communiqué published on April 13, 1992. The subject was discussed by Kayatürk et al. (1995) in the study of examination of curricula of courses of chemistry in the general high school program and assessment of the credit system. Furthermore, the credit system was discussed in the special issue of International Journal of Education and Science in July 1992.

Examining the scientific literatures published following the transition to the system of 4+4+4, a 12-year uninterrupted education in Turkey, with the communiqué published on May 9, 2012, ten literatures of scholars were found. In the studies conducted by Memişoğlu (2013), Külekçi (2013), Odabaşı (2014), Akpınar et al. (2012), Örs et al. (2013), Epçaçan (2014), Demir et al. (2013), Cerit et al. (2014), Akbaşlı and Üredi (2014), Bahtiyar Karadeniz (2012), and Güven (2012), the problems in the transition to the system of 4+4+4, a 12-year uninterrupted education, and reflections thereof were examined and discussed on the basis of opinions of administrators and teachers.

The problems of the process of appointment of teachers in Turkey have always been a popular subject of discussion. The developments related to the principles of the Ministry of National Education for appointment of teachers were examined by Koçak and Kavak (2014); the study conducted by Yılmaz and Altinkurt (2011) on the opinions of candidate teachers about the problems of Turkish Education System, the study conducted by Özoğlu (2010) on the problems training teachers in Turkey, and the study conducted by Çelikten et al. (2005) on the profession of teaching and its properties have provided an insight for the discussions about the issue. Furthermore a comparative study was conducted by Aykaç et al. (2014) about teacher training practices in Turkey, Germany, Finland, France, and England.

Looking through the studies related to amendments in legislation on auditing in the Turkish National Education System, one may say that the issue was discussed through the study conducted by Özmen and Yasan (2007) on the comparison of audit practices in the Turkish education system and member countries of the European Union, the study conducted by Şahin et al. (2013) on the history of audit in Turkish education system and the problems in its development process, and the comparative study conducted by Demirkasımoğlu (2011) comparing the audit in Turkish education system to the audit systems of certain countries selected.

The processes of appointment and training of administrators have usually been problematic in the Turkish education system as well, and this issue was frequently subjected to an amendment in legislation. Looking through the scientific studies conducted on the processes of appointment of administrators in Turkey, we have Aslanargun's (2012) study on the judgments of administrative justice and prevailing values in the process of appointment of head masters, Soydan's (2012) study on employment of teachers in the context of structural transformation of education: a research on the basis of opinions of teachers and administrators on differences of employment forms, and Süngü's (2012) study on appointment and training of head masters in Turkey, Germany, France, and England. Furthermore, one may say that the discussions on the problems in the Turkish National Education System and the process of appointment of administrators were held in the National Education Management congresses, ninth of which was held in 2013, and the Symposium of Training Education Administrators of the twenty-first century held in 2002 in Ankara, the symposium book of which was edited by Elma and Çınkır (2002).

The general purpose of this research is to analyze the scientific literatures which discussed the concepts of chaos, complexity, change, corporate culture, leadership, and risk and the fundamental issues related to organizational uncertainty in education

and school management. Scientific literatures were analyzed within the content of type, title, content method, findings, comments, conclusions, and suggestions. For this purpose the subproblem of this research is: Do the scientific literatures related to organizational uncertainty in education and school management differ in the period of 1990–2000 and 2001 and later in terms of their contents, methods, findings, and comments?

19.2 Method

The research was designed using qualitative research method, and the technique of document review was used. Research data were obtained through document analysis. Document analysis is a systematic review of existing documents as source of data (Flick 2009). Content analysis was used for commenting on the documents. Data are converted to units while being analyzed in content analysis (Mayring 2000). Themes are coded and categorized on the basis of purposes of research, direct citations are taken from the data, and validity of data is provided (Yan and Wildemuth 2009).

The year 1990 is a critical milestone in the study since it was a period when social and political events were experienced fast and intensely in the national and international context. Since it is significant to discuss the studies conducted in this period and their reflections, the year 1990 was selected as the date of commencement. It was examined in two dimensions, namely, 1990–2000 and 2001 and later. The universe of research was composed of the scientific literatures which were conducted in Turkey from 1990 to 2016 and which discussed concepts of chaos, complexity, change, corporate culture, leadership, and risk and the fundamental issues related to organizational uncertainty in education and school management conducted by Turkish scholars abroad, namely,

Essays: compiled essay, original essay, technical note, case study, research note, book critics, comment, letter to the editor, abstract, expert report

Theses: master's, doctorate

Book: research book (excluding theses), individual book, course book, encyclopedia article, book translation, book with editor, book section

Paper: abstract paper, full text paper, poster, verbal paper, invited lecturer

The universe of research was discussed as sample. The classifications in YÖKSİS database were used while classifying.

It was observed in the study that among a total of 121 scientific literatures related to organizational uncertainty in education and school management, 48 were essays (39.67 %), 31 were theses (25.62 %), 34 were books (28.1 %), and 8 were papers (6.61 %). A total of 18.75 % of the essays published were compiled essays, 31.25 % were original essays, and 50 % were research notes. There are no scientific literatures with the type of technical note, case study, book critics, comment, letter to the editor, abstract, expert report. A total of 77.42 % of the theses published are master's

theses and 22.58 % are doctorate theses. A total of 17.65 % of the books published are individual books, 2.95 % are book translations, 20.59 % are books with editor, and 58.82 % are book sections. Whereas there are no books published in the types of research book (excluding theses), course book, and encyclopedia article. Seventy-five percent of the papers published are abstract papers, and 25 % are full text papers, whereas there are no papers published in the types of verbal paper and invited lecturer.

19.3 Findings and Discussion

According to Table 19.3, it is observed that two of the essays related to organizational uncertainty in education and school management were published in the periods of 1990–2000 and 2001 and later. In the period of 1990–2000, one compiled essay, one original essay, and one research note were published, and in the period of 2001 and later, 8 compiled essays, 14 original essays, and 23 research notes were published. The contents of the essays published in the period of 1999–2000 were about subjects of uncertainty and leadership, uncertainty and human, and uncertainty and change, and the essays published in 2001 and later are in the subjects of uncertainty and leadership, complexity, organizational learning, being able to cope with uncertainty, social networks, chaos, complexity, quantum, organization culture, uncertainty in task definition, uncertainty in division of labor, and avoiding uncertainty. When the two periods are compared, it is observed that the subjects of leadership and uncertainty and change and uncertainty were common. The studies on uncertainty started in 1999, and the subject was not brought into the agenda in previous years. The studies began to increase after 2000 and the studies on the subject accelerated.

According to Table 19.3, there were no theses related to organizational uncertainty in education and school management published in the period of 1990–2000; all theses related to the subject were conducted in the period of 2001 and later. The first thesis study on the subject was conducted in 2008.

According to Table 19.4, it is observed that among the books related to organizational uncertainty in education and school management published in the periods of 1990–2000 and 2001 and later, 1 study of individual book type was published in the period of 1990–2000, and in the period of 2001 and later, 5 studies of individual book type were published, 1 study of book translation type was published, 7 studies of book with editor type were published, and 20 studies of book section type were published. It is observed that the content of the book published in the period of 1999–2000 was chaos, complexity, leadership, and uncertainty and that the subjects of chaos, complexity, leadership and uncertainty, education management, social networks, entropy, and change predominated in the books published in the period of 2001 and later. Comparing the two periods, one may say that there were literatures on the subjects of chaos, complexity, leadership, and uncertainty in both periods and the studies on those subjects started in 2000.

Table 19.3 Contents of scientific papers on essay type basis

Type	Content		
Year 2001 and later	Compiled essay	Complexity and uncertainty	2014
		Leadership and uncertainty	2012
		Organizational learning and uncertainty	2011
		Leadership and uncertainty	2008
		Reflection of uncertainty to workers	2007
		Governance and uncertainty	2006
		Coping with uncertainty, avoiding uncertainty	2003
		Leadership and uncertainty	2001
	Original essay	Complexity and uncertainty	2016
		Relations between concepts of education, social networks, and organizational uncertainty	2015
		Uncertainty as one of the reasons of psychological resistance	2013
		Chaos, complexity, and uncertainty	2013
		Chaos, quantum, and uncertainty	2013
		Emergence of the principle of uncertainty, its theses and its effect on administrative and education sciences	2012
		Entropy and uncertainty	2011
		Chaos and uncertainty	2009
		Organizational socialization and uncertainty	2008
		Organizational change and uncertainty	2008
		Complexity and uncertainty	2008
		Uncertainty in change process	2007
		Avoiding uncertainty	2006
		Leadership and uncertainty	2006
		Research note	Avoiding uncertainty
	Developing attitude scale against uncertainty		2015
	Leadership and uncertainty		2014
	Distrust with respect to change management and uncertainties for the process		2014
	Preventing the feeling of uncertainty		2014
	Intermediary role of uncertainty in the effect of perceived organizational change on job satisfaction and the intention of resignation		2014
	Reasons for uncertainty situations encountered by school administrators, decisions taken in such moments, and the factors influencing such decisions		2013
	Risk and uncertainty		2011
	Avoiding uncertainty		2011
	Chaos and uncertainty		2010

(continued)

Table 19.3 (continued)

Type		Content	
		Organization culture and uncertainty	2009
		Leadership and uncertainty	2009
		Crisis management and uncertainty	2009
		Avoiding uncertainty	2009
		Risk and uncertainty	2008
		Leadership and uncertainty	2008
		Uncertainty in task definitions	2007
		Change and uncertainty	2007
		Leadership and uncertainty	2006
		Organization culture and uncertainty	2005
		Leadership and uncertainty	2005
		Avoiding uncertainty	2004
		Uncertainty in division of labor	2002
1990–2000	Compiled essay	Leadership and uncertainty	2000
	Original essay	Human and uncertainty	1999
	Research note	Change and uncertainty	1999

It is observed that there were no papers related to organizational uncertainty in education and school management in the period of 1990–2000, all papers published with respect to the issue were published in the period of 2001 and later. The studies of paper on the issue started in 2014.

According to Table 19.5, it is observed that a total of 3 studies were published in the period of 1990–2000, namely, 1 compiled essay related to organizational uncertainty in education and school management, 1 original essay, and 1 research note; and in the period of 2001 and later, 8 studies of individual compiled essay type, 8 studies of original essay type, and 22 studies of the type of research note were published.

It is observed that the essays published in the period of 1999–2000 were designed using qualitative and quantitative research models and the essays published in the period of 2001 and later were designed using qualitative and quantitative research models as well. It is observed that the samples of the essays published in the period of 1999–2000 were instructors and students and the samples of the essays published in the period of 2001 and later were instructors, students, administrators, and public personnel. In both periods survey was used as data collection tool, and scale was also used in addition to survey in the period of 2001 and later.

It is observed that there were no theses related to organizational uncertainty in education and school management in the period of 1990–2000, all theses published with respect to the issue were published in the period of 2001 and later.

According to Table 19.6, it is observed that 1 individual book related to organizational uncertainty in education and school management was published in the

Table 19.4 Contents of scientific papers on book type basis

Type	Content	Year	
2001 and later	Individual book	Organizational uncertainty in higher education, adopting social networks, and open leadership	2016
		Complexity and uncertainty	2015
		Change, uncertainty, management, and leadership	2009
		Continuous change and uncertainty	2002
		Chaos, complexity, and uncertainty	2001
	Book translation	Chaos and uncertainty	2007
	Book with editor	Chaos, complexity, education, and uncertainty	2016
		Chaos, complexity, and uncertainty	2016
		Chaos, complexity, leadership, and uncertainty	2016
		Chaos, complexity, leadership, and uncertainty	2015
		Chaos and uncertainty	2014
		Chaos and uncertainty	2014
		Chaos, complexity, leadership, and uncertainty	2014
	Book section	Uncertainty in education	2016
		Leadership and uncertainty	2016
		Organizational intelligence and uncertainty	2016
		Entropy and uncertainty	2016
		Social networks and uncertainty	2016
		Social media and uncertainty	2016
		Chaos, complexity, and uncertainty	2016
		Stamping, leadership, and uncertainty	2016
		Education, leadership, social networks, and uncertainty	2016
		Complexity, leadership, and uncertainty	2016
		Social networks and uncertainty	2015
		Education management and uncertainty	2015
		Chaos, leadership, and uncertainty	2015
		Administrative narcissism and uncertainty	2014
		Chaos and uncertainty	2014
		Quantum leadership and uncertainty	2014
		Adapted complex systems and uncertainty	2014
		Chaos, leadership, and uncertainty	2013
	Organizational intelligence and uncertainty	2013	
	Narcissism, leadership, and uncertainty	2012	
1990–2000	Individual book	Chaos, complexity, leadership, and uncertainty	2000
	Book translation	–	
	Book with editor	–	
	Book section	–	

Table 19.5 Methods of scientific papers on essay type basis

Type		Method			Year
		Research design	Universe sample	Data collection tools	
2001 and later	Compiled essay	Qualitative literature review	–	–	2014
		Qualitative literature review	–	–	2012
		Qualitative literature review	–	–	2011
		Qualitative literature review	–	–	2008
		Qualitative literature review	–	–	2007
		Qualitative literature review	–	–	2006
		Qualitative literature review	–	–	2003
		Qualitative literature review	–	–	2001
		Original essay	Qualitative literature review	–	–
	Qualitative conceptual analysis		–	–	2015
	Qualitative conceptual analysis		–	–	2013
	Qualitative literature review		–	–	2013
	Qualitative literature review		–	–	2013
	Qualitative literature review		–	–	2012
	Qualitative literature review		–	–	2011
	Qualitative case study		–	–	2009
	Qualitative conceptual analysis		–	–	2008
	Qualitative literature review		–	–	2008
	Qualitative literature review	–	–	2008	
Qualitative-literature review	–	–	2007		

(continued)

Table 19.5 (continued)

Type		Method			Year
		Research design	Universe sample	Data collection tools	
Research note		Qualitative conceptual analysis	–	–	2006
		Qualitative conceptual analysis	–	–	2006
		Quantitative	303 candidate teachers	Individualism-collectivism scale	2016
		Quantitative	237 students	Scale of attitude toward uncertainty	2015
		Quantitative	290 teachers	Survey on teaching leadership of head masters	2014
		Quantitative	479 public personnel	Survey	2014
		Quantitative	488 teachers	Organizational learning mechanisms scale (ÖÖM)	2014
		Quantitative	161 persons employed in private courses	Perceived organizational change scale	2014
				Uncertainty scale	
				Scale of intention to resign	
				Job satisfaction scale	
		Qualitative	30 school administrators	Semi-structured interview form	2013
		Quantitative	263 male teachers	Audit focus scale	2011
			168 policemen	Arnett excitement-seeking scale	
		Quantitative	45 administrators	Survey developed by the researcher	2011
		Qualitative	39 participants	Interview	2010
	Quantitative	460 university 4th grade students	Scales prepared by the researchers	2009	
	Quantitative	358 teachers	Scale of crisis management skills of elementary school teachers	2009	
	Quantitative	265 teachers	Leadership style scale	2009	
	Quantitative	58 administrators	Survey	2009	

(continued)

Table 19.5 (continued)

Type		Method			Year
		Research design	Universe sample	Data collection tools	
		Quantitative	665 teachers	Leadership profile survey	2008
		Quantitative	8 participants	Survey	2008
		Quantitative	200 teachers, 90 administrators	Survey	2007
		Quantitative	114 teachers, 61 administrators	Scale of time management in the class	2007
		Quantitative	250 teachers, 322 students	Scale	2006
		Quantitative	2,380 elementary school teachers, 1,191 secondary school teachers	Organization culture scale	2005
		Quantitative	38 administrators, 380 teachers	Adjective review list	2005
				Scale of determining leadership behavior	
		Quantitative	203 candidate teachers	Survey	2004
	Qualitative-case study	5 individuals	–	2002	
1990–2000	Compiled essay	Qualitative literature review	–	–	2000
	Original essay	Qualitative conceptual analysis	–	–	1999
	Research note	Quantitative	27 instructors, 252 students	Survey	1999

period of 1990–2000; and in the period of 2001 and later 5 studies of individual book type, 1 study of book translation type, 7 studies of the type of book with editor, and a total of 20 studies of book type were published in the periods of 1990–2000 and 2001 and later.

One may say that the books published in the period of 1999–2000 were designed using qualitative research model of the conceptual analysis method and the books published in the period of 2001 and later were designed using qualitative and quantitative research models. It is observed that samples of three studies with book section type published in the period of 2001 and later were administrators and finance companies and the data collection tools were semi-structured interview form and scale.

Table 19.6 Methods of scientific papers on book type basis

Type		Method			Year
		Research design	Universe sample	Data collection tools	
2001 and later	Individual book	Qualitative conceptual analysis	–	–	2016
		Qualitative conceptual analysis	–	–	2015
		Qualitative conceptual analysis	–	–	2009
		Qualitative conceptual analysis	–	–	2002
		Qualitative conceptual analysis	–	–	2001
	Book translation	Qualitative conceptual analysis	–	–	2007
	Book with editor	Conceptual analysis	–	–	2016
		Conceptual analysis	–	–	2016
		Conceptual analysis	–	–	2016
		Conceptual analysis	–	–	2015
		Conceptual analysis	–	–	2014
		Conceptual analysis	–	–	2014
		Conceptual analysis	–	–	2014
	Book section	Qualitative conceptual analysis	–	–	2016
		Qualitative conceptual analysis	–	–	2016
Quantitative		Finance companies	Organizational intelligence scale for business organizations	2016	

(continued)

Table 19.6 (continued)

Type		Method			Year
		Research design	Universe sample	Data collection tools	
		Qualitative conceptual analysis	–	–	2016
		Qualitative conceptual analysis	–	–	2016
		Quantitative	125 administrators	Stigma scale	2016
		Qualitative conceptual analysis	–	–	2016
		Qualitative	3 participants	Semi-structured interview form	2016
		Qualitative conceptual analysis	–	–	2016
		Qualitative conceptual analysis	–	–	2016
		Qualitative conceptual analysis	–	–	2015
		Qualitative conceptual analysis	–	–	2015
		Qualitative conceptual analysis	–	–	2015
		Qualitative conceptual analysis	–	–	2014
		Qualitative conceptual analysis	–	–	2014
		Qualitative conceptual analysis	–	–	2014
		Qualitative conceptual analysis	–	–	2014
		Qualitative conceptual analysis	–	–	2013

(continued)

Table 19.6 (continued)

Type		Method			Year
		Research design	Universe sample	Data collection tools	
		Qualitative conceptual analysis	–	–	2013
		Qualitative conceptual analysis	–	–	2012
1990–2000	Individual book	Qualitative conceptual analysis	–	–	2000
	Book translation				
	Book with editor				
	Book section				

It is observed that there were no papers related to organizational uncertainty in education and school management in the period of 1990–2000, all papers published with respect to the issue were published in the period of 2001 and later.

According to Table 19.7, it is observed that 3 papers, namely, 1 compiled essay, 1 original essay, 1 research note were published among the essays related to organizational uncertainty in education and school management in 1990–2000 and 2001, and in the period of 2001 and later, there were 8 individual essays, 14 original essays, and 22 research notes.

We may summarize that the findings and comments of the essays published in the period of 1999–2000 were related to organizational change, human nature, and uncertainty; the findings and comments of the essays published in the period of 2001 and later may be summarized under the titles of reflections of the attitude of leaders toward uncertainty to the organization, relation of organizational learning with uncertainty, uncertainty and access to knowledge, lack of job security and uncertainty, organization culture and uncertainty relation, organizational change and uncertainty relation, environmental uncertainty and uncertainty, elimination of uncertainty in the organizations, quantum theory and uncertainty, entropy and uncertainty, communication and uncertainty, role of leaders in uncertainty, avoiding uncertainty, human nature and uncertainty, management and uncertainty, reasons for uncertainty, consequences of uncertainty, benefitting from uncertainty, uncertainty and crisis management, uncertainty and risk management, uncertainty and indecision, leadership style of teachers and uncertainty, general policy of education institutions, and power distance and uncertainty. One may say that findings and comments related to organizational change and uncertainty in both periods were common.

It is observed that there were no theses related to organizational uncertainty in education and school management in the period of 1990–2000, all theses pub-

Table 19.7 Findings and comments of scientific papers on essay type basis

Type	Findings and comments	Year
2001 and later	Edward Lorenz’s experiment, emergence of assumptions of complexity theory and principle of uncertainty	2014
	While the leaders explore the inconsistent, changeable, and uncertain situations, we encounter administrators who bow to those situations. In an environment where uncertainty increases gradually and change accelerates, the “ability to understand the problem, to take decision fast, to be flexible, sensitive and shape change continuously” provides organizations competition advantage	2012
	A learning organization is an organization which reacts to uncertainty, complexity, and change and which can say “count me in” change. Organizational learning on the other hand is concerned with the capacity of responding to uncertainty and complexity in the environment	2011
	In the environment of complexity and uncertainty created today by globalization, knowledge has become a very significant strategic source for businesses, and having knowledge and managing the same effectively has become one of the most significant conditions in global competition	2008
	Lack of job security covers the situations which lead to the employee to worry about losing one’s job on the basis of uncertainty consideration arising as a result of all sorts of legal and illegal organizational changes which could prevent continuity of the existing job	2007
	In public administration, vertical management always has problems with the horizontal process all the time. In an uncertain environment, the issue of how managements will increase their capacity to manage and success is still uncertain. Naturally, this leads governance to encounter uncertainty in this regard	2006
	We observe that in enterprising and resistant cultural systems where tendency to cope with uncertainty as a cultural value is high, centralization is still low, and the lower the tendency to struggle with uncertainty and resisting and struggling power becomes, the higher centralization gets and a management avoiding responsibility begins to predominate	2003
	Visionary leadership contributes significantly to remedying the uncertainties of the organizations for the future	2001
Original essay	Unlike the idea of increasing the effectiveness of the organization through neutralization of factors increasing environmental uncertainty and complexity as targeted by the contingency approach, complexity theory emphasizes that those uncertainties and complexities are factors that trigger creativity for a new order	2016

(continued)

Table 19.7 (continued)

Type	Findings and comments	Year
	It could be stipulated that social network technologies can be used as an intermediary element in the process of obtaining organizational covered knowledge in order to remedy uncertainty in the organizations because social networks are natural and a “social practice group” alone	2015
	Another thing brought in line with change is uncertainty and unpredictability; because it is based on less control and predictability according to ancient science, understanding and the direction of this wind can be predicted much less now	2013
	Quantum theory, relativity law, and the principle of uncertainty led to a crisis which led the earliest physicians and even those who are not physicians to understand the limits of the machine model better	2013
	Failure of the top management to pay sufficient significance to communication or failure to explain the justification of change to the persons who could be affected by change may increase uncertainty and concerns and lead to resistance	2013
	Emergence of the principle of uncertainty thesis and its effect on administrative and education sciences (chaos) has been examined	2012
	Although the concept of entropy is a concept which is directly related to many problems which have been an integral part of daily life including disorder, uncertainty, chaos, complexity, failure to get organized, noncommunication, pollution, aging, degeneration, decay, death, and bankruptcies and which is defined by many thinkers as the most fundamental law of universe, it is not a concept known very well in all aspects	2011
	The process of the construction of an elementary school in Kılıçköy/Yalova with the social synergy after the earthquake has been explained in the example of communication interaction channels between different levels and different dynamics	2009
	A successful organizational socialization removes role uncertainty and provides role openness and high motivation and interest, high level of loyalty to the organization, and the desire and right to stay in the job	2008
	Emergence of certain results which are difficult to be estimated in advance in organizational change process is a situation which is expectable all the time. Removal of this uncertainty depends on good analysis of the organization and good performance of preliminary work	2008
	Leadership cannot be structured and predicted	2008

(continued)

Table 19.7 (continued)

Type	Findings and comments	Year
	Employees experience uncertainty of future in change process and they want to trust their leaders who will guide them within this uncertainty	2007
	In cultures avoiding uncertainty, people seek for a structure allowing predicting events in their organizations and relations and this naturally prompts them to risky behaviors instinctively	2006
	The leader has to take the cost of potential failure into account in addition to opportunity costs despite uncertainty of the environment and future	2006
Research note	One may say that the more complexity level of culture increases, the more individualist tendency increases	2016
	“Scale of attitude toward uncertainty” is a valid and reliable scale that could be used for the purpose of determining uncertainty levels of individuals	2015
	Distrusts with respect to change management and uncertainties for the process play significant role on this negative perception	2014
	From the dimensions of survey of pedagogical leadership behaviors of head masters, it is observed that the teaching process and assessment of students was the dimension perceived at the highest level and the dimension of supporting and developing teachers was the dimension perceived at the lowest level	2014
	The level of use of organizational learning mechanisms at schools is over the midpoint	2014
	One may say on the basis of the research results that intentions of employees to resign are largely affected by uncertainty	2014
	It has been observed that the effect of perceived organizational change on job satisfaction of employees partially mediated	
	Reasons for uncertainties	2013
	Uncertainty and crisis management	
	Uncertainty and risk management	
	Uncertainty and indecision	
	Consequences of uncertainty	
	Stakeholder effect on the decisions taken in the uncertainty situations	
Expectations of administrators from teachers in uncertainty situations		
Hidden traps in making decision in uncertainty situations		
Benefitting from uncertainty		
Leader-administrator differentiation in uncertainty situations		

(continued)

Table 19.7 (continued)

Type	Findings and comments	Year	
	The positive relation between tendency to take risk and audit focus was found; furthermore it was found that external audit focused ones tended to take more risk than the internal audit focused ones, meaningfully	2011	
	–	2011	
	–	2010	
	When the low rate of employment is added in examination anxiety uncertainties for the future increase as well	2009	
	There is meaningful and positive relation between the perceptions of teachers with respect to their skills of crisis management and their perceptions on visionary leadership	2009	
	Teachers with authoritarian attitude usually threat with low grade, disciplinary penalty, and beating. Since everything depends on the teacher, an uncertainty is in question	2009	
	–	2009	
	Significance of visionary leadership is based on the success of organizations in eliminating uncertainties for the future	2008	
	–	2008	
	Agreement of the education employees with the idea that uncertainty in general policy of the education institution and in task definitions affects time management negatively at limits usually reveals a fundamental problem	2007	
	It has been revealed that elementary school administrators and teachers adopt their schools and become ready for change	2007	
	–	2006	
	Although elementary school generally have a stronger corporate culture, existence of middle level of corporate culture in secondary schools	2005	
	Organizational power distance in Turkish society being high and tendency to avoid uncertainty causes military leadership characteristics to come to the forefront	2005	
	The level of candidate teachers avoiding uncertainty was found to be “high” and power distance values were found to be at “medium” level	2004	
	Conflict within organization is natural, conflict in the computer department is caused by scarcity of resources, uncertainty in division of labor, interruption of communication, and power struggle	2002	
1990–2000	Compiled essay	Under environmental conditions where uncertainty is high, where it becomes more and more difficult to make a long-term plan and to take correct decisions, administrators act more cautiously with respect to organizational change	2000
	Original essay	Provision of intervening in the nature, rearranging the natural world by mankind bring about uncertainties and risks	1999
	Research note	One may say that the students and instructors are affected by the change process positively	1999

lished with respect to the issue were published in the period of 2001 and later. When the findings and comments of the books and information related to organizational change and uncertainty in the period of 1990–2000 and 2001 and later are examined, one may say that there were no findings and comments with respect to uncertainty.

19.3.1 Suggestions

One may suggest performing scientific works in this field according to the results of the study which reveal a lack of studies which examine organizational uncertainty in all aspects and together with the discussions on the changes in the education system. The low number of theses and papers with respect to organizational uncertainty is remarkable; the issue should be enriched through theses and papers as well. It shall be useful to train administrators for coping with organizational uncertainty and provide training for skills for methods of coping with.

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Chapter 20

Pre-pragmatic Perspectives of Leadership



Daniels Aide Okun

Abstract The immaculate nature and scope of leadership transcend far beyond the accepted-applied principles and theories of leadership which has been fluid and elusive overtime in history. Leadership has more often than not been defined empirically based on experiential knowledge, hypothesis, and facts which truly and completely never resonates with the in-depth profundity of leadership intellectually. For centuries after centuries, decades after decades, and years after years and since time immemorial, in records, identified traditions, labeled cultures, and bordered sovereignties or nations, the trust and belief on leadership have always been repeated and reaffirmed from generations to generations. Leadership had in the past and has continued to the present and will always through the future direct the course of humanity both internally and externally. This further explains the vital importance of leadership as more than just an art that ought to be discussed, examined, and taught over time through cultural formations, educational developments, and fundamentally the actions or plans of governance and policies. Leadership has not always been an office, a title, a gender, an age, a race, nor a stationed post. Leadership transcends far beyond physical locations and presence. It has phenomenally been a conscience that has been found rooted everywhere around and beyond humanity and civilization. This strikingly personified nature of leadership has been discussed through the pages of this chapter. The descriptive studies on leadership are more than just an art or a lifestyle and hence should be discussed extensively through a holistic approach. This chapter was aimed to analyze the characteristics of leadership beyond conventional means, the typologies of leadership, the rare types of leadership, and ultimately the pragmatic assertions of leadership. With the envisioned stand on knowledge through this chapter on leadership, questions ought to be answered as to what exactly the definition of leadership truly is could be and should continue to be while moving forward futuristically.

D. A. Okun (✉)
Volgograd State Technical University, Volgograd, Russia
e-mail: danielsokun@yahoo.com

20.1 Pragmatic Views and Assertions on Leadership

Leadership is far more than just an art or a lifestyle, yet it is profoundly the justification of existence. Leadership existentially reflects the core values and purpose of humanity and beyond. While leadership underscores the very bare essentials of humanity, it truly redefines and redirects the courses of humanity all lifelong.

Thoughtfully there are and have always been many definitions, assertions, and conclusions on the concept and theory of leadership, some of which have resonated with light truth and facts, while others hold bold and hard truth and facts thereby creating a clear field of battle for both subjectivity and objectivity depending on peoples' perspectives and mind-sets. Pragmatically the universal acceptance and justification of the term "leadership" through its meaning ought not to be divisive, elusive, or downsized. It ought to be clear enough to assert the meaning through its presence. Leadership is the all existence.

All the aspects of life have responded to the directive and creative control of leadership whether it be through psychology, physiology, economics, sociology, or politics setting the pace and directing the course of action. It was indeed leadership at play measured through its asserted-valued quality.

It is however worthy to notice that it is not just the evaluation of impacts, influence, results, or success that makes up for or accounts for the definition of leadership, but the course of eternity does account which cannot by itself be measured, "infinity through existence." No wonder why most people would acclaim and assert that "the value of a great leader can never be quantified."

The prudence of leadership is undeniably powerful beyond the classification of good and bad. As the very end of both spectrums and notions of "bad and good," there lies the undefeatable power of leadership whose far-reaching influence cannot be measured nor quantified.

Pensively clear enough to assert that leadership is an expression of both good and bad, ugly and beautiful, brave and weak, and kind and wicked, with far-reaching results that cannot be clarified, evaluated, nor examined before and after its impact and influence.

Leadership is indeed the all of life's existence from living to learning to creating to giving to taking to buying to selling to ultimately dying. Generously our stands and supports of understanding leadership through observations, experiences, and practices reflect our own concealed definition of leadership.

Leadership is intrinsically connected with existence. There is hardly anything that is done, achieved, or envisioned without the efforts of leadership. The life journey of any visionary path always begins on the dream path of leadership; it is however important to notice that even as much as leadership is not always mentioned or referred to as a force of power that it truly is, leadership continues to be a powerful force whether at a low or a high dimension.

Explanatorily, even though leadership might have a lot of preconceptions amidst misconceptions, definitions, interpretations, and judgments, the fact remains that leadership is the all of existence from a holistic perspective with a multidimensional stand.

The term “leadership” can only be viewed and asserted from a holistic point. From broad and wide spectrums of intellectual views, the term leadership cannot be analyzed with a single approach or perspective. Leadership as an *inherent ability* implies that everyone is truly capable of being a leader. Now whether good or bad, capable or incapable, it is profoundly true to assert that everyone is a born leader. This is however often argued by many thinkers and supporters of the notion that the role of leadership is only destined for a selected few. But all through the years as the human knowledge base has evolved watchfully through observations and experiences, it has become clear enough to assert that leadership is humanity through its fluid and elusive existence meaning that everyone is a leader within a complex but yet uniformed diversity with distinctive levels of growth pace and capacity leadership is always found. Leadership is therefore all embracing and all defining. It resonates with all the touches and folds of humanity from its beginning to its ending.

20.2 Quotes and Assertions on Leadership

“Leadership is the art of getting someone else to do something you want done because he wants to do it.” *Dwight D. Eisenhower was the 34th President of the United States from 1953 until 1961. He was a five-star general in the US Army during World War II and served as supreme commander of the Allied Expeditionary Forces in Europe.*

“Leadership is an action, not a position.” *Donald McGannon was a broadcasting industry executive during the formative years of the television industry in the United States.*

“Leadership is not about titles, positions, or flow charts. It is about one life influencing another.” *John C. Maxwell is an American author, speaker, and pastor who has written many books, primarily focusing on leadership.*

“Leadership is not about a title or a designation. It’s about impact, influence and inspiration. Impact involves getting results, influence is about spreading the passion you have for your work, and you have to inspire team-mates and customers.” *Robin S. Sharma is a Canadian writer and leadership speaker.*

“I suppose leadership at one time meant muscles; but today it means getting along with people.” *Mahatma Gandhi was the preeminent leader of the Indian independence movement in British-ruled India, employing nonviolent civil disobedience.*

“The art of communication is the language of leadership.” *James Humes is an author and former presidential speechwriter. Humes, along with William Safire and Pat Buchanan, is credited for authoring the text on the Apollo 11 lunar plaque.*

“Leadership and learning are indispensable to each other.” *John F. Kennedy was an American politician who served as the 35th President of the United States from January 1961 until his assassination in November 1963.*

“A leader is a dealer in hope.” *Napoleon Bonaparte was a French military and political leader who rose to prominence during the French Revolution and led several successful campaigns during the French Revolutionary Wars. He was emperor of the French from 1804 to 1814 and again in 1815.*

“Don’t find fault, find a remedy.” *Henry Ford was an American industrialist, the founder of the Ford Motor Company, and the sponsor of the development of the assembly line technique of mass production.*

“Leadership is the capacity to translate vision into reality.” *Warren Bennis was an American scholar, organizational consultant, and author, widely regarded as a pioneer of the contemporary field of leadership studies.*

“The task of leadership is not to put greatness into humanity, but to elicit it, for the greatness is already there.” *John Buchan was a Scottish novelist, historian, and Unionist politician who served as Governor General of Canada, the 15th since the Canadian Confederation.*

“Management is efficiency in climbing the ladder of success; leadership determines whether the ladder is leaning against the right wall.” *Stephen Covey was an American educator, author, businessman, and keynote speaker. His most influential book was *The 7 Habits of Highly Effective People*. His other books include *First Things First*, *Principle-Centered Leadership*, *The 7 Habits of Highly Effective Families*, *The 8th Habit*, and *The Leader In Me*. He is a professor at the Jon M. Huntsman School of Business at Utah State University.*

“Leadership is getting someone to do what they don’t want to do; to achieve what they want to achieve.” *Tom Landry was an American football player and coach. He is ranked as one of the greatest and most innovative coaches in National Football League (NFL) history, creating many new formations and methods. He invented the now popular 4–3 defense and the “flex defense” system.*

“The cost of leadership is self-interest.” *Simon Sinek is a British/American author, motivational speaker, and marketing consultant. He is the author of three books including the 2009 bestseller *How Great Leaders Inspire Everyone to Take Action* (2009).*

“Leadership is an intense journey into yourself. You can use your own style to get anything done. It’s about being self-aware. Every morning, I look in the mirror and say, I could have done three things better yesterday.” *Jeffrey R. Immelt is an American business executive. The chairman of the board and chief executive officer of the US-based conglomerate General Electric.*

“Leadership is influence.” *John C. Maxwell is an American author, speaker, and pastor who has written many books, primarily focusing on leadership.*

“The very essence of leadership is that you have to have vision. You can’t blow an uncertain trumpet.” *Theodore Hesburgh is an American priest of the Congregation of Holy Cross. He served as president of the University of Notre Dame for 35 years. TIAA-CREF’s Hesburgh Award is named after him.*

“Leadership is a privilege to better the lives of others. It is not an opportunity to satisfy personal greed.” *Mwai Kibaki is a Kenyan politician who was the third president of Kenya, serving from December 2002 to April 2013.*

“There is no greater name for a leader than mother or father. There is no leadership more important than parenthood.” *Sheri L. Dew is an American author, a publisher, and the president and chief executive officer of the Deseret Book Company, headquartered in Salt Lake City, Utah. She is a religious leader at The Church of Jesus Christ of Latter-Day Saints and an inspirational speaker.*

“A leader is best when people barely know he exists, when his work is done, his aim fulfilled, they will say: we did it ourselves.” *Lao Tzu was an ancient Chinese philosopher and writer. He is considered the reputed author of the Tao Te Ching, the founder of philosophical Taoism, and a deity in religious Taoism and traditional Chinese religions.*

“The key to successful leadership today is influence, not authority.” *Ken Blanchard is an American author and management expert. His writing career includes over 60 published books, most of which are coauthored books. His most successful book, The One Minute Manager, has sold over 13 million copies and been translated into many languages.*

“Leadership is unlocking people’s potential to become better.” *Bill Bradley is an American former professional basketball player and politician. He served three terms as a Democratic US Senator from New Jersey.*

“Leadership – leadership is about taking responsibility, not making excuses.” *Mitt Romney is an American businessman and politician. He served as the 70th Governor of Massachusetts from 2003 to 2007 and was the Republican Party’s nominee for President of the United States in the 2012 election.*

“The growth and development of people is the highest calling of leadership.” *Harvey S. Firestone was an American businessman and the founder of the Firestone Tire and Rubber Company, one of the first global makers of automobile tires.*

“Everything rises and falls on leadership.” *John C. Maxwell is an American author, speaker, and pastor who has written many books, primarily focusing on leadership.*

“The only safe ship in a storm is leadership.” *Faye Wattleton is the first African-American and the youngest president ever elected to Planned Parenthood Federation of America and the first woman since Margaret Sanger to hold the position.*

“Leadership is hard to define and good leadership even harder. But if you can get people to follow you to the ends of the earth, you are a great leader.” *Indra Nooyi is an American business executive and the chairperson and chief executive officer of PepsiCo and is ranked among the World’s 100 Most Powerful Women.*

“Leadership is working with goals and vision; management is working with objectives.” *Russel Honore is a retired lieutenant general who served as the 33rd commanding general of the US First Army at Fort Gillem, Georgia.*

“I think leadership is more than just being able to cross the t’s and dot the is. It’s about character and integrity and work ethic.” *Steve Largent is a retired American football player, enshrined in the Pro Football Hall of Fame, and a former Republican politician. He served in the US House of Representatives for Oklahoma, from 1994 to 2002.*

“I believe in servant leadership, and the servant always asks, where am I needed most?” *Mike Pence is an American politician and the 48th Vice President of the United States. He previously served as the Governor of Indiana from 2013 to 2017.*

“You can’t run a government from one single person. What instead matter’s is that leadership be about gathering around extraordinary individuals and getting the best out of them.” *Justin Trudeau is a Canadian politician. He is the 23rd and current prime minister of Canada and leader of the Liberal Party. The second youngest prime minister after Joe Clark. He is the eldest son of former Prime Minister Pierre Trudeau.*

“Leadership is the key to 99 percent of all successful efforts.” *Erskine Bowles is an American businessman and political figure from North Carolina. He served from 2005 to 2010 as the president of the University of North Carolina system. From 1997 to 1998, he served as White House chief of staff.*

“Life isn’t easy, and leadership is harder still.” *Walter Russell Mead is an American academic. He is the James Clarke Chace Professor of Foreign Affairs and Humanities at Bard College and previously taught American foreign policy at Yale University.*

“As a woman, my style defines my leadership. It’s a gentler, more compassionate approach. I consult, I listen and I compromise where it’s in the best interest of the citizens.” *Kamla Persad-Bissessar is a Trinidadian politician who was the seventh prime minister of Trinidad and Tobago from May 26, 2010, to September 9, 2015.*

“Leadership is hard to train on.” *Ben Horowitz is an American businessman, investor, blogger, and author. He is a high technology entrepreneur and the cofounder and general partner along with Marc Andreessen of the venture capital firm Andreessen Horowitz.*

“Leadership is something I was born with.” *Carmelo Anthony is an American professional basketball player for the New York Knicks of the National Basketball Association (NBA).*

“Stubbornness is a positive quality of presidential leadership – if you’re right about what you’re stubborn about.” *Douglas Brinkley is an American author, a professor of history at Rice University, and a fellow at the James Baker Institute for Public Policy. He is a history commentator for CNN News and a contributing editor to the magazines Vanity Fair and American Heritage.*

“Every time you have to speak, you are auditioning for leadership.” *James Humes is an author and former presidential speechwriter.*

“Leadership requires the courage to make decisions that will benefit the next generation.” *Alan Autry is an American actor, politician, and former National Football League player.*

“Leadership is simply the ability of an individual to coalesce the efforts of other individuals toward achieving common goals. It boils down to looking after your people and ensuring that, from top to bottom, everyone feels part of the team.” *Frederick W. Smith is the founder, chairman, president, and CEO of FedEx.*

“Leadership is one of the things I really strive to excel in in my life.” *Nate Parker is an American actor, director, producer, writer, and musical performer.*

“Leadership should be born out of the understanding of the needs of those who would be affected by it.” *Marian Anderson was an American contralto and one of the most celebrated singers of the twentieth century.*

“I don’t know what leadership is. You can’t touch it. You can’t feel it. It’s not tangible. But I do know this: you recognize it when you see it.” *Bob Ehrlich is an American attorney and Republican politician who served as the 60th Governor of Maryland from 2003 to 2007.*

“Leadership comes in small acts as well as bold strokes.” *Carly Fiorina is an American businesswoman. She is the chief executive officer (CEO) of Hewlett-Packard (HP).*

“Real leadership is leaders recognizing that they serve the people that they lead.” *Pete Hoekstra is a Dutch-American politician who is a former member of the US House of Representatives and represented Michigan’s second congressional district from 1993 to 2011.*

“I think leadership is service and there is power in that giving: to help people, to inspire and motivate them to reach their fullest potential.” *Denise Morrison is an American business executive who serves as president and chief executive officer of Campbell Soup Company. She was named the 21st Most Powerful Woman in Business by Fortune magazine.*

“Leadership means forming a team and working toward common objectives that are tied to time, metrics, and resources.” *Russel Honore is a retired lieutenant general who served as the 33rd commanding general of the US First Army at Fort Gillem, Georgia.*

“Uncertainty is not an indication of poor leadership; it underscores the need for leadership.” *Andy Stanley is the senior pastor of North Point Community Church, Buckhead Church, Browns Bridge Church, Gwinnett Church, Woodstock City Church, and Decatur City Church. He is the founder of North Point Ministries, which is a worldwide Christian organization.*

“Leadership is about vision and responsibility, not power.” *Seth Berkley is a medical epidemiologist by training. He is the CEO of the GAVI Alliance and a global advocate on the power of vaccines.*

“Leadership is intangible, and therefore no weapon ever designed can replace it.” *Omar N. Bradley is a highly distinguished senior officer of the US Army.*

“Good leadership consists of showing average people how to do the work of superior people.” *John D. Rockefeller was an American oil industry business magnate and philanthropist.*

“Leadership is a potent combination of strategy and character. But if you must be without one, be without the strategy.” *Norman Schwarzkopf was a US Army general. He served as commander-in-chief, United States Central Command.*

“Leadership offers an opportunity to make a difference in someone’s life, no matter what the project.” *Bill Owens is an American Republican politician who served as the 40th Governor of Colorado from 1999 to 2007.*

“My philosophy of leadership is to surround myself with good people who have ability, judgment and knowledge, but above all, a passion for service.” *Sonny Perdue is an American politician who served as the 81st Governor of Georgia from 2003 to 2011.*

“Leadership is an act of submission to God. To be a leader means listening to all kinds of people and situations. Out of that listening, we are hoping to discern the mind of God as best we can. This is the price of leadership – it’s an act of sacrifice. So leadership is part and parcel of the work of submission to God.” *Richard Foster is a Christian theologian and author in the Quaker tradition.*

“A leadership culture is one where everyone thinks like an owner, a CEO or a managing director. It’s one where everyone is entrepreneurial and proactive.” *Robin S. Sharma is a Canadian writer and leadership speaker.*

“Leadership is not a popularity contest; it’s about leaving your ego at the door. The name of the game is to lead without a title.” *Robin S. Sharma is a Canadian writer and leadership speaker.*

“We need leadership that can elevate religion and morality to their position of paramount importance and thus eliminate growing selfishness, immorality and materialism.” *George W. Romney was an American businessman and Republican Party politician. He was chairman and president of American Motors Corporation from 1954 to 1962, the 43rd Governor of Michigan from 1963 to 1969, and the United States Secretary of Housing and Urban Development from 1969 to 1973. He was the father of former Governor of Massachusetts and 2012 Republican presidential nominee Mitt Romney and the husband of former Michigan US Senate candidate Lenore Romney.*

“America is stronger because of President Obama’s leadership, and I’m better because of his friendship.” *Hillary Clinton is an American politician who was the 67th United States Secretary of State from 2009 to 2013, a US senator from New York from 2001 to 2009, the first lady of the United States from 1993 to 2001, and the Democratic Party’s nominee for President of the United States in the 2016 election.*

“Lincoln’s leadership is based on a number of precepts, but my favorite one is that he acted in the name, and for the good, of the people.” *Steven Spielberg is an American director, producer, and screenwriter. He is considered one of the founding pioneers of the New Hollywood, asserted as one of the most popular directors and producers in film history. He is also one of the cofounders of DreamWorks Studios.*

“Leadership has a harder job to do than just choose sides. It must bring sides together.” *Jesse Jackson is an American civil rights activist, Baptist minister, and politician. He was a candidate for the Democratic presidential nomination in 1984 and 1988 and served as a shadow US Senator for the District of Columbia from 1991 to 1997. He is the founder of the organizations that merged to form Rainbow/PUSH. He is the father of the former US Representative Jesse Jackson, Jr. Jackson was also the host of Both Sides with Jesse Jackson on CNN from 1992 to 2000.*

“Leadership and management are not synonymous.” *Travis Bradberry is an American author on the subject of emotional intelligence.*

“Leadership has a price.” *Paul Gosar is an American politician and member of the US House of Representatives.*

“Leadership is a mindset that shifts from being a victim to creating results. Any one of us can demonstrate leadership in our work and within our lives.” *Robin S. Sharma is a Canadian writer and leadership speaker.*

“Leadership is about being a servant first.” *Allen West is an American political commentator, retired US Army lieutenant colonel, and former member of the US House of Representatives.*

“In any leadership position, you’re always going to be disappointing somebody.” *Biz Stone is a cofounder of Twitter, Obvious, Medium, and Jelly.*

“Leadership is one of sports’ intangibles. Guys can score, guys can fight, guys can skate faster than anybody else. But not everybody can say, “Follow me.” *Paul Coffey is a Canadian retired professional ice hockey defenseman.*

“For me, leadership is making a difference. It’s using your agency to bring about change.” *Melanne Verveer is the first United States Ambassador-at-Large for Global Women’s Issues.*

“The name of Atatürk reminds mankind of the historical accomplishments of one of the greatest men of this century: His leadership gave inspiration to the Turkish nation, farsightedness in the understanding of the modern world, and courage and power as a military leader. It is without a doubt that another example cannot be shown indicating greater successes than the birth of the Turkish Republic, and ever since then Atatürk’s and Turkey’s broad and deep reforms undertaken, as well as the confidence of a nation in itself.” *John F. Kennedy, President of the United States of America, Washington, D.C., November 10, 1963, on the 25th Commemoration of Ataturk’s death.*

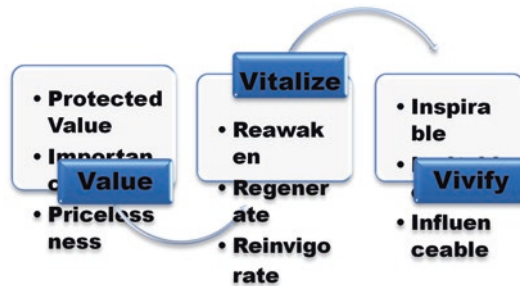
“Leadership controls everything. It is therefore the power of existence that impacts the before and after of humanity.” *Daniels Aide Okun is a teacher and writer.*

20.3 The Three Vs of Leadership

Leadership becomes better understandable and acceptable when it resides within the premises of its own truth. It is hardly impossible for leadership to achieve the credibility of what it was never envisioned to be nor projected to achieve.

Blamefully over the years as countries, organizations, corporate bodies, institutions, and individuals evolve through their various paces of development, leadership has been questioned and interrogated every step of the way. From accountability to credibility and from trustworthiness to transparency, the roles leadership plays have never been a free one, neither will it ever be.

20.4 Vs of Leadership



The three Vs of leadership are value, vitalization, and vivification. Pragmatically it is important to examine these strategically and intelligently. For any leadership to be functionally accurate before it is held accountable for credibility, it needs to embrace and acknowledge what it is supposed to stand for, work with, and operate through. These three Vs are not only core to the starting point of every leadership, but they also all together help define the essence of leadership:

- *Value:* Having strongly established the fact that leadership is humanity through existence. It becomes clear to assert that the unmeasurable value of humanity is the priceless course of leadership. Every leader ought to have a treasurable value for the humans or ideas it stands to advance, develop, protect, and lead. This by itself motivates and inspires the ideals and responsibilities of true leadership. Far more important than the other Vs, “value” is the first attribute of leadership.
- *Vitalize:* Ethically through the protected values on humans’ worth, interests, and desires, a standardized form of leadership is born which in turn normalizes and puts into practice the ideas, passion, and intellects that vitalizes the strength of the people or idea that has been led through leadership. Pragmatically it is important to notice that every form of leadership ought to reawaken the potentials in individuals. For the betterment and advancement of humans, there will always be a need to reinvigorate a new pattern or new mind-set to work or study ethics. It is therefore owed to a leader, among the golden responsibilities, to vitalize the latent intellectual capacity of every human in question under the responsibility of leadership.

- *Vivify*: Leadership through all its missions, aims, and targets is about uplifting and enlightening people through greater paths that were or not envisioned by the people. Leadership is all about the business of getting people, things, and ideas better, greater, wiser, and smarter toward a progressive pathway to perfection and excellence. Throughout the history of mankind, individuals with high aspirations have always wished for, dreamt about, or looked around for inspiration through the emulation, admiration, or adoration of humans alike in their respective field. There goes the infinite power of leadership that has always reflected through the existence of humanity. It is hardly impossible for anyone from any social category or status quo to successfully achieve a high level of advancement without the vivification of leadership.

20.5 The Three Ts of Leadership

Leadership has often been argued by millions time after time to be a rare intellectual persona that can only be found in the inherent personalities of a selected few, while others along the side notes might strongly debate their point by saying “leadership is trained.” A new way of thinking based on experiential and observatory knowledge is creating a pyramid shift from the old assertions and beliefs that is rooted on the notions that leadership is the all of existence transcending through humanity. This strongly acclaims that everyone is a born leader. Regardless of the specifications on gender, age, income, race, nationality, social status, and education, leadership transcends them all. While leadership becomes holistically viewed as broad through this assertive definition, it becomes clear to understand that leadership is systematically functional through specific actions that are result proven. A clear look at the three Ts of leadership is as follows.

20.6 Ts of Leadership

Teach : The fundamental tool for leadership.

Tolerate: The compassionate tool for leadership.

Trust: The intellectual security for leadership.

- *Teach*: The act and practice of teaching is synonymous to the body of leadership. Leadership by itself is a life-learning process which involves life lessons from experiences, exposures, and observation. Leadership through humanity exposes an individual through the very core essential meaning of purpose, reason, and responsibility. This is what makes leadership a far cry away from being asserted as an act or a lifestyle. Leadership can be expressed and demonstrated through teaching which can either be directly formal or indirectly informal. Leadership impacts its values, influence, and wisdom through the simple act of teaching. Every great leader or conversely is a natural teacher. The presence of leadership on its own teaches humanity what it ought to learn while moving forward through every life-step it takes. Every leader ought to teach their followers either formally or informally.
- *Tolerate*: Compassionately it is impossible to occupy and exist within the space of leadership without the presence of tolerance. The faith of tolerance allows leadership to flourish above and beyond its reality. Tolerance in leadership is a necessity not a choice; it goes far beyond a decision. For every impactful role played by leadership, it must have exhibited a level of tolerance. Tolerance justifies the missions and aims of leadership. It is technically impossible to lead people, an idea, or a course of action without tolerance. Tolerance therefore becomes the enabling power that allows the forces of leadership to strive through its envisioned success.
- *Trust*: Pragmatically the science of trust is indeed a complex one. It is highly contestable and debatable. There is hardly ever a common ground for a mutual accepted truth. However, trust is as important as the essence leadership. At the end of both spectrums, the insurance from truth that assures a level of trust on behavioral patterns, wills, interests, abilities, and strengths through all dimensions reaffirms the level of confidence that anyone would have on a ruling system of governance or administration.

20.7 The Three Ss of Leadership

The role of leadership is endowed with the intellectual ability, creative capacity, and the visionary insights aimed at solving problems. Proficiently leadership is predestined to be the act of finding, solving, and avoiding problems. The strategic aim of every leader is to be able to create security and protection at a high-case level. Leadership is visionary in every sense. While leadership functions from the immediate present, its gaze is always projected and envisioned for the future.

Effectively, for leadership to strive through the challenges and demands ahead of time, it ought to have a visionary plan. A visionary plan ignites, inspires, and motivates the passion in every leadership role. From team building to capacity development, the tenacious drive of leadership is strongly rooted in the visions it acclaims. Leadership as a mission is a self-sacrificial service.

20.8 Ss of Leadership



The honest goal and aim of leadership is service. Leadership through its service to humanity can either be self-centered or selfless. The effects of both strategic agendas (self-centeredness and selflessness) justify the mission of leadership as executed to bring to fruition the envisioned visionary goals which in turn reflects service:

- *Self-Sacrifice:* Universally the ideas and concept of sacrifice are asserted as sacred. In this selfless state of giving-in or conversely going-out, the full essence and existence of leadership is born. Leadership is all about self-sacrifice and service. The term “sacrifice” is fluid and elusive; it has been controversially accepted and defended over the years.

From cultures to traditions and from belief systems to religious faiths and spiritualities, the word sacrifice has meant a lot of different things to people of diversity. Both from a positive, neutral, and a negative stand, sacrifice has indeed not been a causal word of emptiness. It has indeed been a very costly and deadly word in most cases. Retrospectively human lives have been sacrificed for an acclaimed justified and an unjustified course. This has made the word “sacrifice” fluid and elusive over the years. Indisputably leadership is intertwined with self-sacrifice not in a brutal sense but in a compassionate sense. The obligations and rights of leadership cannot be executed or achieved without the act of self-sacrifice. Leadership is indeed the mission of self-sacrifice.

- *Service:* Leadership in all ramification is centered around the pledge for service. The selfless acts of service could either be administrative or political service. The responsibilities of leadership are followed and influenced through civil service, which can either be bureaucratic, transactional by nature, or democratic. The body of governance and politics has been influenced over time through community-based service with heartfelt volunteers. The selfless social responsibility of every human being through the force of their leadership is fully expressed on a daily basis.
- *Solution:* Strategically the mission of leadership is solution centered and solution driven; leadership has the embodied intelligence to find, analyze, and translate problems from its causes to effects and impacts. Each and every day of our lives as living individuals, we solve problems while we are not creating one through leadership.

20.9 The VTs of Leadership

Leadership is the embodiment of selfless devotion through the never-ending directions of visions. Enthusiastically leadership is life thoroughly and fully expressed through the actions of faith and wisdom. Every individual strives through life on a daily basis which reflects their type of leadership. Leadership is personified in the sense that everyone has its own unique style of leadership but yet not diversely complex. There is a commonality between the various personified styles of leadership that we all exhibit as individuals on a daily basis.

20.10 VTs of Leadership



The VTs of leadership collectively assert the belief that leadership intelligently operates within the forces and cycles of *values, vitalization, vivification, teaching, tolerance, trust, sacrifice, solution, and service.*

20.11 Humanism and Leadership

Leadership is humanity transcending through its existence. It is emphatically impossible to define or assert the true meaning of leadership without the mention of humanity. The all of humanity was born out, breathed out, and created out by leadership. This explains our very impeccable and inescapable essence of life.

By the existential reason of birth and creation, from the very day we were born as humans, our role of leadership began. Therefore, leadership is inborn in every human being alive which lives through the directions, mind-sets, opinions, and obedience to its own leadership.

Every human is born with a task to accomplish, a purpose to fulfill, a dream to actualize, a mission to defend, a value to enroot, a course to advocate, a song to sing, a problem to solve, a gift to give, a smile to share, a heart to sympathize, a mind to think, a choice to make, a job to serve, a responsibility to shoulder, a mistake to make, a life to succeed, and a world to beautify. The list is endless; as we grow through life every step of the way, it is entrusted upon as humans to execute and utilize our very own powerful tool none other than leadership.

Nothing best prepares the all of humanity for the ever-present, challenging, difficult, demanding, and frustrating life ahead other than the inborn traits of leadership. The presence of leadership is inherently inborn and is as old as time and creation. Tenacity reveals our individualistic type of leadership; what we as humans dogmatically cling to and never want to have changed or moved any further tells a whole lot about who we are and futuristically what we could become through the absence of change.

Pensively, leadership and humanity have not always had that embodied and inseparable union and drive through life on a conscious note. The deceit of not knowing what leadership is has by all means crippled the knowledge of mankind.

Leadership and humanity are embodied as one, even though this might be hard to see or accept by a few who find it difficult to agree with the abovementioned truth. Living in a diversely complex world of competitive cultural differences, abusive racial labels, undefined geographical borders, and conflicting nationalistic ideologies and beliefs, it becomes hard for anyone to ever imagine or acclaim to the fact that every human being lives and breathes through leadership.

It is however important to notice that leadership is not all positive and great. It is however the all that comes with humanity through its existence: from beauty to ashes, cleanliness to dirtiness, perfection to imperfection, equality to inequality, and death to life. It is upon, amidst, and below all of these imbalances and indifferences the power and forces of leadership through humanity strives and assures its worth.

Understandably noted, the term “leadership” or the title “leader” is more often than not associated with huge duties and tasks called responsibilities. This explains why most people have shied away from shouldering responsibilities that are even theirs, let alone taking up the responsibility of leading, directing, and serving others within a much larger capacity. Life demands a high level of self-confidence, self-belief, self-principle, self-worth, self-passion, and ultimately selflessness through its very own journey; we often call the “journey of life.” This is where it becomes undeniably and unquestionably right to assert that leadership is humanity fully and intellectually expressed through existence.

In an attempt to achieve success at any level, we as humans have had the golden opportunity to exhibit and express our inherent leadership abilities each and every one step of the way. The studies and findings on leadership through various theories and concepts have to a very large extent explored the scopes of leadership and the values it carries alone. It is evidently clear that in most cases, it is resounded and concluded as the same message or sermon that “everyone is a leader.” Leadership comes in handy as either grand, majestic, historic, or flat as a flutter; the difference it makes shows in the impact it creates. Leadership will always be judged and

evaluated on a personal note by the influence and impact it creates. Whether it be bad influence or good impact, it certainly does not undermine the stands and presence of leadership.

20.12 Cycle of Leadership

As individuals, every step of the way, our mission through leadership is fully expressed and activated through our daily choices and decisions. From the little steps we take to the giant strides we make on the playgrounds of success, we intelligently unveil the inherent forces and power of leadership that resides within us. We have always been held responsible and accountable for the results we achieve in life; our response to opportunities and challenges reveals our level of maturity and the understanding of our individualistic self which is ultimately a subtotal of the content of our leadership.



Leadership revolves around the above-illustrated cycle. At each and every step of the way, leadership fully expresses its virtues within each cycle simultaneously or orderly.

The cycle of leadership reveals the five intellectual stages of human existence and purpose. It is interesting to notice that each and every one of this stage reflects the presence of leadership through humanity. They all collectively can be experienced fully throughout a human's life simultaneously or orderly as profiled below:

Stage 1: Leadership Inborn – Everyone is born to lead; the capacity and extent to which that leadership impacts and accomplishes its predestined mission vary. The undeniable and uncontestable truth explains the fact that leadership is inborn. As individuals our assertive role of leadership begins biologically from the day we were conceived that role comes into life-fruitition the day we are born, which shows-up as characteristic traits and behavioral patterns that eventually reflects and directs our career path and contribution to humanity can only be identified as leadership.

Stage 2: Leadership Inspiration – Everyone lives by the help of inspiration or a sort of influence that can be seen as visible or invisible. Through this stage of life growth, the human mind forms with desires, passion, and interests that elevate in most cases into a profession or a career path by utilizing leadership.

Stage 3: Leadership Education – Education plays a huge role in the life of every individual from formal education to informal education. The gift of learning is the only force that creates the human power, awareness, and knowledge that redefines leadership.

Stage 4: Leadership Participation – The working act of humans either through professional work ethics or work values reflects and creates a platform that inspires the growth of inborn leadership.

Stage 5: Leadership Aspiration – Everyone has an aspiration; it is either envisioned or not; the strength to aspire ambitiously is always derived from the leadership within.

20.13 Types of Leadership

Autocratic Leadership The assertion of power through aggressive authority. When a leader dictates his actions without consultations, debates, and approvals, it reflects the autocratic style of leadership. This type of leadership can be referred to as “*Dogmatic Leadership.*”

Bureaucratic Leadership The execution and legislation of power through a lawful and constitutional means directed by rules. When a leader leads from the book and from the traditions of duty, it reflects the bureaucratic style of leadership. This type of leadership can be referred to as the “*Systematic-Constitutional Leadership.*”

Charismatic Leadership The assertion and control of influential power derived from charisma and lionized persona. When a leader’s authority is trusted and highly respected based on their individualistic personality, it reflects the charismatic style of leadership which is highly influential. This type of leadership can be referred to as “*Individualistic Leadership.*”

Chauvinistic Leadership The assertion and execution of power on the strengths of national, gender, or cultural pride. When a leader egocentrically asserts power without the recognition and respect for “others,” it is regarded as a chauvinistic style of leadership. This type of leadership can be referred to as the “*Egoistic and Jingoistic Leadership.*”

Chaotic Leadership The assertion and administration of power on within the premises and presence of unrest and instability of any type whether it be political or economic. When a leader strives and struggles to lead through dissatisfaction and outrage, this type of leadership can be referred to as “*Problematic Leadership.*”

Democratic Leadership The assertion and execution of power collectively on a mutual platform of inclusion by the people and for the people. When a leader’s decision-making process is collectively participated, involved, and executed through the interests of a “whole,” it is indeed a democratic style of leadership. This type of leadership can be referred to as “*Diplomatic Leadership.*”

Strategic Leadership The assertion and administration of power tactfully on the strengths of competition and winning. When a leader is fiercely driven by protected interests and advantageous goals, it reflects a strategic style of leadership. This type of leadership can be referred to as “*Opportunistic Leadership.*”

Dualistic Leadership The assertion and execution of power on an emotional to justify and satisfy malevolent and benevolent interests through side-conflicting actions. When a leader chooses to please a selected half or friction and displease another friction within the same period of leadership, it is regarded as a dualistic style of leadership. This type of leadership can be referred to as “*Double-Standard Leadership.*”

Authentic Leadership The assertion and execution of power through a leadership authority that is trusted on the basis of openness, transparency, values, and honesty. When a leader is legitimately trusted, respected, and adored on the rights of merits, it is often considered to be an authentic leadership style. This type of leadership can be referred to as “*Naturalistic-Meritocratic Leadership.*”

Servant Leadership The assertion and administration of power through a selfless but people-centered system of leadership. When a leader puts responsibilities first and ahead of “self,” it is regarded as servant leadership. This type of leadership can be referred to as “*Humanistic Leadership.*”

20.14 Characteristics and Attributes of Leadership

In a fast-paced world of intellectual advancements, the attributes of leadership are in-demand. Leadership is personified and embodied in humanity. Whatever characteristic or behavioral pattern an individual exhibits, it reflects the standard of their leadership type and the stage within the cycle of leadership they are in.

The attributes and characteristics of leadership is a selected core fundamental list of few traits that elevates the greatest projection of leadership:

- *Help*: Every leader ought to be a “helper.” Everything in life begins with the greatest word called help. Every job task or assignment stripped of their titles and names simply means help.
- *Intelligence*: Every leader through the honest course of selfless leadership asserts a high level of intelligence.
- *Sensitivity*: To be an impactful and influential leader, the nature and truths of sensitivity are a must-have. It illuminates the hidden paths of leadership to service.
- *Compassion*: To serve effectively and consciously, a leader ought to be compassionate; this best prepares a leader for a grand legacy.
- *Faith in Bravery*: The mission of leadership ensures bravery and faith. A strong belief in something greater and higher than self secures the path of a leader.
- *Visionary*: The intellectual ability to imagine and envision a better state than the present is one of the greatest attributes of a leader.
- *Humanity*: Leadership is the life expression of humanity through existence.

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Chapter 21

Profiles of New University Academic Staff: Changing Views of Turkish Postgraduate Students Between 2002 and 2016



Şefika Şule Erçetin, Şuay Nilhan Açıkalm, and Feyza Gün

Abstract This study aimed to examine the profiles of academic staff in terms of the views of graduate students. The study was designed with qualitative research methods, and the data were collected through a semi-structured interview form. The semi-structured interviews were conducted with 22 master's, 20 doctoral and 8 non-thesis master's program students at Hacettepe University. In total the study was carried out with 50 graduate students. The obtained data was analysed using the descriptive analysis technique. According to the results of the study, the profiles of the academic staff in terms of the research and innovation dimension were described by expressions such as contribution to the field, awareness of current developments in the field, expertise in the field and having a critical perspective. In the teaching dimension, preparedness before arrival to class, having effective communication skills and being fair and objective were the key features of expression adopted. In the professionalism dimension, however, the key profiles were expressed in the form of following the academic works in other fields as well as knowing and having a very good command of at least one foreign language. Meanwhile, in the personal characteristics dimension, participants emphasized many features such as tolerance and being respectful, innovative, humble, collaborative, creative and visionary. In the dimension of community service, statements like being able to find solutions to

Ş. Ş. Erçetin (✉)
Hacettepe University, Ankara, Turkey

Lancaster University, Lancaster, UK
e-mail: sefikasule@gmail.com

Ş. N. Açıkalm
Lancaster University, Lancaster, UK

International Relations Department, Middle East Technical University, Ankara, Turkey
e-mail: suaynilhan@gmail.com

F. Gün
Hacettepe University, Ankara, Turkey
e-mail: feyzagun@hacettepe.edu.tr

global problems and being able to draw an exemplary human profile to the community were given weight. The research results were also discussed in a comparative way with a similar study conducted in 2002.

21.1 Introduction

Higher education institutions are formal education's topmost structures where qualified individuals and professional people are taken through the highest level of education and training and where scientific research is conducted for the benefit of society based on a strong technology base in tandem with social and economic development. According to Vichit-Vadakan (2015), universities are places where academic staff gather to transfer knowledge and mentor students, where there is no pressure and censorship in the creation and dissemination of knowledge and where there is an open environment for learning and an intellectual unit. Universities are institutions that train people in the framework of the profession they have chosen; they then gain scientific and critical thinking approaches and cognitive, affective and behavioural means which help with their development, promote science and research and aid in rearing innovative individuals to contribute to their countries' technological and economic aspects of well-being through their various products. Considering the social and political point of view, it is also possible to say that higher educational institutions are quite an effective tool for governments (Keohane 2006). Universities are also scientific institutions which, in addition to conducting research and training human capital, also provide services to the community, through academic staff nominated for training missions in order to be scientists who will be able to work in a particular field of science and produce quality research.

21.1.1 *The Roles of Universities*

University organizations as tools of a country's economic, political, social and cultural aspects of development have always affected both societal change and changed society in the process of history. Universities have gone through three major stages in the historical process, the first being the emergence of a science-focused person. Afterwards, universities transitioned into a centre of research and training model. Currently, however, universities are witnessing a transformation into institutions geared toward integration into the society, becoming inventors, as well as aiding social and economic development (Çiftçi 2010; Sakınç and Bursalıoğlu 2012). The first-generation elite universities were premised on science, and the second-generation universities like Humboldt were premised on a research model, while the current more universally inclined third-generation universities are born of characteristics like invention, innovation, creativity, competition, collaboration, support of research beyond disciplines and cosmopolitanism (Wissema 2009, 42).

Parallel to this, Goldstein et al. (1995), while stressing the fact that the modern universities affected economic development, contended that these universities were dependent on each other, and in this interaction, there were some effects exerted on one another. According to the authors, these universities have eight functions which are creating knowledge, developing the necessary human capital, promoting transfer of available information and technology, renewing technology, making capital investments, involvement in regional cooperation, formation of a knowledge sub-structure and making profit not only in the regional economic sense but the various sociocultural aspects as well (cited by Drucker and Goldstein 2007).

As a result of globalization, the role and function of universities have changed, information and communication revolution has been witnessed, an increasing need for lifelong learning has emerged and the growing importance of information has skyrocketed as well as the requirement for national governments to change perspectives (Erçetin 2001; Salmi 2002; Wissema 2009). Universities are operating in a changing environment characterized by the government and higher education policy development, demographic shifts, market forces, economic restructuring and internationalization (Middlehurst and Woodfield 2004 cited by Kaweesi 2016). Considering that the teaching staff takes the largest responsibility in adapting to changes of the university, there is a need to adapt the teaching staff in universities to the requirements of the age or period.

21.1.2 Changes in the Roles of Teaching Staff in Universities

Erçetin (2001), while paying attention to changes in the roles, tasks and responsibilities of academic staff in higher educational institutions, stated that the emergence of a new profile of academic staff is not only inevitable but an urgent necessity. According to the author, a new generation of academic staff who can utilize communication and information technology densely in a way that can keep up with the requirements of the global world order, can educate him or herself constantly in order to develop and is open to cooperation and solidarity is long overdue. Similarly, in another study, Al-Zoubi and Mahasneh (2013) examined the characteristics of new-generation university professors and stressed that the professors need to have qualities and features of the highest quality in order to keep track of surprising developments in scientific research. Chireshe (2011) meanwhile contends that an effective university academic staff should be intimate, helpful, humane, respectful to the student, fair, prepared for lessons and knowledgeable and also should function well in class and should have a personality that motivates learners.

When higher education is considered as the engine of development in the country, then the quality and competence of academic staff who can respond to challenges and dictates of the century in which we are ought to be thought of as an important aspect for the future. Also, to be sufficient in terms of academic and personal characteristics and transfer these to the student, an academic staff has to leave a positive and constructive impact on the development of the student (Akman et al. 2006).

The opinion is that they can adapt to the changing conditions of the times in order to be equipped with necessary skills in the upbringing of students. Erçetin (2002) classifies the profiles of the academic staff who work at universities in five categories: research and innovation, education, professionalism, personal characteristics and community service. The teaching profile requires an academic staff to use information and communication technology effectively to be able to use new teaching methods and techniques, and it also requires effective communication skills; the research and innovation profile calls for being experts in the field and the ability to follow the latest developments in the respective fields; the personal characteristics profile dwells on ambitiousness, patience, objectiveness and helpfulness; the professionalism profile is in the realm of being able to produce academic work and put theoretical studies into practice; the profile of public service meanwhile dwells on features such as being responsive to global challenges and having social responsibility.

In this context, therefore, the central focus of this study was to examine the views of graduate students on how the profile of today's academic staff should be in terms of the categories presented in a study conducted by Erçetin (2002). The study also sought to establish whether the findings in the study by Erçetin (2002) named "Profile of the New University Academic Staff according to Turkish Postgraduate Students" show any difference or not when compared to students' views or opinions after a period of 14 years. Premised on this aim, thus, the problem statement of the research is in form of a question thus: "What should be the profiles of academic staff working in universities?"

21.2 Methodology

This study adopted a survey model, and analysis was done using qualitative approaches. In this approach, analysis focuses on the description of events and phenomena in their natural environment and understanding the perspective of the participants and outlining an inductive approach (Denzin and Lincoln 2000). The study group was composed of 50 postgraduate students undergoing training in the 2015–2016 academic year spring semester at Hacettepe University, Faculty of Educational Sciences Department of Educational Administration, Supervision, Planning and Economics. Among the participants in the study, 22 were master's degree, 20 doctoral and 8 non-thesis master's program students.

The data in the study were obtained using a semi-structured interview form which is one of the most useful information-gathering tools that enables researchers to test a particular hypothesis in mind (Fraenkel and Wallen 2006, 455). Research data was collected from 50 postgraduate students undergoing training at Hacettepe University, Faculty of Educational Sciences Department of Educational Administration, Supervision, Planning and Economics in March 2016. Data were obtained through individual face-to-face interviews. To avoid experiencing any ethics violation issues, a "voluntary participation form" was prepared by the research-

ers and distributed to all participants. In the voluntary participation form, a text describing the purpose of the research to be carried out, voluntary participation in the research, confidentiality of the information obtained, and utilization of data records for purposes of the study only was included. The voluntary participation form enabled the participants to reflect the true thoughts and feelings on the subject of the research easily. Research data were analysed using a descriptive analysis technique and were summarized and interpreted in accordance with predetermined themes.

21.3 Findings

The data obtained within the scope of the study were analysed in accordance with the themes earlier on determined. The results of analysis were presented under these themes. The views of postgraduate students regarding the profiles of academic staff in terms of research and innovation, teaching prowess, professionalism, personal characteristics and community service are presented in Fig. 21.1.

Participants who focused on the “research and innovation” profile of academic staff often used expressions such as being able to contribute to the field, being aware of current developments in the field and having a critical perspective. Respondents who expressed an opinion on the need to develop expertise in the field by academic staff also stressed that even the academic staff who realize their academic achievements need to continue to research and produce more academic works. When the views of graduate students regarding research and innovation profile of academic staff are examined over the two studies, it can be determined that some of the common dimensions of research and creativity from past to present have been unchanging. According to this, the participants share a view that training helps an academic staff to become experts in their fields, follow the latest developments in the field, effectively use communication technologies and have consensus on a critical perspective to support quality work in the field. When the previous study of 14 years ago is explored, it can be seen that the current views of the participants in some ways differ from those expressed before. The students in the previous study sought to see the academic staff adopt a multidisciplinary approach and put forward a new thinking profile. Today, the students emphasized the need for academic staff to constantly improve themselves, represent the country with added innovation and quality work as well as study abroad.

Participants who focused on the “teaching” profile of academic staff stressed statements such as coming to class well prepared; having effective communication skills; contributing to students’ cognitive, emotional and behavioural development; as well as being fair and objective in evaluation. The participants also stressed the need for academic staff to desist from the practice of allocating all responsibilities of the course to students by asserting that even the academic staff ought to play an active role in the course, promote interest of students in local and foreign learning resources related to the area of study through follow-up on their practices and create

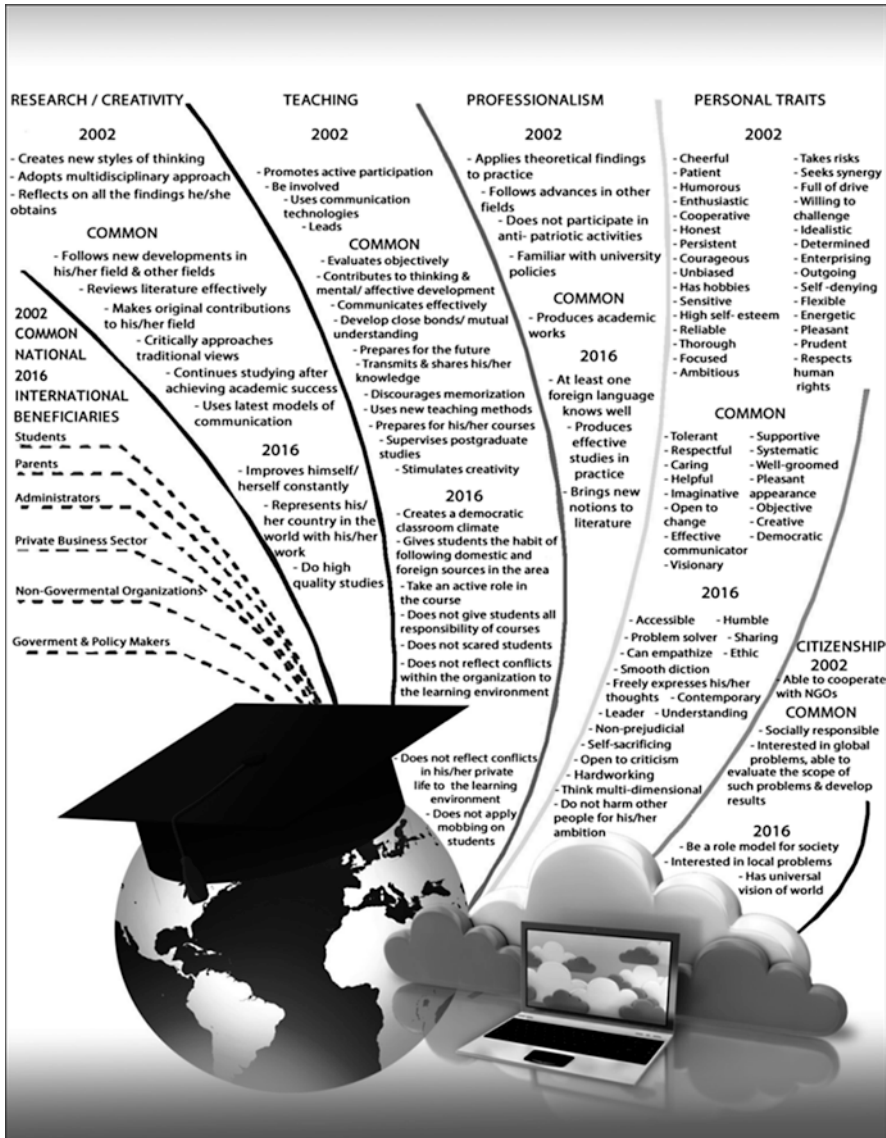


Fig. 21.1 Profiles of academic staff according to views of postgraduate students

a democratic classroom climate. When the views of graduate students regarding the teaching profile of academic staff are examined across the two studies, it can be stated that some of the common dimensions of teaching from past to present have been unchanging. In the analyses, it can be realized that participants expressed the need for academic staff to come prepared for classes and the utilization of new teaching methods. Academic staff should also steer clear of rote learning and give

students the ability to use conceptual and theoretical knowledge in practice. Academic staff also ought to establish a relationship of mutual understanding and should not discriminate between students, while the assessment must be objective. When the previous study done 14 years ago is explored, it can be seen that the current views of the participants in some ways differ from those expressed before. In the previous study, students described academic staff as leaders and as people who support the active participation of student's in the course. Nowadays, however, students seem to describe academic staff as those who do not stress students with problems experienced in private life or organizations and avoid exposing students to psychological torture.

Participants who focused on the "professionalism" profile of academic staff emphasized statements such as the need to produce academic works, following the works in other fields, and to have a very good command of at least one foreign language. When the views of the past are examined in lieu of the present, the unchanging common expression was found to be the need to produce academic works. Meanwhile, when the previous study done 14 years ago is explored, it can be seen that the current views of the participants in some ways differ from those expressed before. In the past study, the students discussed the need for academic staff to convert academic theoretical knowledge into practice with non-participation in activities against the state and to being people who follow developments in other fields. Today, the participants emphasize the need for academic staff to carry out academic works that are valid in practice as well as the need to bring new concepts to the prevalent literature.

Participants who focused on the "personal characteristics" profile of academic staff emphasized the need for academic staff to have a host of features such as being tolerant, respectful, innovative, humble, collaborative, creative and visionary. When the views of the past and present studies are examined, some opinions of the participants were found to be unchanged with some common expressions abound. According to this, participants emphasized the need for academic staff to be creative, helpful, open to change, systematic, democratic, well-maintained and supportive and have vision. Meanwhile, when the previous study done 14 years ago is explored, it can be seen that the current views of the participants differ from those expressed in the previous study in some ways. In the last study, students mentioned that academic staff ought to be ambitious, flexible, idealistic, entrepreneurial, risk-takers, defiant, energetic, cheerful and collaborative. In the current study, meanwhile, the participants observed that academic staff should be problem solvers, contemporary, able to think multidimensionally, accessible, good leaders, sharers, and open to criticism.

Participants focusing on the "community service" profile of academic staff stressed the need for academic staff to produce solutions to global problems as well as being able to draw an exemplary human profile for the community. Participants also addressed the issue of having a universal world view on the part of the academic staff while dwelling on the fact that the academic staff should hold utmost social responsibility. When the views of the past and present studies are examined, some opinions of the participants were found to be unchanged with some common

expressions abound. Accordingly, participants discussed the need for social responsibility on the part of academic staff as well as conjugating solutions for dealing with the global problems at hand. When reference is made to the previous study conducted 14 years ago, participants were of the opinion that an academic staff should be a person who establishes cooperation and a link between various non-governmental organizations and scientific institutions. In the current study, however, participants view an academic staff as a role model to the community, one who is concerned with local problems and issues alongside the global issues and one who has a universal view of the world.

21.4 Conclusion

In this study, generally, profiles of today's academic staff according to the views of graduate students were examined based on the classification made by Erçetin (2002). The study also sought to compare the students' opinions in lieu of this classification in order to establish whether certain changes occurred or not within the participants' views across the two studies, the previous and the present. Under the first theme of the study, views of graduate students regarding the research and innovation profile of academic staff were examined. Results indicate that, unlike the earlier study, participants stressed the need for academic staff to continuously develop themselves and add innovation to quality work in the field and the need to represent the country abroad. When the opinions of today's students are examined, it can be seen that the academic staff now not only have to be able to represent themselves and their countries abroad but also have to do quality work, through methods like adding new concepts and value to existing literature. This is seen as a major success route on the part of academic staff as reflected in students' views. Today, instead of considering the sheer number of studies conducted, the focus is on establishing whether the quality thereof is questionable or not. Being an expert in an academic field one is working in, being able to follow latest developments in the field and having a critical and inquisitive point of view are some of the characteristics of the academic staff which are unchanged from both the past and present studies.

Another theme of the study examined opinions of graduate students regarding the teaching profile of academic staff. The findings show that participants' views differ today. Students stressed the need for the classroom to remain free of opposition or conflicts within the organization experienced by academic staff, as well as mobbing practices which render students stressed and afraid. In the earlier study, participants supported the active participation and involvement of students in courses, while in the current study, they seem to indicate that academic staff should not abdicate their position and responsibility of courses to students. According to views of participants, academic staff should create democratic environments in the class through establishment of mutual understanding relationships which serve as intermediaries. Academic staff should also facilitate values like an understanding of

creativity and research within learners which provides them with the opportunity to put theory into practice instead of undergoing rote learning and memorization.

When the views of graduate students regarding the professionalism dimension or profile of the academic staff are examined, it becomes evident that production of academic works is a feature in both the previous and current studies. According to participants, academic staff should bring new concepts to the literature by doing quality work and should know at least one foreign language at a very good level. The importance of knowing a foreign language in the century we are living in may have caused students to feel this way presumably. This is because it is possible to follow the world, today's technology, learn the science, understand it and be able to contribute to it by knowing a foreign language.

When views of graduate students regarding the personal characteristics dimension of academic staff were examined, it was established that students think of today's academic staff as multidimensional, visionary, a spirited leader, democratic, collaborative and open to criticism. Meanwhile, when participants were asked about the profile of community service, the views were that an academic staff should be able to develop solutions to deal with global issues and must exhibit social responsibility. However, some participants reported that academic staff should not only be concerned with global issues but should utilize their responsibility and competence in dealing with local problems as well.

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Chapter 22

Reflection of Quantum Entanglement Principle to Organization Theory “Organizational Insight”



Şefika Şule Erçetin, Şuay Nilhan Açıkalm, Halime Güngör, and Nihan Potas

Abstract This study’s aim is to initiate a discussion on the reflection of quantum entanglement on organization theory called “organizational insight.” In today’s world, physicists state that the best candidate to explain consciousness is quantum theory. Organizational insight is the ability to foresee the chaotic situation and the future provision of the organization in the organization environment with the experiences of taking inferences from the history of the organization, the presence of a strong organizational communication, and high level of consciousness. In this sense, there have been reflections of quantum theory to organization theory, because we can explain consciousness with quantum. In this study, reflections of quantum entanglement principle to organizational consciousness and organizational communication, organizational insight concept, and relationship between organizational insight and chaos were discussed. This discussion is expected to trigger off a high level of academic and research interest in the field of organization. In subsequent

Ş. Ş. Erçetin (✉)
Hacettepe University, Ankara, Turkey

Lancaster University, Lancaster, UK
e-mail: sefikasule@gmail.com

Ş. N. Açıkalm
Lancaster University, Lancaster, UK

International Relations Department, Middle East Technical University, Ankara, Turkey
e-mail: suaynilhan@gmail.com

H. Güngör
Hacettepe University, Ankara, Turkey
e-mail: halime_gngr@yahoo.com

N. Potas
Health Care Management Department, Gazi University, Ankara, Turkey
e-mail: nihanp@gazi.edu.tr

discussions of this undertaking, we shall seek to examine organizational insight phenomenon by analyzing different organizations, and secondly we will examine organizational insight in terms of the organizational intelligence phenomenon.

22.1 Introduction

One of the contributions of the post-positivist paradigm, which is the paradigm of today and the next century, to humanity is interdisciplinary studies. Having multi-disciplinary studies ensures that the topic being studied is discussed and explained thoroughly. This situation increases the speed of scientific developments by revealing different aspects of the subject. It is important to discuss the reflection of quantum theory on organizational theory in order to contribute to the development of organizational theory and to support organizations to work more healthily in practice. In this study, the reflection of the quantum entanglement principle to organization theory is discussed in the context of chaos theory.

22.1.1 *Quantum Entanglement Principle*

The concept of quantum entanglement is defined by Erol (2010) as the event in which two or more quantum systems can communicate with each other simultaneously, regardless of distance. According to Duran (2011), if there is a correlation between subsystems in quantum states, where there is a compound system consisting of two different systems, it can be said that two systems are entangled. The characteristics of the quantum entanglement can be listed as follows (Erol 2009; Duran 2011):

- Entangled states are obtained by more electrons and photons. Atoms, nuclei, and other ions are also used for this purpose.
- The electrons that share the same orbital are entangled, but this depends on the opposite of the spin of these electrons.

The concept of quantum entanglement refers to the fact that parts of physical systems differ in their “distance and time” but that the change in one will affect the other and change the quantum state. A change in one of the entangled particles determines the other at that moment; this is called the “ghost effect.” If one of the entangled particles is in the world and the other is in another galaxy, a change in any one occurs in the other. The visual representation of the quantum entanglement can be seen in Fig. 22.1.

Quantum theory is seen by physicists as a candidate for clarifying consciousness concept. Kauffman (2010) has argued that the emergence of mind processing processes within the biological matrix of the brain is related to quantum processes.

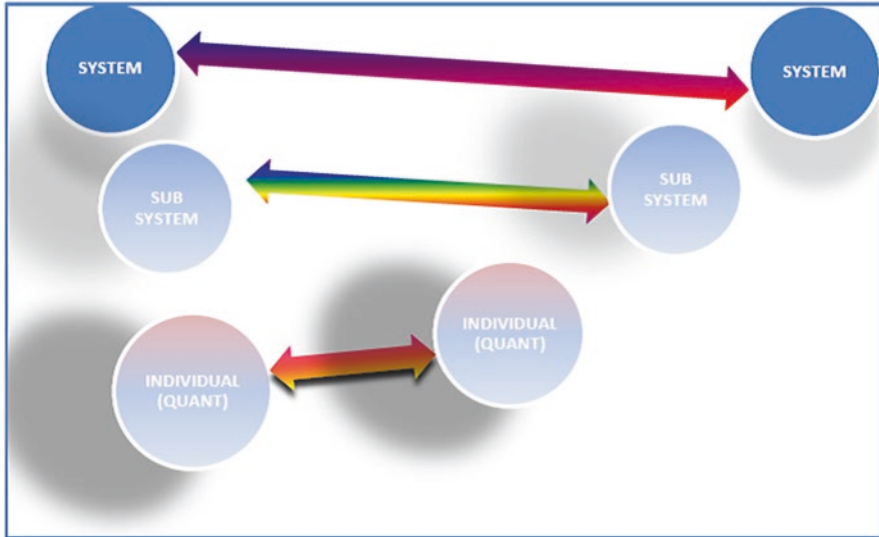


Fig. 22.1 Quantum entanglement (Resource of the figure has been developed by authors)

When the studies related to the connection between quantum and consciousness are examined, it can be said that the quantum entanglement means lack of localization of quantum events and that the quantum entanglement in mental activities is likely to be effective. The reflections of the quantum entanglement to consciousness can be explained as (Erol 2009; Erol 2010):

- The concept of quantum entanglement has a tremendous potential for scientific proof of the relationship between consciousness and quantum physics.
- In quantum systems, for example, the apparent entanglement of two electrons, if consciousness is a quantum system, must be observable for two different individuals (consciousness).
- Especially when consciousness is thought to be a quantum mechanical system, it appears that it is possible to interact with two or more conscious minds far away from each other.

22.1.2 Organizational Insight as Reflection of Quantum Entanglement Principle to Organization Theory

According to the quantum entanglement principle, it is possible for entangled systems to interact at the level of consciousness, regardless of time and place. According to the system approach, individuals working in organizations can be considered as subsystems for organizations. At this point we are confronted with the concepts of organizational consciousness and organizational communication.

Organizational consciousness is the necessary level of consciousness for determined vision for the future of the organization and functioning of organization in planned, organized and effective.

The organizational consciousness includes past experiences of the organization to the present day, employees, the physical structure of the organization, the access to organizational goals, the social responsibilities, the present situation according to the comparison with the counterparts, and the successes and failures. The organizational consciousness is history and memory of the organization. Organizational consciousness is a conscious structure formed by organizational memories and lessons learned from the past. The high level of organizational awareness means that the organization has reached a conscious awareness level. In organizations where organizational consciousness is high:

- Employees have sufficient information about the history of the organization and equipment.
- The organization focuses on the present with this vision.
- Future provisions of the organization are structured on this basis.
- Employees' personal goals and career goals are aligned with each other.
- Employees work motivated to achieve organizational goals.
- Employees aim to move the organization forward.
- Organizational communication is strong.

Strong organizational communication is a necessary attribute in organizations with high organizational awareness. At this point, it can be said that the internalization process of the quantum entanglement principle has begun in organizations with high organizational consciousness and strong communication. In these organizations there is a conscious interaction between the members of the organization, regardless of time and place. Organizational communication can be defined as an effective interaction of subsystems in the organization. Communication in these organizations is defined with open and widespread networks. The management and employees of organizations dominate the management and use of the responsibilities and powers by the rate of communication networks. Everything in and out of the organization is known by the employees through effective interaction. In Fig. 22.2, reflections of the quantum entanglement principle to organization theory are seen.

Insight is literally a form of internal vision, comprehension, self-reflection, and a level of conscious awareness. Individuals with a high level of insight have the ability to assess the reality of their own experience in their minds through an inner view. The solutions that high insightful individuals have when they live in troubles come from their own life experiences, and these individuals arrive at a definite solution. Intelligent individuals more easily reach insightful solutions to the problems. Their motivation and performance to solve their problems are high, and their solutions are clear and accurate. Estimates for the future are objective and clear. The insight of organizations will be seen in Figs. 22.1 and 22.2.

Organizational insight is the ability to foresee the chaotic situation and the future provision of the organization in the organization environment with the experiences of taking inferences from the history of the organization, the presence of a strong

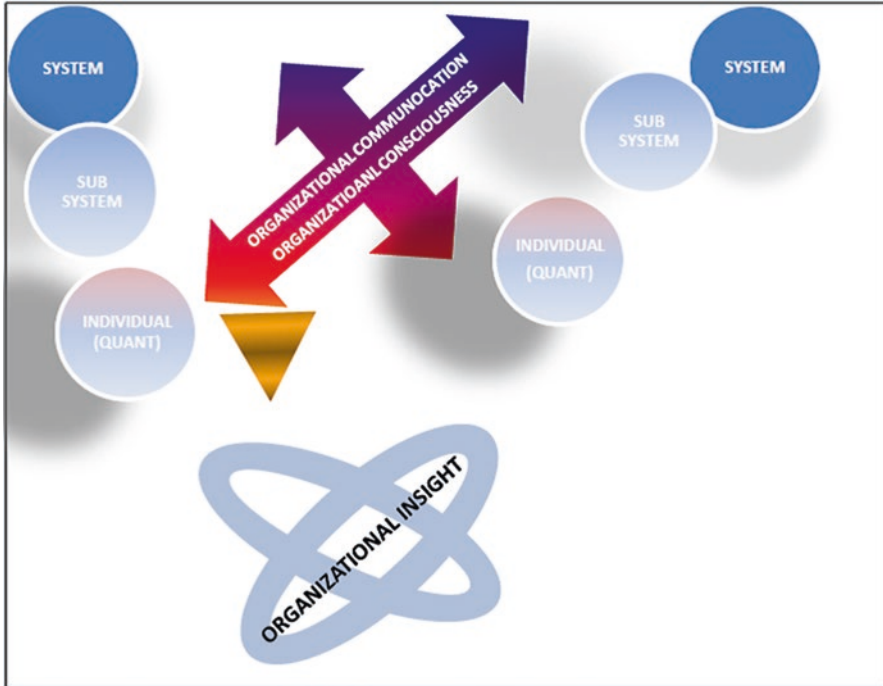


Fig. 22.2 Reflection of quantum entanglement to organization theory (Resource of the figure has been developed by authors)

organizational communication, and high level of consciousness. The characteristics of organizations with high insights can be listed as follows:

- It is the organizations that have the consciousness of quantum entanglement.
- Organizational awareness is high and communication is strong.
- They are intelligent organizations.
- Solutions found to the problems experienced are based on organizational consciousness and are the essence extracted from the experience of the organization, and its solution is reached in a certain way.
- Their motivations and performance to solve their problems are high, and solutions are clear and error-free.
- Estimates for the future are objective and clear.

The ability to deal with chaos is high.

Chaos is a possible occurrence in all organizations. We cannot speak of a hypothesis that chaotic circumstances do not occur in organizations with insight. Chaos is literally the presence of irregularity and turbulence (Açıklan ve Bölücek 2014), but in fact chaos is a source of life, and it is a reality for people and organizations as self-organizing complex systems (Erçetin et al. 2014a). The most common definition of chaos is sensitive dependence on initial point (Açıklan and Erçetin 2014);

this definition can be explained by the “butterfly effect” (Erçetin et al. 2014b). When the initial conditions change, the chaotic environment begins to form. Organizations with high insight can also experience chaotic situations. These organizations, however, know how to use chaos to transform cosmos or use it to make changes and to convert chaos to benefit the organization.

22.2 Conclusion

Finally, we can say that the ability of the insightful organizations to cope with the chaotic situations is high because the existence of quantum entanglement in the organizational environment provides organizational communication and organizational insight while strengthening the consciousness. Discussing and explaining the subject are extremely important in terms of the development of organizational theory and the use of living developments in organizational practices.

22.3 Future Trends

In this study, we opened for discussion the new phenomenon “organizational insight.” This discussion is expected to trigger off a high level of academic and research interest in the field of organization. In subsequent discussions of this undertaking, firstly we shall seek to examine the organizational insight phenomenon by analyzing different organizations and secondly we will examine organizational insight in terms of the organizational intelligence phenomenon.

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Chapter 23

Decision-Making Processes as Part of Administration in Chaotic and Non-chaotic Atmosphere in Educational Organizations



Pınar Temoçin

Abstract Decision making is without doubt an integral part of human life and institutional working, and as it is the case in any process pertaining to successful administration to be carried out in organizations, it has its own place within all the dimensions of an established hierarchy of any kind. Ashcraft (1998) (*Fundamentals of cognition*. New York: Longman) calls it the process of making decisions, a rather slower and more conscious part and aspect of cognitive thinking. It does entail, surely with countless other counterparts, rational thinking, reasoning, and envisioning; thus, decision making inevitably calls for a thorough analysis of any given situation, oftentimes, as well as meticulous evaluation of the future of the organization with all its differing entities. What is more, this frequently has to be realized in short periods of time. In addition to the aforementioned elements inherent in the very process, several other factors come into play during times of decision making such as relatively more subjective parameters like intuitional thinking and using what one's gut feeling signals.

In light of the relevant literature research, it is witnessed that the time when a decision is to be made, the person to make the decision and their certain characteristics, e.g., certain demographic features, and so on are all influential in the type and nature of the decision made. It is also observed that whether the decision is made at the time of a crisis belonging to a rather chaotic period impacts decision making to a degree.

23.1 Introduction

It goes without saying that in any organization/institution, one essential side of administration is making “healthy” decisions where the other one is executing these decisions made again in a desired fashion for the ultimate benefit of the organization. To put it in a different way, these decisions are the ones which maximize

P. Temoçin (✉)
Başkent University, Ankara, Turkey
e-mail: payyildiz@baskent.edu.tr

expected utility or value (Yates and Estlin 1998). Simon (1976) states that decision making mainly requires two steps which are building opinions and also judgments alongside transferring these two to the more practical side of doing things. In other words, decision-making process is mostly seen as twofold. However, Ashcraft (2002) highlights much of the decision making, if not reasoning, is overly impacted by general world knowledge of the individual. Mintzberg (1990) underlines the importance of the role of the administrator at a larger level in the organization and at a smaller level in the process of decision making and lists the most likely administrator behavior when it comes to decision making as *entrepreneur*, *disturbance handler*, *resource allocator*, and *negotiator*. In fact, decision making is a quite complicated process; thus, it is of crucial importance to have a closer look at all the potential interplayers as much as possible, viz., *the situation*, *the people involved*, *preferences*, *selections*, and *minor decisions taken prior to the actual decision to be made*. For instance, aiming at demonstrating the complexity of decision making, Shafir (1993) directs our attention to the fact that when deciding between two options, we can both choose and reject the same option. Heller (1971) sums up these mentioned above under the term *ecological stages* that affect decision making. These are mentioned then as social-political-cultural ecology, organizational system, work environment system, and personal system. All in all, decision making is such a process which can directly and indirectly influence how and to what extent the demands from outside are met by the organization, in what way(s) certain work is carried out by the shareholders, and how performance is evaluated as the process is affected by all these in return. Hence, it would be fair to say that decision making is critical in any organizational structure like businesses and schools.

23.2 The Process of Decision Making

Human beings cannot refrain from issues awaiting for them in life that usually urge them to make decisions accordingly, usually in a rapid manner. This is highly valid for administrators of organizations who usually come face to face with challenges of various nature (Rue and Byars 2003). In fact, considering their ranging roles and responsibilities within the organization, this is not at all surprising. According to many scholars (e.g., Gentner and Collins 1981; Glucksberg and McCloskey 1981), people's decisions, the efficacy of these decisions, and the stages followed by them while making these are very much bound to their competence, expertise, and domain knowledge. It might then be right to think that administrators' capability is another factor interacting with the process. On the other hand, they are not all alone in their decision making as their coworkers/colleagues can assist them in the process. This situation is again related to strategic administrative decisions such as deciding who to take part in the process at what point so as to be able to address a specific need especially during those times of uncertainty (Vroom and Yetton 1973). To this end, administrators need to evaluate a particular problem that they come across quite carefully and recognize their own potential together with the potential of the

organization: that of the system and the workers. This indeed is very much linked to making the “right/rightest” choices (Daft 2003).

23.2.1 Decision-Making Process as for the Nature of Decisions

Two classifications are evident in the literature focusing on decision making. That is to say, there are basically two types of decisions made by administrators, *programmed decisions* and *non-programmed decisions* (Certo 2003), where the former term refers to decisions generally falling under the category of decisions made as part of planning and the latter normally refers to the ones taken in order to be able to deal with situations of more “emerging” nature. Programmed decisions are routines, and they are for most cases repetitive in nature. However, non-programmed decisions are taken when it is not easy for administrators to foresee the future easily and, for instance, when a comparatively novel situation appears for the institution. Such atmosphere of the organization is often called as “chaotic” in the literature of certain fields, and as has been uttered by Ayton (2005), the foundations of decision research and its contemporary shape stem its roots from many disciplines like psychology, mathematics, and even economics. Therefore, the tools that administrators make use of and the path they might follow can be varying due to specific situational cases taking their origins from a number of areas. In that regard, administrators may wish to adapt an already existing method and/or build up their own methods to approach a decision-making process. Here, it is worth mentioning McFarland (1974) who articulates the concept *decision-making techniques* summarizing the process as regards to the sort of decision to be taken as below:

Types of decisions	Decision-making techniques	
	Traditional	Modern
<i>Programmed:</i>		
Routine, repetitive decisions	Habit	Operations Research:
	Clerical routine: Standard operating procedures	Mathematical analysis Models Computer simulation
Organization develops specific processes for handling them	Organization structure	Electronic data processing
	Common expectations	
	A system of subgoals	
	Well-defined information channels	
<i>Non-programmed:</i>		
One-shot, ill-structured novel, policy decisions	Judgment, intuition, and creativity	Heuristic problem-solving techniques applied to:
	Rules of thumb	(a) Training human decision makers
Handled by general problem-solving processes	Selection and training of executives	(b) Constructing heuristic computer programs

McFarland (1974)

It is apparent looking at the chart above that both neutral and nonobjective techniques are resorted to while trying to cater well for programmed and non-programmed decisions. Whereas these techniques tend to become a part of practicum by the administrators themselves, Vroom and Yetton (1973) share that administrators in organizations make decisions with (the help of) others in particular during chaotic moments mainly in order to be able to share the possible risk and hence accountability also thinking about the negativity of any unwanted consequences to be confronted.

In relation to such a path that may be followed, a chart demonstrating this process where others, that is, workers/employees other than administrators, take part in institutional decision making and how they participate in relation to the typology of the administrator is found below (Vroom and Yetton 1973):

Style	Autocratic – you make the decision and inform others of it There are two separate processes for decision making in an autocratic style
Processes	Autocratic 1 (A1) – you use the information you already have and make the decision Autocratic 2 (A2) – you ask team members for specific information, and once you have it, you make the decision. Here you don't necessarily tell them what the information is needed for
Style	Consultative – you gather information from the team and others and then make the decision
Processes	Consultative 1 (C1) – you inform team members of what you're doing and may individually ask opinions; however, the group is not brought together for discussion. You make the decision Consultative 2 (C2) – you are responsible for making the decision; however, you get together as a group to discuss the situation, hear other perspectives, and solicit suggestions
Style	Collaborative – you and your team work together to reach a consensus
Process	Group (G2) – the team makes a decision together. Your role is mostly facilitative, and you help the team come to a final decision that everyone agrees on

Vroom and Yetton (1973)

Although some decisions are made in a more quickly manner than the others like the ones to be taken, e.g., under time pressure, almost all result from some phases, which are utterly cognitive. Drucker (2001) puts forward these in decision making as follows: classifying the issue for which decision is made, defining the issue, specifying it and seeking a solution/solutions, checking what is acceptable and what is right, executing the decision, and testing its validity/efficacy in reality with respect to the authentic conditions that the institution is being exposed to.

Amason (1996) came up with a similar yet somewhat original set of phases of cognitive decision making which are monitoring the frame of the decision, determining the situation/issue to be handled through making minor decisions, diagnosing all the parties and problems regardingly, finding out alternatives, coming up with proper methodologies, assessing solutions offered, choosing the best alternative, and making it a part of the bigger decision.

23.3 Structure of Decision Making

As has been understood so far, decision making is vital and very much sophisticated for administrators like all the other human beings. In that sense, looking at the structure of decision making process is necessary to fully comprehend what it actually means and what it consists of. There is a variety of models observed for decision-making processes like the ones related to governmental issues thinking at a global scale or such as the ones more relevant to organizational systems at microlevel (Açıkalın 2016). Furthermore, as Hirschfield and Gelman (1994) advice, it is noteworthy to refer to *mental models* to better grasp the players of decision making which could, at a broader level, be described as individuals’ mental representations of the outer world (Brown et al. 2009). In the literature, mental models are actually seen as indispensable to make sound decisions for an institution since decision makers like administrators do not have to own all the accurate information of the whole organization/business that they are working for, and using mental models can be of help during such occurrences.

The values attributed by administrators of organizations to the decision(s) to be taken have an important role to talk about the structure of decisions and that of the process of making decisions more effectively while relating these to mental models. In this regard, Smith et al. (2006) underpin the function of these attributes mentioning the relevant name of the researcher in the literature as:

Attributes	Definition	Scholar
Uniqueness	The extent to which the features of this decision are unlike other decisions. For example, uniqueness in making decisions about problems relates to the unique features of an issue and their condition in this specific setting	Schön (1988)
Certainty	The amount of information and clear guidelines that exist as to the interpretation of data and to guide a course of action	Lewis (1997), May (1996), and Whitney (2003)
Importance/criticalness/value conflict	The significance of the decision in relation to outcome and effects of negative consequences. Criticalness is used synonymously here to relate to the extent to which the outcome of the decision is of high importance with respect to outcome or where there is the high potential for a negative outcome	Schön (1988) and Whitney (2003)

(continued)

(continued)

Attributes	Definition	Scholar
Stability	The extent and rate at which the environment surrounding the decision is changing or evolving. For example, an unstable decision environment is where the condition is changing at the time the decision is changing such that new data are being received and interpreted requiring a dynamic decision-making process	Lewis (1997)
Urgency	The extent to which an immediate decision needs to be made or whether it can be delayed	Smith (2006)
Familiarity	The extent to which the decision being made is similar to decisions made in the past	May (1996)
Congruence/conflict	The extent to which elements of the decision such as the inputs, goals, and environment of the decision fit, match, and correspond with each other	Lewis (1997)
Number of variables	The amount of data that needs to be considered and interpreted in order to make a decision	Lewis (1997)
Relevance of variables	The extent to which the data available contain information relevant to the decision being made that needs to be sorted from irrelevant material	Lewis (1997)
Risk	The estimation of the chance of an adverse or negative outcome occurring as a result of the decision	Smith (2006)

Smith et al. (2006)

23.4 Decision Making in Chaos

The first key point of decision making in chaotic moments/atmosphere, irrespective of who the decision taker is (the administrator/a team or both), is most probably recognizing some unique abilities and adequately functioning mindset for the unusual condition experienced. Such decisions are peculiar to rapidness and timing. That is, “making sense” of all the dynamics and coming up with an optimal decision as quickly as possible constitute the basis in crisis in terms of reaching ways out (Weick 1988). It is encountered in the literature that relatively quicker decision making is characterized by taking *strategic decisions* in institutional administration. Contrary to the commonly held belief, it is found out that such quicker decisions are

not always produced by the administrators themselves in a centralized way; they are generally made cooperatively (Eisenhardt 1989).

Sensebreaking is the division or breaking down of an individual's cognition of a given circumstance or situation, whose role is significant in making decisions in chaos (Pratt 2000). *Stress* and coping with it should be accentuated here. A multitude of studies so far have addressed that proper training and having enough level of experience for decision takers are paramount in developing mental and psychological responses under times of stress. Gasaway (2007) is one of the researchers who call attention to the weightiness of stress at the same time pinpointing the fact that the constituents which hinder or ignite the velocity of "tactical decisions" are connected with some other agents, again making the process convoluted.

23.5 Decision Making in Educational Organizations

School ethos is in a symbiotic relationship with rational decisions taken (Uğurlu 2007). Hence one can deduce that decision making has a determining role in the future of educational institutions. Decision making at school level is analyzed in the literature with a scope of effectiveness of education in schools, school success, and relationships between colleagues working with differing titles (e.g., Glasman and Fuller 1992; Griffin 1995; Hayes 1996) whereas some others concentrating upon teacher decisions in and outside classroom, which form the "microcosmos" (e.g., McMillan 2003).

During hectic moments happening in educational institutions, decision-making process has an even more exigent role in relation to the future of the organization. Taking into account all these, a theory, Bayesian decision theory (called also as "decision analysis" in a few relevant resources), is uttered by many in the literature, which is a combination of numerous multiple analytical approaches shaped by the subjective expected utility model (French 2008). The underlying assumption of this is the rationale behind the belief under uncertainty: among all the alternatives existing at a given time, an economic person would go for struggling to maximize *the expected utility* (Hausman and McPherson 2006). Due to the fact that this theory aims at coming up with more or less "the best solution" in a specific context, its latent result directs the urge of the decision maker to "do things themselves" not by convincing others (Slavin 2002).

In institutions like schools most of the time decisions to be taken by any shareholder including administrators encompass issues of morality. Jones' (1991) *Moral Intensity* calls attention to the link between people's decision making and ethics. There are in total six factors here mentioned: magnitude of consequences (the degree of the result of the decision with regard to the impact on the others), social consensus (negotiation of any group members on the decision), probability of effect (the possible extent of harm/good which the decision will cause), temporal immediacy (the period between the decision made and witnessing the consequences of it), proximity (the distance of the decision maker to the individuals to be potentially

affected by the decision in terms of physical, cultural, social, or psychological closeness), and concentration of effect (the relationship among the number of people being exposed to the results of the decision made and the magnitude of unwanted consequences to take place).

When taking decisions during times of “crisis” is to be looked upon, groups within systems should also be handled. Keaten (1995) puts an emphasis on the power of decision-making groups as they are ideal contexts to put into practice a model: the cyberchaotic model on account of the fact that flow of information among relevant bodies is in the core of making decisions, because of the complexity of decision making, and convergence as well as divergence in decision-making groups are evident.

23.6 Conclusion

In its simplest sense, taking decisions is a broad term that applies to selecting among the given options (Thomas et al. 1991). As a result of this, a clear pathway of choice might appear, or a more turgid analysis and reevaluation of the situation are needed.

In spite of the fact that “good” decision making is of utmost importance for individuals and organizations, the neural substrates of it have started to be discovered very recently (Fellows 2005). This is owing to the components that are in interaction all throughout the process, specifically when it comes to institutional decision making, such as the ones that the decision taker possesses and the others like organizational design. In light of this, it is critical to emphasize once more that decision-making processes are to be closely and extensively analyzed both by social and behavioral sciences.

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Chapter 24

Examples Concerning Application of Chaos Theory in the Specialization Fields of Psychological Counseling and Guidance



Filiz Bilge and Ahmet Altnok

Abstract Although the individual is centralized in the field of psychological counseling and guidance (PCG) which has preventive, protective, healing, and developing functions, his interaction with the systems which involve the individual is examined, too. For this, system approaches are used. There exist researches concerning the application of chaos theory, and one of these approaches is observed in the specialization areas of PCG (school, career, mental health, marriage, and family psychological counseling). Furthermore, such researches are witnessed to address a large population. In this section, place is given to the results of researches and practitioner guides based on chaos theory which is thought to be helpful to the field academicians and employees.

24.1 Introduction

When the literature concerning chaos theory is reviewed, researches made in education and PCG are reached besides many disciplines. For example, a research concerning how chaos theory may have effects in the field of education and the process of training was realized with 30 associates from miscellaneous faculties. As a result of the research, it is put forth in the framework of chaos theory that small mistakes made in education may cause greater mistakes in the future, that is, there exists a structure similar to the butterfly effect (Akmansoy and Kartal 2014). Another example may be given from the field of special education. In the process carried out in the framework of chaos theory with a 6-year-old autistic child attending a special education school, focus is placed on anxiety, social skills, and family relations. At the end of the process, it is observed that the anxiety of the child is decreased and social skills and family relations are improved (Cashin and Waters 2006).

F. Bilge (✉) · A. Altnok

Educational Sciences Department, Psychological Counseling and Guidance Division,
Hacettepe University, Ankara, Turkey

e-mail: fbilge@hacettepe.edu.tr; ahmet8619@hotmail.com

Although it is very important to centralize the individual in the field of psychological counseling and guidance (PCG) which has preventive, protective, healing, and developing functions, the approaches which examine the individual and his interaction with the systems which involve him are also used. Although examples concerning the application of chaos theory, which is one of them, are few, the researches made in the specialization areas of PCG such as school, career, mental health, marriage, and family psychological counseling attract attention.

In this section, place is given to the results of researches made in the specialization areas of PCG by using chaos theory. In addition, the guides which are important for the practitioners are also mentioned.

24.2 Researches

A *career psychological counseling* process planned based on chaos theory was carried out in a school environment. At the end of this study, it is indicated that the uncertainties of the counselee who was in a process of career selection were decreased, and he was satisfied from the process (Türkmen 2014). It may be stated that chaos theory reflects the unpredictability of the career process because of its structure. Therefore, researches based on chaos theory draw attention in many studies made in the area of career counseling.

At the end of a *career counseling* study of 5 weeks carried out by Duffy (2000) based on chaos theory for an adult counselee who experienced a hesitation in career process, it was observed that an awareness was formed concerning the counselee's career stability and put forth rational alternatives directed to change such status. In a similar way, also, Pryor and Bright (2008) have reached effective results directed to the career uncertainty of the counselee at the end of the career counseling which they carried out with adults using a technique of archetype stories based on chaos theory.

It is observed also that another study of career counseling in the framework of chaos theory was effective in career developments (Pryor and Bright 2009). Games are used as metaphors in this study.

In another study made concerning career development, place is given to the career transition periods of seven working individuals. Transition periods of the employees from the works they had entered as a result of their training level or wrong selection to works more suitable for them are handled in the framework of chaos theory. In the study, each employee is asked to write his story concerning his own career flow, and these stories are assessed. Chaotic cases taking place in the story of each employee are identified and underlined (Peake and McDowall 2012).

The study carried out with 48 employees by Navarro and Arrieta (2010) concerning complex business life motivation continued for 4 weeks. The employees were asked to keep a diary for a time of 4 weeks in which they might keep daily notes

concerning business motivation. Methodological approaches foreseen by chaos theory were used in the study, and it emerged that there existed chaotic dynamics in 75% of the cases.

Chaos theory may be used in the studies carried out both with individuals and groups, in career counseling, as well as assisting processes in the field of *mental health psychological counseling*. One of these is a study carried out with a 21-year-old, single woman who wished to get assistance for depression and suicide thoughts. Interviews to which chaos theory is integrated are carried out in the framework of this study for 5 weeks, and at the end of this time period, it was observed that the thoughts of the counselee directed to suicide and her depressive symptoms decreased (Brack et al. 1995).

In a study carried out concerning the application of chaos theory for the counsees who experience certain transition periods of their lives, the effectiveness of the theory is assessed over a case. It was provided through a psychological counseling process based on chaos theory that the depressive symptoms of a 35-year-old woman having two children passed away and she gained awareness concerning her life period (Bussolari and Goodell 2009).

In a study where the effectiveness of therapy process based on chaos theory was tested on the behavioral organizations of schizophrenic patients, place is given to 22 tests and 16 control groups. The processes were carried out as counseling with the individual. It was indicated that therapy process was effective in the behavioral organization according to the findings obtained in the study.

Besides psychological counseling with the individual, studies are observed in literature where group psychological counseling processes based on chaos theory are carried out. Small psychological counseling groups, proposed to be composed of maximum ten persons, are defined as groups focusing on individual problems in the group processes rather than group dynamics. In this context, a study was made on skills directed to interpersonal communications in a group therapy in a small psychotherapy group carried out based on chaos theory, and it was expressed that the process was effective (Fuhriman and Burlingame 1994). Again, in a study carried out with 16 persons based on chaos theory, it was observed that group psychological counseling process directed to increase verbal communications skills was effective (Todd 2001). Considering the preventive, protective, and developing functions of PCG, increasing the communications skills by using chaos theory may be accompanied by the prevention of problems in schools like peer victimization.

Abrupt variations, unexpected cases, and developments in emotional relations may hinder the structural predictability of such emotional relations. With regard to this, it is claimed that chaos theory may also be effective in the process of development of romantic relations which should be assessed from the point of multi-perspective just as in the career processes. It may be stated that *spouse or pair therapy* to be carried out based on chaos theory may be effective in this respect (Weigel and Murray 2000). In this context, chaos theory may be used in PCG in the scope of both *pre-marriage and marriage and family counseling*.

When assessing the aforementioned application studies in general, it is seen that chaos theory may be applied in psychological counseling processes carried out with

individuals, pairs, and groups. Also the age groups and diversities of the participants of the studies draw attention. The processes may be applied to students, employees, children, youth, and adults. In this context, it may be indicated that chaos theory addresses a wide range from the point of the applied problem areas. It can be applied to miscellaneous areas of problem such as depression, anxiety, education methods, behavior orientation, professional indetermination, professional stability, crises arising from transitions between life periods, interpersonal relations, skills of verbal expression, and dyadic adjustment.

There exist many practitioner guides in the body of literature (Guess and Sailor 1993; Krippner 1994; Polite 1994; Heiby 1995; Wertheimer and Zinga 1998; Remer 2000; Heinrichs 2005; Kellert 2005; Bloch 2005; Rivera et al. 2005; Bright and Pryor 2005; Pryor and Bright 2007; Cvetek 2008; Ayers 2016). The practitioners and researchers who wish to make applications in this theoretical framework may benefit from the practitioner guides. For example, for experts working in the field of mental health counseling, it is stated that the theory of chaos can be used in developmental psychology, cognitive psychology, psychopathology, and existential psychology (Ayers 2016). In the field of mental health psychological counseling, it has been stated that the complex structure of problems can be understood in terms of three basic structures. These are metaphorization, comparison, and practization. In the field of career psychological counseling, three basic stages have been proposed for practitioners. They focus on the whole process of the system rather than on individual specific goals, on the individual as a result of interacting with the system rather than the data on specific individual values, and finally on the change of the system based on the past time (Bright and Pryor 2005).

24.3 Evaluation

Looking at the researches, it is observed that the applied studies made in Turkey based on the chaos theory are in a limited number, yet chaos theory which can be integrated to many disciplines may be used in the specialization areas of PCG which is an applied discipline.

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Chapter 25

Levels of Using Social Capital in Schools According to School Principals and Teachers



Sabri Çelik and Mehmet Mert Namalır

Abstract The aim of the study is to examine the level of using social capital in primary schools according to principals and teachers and determine the relationship between social capital and gender, education level, status and professional seniority variables. This study was conducted in lieu of relational survey model. The universe of the research consists of 1413 teachers and 212 school principals who were working in primary schools in Yenimahalle, Akyurt, Haymana and Kızılcahamam districts in Ankara in the 2013–2014 academic year. The sample of the research was selected by stratified random sampling method and consists of 297 teachers and 74 school principals who were working in Akyurt, Haymana and Kızılcahamam districts in Ankara. “Expressions towards Social Capital Elements” scale was used in the research. According to the research results; the level of using social capital in primary schools according to views of school principals emerged as high while the level of using social capital in primary schools according to views of teachers emerged as moderate.

25.1 Introduction

Increasing change in today’s societies brings into question the need to adapt to change (Ayalp 2010, 28). Paradigmatic changes that started in the mid-twentieth century and rose swiftly in the last quarter are still ongoing, forcing the education system to change and it will seemingly be the force in system change (Özden 2008, 13).

Organizations try to achieve their main objectives and goals. From the perspectives of the organization’s employees, high level social interaction between employees is important in terms of creating a possibility of increasing organizational efficiency. Specifically, the fact that humans are both input and output in educational organizations (schools), dealing with humans in educational organizations demonstrates that sociability is so important for educational organizations.

S. Çelik (✉) · M. M. Namalır
Gsazi University, Ankara, Turkey
e-mail: sabric@gazi.edu.tr; mertnamalir@hotmail.com.tr

So, principal-teacher, teacher-teacher, teacher-student and teacher-family relationships in educational organizations are important (Güngör 2011, 5).

Lack of some concepts such as aesthetics, love, respect, understanding and trust where humans are involved, causes inefficiency, lack of production and burnout. This situation requires that the social capital of the organizations to be utilized optimally. Social capital is based on the reflection of social life and is critical especially to the development of successful cooperation in the neighborhood, the community and schools. Social capital in educational organizations will lead to an increase in the quality of the product obtained from humans and better results achieved (Töremen 2004, 1). It is possible to accept social capital as a versatile and effective social value that basically determines the approach of a person to people and society. We have to say that, not taking into consideration the role of educational activities about the development of concerned social values would extremely be an incomplete attitude (Karagül 2012, 143).

Schools are not only an organization making financial expenditure or a pile of stones with physical structure but also stimulate an interactional environment with dynamic elements (student, teacher, principal and personnel), a cultural atmosphere, a contracted volume model of social life, a structure formed by purpose and function (Töremen and Ersözülü 2010, 177).

Schools are comprised of the sum of a number of processes that are shaped by social interactions and relationships. From this perspective, it is possible to say that social capital which determines the quality of human behavior by giving direction to this behavior is more valuable to schools. In schools where relationships are based on trust, strong and dense social networks, having norms and values to serve the purpose of the school will provide significant opportunities to achieve the corporate goals through the development of qualified relations between the parties forming the school community and the desired cooperation (Ekinci 2010, 3).

Social capital which is one of the most important economic and social concepts is directly related with economic, social and political successes of countries (Woodhouse 2006, 84). Social capital has been used increasingly over the past decade in particular in areas such as economy, development, education and criminology (Walters 2002, 378).

Although we can come up with different definitions on the point related to the handling of the concept of social capital, it can be defined in the shortest way as the norms and networks that enable partner collaboration (Tüysüz 2011, 3). Social capital which is measured by the level of trust between people can be regarded as a new factor of production alongside the traditional human and physical capital (Svendsen and Svendsen 2004, 44).

Social capital is a concept that deals with the ways as to how to impress social relations on economic activities. While “social” concept asserts single individuals cannot take part in the supply of social capital; “capital” concept shows that social capital is a positive contribution like financial capital and human capital and has mutual interaction with other forms of capital (Özdemir 2008, 82). The main idea of social capital is that it is a valuable wealth of social networks (Field 2008, 16). Bourdieu has used social capital for the first time in that sense and until today since

1980s, the concept of social capital has developed. Coleman Putnam has played an important role in the popularity of the concept of social capital today (Vermaak 2006, 19).

Social capital has abstract relationships and is multidimensional. Social capital can be viewed through arrangements between citizens and the state-owned institutions demonstrating some types of behavior, through link networks and associations, or participation in urban and public institutions. Civic organizations', such as voluntary organizations' or membership in political parties' trust levels to other people are kept at the forefront to measure social capital. The World Bank developed a list of indicators that can be used to measure social capital. Accordingly, the main "social capital indicators" are (KOSGEB 2005,8):

- Democracy,
- Bribery rate,
- Independency of the courts,
- Strikes, student movements, protests,
- The number of prisoners per every 100,000 people per capita,
- The degree of confidence in the government and the unions,
- Credit availability,
- Personal freedom,
- Voters available,
- Participation by the local community,
- Participation in activities in the social context,
- Authorization agency rates,
- Neighborhood connections,
- The family and friendship connections,
- Occupational connections,
- Diversity (differences) tolerance.

Social capital provides equipment to people that is required to achieve their wishes and ensures people's relationships are based on mutual trust by the regulation of their movements (with the contribution of the environment). In this way, social capital changes relationships between individuals by taking away individuals trying to achieve their own goals; causes action within any group or organization. Social capital concept is important for people as well as groups, organizations, societies and also countries. Social capital can be converted into interpersonal relationships for the success of the organization by believing and trusting people, by providing people with a place in which they can communicate with each other, time, common goals and participation opportunities in a society or an organization whose main element is human. We can consider educational organizations as the most needed organizations to create and protect social capital because their main elements are human (Ersözülü 2008, 1). Education is especially important in increasing human capital which is thought to be effective in producing social capital and at the same time is expressed as a result of the social capital (Öğüt and Erbil 2009, 37).

Dika and Singh (2002, 35) examine contexts and research findings of researches which were made on the relationship between education and social capital. They

founded results such as: social capital has a positive relationship with educational success (degree, academic score, notes etc.), reaching academic goals (graduation, educational status etc.) and psychosocial factors that influence educational development (motivation and responsibilities etc.). Schools are important in order to develop the social capital concept. The basic elements of social capital should be established in schools which constitute the process of education to create a qualified educational system. In order to show the impact expected from social capital as a positive value in the educational environment and the process, depends on the presence of school principals who are aware of social capital and spend efforts to develop and implement social capital (Şavkar 2011, 37).

School principals that have leadership qualities by influencing stakeholders inside and outside of school must be guided by the purpose of the school. Social capital has always been about developing the behaviors of leaders that influence and guide human relationships with a set of values as result of relations and interaction within organizational structures where that human element is decisive in such as schools (Ekinçi and Karakuş 2011, 532). According to Töremen (2002, 571), school principals must have three important behaviors to develop social capital. These behaviors are; behaving in a way to stimulate the social capital; namely, to inspire confidence, building strong relationships, to be fair, to adopt its employees, and helping them to certify; to give people the opportunities to recognize and cooperate with each other by organizing group activities at school; to strengthen the sense of belonging to take responsibility by enabling everyone in school-related applications.

Teachers who are the most important elements of education and educational organizations are responsible for transferring social values and rules to the new generations, also for setting up a strong and healthy social relations network. Following the issuance of these values, they teach students desired behaviors and reinforce learned behaviors. Teachers make a yeast task of providing social cohesion in the community by fulfilling these tasks.

At this point, it is an undisputed fact that the most important among the aforementioned capital types for teachers is social capital. Whether the education given by teachers who are not perceived as a reliable person in their classroom, who are unable to communicate in healthy ways with students, are also not able to meet expectations and responsibilities is still open to debate (Toprak and Bozgeyikli 2011, 128).

It appears that, social capital is an added value to schools and provides significant benefits to school principals and teachers in performing school purposes successfully. The aim of the study is to examine the level of using social capital in primary schools according to principals and teachers. In the context of the main objective of the research, the questions related to sub-objectives are:

1. At which level does the use of social capital take place in schools according to school principals?
2. At which level does the use of social capital take place in schools according to teachers?

3. Is there any significant difference between the views of school principals and teachers on the levels of using social capital in schools?
4. Is there any significant difference regarding levels of using social capital of school principals between views of school principals in terms of their:
 - (a) Gender
 - (b) Education level
 - (c) Professional seniority
 - (d) And status?
5. Is there any significant difference regarding the levels of using social capital of school principals between views of teachers with regard to their:
 - (a) Gender
 - (b) Education level
 - (c) Professional seniority
 - (d) Status?

25.2 Method

25.2.1 Research Model

This research which is aimed at determining the levels of using social capital in primary schools according to views of school principals and teachers was conducted via a relational survey model.

25.2.2 Research Sample

The universe of the research consisted of school principals and teachers who worked in primary schools in Ankara during the 2013–2014 academic year. However, due to the lack of facilities to reach all the school principals and teachers in primary schools in Ankara, the universe was re-evaluated by considering “District of Socio-Economic Development Ranking Research” made by the State Planning Organization in 2004.

There were 872 districts in Turkey in the research; the districts of İstanbul, Ankara and İzmir which are within the scope of metropolitan cities were accepted as advanced centers and were excluded from the scope of the research, other districts were divided into six groups according to their development.

In order to be representative of the universe, Yenimahalle was selected within the scope of the metropolitan district, Akyurt was selected from the second group, Kızılcahamam was selected from the third group, Haymana was selected from the fourth group; so one district from each group was determined. The numerical data for the teachers in the research universe are shown in Table 25.1.

Table 25.1 Numerical data on teachers in the research universe

District	Number of primary schools	Number of teachers
Yenimahalle	63	1151
Haymana	17	104
Kızılcahamam	7	73
Akyurt	7	85
Total	94	1413

Table 25.2 Numerical data on teachers in the research sample

District	Number of primary schools	Number of teachers
Yenimahalle	30	246
Haymana	8	22
Kızılcahamam	4	16
Akyurt	4	18
Total	46	302

Research sample was determined by stratified random sampling method. By using the “ $N = Nt^2pq/d^2(N-1) + t^2pq$ ” formula (Baş 2001, p. 44). Three hundred two teachers were expected to represent 95% confidence interval of 1413 teachers. The numerical data for the teachers in the research sample are shown in Table 25.2.

Questionnaire was sent to a total of 320 teachers within the research and 303 of them were returned. Incomplete or incorrectly filled out questionnaires were kept out of the evaluation, analysis was conducted with a total of 297 surveys.

Random sampling method was used to determine school principals. Two hundred twelve school principals who worked in Yenimahalle, Kızılcahamam, Haymana and Akyurt districts of Ankara made up the research universe. The research sample consisted of 114 school principals who worked in 46 primary schools that made practice before. One hundred fifteen questionnaires were sent to school administrators and 86 of these surveys were returned. Incomplete or incorrectly filled out questionnaires were kept out of the evaluation, analysis was conducted with a total of 74 surveys.

25.2.3 Data Collection Tools

The scale used for this research was developed by Şahin (2011). Data collection tool consisted of two parts. “Demographic Information” belonging to school principals and teachers was in the first part, “Towards Social Capital Elements of Expression” Scale was in the second part. Scale is rated in quintes as (1): Strongly Disagree (2): Disagree (3): Partially Agree, (4): Agree and (5): Strongly Agree.

Analysis was carried out to check the reliability and validity of the scale. Findings belonging to reliability and validity studies of data collection tool which was used

Table 25.3 Item number of the scale, factor analysis and reliability results

Scale	Item Number	KMO	Barlett's X ²	Described variance %	Cronbach's alpha
Social capital elements	45	0.96	12469.672 <i>p</i> < 0.001	66.261	0.97
Trust	9	–	–		0.90
Norms and values	12	–	–		0.90
Social networks	5	–	–		0.75
Interest, interaction and participation	11	–	–		0.92
Loyalty and belonging	8	–	–		0.94

to determine the level of using social capital in primary schools according to teachers and school principals are shown in Table 25.3.

Value which was found as a result of KMO Test in order to determine the adequacy of the data obtained from the sample (0.96) is close to 1 so we can say that it is perfectly acceptable. Bartlett's test ($p < 0.001$) is significant, this indicates that the data is suitable for analysis. From the high value of Internal consistency Cronbach's alpha coefficient (0.97) that was obtained for the social capital data collection tool of over 45 items, we can say that the tool is highly reliable.

25.2.4 Analysis of Data

While data analysis was being conducted, the data was coded and transferred to the computer and SPSS (Statistical Package for Social Sciences) software program was used. Scale that was used as data collection tool is a 5th Likert type scale. Therefore, expressions are numbered 1–5. The level of using social capital was determined in terms of these expressions, between the lowest score (1 point) with the highest score (5 points) is divided into five equal parts. As a result of this process, the perception levels of school principals and teachers according to their scores are shown in Table 25.4.

Frequency (f), percent (%), standard deviation and the arithmetic mean (\bar{X}) were computed to determine the level of the use of social capital in primary schools according to school principals and teachers. Distribution of level of using social capital in primary schools according to views of school principals and teachers based on variables (gender, education level, status, professional seniority) was determined. t-Test was conducted for teachers based on gender variable and One-Way Analysis of Variance (ANOVA) was made based on professional seniority variable because the distribution was found parametric (homogeneous) as the result of the analysis. Mann-Whitney U Test was applied to the data of school principals based on gender and status variables and Kruskal-Wallis Test was implemented for teachers's answers based on education level variable and for those of school principals based on professional seniority variable because the distribution was found

Table 25.4 Levels of scores received from social capital scale

Scores received	Level
1.00–1.80	Very low
1.81–2.60	Low
2.61–3.40	Moderate
3.41–4.20	High
4.21–5.00	Very high

non-parametric (heterogeneous) as a result of the analysis. Furthermore, the Tukey HSD test which is one of the multiple comparisons test to determine the difference between groups was used. According to the results of the test, impact of variables on social capital was determined at the 0.05 significancy level.

25.3 Findings

25.3.1 *Level of Using Social Capital According to Views of School Principals*

Findings about the level of using social capital according to school principals are shown in Table 25.5.

When we consider values in Table 25.5, both social capital as well as elements of social capital are seen in “3.41–4.20” level. We understand from these values that the level of using social capital according to school principals is at a high level. It can be said that the realization level of social capital in primary schools according to school principals is at a desired level. When we consider means, we can say that school principals thought loyalty and belonging element is being used at the highest level in primary schools.

25.3.2 *Using Level of Social Capital According to Teachers*

Findings about the level of using social capital according to teachers are shown in Table 25.6.

When we consider values in Table 25.6, “Norms and Values” and “Interest, Interaction and Participant” elements are seen in “3.41–4.20” level and other three elements are seen in “2.61–3.40” level. It can be said that the level of using social capital in primary schools according to teachers is not at the desired level especially “Trust”, “Social Networks” and “Loyalty and Belonging” elements which ought to

Table 25.5 Mean scores and standart deviations belonging to the level of using social capital in primary schools according to school principals

	Mean (\bar{X})	Standart deviation (S)
Social capital	3.91	0.55
Trust	3.91	0.62
Norms and values	3.91	0.53
Social networks interest, interaction and participation	3.86	0.67
	3.92	0.64
Loyalty and belonging	3.95	0.73

Table 25.6 Mean scores and standart deviations belonging to the level of using social capital in primary schools according to teachers

	Mean (\bar{X})	Standart deviation(S)
Social capital	3.39	0.59
Trust	3.40	0.70
Norms and values	3.41	0.57
Social networks	3.26	0.65
Interest, interaction and participation	3.44	0.67
Loyalty and belonging	3.37	0.83

be improved on. It can be said that according to teachers, the realization level of social capital in primary schools according to school principals is not at the desired level. When we consider means, we can say that teachers thought interest, interaction and participation elements were used at the highest level in primary schools.

25.3.3 *Comparing Levels of Using Social Capital in Primary Schools Based on Views of School Principals According to Views of Teachers*

Results on the significant difference between views of school principals and teachers about the levels of using social capital in primary schools are given in Table 25.7.

There is a significant difference between the levels of using social capital in primary schools according to views of teachers and the views of school principals. The level of using social capital in primary schools according to views of school principals ($\bar{X} = 3.91$) is higher than that of teachers ($\bar{X} = 3.39$). In this context, we can say that school principals thought that social capital was being utilized at a desired level in primary schools, and teachers did not refute this view.

Table 25.7 Results related to levels of using social capital in primary schools according to teachers and school principals

Status	N	\bar{X}	S	sd	t	P
Principal	74	3.91	0.55369	6.845	0.000	
Teacher	297	3.39	0.59			

$P < 0.05$

Table 25.8 Mann-Whitney U test results of school principals that participated the research based on social capital elements according to gender variable

	Male	Female	U	P		
	(n = 61)	(n = 13)				
Social capital elements	Mean rank	Total rank	Mean rank	Total rank		
Trust	40.62	2478.00	22.85	297.00	206.00	0.007
Norms and values	41.48	2530.00	18.85	245.00	154.00	0.001
Social networks interest, interaction and participation	41.56	2535.00	18.46	240.00	149.00	0.000
Loyalty and belonging	40.94	2497.50	21.35	277.50	186.50	0.003

$P < 0.05$

25.3.4 Comparing Levels of Using Social Capital in Primary Schools Based on Demographic Variables According to Views of School Principals

In this section, the significant difference between using level of social capital in primary schools according to views of school principals and demographic characteristics (gender, education level, status, professional seniority) was examined.

When we consider Table 25.8, there is a significant difference ($p < 0.05$) according to gender variable based on elements of social capital between the views of school principals. In terms of the gender variable, Mann-Whitney U Test was conducted, there is a significant difference between views of male and female school principals on all of the elements of social capital. When we consider the mean ranks, according to female school principals, we can say that they think the level of using social capital in primary schools is higher.

When we consider Table 25.9, Kruskal-Wallis test was made to determine the significant difference between the views of school principals on the levels of using social capital in primary schools and the education level. According to this, there is no significant difference in the views of school principals on the levels of using social capital in primary schools in relation to trust, norms and values, social networks, interest, interaction and participation and loyalty and belonging dimensions according to education level variable. Hence education level variable is not effective in all the dimensions of social capital according to the views of school principals.

Table 25.9 Kruskal Wallis H-test results of school principals that participated the research based on social capital elements according to education level variable

Social capital elements	Education level	N	Mean rank	sd	X ²	P	Sig. difference
Trust	Associate	9	38.17	2	0.198	0.906	–
	License	50	38.04				
	Master	15	35.30				
Normsand values	Associate	9	35.78	2	0.311	0.856	–
	License	50	38.46				
	Master	15	35.33				
Social networks	Associate	9	43.56	2	1.132	0.568	–
	License	50	37.47				
	Master	15	33.97				
Interest, interaction and participation	Associate	9	44.39	2	1.170	0.557	–
	License	50	37.04				
	Master	15	34.90				
Loyalty and belonging	Associate	9	44.94	2	1.633	0.442	–
	License	50	35.55				
	Master	15	39.53				

$P < 0.05$

Table 25.10 Mann-Whitney U test results of school principals that participated the research based on social capital elements according to status variable

Social capital elements	Principal (<i>n</i> = 29)	Assistant principal (<i>n</i> = 45)	U	P		
	Mean rank	Total rank				
Trust	43.67	1266.50	33.52	1508.50	437.50	0.047
Norms and values	44.47	1289.50	33.01	1485.50	450.50	0.025
Social networks	39.76	1153.00	36.04	1622.00	587.00	0.466
Interest, interaction and participation	47.21	1369.00	31.24	1406.00	371.00	0.002
Loyalty and belonging	45.69	1325.00	32.22	1450.00	415.00	0.008

$P < 0.05$

We can say that education level of school principals does not create a difference and is not effective in terms of the level of using social capital in primary schools.

In Table 25.10, when we consider the results of Mann-Whitney U test according to gender variable of views of school principals on the level of using social capital in primary schools, a significant difference was found between the views of school principals and principal assistants on trust, norms and values, interest, interaction and participation and loyalty and belonging elements but views on social network element of social capital were not significantly different. We can say that, views of school principals according to status have a significant effect on trust, norms and

Table 25.11 Kruskal Wallis H-test results of school principals that participated the research based on social capital elements according to professional seniority variable

Social capital elements	Professional seniority	N	Mean rank	sd	X ²	p	Sig. difference
Trust	1–5 years	5	25.80	4	9.138	0.058	–
	6–10 years	6	49.00				
	11–15 years	10	22.75				
	16–20 years	14	36.82				
	21 years and over	39	41.26				
Norms and values	1–5 years	5	19.70	4	6.832	0.145	–
	6–10 years	6	42.83				
	11–15 years	10	30.60				
	16–20 years	14	34.21				
	21 years and over	39	41.91				
Social networks	1–5 years	5	26.20	4	1.512	0.824	–
	6–10 years	6	37.67				
	11–15 years	10	38.80				
	16–20 years	14	38.61				
	21 years and over	39	38.19				
Interest, interaction and participation	1–5 years	5	21.70	4	5.084	0.279	–
	6–10 years	6	45.92				
	11–15 years	10	37.20				
	16–20 years	14	32.25				
	21 years and over	39	40.19				
Loyalty and belonging	1–5 years	5	18.90	4	7.766	0.101	–
	6–10 years	6	39.75				
	11–15 years	10	31.70				
	16–20 years	14	32.43				
	21 years and over	39	42.85				

$P < 0.05$

values, interest, interaction and participation and loyalty and belonging elements of social capital. When we consider the mean ranks, we can say, the scores of trust, norms and values, interest, interaction and participation and loyalty and belonging on the social capital elements of school principals are higher than principal assistants’.

When we examine Table 25.11, we see that Kruskal-Wallis test was made to determine the significant difference between views of school principals on the level of using social capital in primary schools and professional seniority. According to this, there is no significant difference on views of school principals on the level of using social capital in primary schools based on trust, norms and values, interest,

interaction and participation and loyalty and belonging elements according to professional seniority variable. Thus in terms of all the elements of social capital, according to the views of the school principals of the professional seniority variable, none emerged to be effective. Therefore, professional seniority of principals does not create any difference on the level of social capital used in primary schools and has no significant effect.

25.3.5 Comparing Levels of Using Social Capital in Primary Schools Based on Demographic Variables According to Views of Teachers

In this section, the views of teachers on the levels of using social capital in primary schools and demographic characteristics (gender, education level, and professional seniority) were examined to determine whether there is a significant difference involved in the views or not.

Results of t-Test which was conducted to determine whether a significant difference between views of teachers who participated in the research on the level of using social capital in primary schools based on gender variable are given in Table 25.12.

As seen in Table 25.12, according to “gender” variable, there is no significant difference between views of teachers ($p > 0.05$, except social network element). According to social network element, a significant difference ($p < 0.05$) was found in terms of gender variable between male and female teachers.

According to female teachers arithmetic mean of “social network” capital element is 3.18, according to male teachers arithmetic mean of “social network” capital element is 3.50. In this context, according to views of male teachers the level of using social networks in primary schools is more adequate than female teachers’ views. To this end we can state that, according to views of male teachers, school principals utilized the social network element in primary schools at an adequate level but female teachers did not share this view.

When we examine Table 25.13, Kruskal- Wallis test was conducted to determine the significant difference between views of teachers on the level of using social capital in primary schools and education level. According to this, there was no significant difference on views of teachers on the level of using social capital in primary schools based on trust, norms and values, interest, interaction and participation and loyalty and belonging elements according to the education level variable. In that regard, as for the level of using social capital in primary schools, according to the views of the teachers, the education level variable emerged not to be effective. Accordingly, educational level of teachers did not create any difference on the level of social capital used in primary schools and had no effect.

Results of ANOVA which was conducted to determine whether there was a significant difference between views of teachers who participated in the research on

Table 25.12 t-Test results of teachers that participated the research based on social capital elements according to gender variable

Social capital elements	Gender	N	Mean \bar{X}	S	sd	t	P
Trust	Female	223	3.38	0.72	295	0.894	0.372
	Male	74	3.46	0.63			
Norms and values	Female	223	3.40	0.59	295	0.356	0.722
	Male	74	3.43	0.54			
Social networks	Female	223	3.18	0.68	295	3.699	0.000
	Male	74	3.50	0.50			
Interest, interaction and participation	Female	223	3.42	0.68	295	0.951	0.342
	Male	74	3.50	0.66			
Loyalty and belonging	Female	223	3.34	0.87	295	1.293	0.197
	Male	74	3.48	0.71			

$P < 0.05$

Table 25.13 Kruskal Wallis H-test results of teachers that participated the research based on social capital elements according to education level variable

Social capital elements	Education level	N	Mean rank	sd	X^2	p	Sig. difference
Trust	Associate	47	140.04	2	1.113	0.573	-
	License	231	149.58				
	Master	19	164.11				
Normsand values	Associate	47	146.23	2	0.169	0.919	-
	License	231	149.00				
	Master	19	155.82				
Social networks	Associate	47	167.49	2	2.698	0.259	-
	License	231	145.08				
	Master	19	150.89				
Interest, interaction and participation	Associate	47	146.35	2	0.067	0.967	-
	License	231	149.31				
	Master	19	151.74				
Loyalty and belonging	Associate	47	163.72	2	2.403	0.301	-
	License	231	144.88				
	Master	19	162.68				

$P < 0.05$

the level of using social capital in primary schools based on professional seniority variable are given in Table 25.14.

According to this, as regards to professional seniority variable between the views of teachers according based on interest, interaction and participation element, and loyalty and belonging element, there was nothing significantly different. However, in terms of professional seniority variable, between the views of teachers according to trust, norms and values and social network elements, the elements were found to

Table 25.14 One-way analysis of variance (ANOVA) results of teachers that participated the research based on social capital elements according to professional seniority variable

Social capital elements	Professional seniorit	N	Mean \bar{X}	S	Sd	F	P
Trust	1–5 years	50	3.37	0.60	G.A. 2	3.307	0.011
	6–10 years	42	3.64	0.65	G.İ. 159		
	11–15 years	32	3.65	0.71			
	16–20 years	63	3.33	0.75			
	21 years and over	110	3.28	0.69			
	Total	297	3.40	0.70			
Norms and values	1–5 years	50	3.31	0.51	G.A. 4	3.454	0.009
	6–10 years	42	3.67	0.57	G.İ. 292		
	11–15 years	32	3.51	0.64			
	16–20 years	63	3.41	0.54			
	21 years and over	110	3.32	0.58			
	Total	297	3.41	0.57			
Social networks	1–5 years	50	2.93	0.72	G.A. 4	4.859	0.001
	6–10 years	42	3.26	0.70	G.İ. 292		
	11–15 years	32	3.48	0.53			
	16–20 years	63	3.28	0.71			
	21 years and over	110	3.35	0.55			
	Total	297	3.26	0.65			
Interest, interaction and participation	1–5 years	50	3.44	0.64	G.A. 4	1.980	0.098
	6–10 years	42	3.67	0.66	G.İ. 292		
	11–15 years	32	3.52	0.73			
	16–20 years	63	3.32	0.68			
	21 years and over	110	3.39	0.66			
	Total	297	3.44	0.67			
Loyalty and belonging	1–5 years	50	3.14	0.87	G.A. 4	2.317	0.057
	6–10 years	42	3.58	0.79	G.İ. 292		
	11–15 years	32	3.48	0.89			
	16–20 years	63	3.25	0.88			
	21 years and over	110	3.44	0.76			
	Total	297	3.37	0.83			

$P < 0.05$

be significantly different. Tukey HSD test from multiple comparison tests (post hoc) was conducted to test which seniority category of teachers the differences result from. According to results of Tukey HSD test, in terms of trust element the difference is between 6 and 10 years and 21 years and over; in terms of norms and values element the difference is between 1–5 years and 6–10 years and 6–10 years and 21 years and over; in terms of social networks element the difference is between 1–5 years and 11–15 years, 16–20 years, 21 years and over.

25.4 Results and Discussion

Owing to the results of the study, a significant difference between the level of using social capital in primary schools according to views of teachers and those of school principals was found. The levels of using social capital in primary schools according to views of school principals were examined by social capital elements, all social capital elements were seen as alternating between the “3.41–4.20” level.

The levels of using social capital in primary schools according to views of teachers were examined by social capital elements, “Norms and Values” and “Interest, Interaction and Participation” elements were witnessed to alternate between the “3.41–4.20” level, “Trust”, “Social Networks” and “Loyalty and Belonging” elements were within the “2.61–3.40” level. In that sense we can say that the level of using social capital in primary schools according to views of school principals is at a high level, while the level of using social capital in primary schools according to views of teachers is quite moderate, and this is not at the desired level implying that these elements need improvement. Realization level of social capital in primary schools according to school principals is at the desired level but school principals’ realization level of social capital in primary schools according to teachers is not at the desired level.

As the appointment of school principals is only through success in the written exam, principals’ personality-traits, educational perspectives and style of approaching people cannot be properly evaluated; and in accordance with that their realization level of social capital in primary schools according to teachers can be found at an undesired level.

There was a significant difference based on social capital elements in primary schools according to “gender” variable between views of school principals. We can say that, male principals thought that trust, norms and values, social networks, interest, interaction and participation were adequate in primary schools, however female principals did not agree with this view.

No significant difference was found except social network element in primary schools based on social capital elements according to “gender” variable between views of teachers. When we examined social capital levels in primary schools according to teachers in terms of the gender variable; we realized that, according to views of male teachers’ social networks in primary schools are higher and better than views of female teachers. In this context, according to views of male teachers, principals in primary schools made use of the social network element at a desirable level but female teachers did not support this view.

There was no significant difference in primary schools based on social capital elements according to “education level” variable between the views of school principals and teachers. Therefore, education level of both principals and teachers does not create a difference and is not effective in terms of the level of using social capital in primary schools.

There was no significant difference in primary schools based on social networks elements according to “status” variable between the views of school principals and

teachers. We can say that, the level of trust, norms and values, interest, interaction and participation and loyalty and belonging of school principals is slightly higher than principal assistants’.

There was no significant difference in primary schools based on social capital elements according to “professional seniority” variable between the views of school principals and teachers. Therefore, professional seniority of principals does not create a difference and is not effective in terms of the level of using social capital in primary schools.

According to this, in terms of professional seniority variable between the views of teachers according to interest, interaction and participation element, and loyalty and belonging element, none was found significantly different. Yet in terms of professional seniority variable, between the views of teachers according to trust, norms and values and social network elements, some elements were found significantly different. Tukey HSD test from multiple comparison tests (post hoc) was conducted to test which seniority level of teachers the differences resulted from. According to results of Tukey HSD test, in terms of trust element the difference is between 6–10 years and 21 years and over; in terms of norms and values element the difference is between 1–5 years and 6–10 years and 6–10 years and 21 years and over; in terms of social networks element the difference is between 1–5 years and 11–15 years, 16–20 years, 21 years and over.

Although the level of using social capital in primary schools according to school principals is at a high level, the level of using social capital in primary schools according to teachers is not at a desired and adequate level based on trust, social networks, loyalty and belonging element. Due to that to develop social capital in primary schools, development of communication between members of the school organization by creating a trustful environment ought to be provided as well as ensuring the preparation of social environments to ensure the coexistence of members.

Organizational productivity can be increased by giving in-service trainings; seminars to school principals by National Education Ministry about social capital concept and motivate principals to take graduate education. When school principals are being appointed to schools, principals’ personality-traits, educational perspectives and styles of approaching people can be considered along with results of the written exam.

School principals can utilize social capital in primary schools by considering views and opinions of teachers. Using level of trust, norms and values, social networks, interest, interaction and participation, loyalty and belonging as key elements of social capital can be developed through wishes and recommendations of female principals.

It is useful taking into consideration the views and opinions of principal assistants especially on social networks element of social capital for school principals to realize social capital in primary schools at a desired level.

School principals can consider both experiences of teachers who have much seniority and ideas of young teachers to use social capital more effectively in primary schools.

Training seminars can be given to people who have just started to work as teachers and principals by the Provincial and District Education Directorates through people who are experts on social capital concept, so that teachers and principals can dully be conscious on social capital concept.

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Chapter 26

The Significance of Metacognitive Learning Skills in Teacher Training and Their Relations to Chaos Management



Murat Özdemir and Ebru Gülcemal

Abstract The number of knowledge pieces, skills, attitudes, and behaviors is exponentially increasing because the present age is the age of information, which makes it mandatory for individuals to acquire these knowledge pieces, skills, attitudes, and behaviors for an efficient learning process. In view of the changing education system, teachers need to be experienced, tolerant, and unbiased and are also expected to be individuals who can research and solve educational problems, retrieve and exploit information, have a high level of thinking and reasoning capability, and can perform effective analysis, synthesis, and evaluation.

Thus, metacognition is among the crucial skills, especially teachers should attain. Metacognition can be listed among the important factors in educating conscious individuals with a higher level of awareness of their own mental processes. Efforts to educate conscious individuals in educational systems have given way to the emergence of the concept of “metacognition” and have gained significant momentum thanks to the related research studies. Accordingly, the present study attempts to discuss the importance of metacognitive learning skills enabling individuals to learn how to learn individually and develop awareness of their learning process and allowing for self-evaluation through self-monitoring and their relations to chaos management. The researcher has employed a theoretical analytical research model to describe and analyze the present condition. To this end, document analysis, a qualitative data collection method, was used.

26.1 Introduction

In the present age, when scientific knowledge has exponentially increased and technology has rapidly developed, individuals capable of producing information and questioning the given piece of information and aware of how to retrieve information are desirable. Teachers who are supposed to ameliorate the quality of life by training

M. Özdemir (✉) · E. Gülcemal
Hacettepe University, Ankara, Turkey
e-mail: mrtozdem@gmail.com; ebrugulcemal26@gmail.com

the needed labor force are expected to be individuals who can develop strategies by constantly monitoring and evaluating their own thinking processes to come up with solutions to the problems they have encountered, have self-confidence in implementing these strategies, and manage to be patient meanwhile. In other words, they are expected to have academic self-efficacy to be successful and able to employ their metacognitive strategies (Tunca and Sahin 2014). In this chapter, “cognition” and “metacognition” are defined, and the very nature of metacognition, metacognitive skills, and the importance of metacognitive skills in teacher training are discussed.

26.1.1 The Nature of Metacognition

Given the fact that metacognition is the combination of two morphemes, i.e., “meta-” and “cognition,” firstly the concept of cognition should be discussed to be able to better understand what metacognition exactly is. Cognition refers to “an individual’s informed and conscious state concerning the existence of an object or a phenomenon” (TDK 2015). According to Fidan (1996), cognition is a set of mental activities performed by human mind to understand phenomena around and the world itself. Cognition incorporates perception, memory, reasoning, thinking, and comprehension processes (Sendurur and Akgül 2002). The desire to raise individuals who can think and question what, about what, and how they think and individuals’ awareness of how they (can) shape information signify metacognitive skills. In recent years, such concepts as “learning to learn” “self-learning” and “effective learning” have become more important. This is when metacognition is foregrounded, for it is believed to allow for the acquisition of “self-learning.” The reason why metacognition is foregrounded in the learning process is that it is thought to play a crucial part in the acquisition of self-learning. Although the Turkish equivalence, “üstbilis,” of metacognition has been discussed since the 2000s, a consensus on the Turkish term has not been achieved yet (Cakiroglu 2007). Supposedly, the reason is that the Turkish word “üstbilis” has several connotations, such as self-regulation, managing control, supra-cognition, executive cognition, and cognitive awareness, and that these concepts are used interchangeably. Metacognition refers to individual’s own awareness of what and what not he/she knows, own thought about what he/she thinks, and own eye cast upon his/her own cognition process. From another perspective, metacognition refers to a meta-operation in relation to how cognition and memory work by the employment of monitoring and control processes (Koriat 2007; Nelson and Narens 1990). Metacognition can be expressed as an ability, a skill, or a feature involving knowledge and self-control (Baltas 2004). Apart from these definitions, it is also used in the related literature to refer to a function of the memory or experience, cognitive belief, cognition, emotion and an intuitive mental process, and even to reflection with no recent use (Smith 1994). Metacognition is a monitoring and managing meta-system under the umbrella term of “information processing” and a process whereby an individual can gain awareness of the activities and operations in his/her mind and can purposefully direct these activities and

operations (Dienes and Perner 1999). Brown (1987) defines metacognition as students' awareness of and the organization of thinking processes that they use during planned learning and problem solving; Marzano et al. (1988) refer to it as awareness of our own thinking process while performing given duties and the use of this awareness to monitor and orchestrate what we do. Despite the profusion of definitions, the common point of all is the monitoring strategies intended for the learning process (Bonner 1988). In view of the changing education system, teachers need to be experienced, tolerant, and unbiased and are also expected to be individuals who can research and solve the educational problems, retrieve and exploit information pieces, have a high level of thinking and reasoning capability, and can perform effective analysis, synthesis, and evaluation. Thus, metacognition is among the crucial skills, especially teachers should attain. The ability to control, which consists of planning, monitoring, error elimination, and evaluation of the sub-domains, matters in promoting the metacognitive awareness of individuals (Uckun et al. 2013).

26.1.2 Metacognitive Skills

According to Doganay (1997), metacognition is the way to learn learning, and the skills individuals are expected to develop as a result of metacognition are as follows:

- Self-awareness and awareness of the ways to learn
- Conscious acting
- Self-control
- Planning
- Monitoring of learning process
- Self-organization
- Self-evaluation

Metacognitive skills are concerned with the operational memory an individual needs to organize and control his/her own learning activities. Planning learning, monitoring, controlling, organizing, and thinking are the expositions of these skills (Schraw and Moshman 1995).

According to Ormrod (2012), a person who has metacognitive skills is expected to exhibit the following behaviors:

- Knowing what one's own learning and memory capabilities are and what learning tasks one can realistically accomplish
- Knowing which learning strategies are effective and which are not
- Planning a viable approach to a new learning task
- Tailoring learning strategies to the circumstances
- Monitoring one's present knowledge state
- Knowing effective strategies for retrieval of previously stored information

Planning, monitoring, and evaluative skills have an important place in learning process, and thanks to metacognitive skills, an individual can identify a problem and choose a viable strategy to deal with it, gather sources likely to prove beneficial for the solution, and finalize the process by including previously acquired information. In the literature, it can be seen that metacognitive skills are clustered around two types of skills (Cakıroglu 2007), namely, self-evaluation and self-management.

Self-Evaluation The first metacognitive skill is self-evaluation, which requires individuals to evaluate their knowledge and skills. Available research has shown that people who are successful in self-evaluation and have developed awareness of this skill are more strategic and outperformed others who are unaware of these skills (Schraw and Dennison 1994). Self-evaluation, which can also be referred to as control of knowledge and the self, involves attention, attitude, and commitment. Most teachers intuitively regard students' commitment to a given academic subject as the fundamental determinant of their success. Besides, what goes unattended is that commitment originates from willpower not from actions. The first domain of the control of knowledge and the self is the fact that commitment to a specific subject depends on individual's himself/herself. Learners adopt an attitude toward a certain subject in consideration of its value, their capability to be successful in it, and the value of the made effort. If learner fails to develop effective attitudes, then the learning setting is adversely affected. As a result, one of the important aspects of the control of knowledge and the self is to be aware of the attitude toward a certain subject and to allow for the development of such attitudes supposed to support the learning process. The last domain of the control of knowledge and the self includes attention. As in commitment, attention is generally thought to be the reaction to a stimulus. If something is interesting, then one develops an interest in it. If not, one gets less interested. In addition, attention can be controlled by students themselves. The third domain of controlling knowledge and the self is that one should adjust the level of attention and the development thereof when needed (Doganay and Kara 1995).

Self-Management The second of the metacognition skills includes individual's self-awareness and awareness and monitoring of the process. "Self-management" is defined by Goleman (1998) as "management of emotions." Self-management is an individual's ability to manage his/her emotions for his/her own good without hurting himself/herself or anyone around. Individual's self-control, self-confidence, and flexibility in the face of problems are also embedded in self-management.

In conclusion, the metacognition concept incorporates these two skills and denotes an individual's awareness of his/her own learning process and ability to provide himself/herself with feedback related to this process. Briefly, metacognitive skills can be defined as the ways to learn learning (Bransford, Brown and Cocking 2000; Dunlosky and Metcalfe 2008; Hacker et al. 2009; Schraw and Dennison 1994; Schommer-Aikins 2004; Sperling, Howard, Staley and DuBois 2004; Vauras, Rauhanummi, Riitta Kinnunen and Lepola 1999).

Studies on learning theories till the mid-1900s have been grouped into three categories: behavioral, cognitive, and affective; however, neurophysiological domain

has been included then with the advent of the neurophysiological theory (Ozden 2000; Sönmez 2000). Cognitive theories include cognition serving as a basis of learning and thinking (information retrieval and processing) and metacognition (executive cognition and strategic information) (Palincsar and Brown 1987).

26.1.3 Metacognitive Skills in Teacher Training

In any education system, teachers are the first things to come to the mind when human resources are at stake. Presently, teaching is a job that requires specialized knowledge and skills, whose status and prestige vary across countries and cultures, and which has been regarded as not only as a source of income but also as a holy duty in Turkish culture as it is directly concerned with humans. Relatedly, teachers have been accepted as behavioral role models and exemplary figures. That is why teacher training and education have such an important place (Sisman and Tasdemir 2008). Quality of the offered education and teacher efficacy are pivotal issues for teachers to achieve the desired level in any development area, to be useful for themselves and their countries, and to develop an independent mind-set (Aras and Sözen 2012).

Among the hotly debated issues is the quality of education in Turkey as in any other country across the world. Teacher is one of the factors to determine the quality. To improve the quality of teachers is achievable by seriously investing in teacher training to help prospective teacher develop metacognitive skills. There are three basic factors when it comes to quality of teachers: teacher's content knowledge, world knowledge, and professional know-how (Canakcı and Ozdmir 2000). In consideration of the rapid proliferation and obsolescence of information, which is typical of the information age, teacher training should be performed in a way to allow for the acquisition of adaptive skills to give way to constant personal and professional development and innovation through effective learning. This entails reorganization of teaching-learning processes in the development of educational programs of effective learning in the light of the identified data by taking into account individual's learning skills. Kazancı (1989) states that one of the widespread views in the last years is to know "how," not "what," individuals think and to teach how they should. This trend highlights the crucial place of metacognition in teacher training. Competency of using metacognitive skills is among the most important aspects one should possess to be able to solve the problems he/she encounters.

In short, metacognition can be defined as an individual's awareness of his/her own thinking processes and ability to control these processes (Ozsoy 2008a, b: 719). It denotes self-recognition and one's awareness of his/her own learning style and ability to organize his/her own education and teaching activities accordingly. This means that the first condition of employment of metacognitive strategies is self-recognition (Ozsoy 2008a, b; Ozbay and Bahar 2012). Metacognitive thinking skills involve some distinct and significant learning processes such as writing down noteworthy information, correcting mistakes, and evaluating the difference between the

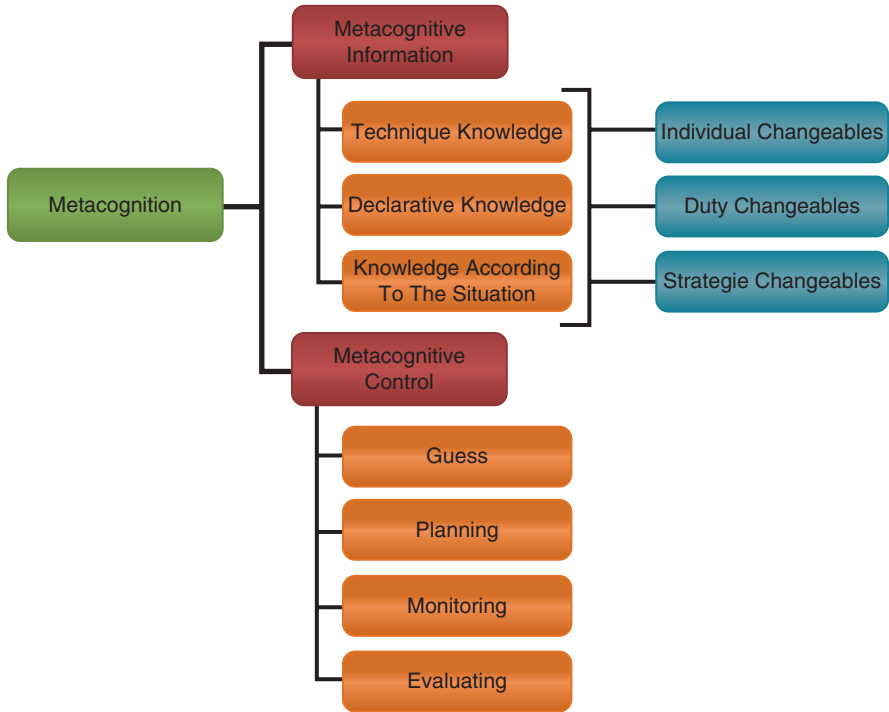


Fig. 26.1 The structure of metacognition (Source: Ozsoy 2008a, b)

inputs at the beginning and the outputs at the end of the learning process. This can be considered as the characteristic distinguishing metacognition from cognition.

According to Flavell (1987), who coined the concept of metacognition in the late 1970s, metacognition is a person's knowledge about his/her own cognitive processes and ability to use it to control cognitive processes. It is mandatory to know the structure of metacognition to be able to understand what metacognition is and how it is used. The structure of metacognition is shown in Fig. 26.1.

Ozsoy (2008a, b: 720) expresses that the related literature concentrates on four metacognitive skills. These are as follows:

1. Guessing
2. Planning
3. Monitoring
4. Evaluating

According to Gourgey (1998), metacognitive processes are intrinsic "regulatory" processes which regulate and control cognitive processes and help plan, monitor, and evaluate in performing a learning task. Metacognitive knowledge incorporates such information types as individual's own cognitive abilities (e.g., telling that

his/her listening skill is weak), cognitive strategies (e.g., the use of some methods and techniques to remember a text he/she has listened to), and knowing what to do in different situations (e.g., knowing which activity to perform in the listening process according to the text type). Metacognitive knowledge can be divided into three domains as declarative knowledge, procedural knowledge, and conditional knowledge (Schraw and Moshman 1995). Furthermore, metacognitive control can be defined as the execution of several mental operations which let individuals control their own learning. Özsoy (2008: 19) describes metacognitive control as “the ability to strategically use metacognitive knowledge to achieve cognitive goals.” Evaluation involves making decisions about and a mental perception of the current condition of a continuing developmental process. Do I thoroughly understand what I read? Besides, evaluation also requires the evaluation of whether overall and specific goals have been achieved and suitable resources are ready to exploit. Planning includes meticulous choice of strategies to realize the specific goals. Generally speaking, student should know how to organize certain operations concerning the subject at stake and should perform the most suitable operation at any given time. Lastly, organization, which incorporates guessing and planning, requires the control of general and specific goals and the modification of that particular behavior if need be. Attachment of importance to thinking in class means students’ control of in-class subjects and taking responsibility. Thusly, the concept of “prim and proper” teacher requiring absolute obedience has been eliminated. In this sense, one of the vital skills necessary for labor force is metacognitive skills he/she will need to self-control for him/her to be able to effectively and independently work with others even in the face of adversity (Ergin 2005).

Even if categorized differently, metacognition can be claimed to consist of two basic domains, i.e., one’s knowledge about and monitoring and controlling of his/her own cognitive processes and emotional state.

Metacognitive learning strategies can be divided into three, namely, learning-centered strategy, planning strategy, and evaluation strategy. Metacognitive learning strategies enable students to control their cognition, in other words to regulate their learning processes by using such operations as ordering, planning, and evaluating (Hismanoğlu 2000). Assignment of a central position to learning inevitably entails assignment of students as the focus of learning, which eventually requires teachers to explore their skills and capabilities, planning abilities, thinking processes, behaviors, and other skills like controlling the way of thinking learning. It has become a necessity for teachers to acquire such skills as learning thinking, monitoring progress, explaining what and why he/she does, talking about feelings, planning, problem solving, self-organization and self-control, and shortly skills to learn learning (Demir and Kaya 2014). Therefore, responsibilities teachers with highly developed metacognitive skills should assume have been gradually increased to position learner in the center and in an independent status.

The metacognition chart developed by North Central Regional Educational Laboratory is as follows.

Metacognition is composed of three elements (Candan 2005). These can be listed as follows:

- Developing a plan of action
- Maintaining and monitoring the plan
- Evaluating the plan

Before starting to develop the plan, it is suggested to ask these questions:

- What in my prior knowledge will help me with this particular task?
- In what direction do I want my thinking to take me?
- What should I do first?
- Why am I reading this selection?
- How much time do I have to complete the task?
- When applying the plan:
- How am I doing?
- Am I on the right track?
- How should I proceed?
- What information is important to remember?
- Should I move in a different direction?
- Should I adjust the pace depending on the difficulty?
- What do I need to do if I do not understand?
- When evaluating the plan:
- Did my particular course of thinking produce more or less than I had expected?
- What could I have done differently?
- How might I apply this line of thinking to other problems?
- Do I need to go back through the task to fill in any “blanks” in my understanding?

Organization of the learning setting in view of learner’s needs does not suffice to achieve the desired outcome. The learner should have a metacognitive capability. It has been concluded that learning is promoted when metacognitive skills are taught and improved and that metacognitive skills are required for learners to realize and think about their own cognitive structures to properly construct knowledge (Baird and Mitchell 1986; Gauld 1986). An analysis of teacher training programs would reveal that planning and organization of learning and teaching process; learning and teaching setting and development; monitoring and evaluation; collaboration with the school, the families, and the community; professional development; linguistic development; monitoring and evaluation of linguistic development; scientific and technological development; individual responsibilities and socialization; and monitoring development and evaluation fields in teacher training are congruent with the domains in the metacognitive skills approach.

Developments having started to appear from the midst of the twentieth century onward and having gained momentum in the last quarter have necessitated educational changes as in economic, social, political, and cultural fields. In this context, most of the developing and developed countries have made many renovations to better their education systems. These renovations have involved various policies and

practices intended to improve the teaching-learning process through systemic reforms, efforts to found modern institutions, supply of modern educational equipment, improvement of teachers' professional knowledge and skills, and administrative renovations at school (Karip and Köksal 1996, 245). Teachers' clear metacognitive awareness promotes students' development of cognitive and metacognitive skills (Schunk 1989). Given the fact that teachers' levels of metacognitive awareness play a significant part in students' development of metacognitive skills, an analysis of the progressive improvement level of this awareness type in undergraduates in the faculty of education is believed to prove fruitful to reveal its significant role.

In this new period, improvement of individuals' skills, individual's self-improvement, and thorough exploitation of his/her own abilities will stand out as noteworthy factors. Individuals are expected to have such skills as learning to lead an information-based life, think analytically, synthesize, solve problems, and communicate effectively. The rapid proliferation of information will require the training of selective individuals, who know what information to find and how and where to find this piece of information, not who ideally knows everything (Numanoğlu 1999, 333). It can be asserted that education understanding in the age of informatics entails the production and application of adaptive programs capable of satisfying varied needs, interests, and abilities observable in educational institutions and offering a variety of opportunities.

It has become very important to take precautions against likely adversities to be caused by globalization-induced changes in the information society and to train individuals and societies for the future to cope with changes. Hence, the preparations for this process should be launched with specific focus on educational institutions and teachers who will work therein. Individuals' integration in the rapidly changing information society, acquisition of their rightful places, attainment of new pieces of information, and improvement of their skills can only be achieved via lifelong learning and by being more qualified than ever (Yurdabakan 2002). Blakey and Spence (1990) suggest the following techniques to improve metacognitive strategies:

- (a) Identify what you know and what you do not know.
- (b) Saying what you think.

What are the fundamental skills teachers should have? Different skills are listed in reply to this question, which are teaching skills. These skills signify the basic teaching skills a teacher should have irrespective of his/her specialization. As required by the role assumed by teachers in an in-class teaching setting and the role to create this setting, teachers are expected to have many skills to produce an effective teaching management, such as considering the predetermined goals of a program, planning the teaching process, getting to know students, identifying students' learning problems, supporting students on how more easily they can learn, providing reinforcement and motivation, evaluating abilities, identifying intelligence types and learning styles, and re-teaching. These are the basic skills which are supposed to lead students to learning ([Basic teaching skills of the teachers need to be found](http://www.ogretmeninsesi.com/makale/m7.htm), <http://www.ogretmeninsesi.com/makale/m7.htm> Access Date: 25/11/2015).

The Ministry of National Education renovated firstly elementary and then middle school programs from the scratch with a new understanding and put the renewed/new programs into effect in 2005. By restructuring the programs, the ministry replaced the behaviorist approach and perennialist and essentialist educational philosophy predominant in Turkish education system till 2004 with a progressive and proactive approach based on socio-cognitive psychology. Until then, behaviorism had been mistaken for a “blessed” education and teaching practice for many. How teachers having been properly taught how to behave in the system, in other words whom they will obey, and what their primary responsibilities are will apply these programs in a constructive way as claimed poses a serious problem. As a matter of fact, a novice teacher has a great number of questions in his/her mind. This “naive” teacher expects to find some answers to these questions in the discussions during the basic education. However, the most important education he/she will receive over time will be that advancing in the system is achievable only by following the path he/she is provided with not by trying hard to find answers to the questions in his/her mind. These changes, made without meticulous preparations and probations and without seeking teachers’ opinions, have not been welcomed as fervently as expected. Many teachers went on “teaching” as they used to do despite the new program and the new approach. Thus, the changes could not be implemented *de facto*. What is actually done in classes is simply nothing but following guidebooks. Therefore, it can be asserted that teachers have been trapped in the instructions of these guidebooks. In addition, placement tests introduced to regulate transitions from elementary to middle school turned learning into a practice relying on “multiple-choice” examination processes, which lowered the age of solving multiple-choice questions from 12–13 to 8–9 years and of attending extra school classes from 12–13 to 10–11 years. The intended emphasis here is on how easily and quickly superficially memorized information is forgotten and on the failure to exploit such pieces of information when needed. Therefore, educational activities offered to students during education process should be organized in a way to allow them to avail of the acquired knowledge to solve real-life problems. In order for an effective and efficient implementation of new educational programs as a national standard, teachers who adopt a constructive approach are expected to offer not such tasks intended for the superficial memorization of a given content as “to count, to list, to name, to know, and to describe,” but “to classify, to analyze, to identify, and to construct,” which result in metacognitive processing. As expressed, a constructive teacher is far more important than a constructive education system (Leblebici and Yapıcı 2007).

According to Kuiper (2002), constructivist paradigm seconds metacognitive development by exploiting social and cognitive theories, and experiences attained through situational learning processes involving reflection and self-organization positively affect metacognitive outcomes. Teachers should motivate learners to use retrieved information, act as a problem solver and inquisitive role model, and help students take responsibilities in learning process by supporting the development of their metacognitive skills. Claiming that metacognition is improved when learners participate in activities and use metacognitive skills, or else metacognition skills cannot be taught mechanically, Dunlop and Grabinger (1996) report that learners’

reflections on learning processes they have made use of, comparison of one strategy with another, constructive learning processes allowing for discussion and evaluation of the effectiveness of a certain strategy greatly contribute to the development of metacognitive reflection. In this sense, constructive learning settings offering valuable opportunities for metacognitive development can be regarded as natural metacognitive learning settings by their nature where learners explain how they learn and form knowledge structures (Dunlop and Grabinger 1996; Yurdakul and Demirel 2011) Dunlop and Grabinger (1996).

Metacognitive skills are the first of the five dimensions of thinking (Ergin 2005):

- Metacognitive awareness
- Critical and creative thinking
- Thinking processes
- Basic thinking skills
- Subject/content knowledge

Although cognitive awareness (metacognition) has been frequently discussed, it can easily be misunderstood. Generally speaking, cognitive awareness refers to one's awareness of his/her own thinking. Any activity promoting an individual's discovery of the interrelations between mental operations and the obtained results develops metacognition too. Majority of the activities at school support the development of metacognition. It can be stated that metacognitive intuition and information consist of three main components (Ergin 2005). These are as follows:

- (a) Strategic variables mean strategies an individual can successfully use in various mental activities. It involves deciding whether a strategy employed in assorted settings is suitable or not for a new situation and a successful execution when implemented.
- (b) Variables concerning the task to be performed: An individual's understanding of what he/she is asked to do in relation to the assigned task refers to his/her awareness of whether he/she will be able to fulfill the mental activities as required by the assigned task in question. In other words, it denotes individual's knowledge about the subject, including its level of difficulty as perceived by the individual.
- (c) Variables concerning individual's self: Information on whether individual has performed similar tasks before or how success is affected in what condition. This piece of information can be regarded as individual's intuitions about himself/herself (e.g., I like painting).

New values of learning and teaching entail the reorganization of learning into a student-based activity. Not knowledge transmission but student himself/herself is foregrounded. It is not important to acquire information but to use it and produce new information out of it. To do so, teacher should metamorphose from "a knowledge transmitter" into "a person learning while teaching." Just like a trainer who strives to maximize the capacity of each and every team member, teacher is expected to be given more authority and to assume more responsibilities. Teaching is anticipated to become less stereotypical but more personalized. The complex nature of

teaching should be understood and taken as the focal point when education is reconstructed (Ozden 2006). To survive, man has to learn constantly. Everyone learns from what he/she has lived. The newly learned information brings along more learning. Hence, learner feels the urge to learn more. As a result, this highlights the necessity that teacher should attain metacognitive abilities.

Acquisition of metacognitive skills allows for the development of personal responsibility and accountability. The decision to assume personal responsibility helps individual discover the unlimited power inside and results in heightened awareness and promotes the ability to pass this piece of information onto someone else. Thanks to this process, the occurrence of reflexive behaviors decreases, and the ability to identify the needs and to meet others' needs is developed. The acquisition of metacognitive skills not only supports intuitive development but also promotes the ability to process inner voices warning us about dangers and signaling that we can transcend our personal and physical limits. Teachers with highly developed metacognitive skills act as mediators helping individuals build awareness of what is happening between them and their thoughts and in their minds. They are expected to take a great number of professional responsibilities to raise students as self-valuing individuals. It is important to determine standards in an educational program which are supposed to be in congruence with the goals and desired quality levels in order to help preservice teachers acquire the behaviors expected from them for the fulfillment of these responsibilities before they start working. This is because program standards in teacher training involve such competencies as acting consciously and appropriately in any case they may encounter while teaching, working with students having different personal characteristics and backgrounds, and being more effective in the class (Adıgüzel 2008: 54). In such a process, metacognitive skills of teachers are likely to make positive contributions for them to develop these competencies more effectively.

Information after which the present age has been named is listed among the values influential in shaping this century. A notable characteristic of the information age is that it requires individuals to know where, when, and how to use information. Individuals should be able to keep up with the rapid technological and scientific advancements; in other words they should be information literate, for them to be able to avail themselves of the opportunities of this age. It is an undeniable fact that teachers play a crucial role in educating individuals who learn throughout their lives and who can stay up-to-date. For teachers to assume this role, they are expected to be self-learning individuals throughout their educational and professional lives and thusly to provide their students with opportunities to study and to guide them about information retrieval and use (Fındıkcı 2004; Ringstead 1998).

The author believes that considering, interpreting, and understanding metacognitive skills in teacher training are crucial for the production of a more realistic educational program. Considering the characteristics of the information age, information has become the most important factor for the development and success of individuals and societies. In this period when adaptation to rapidly changing conditions is a necessity, public and private organizations are to act as fast and well-planned as possible because of the increasing technological and global competition. As can be inferred from the aforesaid, organizations should be able to produce, share, and

apply information and go through the learning process once more after obtaining the needed results. Learning organizations adopt different approaches toward change. While other organizations adapt to changes in the existing values and structures, learning organizations aim to modify themselves in line with the changes at stake and learn from them (Bayraktaroglu and Kutanis 2002).

To be able to enhance quality in education services, the qualifications of teachers offering these services should be increased. Therefore, teacher training is of great importance to improve the quality of this service.

It is mandatory that undergraduate students should be helped acquire teaching competencies and develop them to the expected level through theoretical and applied programs over the course of teacher training (YOK 1998). The misconception that students are a “tabula rasa (blank slate),” on which a predetermined set of information pieces—which is mistaken for a “good” education—will be written is a long-gone concept. It is not easy to describe the teaching behaviors to allow for effective teaching. Effective teaching behaviors vary according to subject matter, class level, students’ levels of cognitive and psychological development, and learning goals. The aim of education has been undergoing a transformation ranging from the acquisition of basic skills and phenomenological knowledge to the development of higher thinking and performance skills and so have social conceptions on what a teacher should know and do (Darling-Hammond, Wise and Klein 1999). Teachers are expected to do more than rapidly transmitting the information in course books.

Semerci (2005) notes in view of the changing teacher profile that teachers should be the ones who are patient, tolerant, and unbiased; who can research and solve learning problems; who can search for, retrieve, and use information, who can carry out analysis, synthesis, and evaluation; and who have a high level of thinking capability. If a learner is aware as to what extent his/her preknowledge affects the new subject and asks himself/herself what he/she knows and plans what he/she should do to fill in his/her learning gaps, then it means that he/she uses metacognitive skills (Namlu 2004). Metacognitive skills are crucial features which are both listed in teaching competencies and teachers should help their students acquire. Active individuals with metacognitive skills are more aware of their strengths and weaknesses when they meet others and make notable efforts to develop their own learning skills (Bransford et al. 2000). Educational arrangements that will allow for the development of metacognitive skills are suggested to increase and promote metacognitive skills (El-Hindi 1996). Teaching metacognitive strategies help students acquire a higher level of cognition by letting them discover suitable problem-solving processes and enabling them to use these processes in various situations (Victor 2004).

The teaching competencies as described in the Basic Education Support Project (BESP), hosted by the Directorate General of Teacher Training and Education in 2002, comprise 6 major and 39 minor competencies and 244 performance indicators. However, 6 major and 31 minor competencies and 221 performance indicators were identified at the “General Teaching Competencies Workshop,” organized on 21–25 June 2004, where 120 teachers, 25 faculty members, 18 primary school inspectors, 6 assessment-evaluation specialists, and representatives from the central organization of the Ministry of National Education and representatives of unions of

educational and scientific agents discussed to answer such questions as “How should the quality of teaching be in the twenty-first century?” and “What kind of qualifications are students and teachers expected to have?.” Major teaching competencies identified at this workshop are as follows:

- A. Personal and professional values—professional development
- B. Knowing students
- C. Learning and teaching process
- D. Monitoring and evaluating learning and development
- E. Interrelations between school, family, and society
- F. Program and content knowledge

(Teacher general sufficiencies. <http://otmg.meb.gov.tr/YetGenel.html>. Access Date: 05/12/2015.)

Individuals who know how to learn also know how their own learning occurs, what their strengths and weaknesses are, and how to sort out the weaknesses. Such a perspective suggests the view that individuals play a proactive role in the selection and application of what will be learned and of the strategies they employ when learning, thus necessitates the existence of a human model who is the creator of his/her own thinking. Metacognitive viewpoint allows for a mental model-based explanation of many concepts (self-regulation, etc.) starting with the prefix *self-* and effective in the performance of learners (Hacker et al. 2009). In the instruction of metacognitive skills, individual’s evaluation of his/her own learning process is essential for metacognition briefly referred to as “thinking about thinking” or “learning to learn.” Therefore, during this evaluation process, individuals should understand learning duties and what kind of knowledge sets and skills these duties require. Besides, metacognition should be integrated into the skill to draw the right inferences on how an individual should make use of his/her own strategic knowledge in certain situations and how effectively he/she can use this strategy (Melanlioğlu 2011). Kumar (1998) reports that even though different models are employed to develop metacognitive awareness skills, results of the research studies on this subject matter have revealed that metacognition is a teachable concept. Training of teachers, who are the indispensable factors to make individuals independent learners, has become more and more important at the present time. The success of constructive education, as stated by researchers, results from the exploitation of the building blocks of this concept in a way to complement each other. Metacognitive skills providing a theoretical framework in teacher training, especially in the use of thinking skills, are regarded as a series of operational and thinking ways and strategies to shape and re-format the thinking processes and problem-solving capacities of himself/herself and others (Doganay and Demir 2009). Metacognition both underlies thinking and incorporates all thinking skills. Individual’s skills to decide upon the steps to take when performing a given task, mentally plan the task and the subject, incessantly review and revise the plan, and fix the failing components are embedded in metacognition (Demir and Ozmen 2011). Actually, findings (Ushijima 1996) second the necessity to bring in activities that will help learners develop thinking skills intended for their characteristics and

self-realization. Teaching of metacognitive skills reminds of structured education because it teaches the skills on one side and allows to teach where, when, and how to use them on the other (Gelen 2004).

26.2 The Relation of Chaos Management to Metacognition

Education is a vast realm of awareness emerging in brain and expanding to encompass the educational environment. Just as a system becomes unpredictable and complicated when the number of effects involved in the system increases, the profusion of variables (parents, students, environment, etc.) results in chaos and uncertainty in education (Ertürk 2012 and Bulbul 2007). While such forces as planning, constructing and controlling attempt to establish the balance and order in the system, others such as innovations/inventions, new attempts and trials lead to imbalance and irregularity. The combination of these forces results in a highly hectic structure, which is referred to as “a chaotic organization” (Gleick 2000). Thus, schools are regarded as chaotic organizations. One should not mistake disorder for chaos discussed as the research subject of the present study (Gündüz 2002). Unlike disorder, chaos has a peculiar intrinsic order and regulation. Since education conditions 10 years ahead are unpredictable, the inclusion of chaos management in education is an obligatory management style (Gunter 1995). With the scientific paradigm shift, educational system too has gone under a reconstructive process in line with the prerequisites of the information age. For Radford (2006: 184), schools are organizations attempting to produce different effects and outcomes. It was the school that used to shape individuals in the past. However, currently the number of stimuli around an individual is infinite. Thus, the roles of schools and teachers have changed (<http://blogs.kqed.org/mindshift/2014/05/on-the-edge-of-chaos-where-creativity-flourishes/>). In this sense, it can be thought that metacognitive skills have been developed as a model suitable for the management of in-class chaos. In traditional education, teacher deems student as a monotypic being and takes on the transmitting role. In fact, a teacher with metacognitive skills accepts that students have different abilities and capabilities and guide them as such. That is, such teachers can turn chaos into an opportunity. Most of the problems in education systems stem from people and spaces, and system’s overreliance on chaos-creating factors makes it hard to produce solutions. If and when educators can reduce the dependence of educational activities on all of the systemic factors, then they can rescue the system from chaos. For example, if there is only one ball for the physical education class, then the class is dependent on that ball. A puncture in the ball leads to chaos. However, if the teacher has metacognitive skills, he/she makes up a new game without a ball in it to acquire the desired outcomes. Teacher with metacognitive skills is self-reliant and can make choices on his/her own. Thus, one can claim that teachers with metacognitive skills are more successful in chaos management. Although recent teacher recruitments have been performed to relieve the education system, the fast introduction of an excessive number of teachers lacking metacognitive skills is likely to turn

into chaos soon. As dictated by the chaos theory, attempts to restore order in a chaotic place may lead to chaos somewhere else. It is clear to see that everything has rapidly shapeshifted in this century. Hence, it is a fact that people need an education system, schools, classes, and educators not focused on content transmission but willing to help students develop advanced thinking skills and learn how to learn (Consciousness, creating in the brain. (2015) <http://kendigucunukesfet.net/?Syf=26&Syz=307600>. Access Date: 03/04/2016. 17).

26.2.1 Conclusion, Discussion, and Suggestions

Although there exist studies on metacognitive awareness of students in Turkey, there is no research on the significance of metacognitive skills for teacher training to the best of the author's knowledge. The literature review revealed studies on the significance of metacognitive awareness. Borkowski and Muthukrishna (1992) are of the opinion that metacognitive skills can help teachers who wish to create classroom settings focused on flexible and creative strategic learning. In the study on preservice teachers' employment of cognitive awareness skills while studying for a subject, Demir (2014) concluded that preservice teachers who availed of cognitive awareness strategies had higher levels of academic achievement than the ones who rarely or never used them. Similar studies by Bagceci et al. (2011), O' Neil and Abedi (1996), and Emrahoğlu and Oztürk (2010) have revealed that cognitive awareness brings along higher academic achievement and metacognitive awareness is a positive predictor of academic achievement. The premise that a teacher with metacognitive skills can only be effective in students' acquisition of metacognitive awareness can be claimed to substantiate the fact that metacognitive skills is an important teaching component. The attainment of cognitive awareness skills lays the groundwork of flexible thinking, planning, and more efficient problem solving for students. Hence, teachers' professional competencies to help students acquire cognitive awareness skills is a requirement for the use of these skills as a learning strategy (Demir and Kaya 2014).

Students with an advanced metacognition are individuals aware of what they know and what they do not. It is the teachers to create this awareness. For teachers to be able to acquire metacognitive skills, they should be offered in-service trainings; as the next step classes involving metacognitive skills should be included in the curricula of education colleges to help preservice teachers get to know and practice these skills. This is how teachers will know the most suitable strategy of all for their classrooms. Although metacognitive skills are teachable, teachers having received strategy education should not be expected to achieve immediate success for it takes time to internalize and skillfully use strategies (Muhtar 2006 and Dogan 2013). Many qualifications have been identified as teaching competencies, yet such efforts have fallen short of describing how these competencies can be practiced. The present paper is believed to serve to compensate for the absence of such studies. Prospective teachers' acquisition of self-planning, self-organization, self-control, and self-evaluation skills will help them both educate more independent students

and act as a role model of cognitive awareness for their students. Schraw and Graham (1997) state that metacognitive skills are integral components of effective learning because they enable individuals to monitor and regulate their own cognitive performances study overlap with those. Teachers and preservice teachers are anticipated to have a high level of metacognitive awareness, which holds a crucial place in teaching. Therefore, preservice teachers should receive training to develop the two components of metacognition, i.e., a knowledge of cognition and organization of cognition. This is achievable by content modifications in undergraduate programs. In Turkey, there is no need for another practice after graduation to be a teacher, which impedes teachers' self-development and professional development. Besides, it can be suggested that the number of research-oriented courses including scientific studies should be increased to support personal developments of preservice teachers and in order for them to be able to take up research-focused learning and development as habitual behaviors. Contemporary teacher whose primary duty is to present students with pathways to information and the ways to use the retrieved information, not to transmit information, should be trained as a leader, the leader of his/her class, then of the school. Training teachers who know how to use learning strategies; can explain when and why to use these strategies; make use of and practice planning, goal-setting, and resource-creation skills before teaching; and have metacognitive skills, which render learning process more fruitful, allows for the monitoring of learning process and pinpointing and correcting errors and foregrounds teacher's skills, intellectual resources, and abilities. Considering the properties of cognitive awareness strategies, whether they are suitable strategies for teaching approaches adopted in Turkish education system, can be investigated by other researchers.

Previous research studies have revealed that metacognitive skills play decisive roles in students' achievements and that students with high levels of metacognition are more successful. Additionally, achievement levels of students who are taught to acquire metacognitive strategies have been observed to increase. Thusly, metacognition can be exploited as a useful tool for students' developments. However, it was realized that activities intended for the development of such skills are not sufficiently included in elementary school programs in Turkey although it is a relatively new program produced in 2004. It is thought that the inclusion of activities and outcomes in future programs likely to support students' metacognitive developments will prove beneficial. In addition, experimental research studies to shed light on the efforts to develop such programs are considered to be helpful. Teaching is one of the outstanding jobs shaping societies' futures and protecting their futures and pasts. It is important for the development of teaching as a profession that faculties of education properly train teachers and that teachers use various teaching strategies and realize positive and negative teaching experiences. Learning starts by asking questions. When a student has started to question and produce the right questions along with the right answers, it means that the learning process has started (Kana 2015). It is obligatory that the present infrastructures and practices of faculties of education be renovated and rearranged in line with the necessities of the time. Faculties of education are among the most important faculties structured to get indi-

viduals prepared for the upcoming generations. A high level of cognitive awareness of the teachers trained in the faculties of education is of grave importance.

The author thinks that contemporary lifestyle teaches individuals how to live by getting lost rather than how to find themselves. This postmodern imposition has infiltrated in the very existence of modern human, enslaved souls, promoted popular culture, and devour individuals. For humans to be themselves, they should develop metacognitive awareness. Thus, chaos management in education becomes easier thanks to teachers with metacognitive skills. If we manage to train teachers in consideration of metacognitive skills and use these skills as a means of humanization, then we can take a huge step to solve a serious problem.

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Chapter 27

A Source of Inspiration for Women: Christine Lagarde



Şaduman Kapusuzoğlu and Barış Eriçok

Abstract Christine Lagarde studied law in Paris, and she joined an international law firm, Baker & McKenzie. As a woman, she took on several positions throughout her career including partnership, managing partnership, membership to executive committees, being the chairperson of the executive committee and chairperson of the global strategic committee in Baker & McKenzie. Politically, she became the deputy minister of foreign trade in France at first and then the minister of finance in 2007. Moreover, Christine Lagarde was elected as the new managing director of International Monetary Fund (IMF) as the first woman to hold this position. Becoming a top leader of an organization requires some crucial leadership skills: compelling leadership behaviours, vision, providing balance, handling international issues, managing chaotic situations and networked relations and many others. In this chapter, Christine Lagarde's life story, her leadership style and her current position are subjected to theoretical and functional analysis in the context of women leadership. This chapter concludes that because of being at the top in a complex organization, Christine Lagarde can be seen as a source of inspiration and motivation for women who want to break the glass ceiling and reach the top positions.

Ş. Kapusuzoğlu (✉)

Department of Educational Management, Planning, Supervision and Economics,
Hacettepe University, Ankara, Turkey
e-mail: sadumankapusuzoglu@gmail.com

B. Eriçok

Department of Foreign Languages, Nevşehir Hacı Bektaş Veli University, Nevşehir, Turkey
e-mail: barisericok@gmail.com

27.1 Introduction

27.1.1 *Life Story of Christine Lagarde*

Christine Lagarde was born to a professor father and a linguist mother in France in 1956. The family lived in Le Havre, on the northern French coast. When she was 16, her father died so her mother raised Christine Lagarde with her three younger brothers. Christine Lagarde graduated from Claude Monet High School in Le Havre in 1974. She was mainly an active character and interested in many sports including scuba diving, swimming and cycling. She also sang backup in a group called Les Messages Mixe. After finishing high school, she won a scholarship to the Holton Arms School (Bethesda, Maryland, USA) in an exchange programme. Holton Arms School is a private girl's preparatory school that promotes academic excellence, personal choice and untraditional subjects for girls and community spirit. During her time in the USA, she worked as an assistant of Representative William Cohen. Then, she returned to Paris and obtained her bachelor's degree in law at the University of Paris X. For her master's degree, she studied political science at the Institute of Political Studies in Aix-en-Provence. During her master's degree, she paid special attention to business and labour law. Furthermore, she had also given lectures in law at University of Paris X before she joined Baker & McKenzie. She also holds a master's degree in English (Nedeva 2015, 319; Dieterle 2013, 202; Bronwyn 2013; Lerner 2004, 18).

After having completed her education and been admitted as a lawyer to the Paris Bar, Lagarde had many difficulties in finding her first job mainly because of being "a woman", even though she had a perfect background. Finally, Christine Lagarde, at the end of a female-driven job interview, managed to join the international law firm of Baker & McKenzie as an associate, specializing in antitrust, labour law, mergers and acquisitions in 1981. She rose quickly in Baker & McKenzie, and she became a partner in 1987. Then, between the years of 1991 and 1995, she served as managing partner of the Paris office. She continued to move up the career ladder and became a member of the Executive Committee of Baker & McKenzie in 1995. She worked in this position from 1995 to 1999 as the first female member ever. In 1999, she was elected as the chairman of the Global Executive Committee of Baker & McKenzie and chairman of the Global Strategic Committee in 2004. During her time in Baker & McKenzie, the turnover of the firm increased by 50% (Bronwyn 2013; Dieterle 2013, 202; Atal 2011, 78; Lerner 2004, 18).

In 2005, Christine Lagarde returned to France and became the deputy minister of foreign trade in the government of Dominique de Villepin. Her work in that post led her being named among the world's 30 most powerful women by Forbes magazine (Bronwyn 2013). She was appointed as the minister of finance by the newly elected President Nicolas Sarkozy in June 2007. Shortly afterwards, she was appointed as the minister of finance – the first woman in that position. In 2011, after the Dominique Strauss-Kahn's resignation, Christine Lagarde was elected as the new managing director of International Monetary Fund (IMF) as the first woman to hold

this position (Nedeva 2015, 320). Today, Christine Lagarde is well-known all over the world with her contributions to the world of international finance and law (Dieterle 2013, 202). Christine Lagarde has been married twice, and she has two sons.

27.2 Leadership and Christine Lagarde

Everything evolves. Globalization, shifting paradigms, new technologies, new needs, sophisticated relations, online services, busy working hours and many more can be seen as evidence for this evolvement. All these and other evolving factors make the current conditions pretty different from the past, even from what was valid a few years ago. As a result, organizations and societies, where people live in and work at, also evolve and become more complex. These changes require people to undertake new roles and adapt to new situations. As expected, this change requires new leadership characteristics and understandings for organizations and societies. Then, what is leadership and where does it come from?

For some, leadership and good management are the same; for others, it takes persuasion to the centre. Some see leadership as problem solving, others as a fostering factor for opportunities. For some, leadership is a social phenomenon, but in fact leadership is complex and intrapersonal (Iszatt-White 2012, 37). When the literature is examined, one can easily see that leadership is studied under various headings such as great man theories, trait theories, behaviour theories, contingency theories, influence theories, relational theories, etc. Moreover, there are numerous definitions and key words of leadership, and, as cited in Yukl (2010, 20), according to Stogdill (1974, 259), “there are almost as many definitions of leadership as there are persons who have attempted to define the concept”. As an example, one of the very beginning studies about leadership was carried out by Stogdill (1948, 63-67). He examined the studies about leadership and made a list of the related concepts about leadership. His study shows that leadership is related to large numbers of topics including capacity, achievement, responsibility, participation, status and situation. According to Bass and Stogdill (1990, 3), “leadership is one of the world’s oldest preoccupations”. Another valuable contribution to leadership was made by Northouse (2010, 5), and he defines leadership as “a process whereby an individual influences a group of individuals to achieve a common goal”. Similarly, according to Yukl (2010, 26), leadership is the “process of influencing others to understand and agree on what needs to be done and how to do it, and the process of facilitating individual and collective efforts to accomplish shared objectives”. Bertocci (2009, 53) made a remarkable judgement about the leadership theories. According to him, “the earlier theories often contributed to the development of newer approaches to thinking about leadership in organizations, while subsequent theories attempted to overcome the shortcomings of earlier theories”. As can be seen in the above definitions and expressions, there are numerous point of views about leadership; “influencing people to achieve the goals” is one of the key points in leadership definitions.

Moreover, it can be interpreted that leadership has an evolving nature; the definitions and point of views about leadership have been changing according to the necessities of the time and circumstances of the moment.

Although it is not enough, according to Landy and Conte (2013, 505), in 2012, some women got the top leadership positions in some of the largest American corporations, such as IBM (Virginia Rometty), Kraft Foods (Irene Rosenfeld) and PepsiCo (Indra Nooyi). Not only females from the USA but also from other countries have been ascending to top positions. As an example, the last three US secretaries (Madeline Albright, Condoleezza Rice and Hillary Clinton) can be given. Another prominent example is Christine Lagarde. In 2011, France's previous minister of finance Christine Lagarde was elected as the new leader of the International Monetary Fund.

Christine Lagarde became the leader of the IMF after Dominique Strauss-Kahn scandal in 2011 as the first woman in this position. Moreover, she took over this position in the course of an economic crisis. Becoming a woman leader in such critical times in men's world requires some key leadership features. Christine Lagarde gave an interview to Adi Ignatius, Harvard Business Review's editor in chief, about leadership, women in power and how to foster change in a complex organization. Ignatius (2013, 111) states that according to Christine Lagarde, being an effective leader means, firstly, believing what you are doing and feeling comfortable with the organization and its strategy. And then, you have to focus on your goal that you set. Finally, considering your staff is another indicator of being an effective leader. As a leader, you have to know how to hear your personnel profoundly. You have to show that you are aware of the way that each staff handles the issues, and you have to make sure that your workforce feel as part of the organization. Another equally essential point about leadership according to her is that leaders should have some certain skills. A leader needs energy to success and self-confidence to hold on tight to his/her business or organization. To conclude, Christine Lagarde's view of leadership is based on self-belief towards the organization's goals and personnel management that will provide the staff to feel comfortable.

Women are quiet and powerful; women are deep and intense; women are modest and wise (Erçetin and Açıkalın 2016). On the other hand, a number of authors and researchers from different cultures in different times have noted that there are very few women in leadership positions (Talbot 2014, pp. 95–96; Harrison 2013, 297; Eagly and Karau 2002; Schein 1973) and historically, leadership has been conceptualized as the business of men (Kenkle 2004, 1). Similarly, Erçetin (2016, 5) states that “in general, people easily perceive a man as a leader but cannot perceive or accept a woman in that role”. Complementary to this, there are many studies that suggest everyone has his or her own unique leadership style; in other words, leadership does not belong to just men (Chapman 2010; Tarr-Whelan 2009; Rosener 1990, 119–125; Epstein et al. 1990). Erçetin and Düzer's multidimensional perceptual leadership model (2008, pp. 28–30) can also be interpreted in the scope of gender imbalance in leadership of businesses and organizations because in their model Erçetin and Düzer state that “everyone is a potential leader”, so no other factors can determine leadership except for the perceptions of the leader and those of his/her

followers. Concerning this issue, Christine Lagarde states in the aforementioned interview that there are very few women in leadership positions because leadership takes too much time to reach the top. It requires a large amount of energy to manage to stay in the game. She thinks that women have a choice; they can either raise a family or rise in their business. At the same time, Lagarde offers a solution to the problem of gender imbalance in organizations. She asserts that hard data works. Lagarde suggests measuring the performance of women and men can remove the obstacles and prejudice. This will help women having the same career opportunities as men.

In her interview, Christine Lagarde asserts that there is a difference between masculine and feminine leadership characteristics. She adds that female leaders have some certain dominating features such as ability to listen, desire to form a consensus and attention to risk. Thus, Christine Lagarde thinks that especially in the time of crisis, women can exhibit more suitable leader behaviours. One can easily see that these expressions reflect the general beliefs in the literature. According to Park's (1996, 13) citation from Bem (1974), there are two dimensions of gender role: masculinity and femininity. Being aggressive, independent, objective, logical, rational, analytical and decisive are the typical characteristics of masculinity; however femininity includes being emotional, sensitive, expressive, cooperative, intuitive and warm and a tactful nature. Moreover, she sees crisis as an opportunity for leaders to show themselves. In the moments of crisis, leaders can prove their leadership skills well. Leaders should try to turn the crisis into an opportunity bearing in mind that famous quote: in every difficulty lies opportunity.

27.3 Conclusion

Women can be seen as the driving force in the lives of the people because life begins with women. Their biological and social responsibilities and roles attribute an irreplaceable meaning to them. In the face of the difficulties, women sacrifice them first for their family's benefit. Moreover, as everyone knows, there is a gender discrimination that prevents women to rise through their careers. These factors, responsibilities and roles hinder their chance in leadership. As a result, they have to struggle with their social roles besides leadership efforts. In spite of all these difficulties and challenges, some women do their best to become strong and to survive on the top. Christine Lagarde is a distinguishing character who managed to rise through her career and stand up to these challenges. It is apparent that getting to the top in the IMF is not simple because the IMF is a cosmopolitan, multicultural and chaotic organization and it has numerous challenges. Providing the balance between these challenges and surviving in this environment makes her work heavier. As a woman who is at the top, Christine Lagarde has managed to rise and stay at the top, so she may be seen as a motivation and inspiration source for women.

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Chapter 28

The Effects of Diverse Personality Characteristics of Teachers on Professional Satisfaction: A Sample of Mersin City



Lütfi Üredi and Hakan Ulum

Abstract Personality characteristics are a combination of psychological and physical features that differ among human beings. Humans' personality characteristics are closely related with the professions they carry out. Under suitable conditions, a person chooses a job that conforms with his or her own personality. Occupational selections are realized at a time when personality has just been formed and a chaotic setting covers the inner world of the individual. Some professions, among which teaching profession comes first, cannot be carried out through ignoring personality characteristics. Teachers must be aware of both their own personality characteristics and the characteristics their profession requires. Adaptation to such a condition is to provide high professional motivation and professional satisfaction, as well as creating well-trained individuals educated by teachers in relation to a relatedly proper society. On the other hand, maladaptation to such a condition is to create a teacher profile in which there is no professional satisfaction and no success in social role. Teachers having different personality characteristics will also represent diversities in their professional satisfaction. Issuing from the above premise, this study is conducted with the aim of investigating the effects of different personality characteristics owned by teachers on their professional satisfaction. The relationship between diverse personality characteristics of teachers and their professional satisfaction is identified with reference to different variables. The study is based on a survey design. The sample of the study is composed of 516 primary and secondary school teachers employed in Mersin city centre and its connected counties. The data of the study are collected by scales on personality characteristics and professional satisfaction. The data transferred into the computer are analysed and interpreted by

L. Üredi (✉)
Mersin University Education Faculty, Mersin, Turkey
e-mail: lutfiuredi@gmail.com

H. Ulum
Ministry of National Education, Ankara, Turkey
e-mail: hakanulum@gmail.com

means of statistical techniques. According to the results, the teachers are found to be extrovert, responsible, open to innovations, and calm. Besides, there exists a significant relationship between the personality characteristics and the professional satisfaction of teachers. It is also detected that there is a positive correlation between the professional satisfaction of teachers and their extroversion, responsibility, tender mindedness, and openness to experiences, while there stands a negative correlation between the professional satisfaction and emotional instability. The results of the study present an existing relationship between the professional satisfaction of teachers and their personality characteristics, as well as their demographic features.

28.1 Introduction

The change of the world from an industry-based environment to a knowledge-based atmosphere has been rapidly growing recently. So, the world of education has renovated itself and produced much pedagogy to meet the new system (Akbaşı and Üredi 2015). In such a rapidly changing world, uncertainties have accumulated at a fast rate, especially in such sectors as economy, politics, and education (Üredi 2015). As a result, the necessities of the modern world have brought about the requirement of proper approaches and pedagogies in the education system. Being the crucial elements of the education system, the personality characteristics and job satisfaction of teachers are the significant variations of these approaches and pedagogies.

Personality and occupation are two related concepts. The occupational life of a person that covers most of his/her life should be compatible with his/her personality structure as well. Occupational preferences that are not suitable for the personality characteristics abrogate the quality of life.

The phase of choosing an occupation corresponds to puberty. Puberty, for those in this period, means chaotic environments at diverse levels. At such chaotic environments, those whose personality characteristics have not developed yet as a result of the development period may take wrong decisions. The selection of an occupation in chaotic environments will be directly affecting job satisfaction in the future. The stress caused by the chaotic environment will direct the individual whose personality has not developed yet at this period to the wrong job and will decrease the job satisfaction level to the lowest degree. In this respect, this period is a time at which the individual should be supported and guided accordingly. Upon passing this period, the reflection of diverse personality characteristics within the individual and the job satisfaction as a result of this reflection are both expected circumstances.

When the concept of personality is investigated, we come across many definitions in literature. One of the most important factors which make people different from each other is personality. Every human represents an individual, and individualism is the structure of relationships originating from human personality and formed idiosyncratically. In other words, personality reflects all the distinct, fixed, and consistent features of an individual (Aytaç 2001).

Personality refers to the specific, complex, and transformative combination of such components as physiological structure, mental and emotional reaction forms, and the formation of self. This combination covers the positive and negative characteristics of a person in all his/her life. Personality development of an individual may be related to his/her society, socio-economic status, and cultural impact (Bakırcıoğlu 1982).

Personality has an important effect on the perceptions and evaluation at the work place. Since such a circumstance came to be known, personality characteristics of the staff have been considered as an important variable in various research areas (Schneider and Smith 2004, 425).

Some of the human necessities are physiological, while some are psychological. This is a fundamental principle of all professional activities. While money is gained as a result of occupational productivity to meet the physiological needs, such concepts as self-expression, achievement of success, being famous, and happy correspond to psychological needs (Kuzgun et al. 2005; Kuzgun 2000). When viewed from this perspective, professional satisfaction is an important need for humans.

Job satisfaction includes positive and negative emotions related to the occupational environment. Job satisfaction is such a case in which the individual has expectations of his/her job as well as his/her gains out of the job. When the expectations are more than the gains, dissatisfaction of the individual appears (Yelboğa 2008). In other words, job satisfaction means the contentment of people in their jobs (Mersin 2007). While the job is selected by considering the educational status of the individual, it is also important to choose a job according to personality characteristics, competencies, and personal goals of the individual in order for job satisfaction to be realized (Yelboğa 2008). When job satisfaction is not achieved, job burnout appears as a result. Job burnout is shortly defined as taking a dislike to one's job psychologically as a consequence of intense stress and dissatisfaction related to his/her own job (Maslach et al. 2001).

The personal characteristics of people are closely related to their professional tendencies. There has to be a harmony between the features that a profession requires and the own characteristics of people who prefer that profession. For instance, this harmony will result in teachers with high motivation and occupational satisfaction, individuals educated well by such content teachers, and healthy societies accordingly. Unconformity on the other hand will erode the job satisfaction of teachers and render them unsuccessful in their social roles.

28.2 The Aim of the Study

The aim of this study was to find out the personality characteristics of teachers employed at educational institutions and to investigate their job satisfaction in terms of diverse variations, as well as discovering the relationship between their personality characteristics and job satisfaction.

The answers were sought to the following research questions in light of the aims of the study:

1. What are the personality characteristics reflected by teachers employed in the Ministry of Turkish National Education?
2. Is there a significant difference between personality characteristics and gender of teachers employed in the Ministry of Turkish National Education?
3. Is there a significant difference between personality characteristics and the subject major of teachers employed in the Ministry of Turkish National Education?
4. Is there a significant difference between personality characteristics and seniority of teachers employed in the Ministry of Turkish National Education?
5. What is the level of job satisfaction of teachers employed in the Ministry of Turkish National Education?
6. Is there a significant difference between job satisfaction and gender of teachers employed in the Ministry of Turkish National Education?
7. Is there a significant difference between job satisfaction and subject major of teachers employed in the Ministry of Turkish National Education?
8. Is there a significant difference between job satisfaction and seniority of teachers employed in the Ministry of Turkish National Education?
9. What is the relationship between job satisfaction and personality characteristics of teachers employed in the Ministry of Turkish National Education?

28.3 Methodology

28.3.1 Research Design

In this study, a general survey design has been used. General survey design is utilized with the aim of having a general opinion about a whole population or a sample. In general survey models, single and relational surveys can be conducted (Karasar 2014, 79). By using this model in our study, we descriptively analysed the personality characteristics of teachers and the effects of these characteristics on their occupational satisfaction. In other words, through a survey method, the personality characteristics and job satisfaction of teachers were figured out and investigated according to several variations. Besides, the variations were investigated by means of t-test and ANOVA techniques. The relationship between the personality characteristics and job satisfaction of

teachers was established by means of correlational research design, and within this respect, Pearson's product-moment correlation coefficient was utilized for the analysis.

28.3.2 *The Sample of the Study*

The sample of this study consists of teachers who are employed in Mersin, Turkey. In other words, the participants of the study consist of 516 teachers working in Mersin in the 2015–2016 academic year. Besides, the participants were selected through a simple random sampling method. Voluntariness and maximum diversity were taken into consideration while choosing the sample (Table 28.1).

Five hundred sixteen teachers participating in the study represent the following demographic data:

1. %67 female ($N = 346$) and %33 male ($N = 170$)
2. %48.3 ($N = 249$) in 0–5 years of seniority, %21.3 ($N = 110$) in 6–10 years of seniority, %13.2 ($N = 68$) in 11–15 years of seniority, %7.9 ($N = 41$) in 16–20 years of seniority, and %9.3 ($N = 48$) in 20 years of seniority
3. %36 ($N = 186$), classroom teacher; %5.8 ($N = 30$), maths teacher; %8.9 ($N = 46$), Turkish teacher; %2.7 ($N = 14$), science and technology teacher; %4.3 ($N = 22$), social science teacher; %14.3 ($N = 74$), english teacher; and %27.9 ($N = 144$), other majors.

Table 28.1 Demographic data of the participants

	(f)	%	Total	
			(f)	(N)
Gender	Female	346	67.1	516
	Male	170	32.9	
Seniority	0–5 years	249	48.3	516
	6–10 years	110	21.3	
	11–15 years	68	13.2	
	16–20 years	41	7.9	
	20 years and above	48	9.3	
	Classroom teaching	186	36	
	Maths	30	5.8	
	Turkish	46	8.9	
Major	Science and technology	14	2.7	516
	Social sciences	22	4.3	
	English	74	14.3	
	Others	144	27.9	

28.3.3 Instruments

In the study, besides scales of personality characteristics and job satisfaction, a personal data scale was used as an instrument. Data on gender, major, and seniority was obtained through the personal data scale designed by the researchers.

Data collection on personality characteristics was done through a scale (ten-item personality scale) designed by Gosling et al. (2003) and adapted into Turkish use by Atak (2013). The scale evaluates five important personality characteristics such as openness to experiences, responsibility, extroversion, docility, and emotional stability. In this type of seven-degree Likert scale, there stand two items in each sub-dimension. Besides, a scoring tool formed by Gosling et al. (2003) was utilized in the study.

The measurement of occupational satisfaction has been implemented through five-degree Likert scale (Professional Satisfaction Scale) with 20 items, which was designed by (Kuzgun et al. 1999; 2005).

28.3.4 Data Collection

The data of the study were gathered through online “Google Form”. Besides, the teachers employed in Mersin were contacted through social media and e-mail. After making the required explanations, the participants were asked to fill in the scales by means of an online web link.

28.3.5 Data Analysis

The gathered data was analysed by means of Statistical Package for the Social Sciences (v.22.0) through specific coding techniques peculiar to SPSS (v.22.0). The statistical analysis techniques used for the analysis were mean, standard deviation, frequency, one-way ANOVA, and independent sample t-test.

28.4 Findings (Table 28.2)

The dominant personality characteristics of teachers have been determined by taking the average total score for each sub-scale into consideration. The personal characteristics belonging to the sub-scale have been accepted as the basic personality characteristics of teachers, just in accordance with the scale. Teachers have represented such personal characteristics as extroversion, emotional stability, openness to experience, responsibility, and docility at medium level. The easy scoring tool formed by Gosling et al. (2003) was utilized in the study.

Table 28.2 Personality characteristics of teachers

	Extraversion	Docility	Responsibility	Emotional stability	Openness to experiences
Scores	5.83	5.34	6.01	5.05	5.63
Norms	4.44	5.23	5.4	4.83	5.38
Level	Medium	Medium	Medium	Medium	Medium

Table 28.3 *T*-test results according to gender

Sub-dimensions of the ten-itemed personality scale	Gender	<i>N</i>	\bar{X}	<i>S</i>	Sd	<i>T</i>	<i>P</i>
Extraversion	Female	346	4.2500	.92333	514	1.328	.185
	Male	170	4.3647	.91951			
Emotional stability	Female	346	4.4061	1.19806	514	.871	.384
	Male	170	4.5029	1.16342			
Openness to experiences	Female	346	3.8685	1.03177	514	.289	.773
	Male	170	3.8412	.96142			
Responsibility	Female	346	4.2182	.86607	514	1.564	.118
	Male	170	4.0912	.86973			
Docility	Female	346	4.2182	1.08899	514	2.164	.031
	Male	170	4.0912	1.22462			

According to the findings of the study, the participant teachers' personality characteristics are at medium level, according to the scores of the sub-dimensions of the scale. The teachers represent such personality characteristics as extrovert at medium level ($5.83 > 4.44$), docile at medium level ($5.34 > 5.23$), responsible at medium level ($6.01 > 5.4$), emotionally stable at medium level ($5.05 > 4.83$), and open to experiences at medium level ($5.63 > 5.38$) (Table 28.3).

While there is no significant difference between gender and the personal characteristics such as extroversion, emotional stability, openness to experiences, and responsibility ($p > 0.01$), there is a significant difference between gender and docility ($t(514) = 2164, p < 0.01$). Male teachers reflect docility ($X = 4,2182$) more than female teachers ($X = 4,0912$).

Table 28.4 represents whether there is a significant difference between the scores obtained from sub-dimensions of the ten-itemed personality scale and major of the teachers or not. The personality characteristics of the teachers display no significant difference between extraversion, emotional stability, openness to experience, responsibility, docility, and the major of the teachers ($p > 0.05$).

When we take a look on Table 28.5, establishing whether there is a significant difference between the scores obtained from sub-dimensions of the ten-itemed personality scale and seniority of the students or not is clearly understood. The personality characteristics of the teachers display no significant difference between extraversion, emotional stability, openness to experience, responsibility, docility, and the seniority of the teachers ($p > 0.05$) (Table 28.6).

Table 28.4 ANOVA results according to major

Sub-dimensions of the ten-itemed personality scale	Variation resource	<i>S</i>	<i>Sd</i>	\bar{X}	<i>F</i>	<i>P</i>
Extraversion	Between groups	3.876	6	.646	.756	.604
	Within groups	434.637	509	.854		
	Total	438.513	515			
Emotional stability	Between groups	7.999	6	1.333	.946	.461
	Within groups	717.016	509	1.409		
	Total	725.016	515			
Openness to experiences	Between groups	9.948	6	1.658	1.643	.133
	Within groups	513.615	509	1.009		
	Total	523.563	515			
Responsibility	Between groups	.343	6	.057	.075	.998
	Within groups	388.108	509	.762		
	Total	388.452	515			
Docility	Between groups	6.204	6	1.034	.795	.574
	Within groups	662.413	509	1.301		
	Total	668.618	515			

The scores in the occupational satisfaction scale dispersed between 20 and 100. The scores of the occupational satisfaction attained by the teachers participating in the study are nearly at medium level ($X = 44.88$) (Table 28.7).

According to the findings of the study, there is a significant difference between the scores the teachers obtained on occupational satisfaction scale and gender variation ($t = 2.770$, $p > 0.05$). In other words, the occupational satisfaction of male teachers ($X = 2,3738$) is higher than female teachers ($X = 2,1808$) (Table 28.8).

The findings of the study suggest that there is no significant difference between the scores which were obtained by the participating teachers from the occupational satisfaction scale and their major ($F = 0.604$, $p > 0.05$).

One can easily understand from Table 28.9 that there is a significant difference between the scores which were obtained by the participating teachers on the occupational satisfaction scale and their seniority ($F = 0.604$, $p > 0.05$).

	Seniority	<i>N</i>	<i>X</i>	<i>Sd</i>
(A)	0–5 years	249	2.2191	.72354
(B)	6–10 years	110	2.4091	.73607
(C)	11–15 years	68	2.3132	.84317
(D)	16–20 years	41	2.3012	.74014
(E)	20 years and above	48	1.8521	.64238
	Total	516	2.2444	.74887

Table 28.5 ANOVA results according to seniority

Sub-dimensions of the ten-itemed personality scale	Variation resource	<i>S</i>	Sd	\bar{X}	<i>F</i>	<i>P</i>
Extraversion	Between groups	1.362	4	.341	.398	.810
	Within groups	437.151	511	.855		
	Total	438.513	515			
Emotional stability	Between groups	8.582	4	2.146	1.530	.192
	Within groups	716.433	511	1.402		
	Total	725.016	515			
Openness to experiences	Between groups	5.633	4	1.408	1.389	.236
	Within groups	517.930	511	1.014		
	Total	523.563	515			
Responsibility	Between groups	1.074	4	.268	.354	.841
	Within groups	387.378	511	.758		
	Total	388.452	515			
Docility	Between groups	4.613	4	1.153	.887	.471
	Within groups	664.005	511	1.299		
	Total	668.618	515			

Table 28.6 Descriptive statistics of the scores of occupational satisfaction

	Min.	Max.	<i>X</i>	Sd	<i>N</i>
The mean of the scores of occupational satisfaction	1.00	4.80	2.2444	.74887	516

Table 28.7 T-test results of the scores obtained by teachers from the occupational satisfaction scale according to gender

	Gender	<i>N</i>	\bar{X}	<i>S</i>	Sd	<i>T</i>	<i>P</i>
Occupational satisfaction	Female	346	2.1808	.70618	514	2.770	.006
	Male	170	2.3738	.81595			

Table 28.8 ANOVA results of the scores obtained by teachers from the occupational satisfaction scale according to major

	Variation resource	<i>S</i>	Sd	\bar{X}	<i>F</i>	<i>P</i>
Occupational satisfaction	Between groups	2.042	6	.340	.604	.727
	Within groups	286.772	509	.563		
	Total	288.814	515			

Table 28.9 ANOVA results of the scores obtained by teachers from the occupational satisfaction scale according to seniority

	Variation resource	<i>S</i>	<i>Sd</i>	\bar{X}	<i>F</i>	<i>P</i>	
Occupational satisfaction	Between groups	10.986	4	2.746	5.051	.001	E-A,
	Within groups	277.828	511	.544			E-B, E-C
	Total	288.814	515				

Table 28.10 The correlational relationship between personality characteristics and occupational satisfaction

	Occupational satisfaction
Extraversion	-0.42**
Emotional stability	0.087**
Openness to experiences	0.056**
Responsibility	0.176**
Docility	-0.138**

**Correlation, significant at $p < 0.01$

According to the one-way ANOVA results, it was found out that there is a significant difference between the occupational satisfaction of the teachers and years of seniority ($F = 5.051$, $p > 0.05$). Scheffe test was utilized in order to establish the dispersion, and it was seen that the occupational satisfaction of those with 20 years of seniority ($X = 1,8521$) was lower than those with (A) 0–5 years ($X = 2,2191$), (B) 6–10 years ($X = 2,4091$), and (C) 11–15 years ($X = 2,3132$) of seniority.

As it can be understood from the table, it was detected that there is a significantly negative relationship between extraversion and occupational satisfaction at medium level ($r = -0.42$, $p < 0.01$), while there is a significantly positive relationship between emotional stability and occupational satisfaction at low level ($r = 0.087$, $p < 0.01$). Besides, we can clearly understand from Table 28.10 that there is a significantly positive relationship between openness to experiences and occupational satisfaction at low level ($r = 0.056$, $p < 0.01$), while there is a significantly positive relationship between responsibility and occupational satisfaction at low level ($r = 0.176$, $p < 0.01$). Finally, one can conclude from the table that there is a significantly negative relationship between docility and occupational satisfaction at low level ($r = -0.138$, $p < 0.01$).

28.5 Discussion and Conclusion

It is easier to gain success for people who choose jobs according to their personality characteristics. Teaching is a stressful job, and the occupational satisfaction of teachers who choose this profession may be affected by several factors. Personality

characteristics come first among these factors. In this study, it was found out that teachers have diverse personality characteristics. Besides, it was also understood that the score of occupational satisfaction is at medium level. Moreover, the diverse personal characteristics of teachers display relations with occupational satisfaction in different forms.

According to the findings of the study, the teachers represented each personal characteristic as extraversion, emotional stability, openness to experiences, responsibility, and docility at mutual and medium levels. The conclusion of a similar research study which was conducted on teacher candidates is that the highest score belongs to the personality characteristics of openness to experiences, while the lowest score belongs to the personality characteristics of emotional stability (Kösece et al. 2015).

The results suggest that while there is no significant difference between the personality characteristics of teachers such as extraversion, emotional stability, openness to experiences, responsibility, and gender, there is a significant difference between docility and gender. Besides, there is no significant difference between such personality characteristics as extraversion, emotional stability, openness to experiences, responsibility, docility, and the majors of the teachers. In terms of the years of seniority, there is no significant difference with such characteristics as extraversion, emotional stability, openness to experiences, responsibility, and docility levels. Upon making a wide literature review, we see that there are such studies investigating the teachers as directors rather than teachers.

The study displays that there is a significant difference between the occupational satisfaction of teachers and gender. In accordance with that, male teachers' occupational satisfaction is higher than that of female teachers. Kınalı (2000) found out that male consultant teachers are more satisfied in their jobs, compared to female consultant teachers. The studies which are similar to our study in terms of the topic represent differences in findings regarding the relation between gender and occupational satisfaction. The studies in which there is no significant difference between gender and occupational satisfaction are those of Biçer (2013), Güçray (1995), Çifçili (2007), and Yıldız (2010). Yet, Aslan (2001) found out in his study that the occupational satisfaction rate of female teachers is higher than that of male teachers. The findings established in terms of teachers' subject majors show that there is no significant difference between occupational satisfaction and the major of the teachers.

Furthermore, the study expresses that the occupational satisfaction of the teachers differs significantly with years of seniority. The occupational satisfaction of teachers whose seniority is 20 years and above is lower than those in 0–5 years, 6–10 years, and 11–15 years. Biçer (2013) found out a significant difference between the occupational satisfaction of teachers and their years of seniority. Karahan (2006), in his study, found that the more the seniority is, the more the occupational satisfaction is, which is similar to the study of Günbayı (2001) who found out the same results. In addition, Kayhan (2008) detected that the level of occupational satisfaction varies according to the seniority.

The findings of the study state the following: that there is a significant inverse relationship between the extraversion personality characteristics of people and the occupational satisfaction at medium level, a significant linear relationship between the personality characteristics of openness to experiences and the occupational satisfaction at low level, a significant linear relationship between the responsibility characteristics and occupational satisfaction at low level, and a significant inverse relationship between docility and occupational satisfaction at low level. To that end, while the more the emotional stability, openness to experiences, and responsibility are, the more the occupational satisfaction is. Besides, the more docility and extraversion are, the less the occupational satisfaction is. Biçer (2013) found out that there is a significant relationship between the occupational satisfaction of people and personality types. In this respect, the researcher detected a significant linear relationship between occupational satisfaction and personality characteristics such as extraversion, docility, responsibility, and openness to experiences, while also detecting a significant inverse relationship between occupational satisfaction and emotional stability. Kuzgun (2000) states that there is a harmony between the personality characteristics of teachers and the characteristics of the teaching profession.

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Chapter 29

Process of Technical Teacher Training in Turkey



Sait Akbaşlı and Pınar Mardin Yılmaz

Abstract The purpose of this study was to analyze the present state of the vocational and technical education system and the history of the teacher training processes and techniques and the current situation. It also includes examples of the vocational and technical teacher training process in developed countries. In this context, the process of examining the historical development of technical teacher training—objectives, programs, and conditions—was put forward in terms of organization. Also, the concept of a technical teacher training system in recent years was analyzed. Within the framework of restructuring, focusing particularly on schools, the title given to the graduates, objectives, programs, places, organizations, international accreditation issues, and pedagogical training courses were investigated. The study was carried out using a qualitative research method in accordance with a case study design. Literature research was used as a data collection tool.

29.1 Introduction

The role of qualified manpower that has skill and competence is very important for the development of a country. Vocational and technical education is a type of education that aims to equip people with certain types of knowledge, skills, and competencies. In this context, vocational and technical education must provide individuals with the business knowledge required by the profession, and skills and competencies in line with the demands of the business world (Gelişli et al. 2016). The vocational and technical education system is advancing towards a structure that is open to global innovations and changes, based on analyses of the labor market, directing individuals to employment, that is competency-based and based on mobility (MoNE 2014).

S. Akbaşlı (✉) · P. Mardin Yılmaz
Hacettepe University, Ankara, Turkey
e-mail: sakbasli@gmail.com

Almost all of the international institutions such as the European Union (EU), the Organization for Economic Co-operation and Development (OECD), the United Nations Educational, Scientific and Cultural Organization (UNESCO), and the World Bank address vocational and technical education as a separate “area” in their studies related to education, and form common strategies and regional and global monitoring networks.

Vocational and technical education based on skills and competencies is fundamental. Meeting the needs of the labor market, strengthening the education-employment relationship, effective implementation of active labor market policies, and increasing the employability of the workforce are among the priorities of developing countries.

Nowadays, vocational and technical training in the rapid technological changes and global construction process is recognized as being very important. The resulting developments directly affect business, leading to changes in the business world, which make it necessary to increase human resources and plans in an effective and efficient system. Therefore, with new information, there is a close relationship between education policies and the acquisition of new skills and competencies. This requires developing a high quality and organized vocational and technical education in line with the changing environment.

Vocational and technical education constitutes the socio-economic development of the most important driving force and the most important element of productivity growth. The 1986-dated 3308 Vocational Education Law was an important milestone in this regard. With this law vocational and technical schools and institutions have been restructured on the basis of the cooperation of businesses. Also, the 2547 Higher Education Act, the 5544 Vocational Qualifications Authority Act, and Law No. 6287 all make up a part of this legal framework.

The existence of qualified teachers in vocational and technical education is essential to achieve success and progress. In this context, workshop and laboratory teachers entitled “technical teachers” have been employed at vocational technical high schools. This title is given to graduates according to law 3795, from High School, School and School Graduates to Title Granting higher schools: Head 2, those who graduate from higher technical education schools, male technical teacher training colleges, male technical high school teacher schools, and female technical teacher high schools together with technical teacher training colleges.

Until recently the need for teachers has been addressed by technical and vocational higher schools (technical training schools, vocational training schools, the trade and tourism faculty of education, and industrial arts education faculty). In 2009 these faculties were closed by the Council of Ministers Decision No. 2009/15546. Therefore, the question of how to meet the needs of teachers is on the agenda. In this context, the aim of this study was to analyze the historical processes of general technical faculties and the current situation, with suggestions for the future. Therefore, the question of how to train a teacher for vocational and technical secondary education institutions is not bound by any other standards (Ministry of Development 2014).

With this background, this study was conducted to analyze the present state of the vocational and technical education system and the history of the teacher-training processes and techniques, and compare them with the current state. On this basis, secondary aims of the study were:

- To understand technical teacher training systems in Turkey from a historical point of view.
- To analyze the reasons for the closure of technical training faculties.
- To analyze the policies and approaches adopted regarding technical teacher training in other countries.
- To discuss a new approach for technical teacher education.

29.2 Methodology

The study was carried out using a qualitative research method in accordance with a case study design. The data were collected through analyzing national and international reports and articles related to technical teacher training.

29.3 Historical Perspective

Vocational and technical education was carried out by artisan and craftsmen organizations with conventional methods from about the twelfth century to the end of the eighteenth century. “Akhism,” which was established by Seljuks, continued in the period of the Ottoman Empire for a while and then was changed into “Guild” and “Gedik” organizations (Kılınc 2012).

The first attempt in a modern sense in the field of vocational and technical education started as a way of regulating the army in the eighteenth century. Vocational training is given in vocational and art schools, which have been considered to be formal education institutions. In this system, teaching was conducted in the apprentice-type situation.

Despite the fact that secondary general education courses have a 150-year history, the efforts in training technical teachers are thought to have progressed in parallel with the industrialization of our country towards the end of the 1930s. During this period, foreign experts were invited to the country, and emphasized the importance of vocational and technical education for the progress and development of the country. It was considered that technical teachers hold the key position for establishing a vocational and technical education system as well as with regard to its development (Boynak and Meral 2007). Therefore, vocational and technical teacher training processes were focused on. In this context, between the years 1927 and 1929, to train technical teachers, 133 students were sent to European

countries and 65 teachers came from 65 other European countries. The Male Technical Teachers Training College was opened to train teachers in vocational and technical fields in Ankara in 1937. For many years this school has continued to meet the needs of this area, though with some name changes during this time (Akpınar 2005).

Because art schools began to spread throughout the country, the need to train teachers for vocational courses and workshops began to be apparent. Thus the Male Occupation Teacher School was opened in 1937. The school's name was changed to Male Technical Teachers Training College in 1948. With the addition of new departments, the name of the school eventually became the Higher Technical Teachers College in 1976 (Tüfekci 2008; Duman 2014).

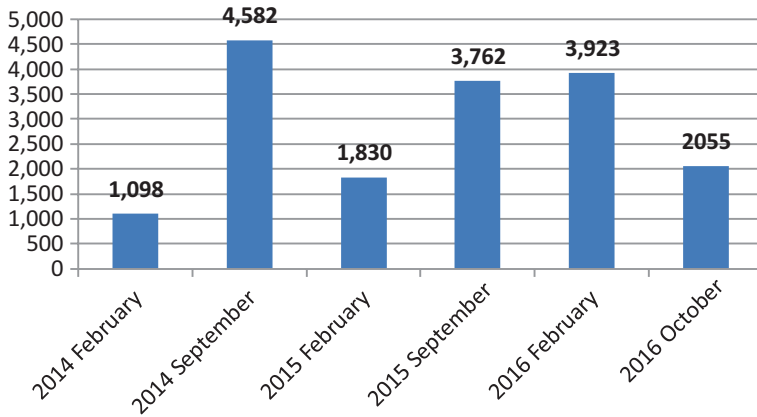
For many years and by various names since its inception, the School of Art, then the Industrial Vocational High School, trained technical teachers in various vocational fields for the Apprenticeship Training Centers and Multi-Program High School. This school has trained technical teachers in various professional fields since it was established for School of the Arts, the Industrial Vocational High School, the Vocational Training Centers and Multi-Program for High Schools. The second Technical Teachers Training College was opened in Istanbul in the 1970s. With the establishment of The Council of Higher Education of Turkey (CoHE), this school was elevated to the status of a university in 1982. In addition, its name was changed to the Faculty of Technical Education (Ünlüeser 2007). Quantitative developments are shown in Table 29.1 between the years 2000 and 2014.

The increment in vocational and technical education higher institutions had a positive impact on assignments initially and then because of the demand-supply mismatch, employment problems began emerged. According to Ministry of National Education data assignment, the number of vocational and technical teachers who are employed appears in recent years seems to be slightly increasing. Data for employment are given in Fig. 29.1.

Table 29.1 Quantitative developments in technical education

Academic year	Faculty	Student	Graduate
2000–2001	15	16.028	2.815
2002–2003	16	20.960	2.928
2004–2005	16	26.009	3.767
2006–2007	16	27.899	4.960
2008–2009	17	28.381	4.996
2009–2010	16	28.861	5.974
2010–2011	–	23.372	4.844
2011–2012	–	18.969	4.677
2012–2013	–	13.543	4.847
2013–2014	14	6.714	–
Total	100	210.736	39.808

Source: OSYM Statistics



Source: MoNE, General Directorate of Human Resources

Fig. 29.1 Distribution of teachers assigned to vocational technical high schools according to years (Source: MoNE, General Directorate of Human Resources)

29.4 The Reasons for Restructuring

It is known that vocational technical education is a key issue of the change process and needs a dynamic structure if it is to meet the demands of increasing manpower required by an economy open to change (Taspinar 2006). Therefore, vocational and technical education are among the priorities. This process is provided by technical teachers. In addition, technical training schools were established to meet the needs of technical teachers. Before the establishment of this school, there was no supply of trained personnel for the industry. The number of graduates has increased over time and teacher employment has declined, thus they are beginning to work in the industry instead. There are a large number of graduates working in various workforce sectors, which is causing some problems (İstanbul Chamber of Commerce 2008). There is no equivalent accredited school in developed countries for vocational training and technical education faculties. Teachers who have no chance of teaching have experienced problems regarding their name and status in both a national and an international arena. Because of the coefficient practice, it was difficult to transition from vocational secondary schools to engineering schools, as the quality of the students of these schools led to problems. Due to coefficient barriers, difficulties in transition from vocational secondary schools to engineering schools arose, which led to a decrease in the quality of students.

29.5 Faculty of Technology

With the Council of Ministers Decision, which was published on 13 November 2009 and numbered 27405 Official Gazette, some higher education institutions, e.g., technical education faculties, vocational schools, vocational and technical

Table 29.2 The changes in the process of establishment of a faculty of technology

Higher education institutions	Closed	Opened
Adıyaman University	Faculty of Vocational and Technical Education	Faculty of Technology
Afyon Kocatepe University	Faculty of Technical Education	Faculty of Technology
Amasya University	Faculty of Vocational and Technical Education	Faculty of Technology
Batman University	Faculty of Technical Education	Faculty of Technology
Cumhuriyet University	Faculty of Technical Education	Faculty of Technology
Dumlupınar University	Simav Faculty of Technical Education	Faculty of Technology
Düzce University	Faculty of Technical Education	Faculty of Technology
Fırat University	Faculty of Technical Education	Faculty of Technology
Gazi University	Education Faculty of Industrial Arts	–
Gazi University	Faculty of Vocational Education	Faculty of Technology
Gazi University	Faculty of Technical Education	Faculty of Technology
Gazi University	Education Faculty of Commerce and Tourism	Faculty of Tourism
Gebze Institute of Technology	Faculty of Technical Education	Faculty of Technology
Karabük University	Of Faculty of Technical Education	Faculty of Technology
Karadeniz Technical University	Faculty of Technical Education	Of Faculty of Technology
Kırklareli University	Faculty of Technical Education	Faculty of Technology
Kırklareli University	Education Faculty of Commerce and Tourism	Faculty of Tourism
Kocaeli University	Faculty of Technical Education	Faculty of Technology
Marmara University	Faculty of Technical Education	Faculty of Technology
Mersin University	Tarsus Faculty of Technical Education	Tarsus Faculty of Technology
Muğla University	Faculty of Technical Education	Faculty of Technology
Nevşehir University	Education Faculty of Commerce and Tourism	Faculty of Tourism
Pamukkale University	Faculty of Technical Education	Faculty of Technology
Sakarya University	Faculty of Technical Education	Faculty of Technology
Selçuk University	Faculty of Technical Education	Faculty of Technology
Selçuk University	Faculty of Technical Education	Faculty of Art and Design
Süleyman Demirel University	Faculty of Technical Education	Faculty of Technology

Source: <http://www.resmigazete.gov.tr/eskiler/2009/11/20091113-4.htm>

training schools, trade and tourism schools, and with the closure of educational faculties of industrial arts, the education faculty was closed and it was decided to establish new faculties (Çavuşoğlu and Günay 2010). Information regarding these changes is given in Table 29.2.

The mission of the Technology Faculty is to train the manpower in line with the needs of industry. The Faculty of Technical Education has not been converted to a Faculty of Technology. Conversely, in order to not replace the Faculty of Technical Education, the Technology Faculty has been established to cater for a higher skill level of engineers as a new faculty (Balcı et al. 2013).

Providers of technical faculties in developed countries are known as application engineers who have been trained in technology faculties. These graduates “will be awarded with title of “Engineer”. In addition, they can also be teachers with additional training in the fields of education after graduation. The length of an engineering education program is 4 years or eight semesters. Students over an academic year must obtain a total of at least 240 (ECTS).

A student in the engineering program has to do workplace training. The duration of this training must be 72 working days during the summer semester. Thus, students of technology faculties will spend seven semesters of the academic year in the school and in the workplace. It is allowable to have parallel horizontal transitions between the departments and faculties (Çavuşoğlu and Günay 2010).

Part of the quota of the Faculty of Technology is reserved for the students who graduated from vocational technical high schools. This quota rate was 60% in 2010. This ratio, as a result of a decision taken by the Council of Higher Education in 2013, has been changed to 30%.

For the 2013–2014 academic year, there was a quota of 4,897 from general secondary education and 2,157 students from vocational and technical secondary schools. The enrollment rate of a general high school is 90.34%, and for vocational and technical secondary schools is 81.87%. For the 2014–2015 academic year, there was a quota of 4,924 for general secondary education and 2,137 students from vocational and technical secondary schools. The enrollment rate of the general high school is 96.49%, and for vocational and technical secondary schools is 87.71%.

29.6 Approaches of Different Countries to Vocational and Technical Teacher Training

The vocational and technical teacher training systems of various countries have similarities and differences within themselves. Here we present approaches from European Union countries and the system in the USA.

29.6.1 Vocational and Technical Teacher Training in the USA

The Faculty of Engineering educates engineers who are predominantly theoretical and whose design abilities are at the forefront. Technology faculties educate technical staff with practical skills as well as theoretical knowledge. In addition, the graduates of the faculty of technology are employed as technical teachers in line with the

needs of secondary vocational technical education institutions by receiving training in pedagogical formation.

Technology faculty graduates who are appointed as technical teachers are also required to have had experience in industry for a certain period of time. The working hours of the industry may vary according to the professions and provinces (Ünlüeser 2007). Graduates from the School of Technology, Technical College, Institute of Technology, and Engineering Technology Department who have work experience are usually trained by providing pedagogical formation at a graduate level (Akpınar 2005).

29.6.2 Vocational and Technical Teacher Training in European Countries

Teacher and trainer professional development continues to be high on the EU policy agenda. In 2010, the Bruges Communiqué (2010) invited Member States to invest in VET teachers and trainers by offering flexible training provisions. The Riga Conclusions (2015) have put renewed emphasis on the issue to “Introduce systematic approaches to, and opportunities for, initial and continuous Professional development of VET teachers, trainers and mentors in both school and work based settings” (Topbaş 2004; Akbaşlı 2009; European Commission 2015).

Today, although the EU member countries vary greatly, vocational and technical education training is carried out in the form of providing pedagogical formation for those who are generally undergraduate technical undergraduates and also among those who have experience in the market. In these countries, successful and experienced masters at work are frequently employed as workshop and practice teachers after the required pedagogical training (CEDEFOP 2015).

Initial teacher training is well established across the EU. Most countries offer teacher-training programs and recognized teacher qualifications at EQF levels 5–8. In theory, technical teachers usually have a degree in a professional field such as engineering or hospitality. Some countries have specific VET teacher training programs (Austria, the Czech Republic, Denmark, Estonia, Germany, Latvia, Norway, Slovakia, Sweden) (CEDEFOP 2016).

In most countries (Belgium-Flemish Community, Spain, France, Italy, Hungary, Austria, Portugal, Finland, and others), initial teacher training includes practice (traineeships) in schools under the supervision of experienced teachers. In some countries (the Czech Republic, Estonia, Croatia, Cyprus, Lithuania, Slovenia, Slovakia, UK-Wales), novice teachers start out on their career with an induction period of up to 1 year under the supervision of an experienced teacher (CEDEFOP 2016).

VET systems are regulated as prevocational training for preparation of young people regarding the transition to a VET program at an upper secondary level. In Europe there have been two popular types of VET: Initial vocational education and training (IVET) and Continuing vocational education and training (CVET). IVET involves an initial (upper secondary) vocational qualification. The qualification can

be undertaken in an institution-based system or in apprenticeship training. IVET contains general education and training for young people aged between 16 and 19 years. It can also take the form of adult education (Misra 2011).

CVET refers to education and training after initial education and also training after starting business life. CVET focuses on individuals to improve or update their knowledge and skills, to acquire not only new skills for career progress or retraining and but also to support their personal or professional development. CVET is provided by various organizations through public or private institutions. In many countries social partners play an important role in CVET (Volmari et al. 2009a).

The difference between VET teachers and VET trainers is not so clear in European countries. Teachers and trainers are distinguished in terms of function and place of employment. Teachers generally work in VET schools and institutions while trainers are employed in companies (CEDEFOP 2016). The training framework for TVET trainers has a different type of education (formal and informal), as shown in Fig. 29.2. Fundamentally, there are three different ways of defining teachers and trainers (Misra 2011, 31–32):

- Based on a learning context: teachers work in educational institutions (generally the public system) and trainers work in enterprise and organizations (generally the private system) (Denmark, Finland, Norway, Portugal, and the UK), or teachers work in the education world and trainers in the industry and commerce (Germany, Ireland, and Austria).

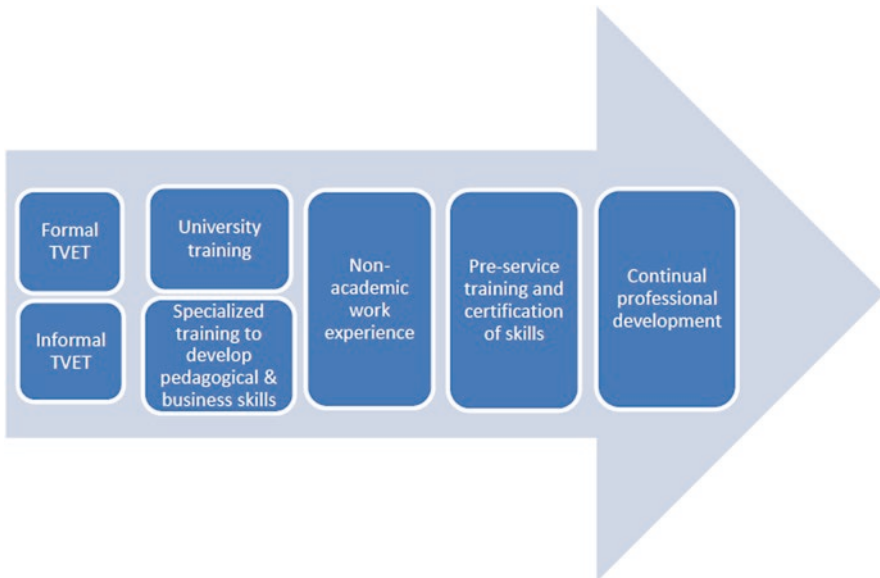


Fig. 29.2 Training framework for TVET trainers, formal and informal (Source: Axmann et al. 2015. *Vocational teachers and trainers in a changing world: the imperative of high-quality teacher training systems*. International Labour Organization)

- The concept of teacher is used in the IVET system and trainer is used in the CVET system (Belgium and France – in France, the term “trainer” is used for all learning facilitators in CVET).
- Based on “content” (theory-practice aspect): teachers are responsible for the theoretical part of VET, but trainers are responsible for the practical part of VET (e.g., Greece and Spain).

29.7 Conclusion and Recommendations

Vocational and technical education has always been an important issue in Turkey. Technical teachers are one of the most basic elements of this system. In the beginning of the Republic, the technical education faculty, which was established as a high school, fulfilled the task of educating vocational and technical secondary education teachers for many years depending on the Ministry of National Education. Significant changes were made to the program, structure, and functioning of these institutions, which were converted to faculties and connected to universities in the framework of the reform of higher education in 1981.

Over the years, the number of faculties increased rapidly without considering a supply-demand balance. Therefore, employment problems began to emerge. Graduates had to work for low wages and status in the private sector. In addition, they could not find work in or related to their profession. Faced with employment problems, the faculty of technical education is considered to have completed its mission and the technology faculties have been opened using existing physics structures and teaching members. It is anticipated that the opening of this area will emerge with the gradual reduction of the current older graduates. The teacher training process will be tried to be provided by pedagogical formation among graduates. However, in this situation it is not clear how to meet the needs of teachers.

Following the closure of the faculties that train technical and vocational teachers, the understanding of teacher training through pedagogical formation has been adopted accordance to a consecutive model. However, because of the high number of graduates and the lack of teacher employment, this practice been realized to any great extent. It is not so clear how many of the graduates of an engineering faculty have applied for the pedagogical formation program and received certification. Changes in the supply-demand balance in the coming period will also affect this process. There has been a need for an effective planning process.

Although the employment problem is a factor in the closure of technical education faculties, it is a real situation for the other faculties in Turkey. It is important to educate human power in accordance with the conditions of the country with effective planning. In this context, the following suggestions can be made:

- Faculties that train technical teachers can be established in the most suitable areas in terms of conditions. Physical and financial capacity, faculty members, and internship opportunities should be considered.
- The existing pedagogical formation program can be revised and used within the framework of technical teacher training.

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Chapter 30

Analysis of Scientific Papers on Organizational Uncertainty in Education and School Administration (1990–2016)



Müzeyyen Petek Dinçman and Didem Koşar

Abstract Organizational uncertainty affects all administration processes and functions whereas perception of uncertainty affects not only organizational administration and functions, but may also adversely affect individual performance. Consequently, a review of the existing papers related to organizational uncertainty and developing suggestions on the issue will direct the course of solutions to be found for this situation. A secondary purpose of this review is researching the titles, types, contents, methods, findings and comments, conclusions, and suggestions of the scientific papers related to organizational uncertainty in education and school administration in the period from 1990 onward. The research was designed with a qualitative research model, and a document examination technique was used. The data were obtained using document analysis. Content analysis was used for interpreting the documents. The year 1990 is a critical milestone in the study since it was a period when social and political events were being experienced rapidly and intensely in both a national and an international context. Since it is of significance to discuss the studies conducted in this period and their outcomes, the year of 1990 was selected as the date of commencement.

30.1 Introduction

The economic, political, social, and technological changes encountered in recent years affect organizations in relation to their keeping abreast of the times and to their survival in as much as they affect individuals. On the other hand, any change planned as a result of determining needs brings about organizational success. In this

M. P. Dinçman
School of Foreign Languages, Hacettepe University, Ankara, Turkey
e-mail: petekd@gmail.com

D. Koşar (✉)
Faculty of Education, Hacettepe University, Ankara, Turkey
e-mail: didemarlikosar@gmail.com

regard, detecting organizational uncertainty is of great significance. Van Greenhuizen and Nijkamp (2003) state that coping with the problem of uncertainty is “the most vital factor of the decision-making process”. When such problems are examined in terms of education administration in general and in terms of education and teacher planning specifically, it is revealed that it is only possible to respond to the long-term plans by defining uncertainties and producing remedies for solution.

The speed of change and uncertainty have increased in the current century compared to the past (Alkin 2006). Uncertainty is generally defined as the obscurity of expressions, variability of conditions, or situations for which there are different comments and viewpoints that can be contradictory from time to time (Bakioğlu and Demiral 2013). Situations of uncertainty can cause very serious tension and stress in humans (Ersanlı and Uysal 2015). Situations of uncertainty can be defined as an event or series of events that develop unexpectedly and suddenly, and which have the potential of interrupting the daily course of life in various ways, weakening the existing individual and social functioning; they affect attitudes of the individual adversely in general and can lead to crisis (Taş 2009).

The concept of uncertainty is the phenomenon of failure to specify or understand a situation. It may be defined as failure to estimate the probability of realization of events and the results that may arise from that (Kasperson 2008).

Uncertainty is a situation where the future and the expectations related to are not clear (Polat and Arabacı 2015). On the other hand, intolerance to uncertainty is defined as the tendency to react negatively to uncertain events and the tendency to not admit that negative events may result (Dugas et al. 2001; Ladouceur et al. 2000). One may say that deeming uncertainty as a negative concept reflects the situation of humans desiring by nature to make sure about their futures.

Today organizations have to cope with environmental factors, including rapid technological change, economic uncertainty, growth in industry, increasing global competition, and changes in population structure and values (Paksoy and Özbezek 2013). Uncertainty makes it more difficult to determine individual purposes and to develop behaviors on the basis of the purposes determined (Zel 2001, 116). Uncertainty is an important problem that can lead to very significant and serious consequences for organizations as well. For this reason, leaders can no longer ignore uncertainty and admit that organizations are not stationary environments (Polat and Arabacı 2015).

Frequent changes experienced in business life may lead to a higher perception of uncertainty by the employees and negative effects resulting from this (Karakuş and Yardım 2014). In this situation, leadership risks become much more important for organizations in terms of stipulating the future provisions that uncertainties expound. In order to increase the trust of the employees with regard to administration and organizational changes, communication within the organization should be consolidated and a trust-based relation should be developed between the administrators and the personnel, and uncertainty and distrust with respect to the change process should be eliminated (Kerman and Öztöp 2014). Changes in the organizational environment affect the organization through inputs; the organization has to redress the balance in order to survive. When any factor that could destroy the balance is created,

uncertainty begins to surface. In this case, organizations are required to have a continuous process of adaptation to the environment in order to comply with changes and sustain their existence (Paksoy and Özbezek 2013).

Considering that environmental uncertainty is one of the reasons threatening the vital existence of organizations (Ersoy Yılmaz and Çetinel 2015), one may say that when changing conditions increase, harmonization becomes more difficult and organizational costs caused by environment uncertainty increase (Gürçaylılar-Yenidoğan 2013, 114). Consequently, two basic strategies that will enable organizations to cope with the high uncertainty created around them may be stated as adapting the organization to the changes arising around them and affecting the environment in a manner in which it can respond to organizational needs (İraz 2000). When organizations fail to cope with uncertainty by responding to the threats both from the environment and from the organization, organizational collapse eventually occurs.

In an “environment of uncertainty” where it becomes gradually more difficult to stipulate what will happen, organizations may fail to exhibit the necessary resilience to deal with the needs and problems of the renewed order, and conflict, crisis, and chaos may arise (Çamlıbel 2003). Most often, leaders are accused of and held responsible for this situation.

In today’s world, organizations sustain their lives in a non-static and dynamic environment. The changes in the environment, uncertainty, and chaotic situations mean that administrators encounter problems that need to be solved (Özalp and Öcal 2000). Change process may lead to chaos and uncertainty and leave organizations in a crisis situation (Pira and Sohodol 2004, 36). If organizations fail to anticipate the approaching crisis, comment and assess the situation and provide appropriate reactions, the organization is likely to be in crisis, and in this case uncertainty of organization reaches a maximum level (Aksu 2009).

Organizations today try to live with chaos, complexity, and uncertainty as a consequence of renewal, complexity, and non-solubility, which we can call the fundamental reasons for uncertainty (Polat and Arabacı 2015). Another reality is that the condition of avoiding uncertainty creates an “unknown” in the organization (Başar Neyişci 2008). Uncertainty decreases the effectiveness of organizations and may prevent proper decisions being taken in the organization (March and Simon 1958). Consequently, organizations should consider alternative leadership approaches to deal with uncertainty in addition to new leadership approaches during this period (Polat and Arabacı 2015). Furthermore, organizations should develop strategies in a manner that will assist them to comply with changes without being harmed by the changes.

Organization theorists examine the phenomenon of uncertainty in the light of three elements, namely insufficiency in assessment of realization of the events in the future, lack of knowledge with respect to cause and effect relations, and insufficiency in estimating potential consequences of decisions (Milliken 1987, 134). Humans have the power to intervene in nature and rearrange the nature of the world, bringing about uncertainty and risks in addition to benefits and genetic pollution, corruption of the balance of the nature, and the results arising from these interventions make up the source of uncertainty and risks (Erçetin 1999).

Uncertainty is a situation in which it becomes more difficult to see the cause and effect relations between events (Usta 2013). Any change in any place or in any subject leads to unanticipated effects, problems, crises, and changes; everything may change any time in this environment, aptly named the environment of uncertainty (Usta 2013), and it is not easy to estimate the point that this could reach. One aspect of avoiding uncertainty is related to what individuals feel about uncertainty and non-static situations and the measures they take to protect themselves, according to Pulat (2010).

Teoh and Foo (1997) define avoiding uncertainty as the level of responding against the complex conditions in the environment. According to Erdem (2001), avoiding uncertainty is the ability to react in uncertain conditions. Avoiding uncertainty is the level of preventing the anxiety that may arise about the future in any culture. Avoiding uncertainty refers to how members of a society feel about conditions that are not definite and/or which may create suspicion and their tendency to avoid them (Bakan 2008).

Organizations that try to live with chaos, complexity, and uncertainty, may create more uncertainty for themselves (Bakioğlu and Demiral 2013). Leaders cannot ignore conditions of uncertainty and must admit that organizations do not exist in a static condition (Başar Neyişçi 2008).

Since uncertainty gradually increases the ability to understand the source of the problem in the change environment, to take effective decisions, to be flexible and shape the change provides a competitive advantage to organizations (Ünal 2012). One may say that the understanding of lifetime employment and being employed by the state is a natural consequence of avoiding uncertainty (Aydınlı 2003).

According to Hofstede (1980, 187, 1983, 61), Yeloğlu (2011) expresses the criteria of avoiding uncertainty in his study as follows:

- Looking through the levels of avoiding uncertainty; uncertainties of daily life in cultures with low levels of avoiding uncertainty are under a condition that could be coped with, level of stress is low, superego is weaker, and the level of conservatism is low.
- Whereas in cultures with high levels of avoiding uncertainty, uncertainty is in a condition which requires continuous effort. Stress and anxiety levels of individuals are higher.

Organizations have many routes to follow in each case and there are many uncertain factors that could affect the success of organizations (Arslan 2013). The ways individuals use to cope with situations containing uncertainty in a variable environment just like today's environment vary as well (Demiral 2014). Some of those methods are given here:

1. *Planning*: Planning in organizations is related to the future. If risk analysis for the future and uncertainty analysis is performed, planning becomes more effective (Şahin 2010).
2. *Organizational culture*: Being aware of the cultural values of the organization and the individuals in the organization are factors that assist with understanding, interpreting, and giving meaning to the uncertain factors affecting administrative

decisions (Şahin 2010). In this case, conflict and chaos environments may be anticipated and dealt with in the organization. In this regard, when corporate culture is strong, it is an element that supports organizations' sustaining their lives and supporting the organization and organization members to cope with uncertainty.

3. *Leaders*: Uncertainty in the external environment increases uncertainty of the process of decision-making in the organization. Knowing the reactions that an administrator may have in difficult and uncertain situations is significant considering the fact that his/her behaviors may affect the students and teachers.
4. *Organizational learning*: Organizational learning on the other hand is related to increasing the capability of responding to the uncertainty and complexity in the environment (Atak 2011).
5. *Organizational structure*: Mirze (2002) emphasizes the necessity for organizations to increase their awareness with respect to any situation of uncertainty they may experience in order to cope with uncertainty. The method for this is organizations to be more flexible with regard to the effects from the environment, monitoring any existing and potential activities, managing change, and supporting unity, solidarity, and voluntary participation in the organization (Polat and Arabacı 2015).
6. *Making decisions in uncertain situations*: Strategic leaders who develop strategies on the basis of new knowledge and motivate the organization to act through new strategies are needed. Those organizations and leaders who have the power to cope with uncertainty minimize uncertainty by instilling a desire to live for the future and control the future, and to try to understand the known and unknown ways as well as uncertainty (Ertürk Kayman 2008).
7. *Vision development*: The most useful process with respect to the future for structuring of the organization is the process of development of vision and the process of internalizing and implementing this vision; having such a vision brings about personal and organizational learning and development of loyalty and trust (Ertürk Kayman 2008), and increases the power of coping with uncertainty.

30.2 Reflections of Organizational Uncertainty Regarding Education

The developments experienced in the last century affect educational organizations as much as other organizations and force educational organizations to change as well and evolve as a result of the social, economic, and scientific developments experienced. It is unavoidable to experience uncertainty in educational organizations as well in this process. The processes of change and uncertainty are not negative phenomena per se; however individuals with a high level of anxiety may perceive change and uncertainty negatively depending on their viewpoints and perceptions. There are studies that explain that those individuals who fail to decrease their level of uncertainty or who have a high level of anxiety are influenced more

easily than other individuals, and furthermore they are more influenced by the group of which they are a member (Alkın 2006).

The structural changes that were experienced in the educational organizations in recent years and shaped through legal legislation and that affect all educational organizations have rendered uncertainty in educational organizations and reflections of uncertainty a subject for discussion. Though it is one of the problems experienced in educational organizations, the concept of role uncertainty that has been observed to have been experienced more intensely in this process may be seen as one of the situations that have increased uncertainty in organizations. It has been observed that role uncertainty in organizations is generally closely related to stress, psychological oppression, and a decrease in job efficiency (Alkın 2006).

The future is uncertain and it is not possible to have knowledge of absolute circumstances with respect to the future, and for this reason workers should learn how to work under conditions of uncertainty (Usta 2013). Organizational change aiming at providing sufficient power and development of the organization to deal with uncertainty and changing environmental conditions is a continuous process (Karakışla 2009). Dooley (1995) states that the ordinary behaviors in the organization reflect non-observed values under stress and conditions of uncertainty conditions in the process of change, and these may be determined through implications based on the behavior of workers. Administrators may observe the behavior of employees with respect to effectiveness of the process of change and the issue of coping with uncertainty and expect success.

A lack of communication within the organization also leads to uncertainty and may lead workers to obtain false or incomplete information as a result and thus resist the changes (Karakışla 2009). In this regard appropriate and regular organizational communication may be deemed to be a method of coping with organizational uncertainty. The existence of many problems including insufficient educational sources, teacher sufficiency, equipment insufficiencies, overcrowded classes, and transition between grades has been expressed (Karip 2005). However, the act of coping with uncertainty is closely related to teachers' perspectives on problems. While certain teachers deem uncertainty to be the fundamental reason for anxiety, burnout, and inefficient teaching, others claim that being aware of uncertainty is an aspect that develops teaching skills and that uncertainty protects teachers from pessimism and guiltiness (Arslan 2013).

Change applications are introduced in educational organizations and a period of adapting to the changes in the environment is experienced (Özdemir and Cemaloğlu 1999). In an "environment of uncertainty" where everything always changes and it becomes difficult to anticipate the future, a school administrator can provide order by exhibiting resilience with regard to the needs and problems as required by innovations, by managing the conflicts and crises experienced, and thus provide continuity of educational services (Ertürk Kayman 2008).

In the current understanding of education, a leader teacher model that can guide the students, parents, the environment, and other stakeholders gains more value than merely the transfer of knowledge by the teacher (Dağ and Göktürk 2014), coping with uncertainty by the teachers in the leader teacher model and transforming the

situation of uncertainty into gain is a situation to be striven for. On the other hand, from the perspective of leaders, one may stipulate that leaders may be effective in managing uncertainty through their identity as a leader with strategy and vision. Moreover, in order for the change process to be effective, a change in leadership needs decisive leaders who can cope with uncertainties, make future-oriented strategic plans, and run those processes as well as their audience (Ertürk Kayman 2008).

According to the results of the research conducted by Bakioğlu and Demiral (2013) for the purpose of determining the reasons for uncertainty experienced at schools according to the perceptions of school administrators, the paths they follow while making decisions in such cases, their attitudes and the things that influence them in this process; planning mistakes, instability and reasons arising from education legislation and top managers came to the forefront as reasons for uncertainty in schools. It has been concluded that school administrators first consult with the persons around them or seek examples similar to the situation they experience under conditions of uncertainty, and the teachers and parents have an influence on the school administrators as well while making decisions in cases of uncertainty.

According to the results of the research conducted by Karakuş and Yardım (2014) for the purpose of determining the intermediary role of uncertainty in the effect of perceived organizational change on job satisfaction and the intention of resignation, it has been indicated that perceived organizational change has an effect on uncertainty, job satisfaction, and the intention of resignation. Ersanlı and Uysal (2015) developed the Scale of Attitude toward Uncertainty.

In a study conducted by Argon and Kösterelioglu (2009) it was found that candidate teachers experienced great anxiety regarding employment after graduating, and uncertainties for the future increased when the low level of employment rate is added to anxiety over examinations.

Polat (2015) conducted a study on a sample composed of 650 academic and administrative personnel commissioned in Fırat University in the academic year of 2013–2014 for the purpose of determining the effect of the condition of administrators to become open leaders and adopt social networks on organizational uncertainty on the basis of the opinions of academic and administrative personnel. Data were collected through a personal information form of seven questions as well as a measurement inventory, developed by the researcher and comprising three scales, namely “Open Leadership Scale (ALÖ),” “Scale of Adopting Social Networks (SABÖ),” and “Organizational Uncertainty Perception Scale (ÖBAÖ).” It was revealed as a consequence of the research that the ability of administrators to adopt social networks has a partial intermediary effect on predicting the relation between open leadership and organizational uncertainty.

In a study conducted by Akmansoy and Kartal (2014) on reflections of the chaos theory with regard to education, the authors examine how the chaos theory found a place in education. They found that chaos in educational organizations was a refreshing element for education according to the results of the qualitative study of the sample that was made up of 30 scholars.

Organizational uncertainty affects all administration processes and functions, whereas perception of uncertainty may not only affect organizational administration

and functions adversely but also individual performance. Consequently, reviewing the existing papers related to organizational uncertainty and developing suggestions on the issue will direct the course of solutions to be found for this issue.

As much as studies on organizational uncertainty have contributed to the field of educational organizations and implementation, the condition of changing and transforming uncertainty using individual and organizational measures will increase. In this regard, it is important to analyze the studies conducted on uncertainty in the literature firstly and it is considered that research will contribute to this field.

This study is significant for revealing how often the individuals working in the academic field monitor the events affecting the system in their own fields as well. The findings revealed through researches as well as conclusions and suggestions reveal that policy developers and the individuals working in the academic field should conduct joint projects. It is extremely significant that policy developers are fed by the individuals working in the academic field and practices are supported by theories, in terms of projecting developments in the scientific field to our life and bringing scientific solutions to the problems in daily life.

The general purpose of this research is performing analysis of scientific papers that discuss the concepts of chaos, complexity, change, corporate culture, leadership, and risk, which are the fundamental subjects related to organizational uncertainty in education and school administration. Scientific papers were examined and analyzed within the content of type, title, content, findings and comments, conclusions and suggestions. A secondary aim of the research was to research titles, types, contents, methods, findings and comments, conclusions and suggestions of the scientific papers related to organizational uncertainty in education and school administration in the period from 1990 onwards.

In this study, it was assumed that the scientific literature that was published in Turkey from 1990 to 2016 and which discussed the fundamental issues related to organizational uncertainty in education and school management conducted by Turkish scholars abroad will be accessed. This study is limited to the scientific papers that were conducted in Turkey and conducted by Turkish scholars abroad, which discuss organizational uncertainty in education and school management.

30.2.1 Method

The research was designed using a qualitative research method and the document review technique was used. Research data were obtained through document analysis, which is a systematic review of existing documents as a source of data (Flick 2009). Content analysis was used for commenting on the documents. Data are converted to units while being analyzed in the content analysis (Mayring 2000). Themes are coded and categorized on the basis of the purpose of the research, direct citations are taken from the data, and the validity of the data is provided (Yan and Wildemuth 2009).

The year 1990 is a critical milestone in this study since it was a period when social and political events were experienced rapidly and intensely in both a national and an international context. Since it is important to discuss the studies conducted in this period and their findings, the year 1990 was selected as the date of commencement. It was examined in two segments, 1990–2000 and 2001 and later.

30.2.1.1 Study Group

The research included the scientific investigations that were conducted in Turkey from 1990 to 2016 and that discussed the concepts of chaos, complexity, change, corporate culture, leadership, and risk, the fundamental issues related to organizational uncertainty in education and school management conducted by Turkish scholars abroad, namely:

Essays: compiled essay, original essay, technical note, case study, research note, book critics, comment, letter to the editor, abstract, expert report

Theses: master's, doctorate

Book: research book (excluding theses), individual book, course book, encyclopedia article, book translation, book with editor, book section

Paper: abstract paper, full text paper, poster, verbal paper, invited lecturer.

The scope of the research was discussed as a sample. The classifications from the YÖKSİS database were used.

When Table 30.1 is examined, it can be seen that 48 of the total 21 scientific papers relating to organizational uncertainty in education and school administration were essays (39.67%), 31 were theses (25.62%), 34 were books (28.1%), and eight were papers (6.61%). Of the essays published, 18.75% were compiled essays, 31.25% were original essays and 50% were research notes. There are no scientific publications in the categories of technical note, case study, book critics, comment, letter to the editor, abstract, expert report. Of the theses published, 77.42% are master's theses and 22.58% are doctoral theses. Of the books published, 17.65% are individual books, 2.95% are book translations, 20.59% are books with an editor, and 58.82% are book sections. There were no books published in the category of research book (excluding theses), course book, or encyclopedia article. Seventy-five percent of the papers published are abstract papers and 25% are full-text papers; no papers were published in the categories of verbal paper, invited lecturer.

30.2.1.2 Data Collection Tools

The scientific papers that make up the scope of the research were collected using the YÖK database, google academic, and archives of academic journals. The data were separated into categories in separate files, namely essays, books, papers, and theses, and each was separated into subtypes in each file.

Table 30.1 Distribution of the sample according to type of scientific paper

Type	Classifications	<i>N</i>	%	Total	%
Essay	Compiled essay	9	18.75	48	39.67
	Original essay	15	31.25		
	Technical note	0	0		
	Case study	0	0		
	Research note	24	50		
	Book critics	0	0		
	Comment	0	0		
	Letter to the editor	0	0		
	Abstract	0	0		
	Expert report	0	0		
Thesis	Master's	24	77.42	31	25.62
	Doctorate	7	22.58		
Book	Research book (excluding theses)	0	0	34	28.1
	Individual book	6	17.65		
	Course book	0	0		
	Encyclopedia article	0	0		
	Book translation	1	2.95		
	Book with editor	7	20.59		
	Book section	20	58.82		
Paper	Abstract paper	6	75	8	6.61
	Full text paper	2	25		
	Poster	0	0		
	Verbal paper	0	0		
	Invited lecturer	0	0		
Total	121	100			

30.2.1.3 Processing and Analyzing Data

After the data are collected, a table was prepared using MS Excel Program considering the research problems, secondary problems, and data types such as essays, books, papers, and theses, and the data were entered in the tables. Essay was coded as M, thesis as T, book as K, paper B depending on their types, then essays were coded on sub-type basis as follows: compiled essay as D, original essay as Ö, technical note as TN, case study as VT, research note as AN, book critic as KK, comment as Y, letter to the editor as EM, abstract as Ö, expert report as BR. Theses were coded on a sub-type basis as follows: master as YL, doctorate as D. Books were coded on sub-type basis as follows: research book (excluding theses) as AK, individual book as BK, course book as DK, encyclopedia article as AM, book translation as KT, book with editor as EK, book section as KB. Papers were coded on sub-type basis as follows: abstract paper as ÖB, full text paper as TMB, poster as P, verbal paper as SB, invited lecturer as DK. Finally, they were given order numbers depending on the order they are entered in the tables. For example, an essay with a

sub-type of research note located in the second order in the data table was categorized as M-AN-2 in the research note file.

The secondary (sub-)purposes were organized into categories after the scientific papers making up the main research universe were collected. After the papers were reviewed, they were examined within six categories, namely title, type, contents, method, findings and comments, conclusions and suggestions. Periodical differences of the papers were analyzed separately in two periods, namely 1990–2000 and 2001 and later, and were examined in four categories, namely contents, method, findings and comments, conclusions and suggestions. Coding was made on the basis of those categories.

30.2.1.4 Internal and External Validity of the Research

For internal validity of the study, the data were presented in the section of findings and comments, and after the information was presented, it was interpreted in the light of amendments in legal legislation in the Turkish National Education System and consideration of those amendments to scientific papers in line with the changes and developments experienced during the periods of 1990–2000 and from 2000 onward.

For external validity of the study, detailed information was provided in the method section of the study with respect to the stages of research design, universe/sample, collection of the data, processing the data, and analysis of the data. Data records and analyses transferred to the computer were stored and data tables are provided in the Appendix.

30.3 Findings and Discussion

When Table 30.2 is examined, it can be seen that the scientific papers related to organizational uncertainty in education and school administration started in 1999. When the table is examined from top to bottom, it can be seen that among the scientific papers, 42.43% were conducted in 2016, 15.15% were conducted in 2015, 21.21% were conducted in 2014, 6.06% were conducted in 2013, 3.03% were conducted in 2012, 3.03% were conducted in 2009, 3%. 3.03% were conducted in 2007, 3.03% were conducted in 2002, 3.03% were conducted in 2001. When examined on periodical basis, it can be seen that 2.94% of the books were published in the period 1990–2000 and 97.06% were published in the period 2001 and later.

Among the scientific papers related to organizational uncertainty in education and school administration, 4.45% of essays were conducted in 2016, 4.45% were conducted in 2015, 11.12% were conducted in 2014, 8.88% were conducted in 2013, 4.45% were conducted in 2012, 8.88% were conducted in 2011, 2.22% were conducted in 2010, 11.12% were conducted in 2009, 13.34% were conducted in 2008, 8.88% were conducted in 2007, 8.88% were conducted in 2006, 4.45% were

Table 30.2 Type of scientific papers

Years	Book		Essay		Thesis		Paper		Total	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
2016	14	42.43	2	4.45	0	0	0	0	16	13.67
	87.5	%	12.5	%	0	%	0	%	100	
2015	5	15.15	2	4.45	4	12.9	2	25	13	11.11
	38.46	%	15.38	%	30.78	%	15.38	%	100	
2014	7	21.21	5	11.12	4	12.9	5	62.5	21	17.95
	33.33	%	23.8	%	19.07	%	23.8	%	100	
2013	2	6.06	4	8.88	5	16.1	0	0	11	9.4
	18.18	%	36.36	%	45.46	%	0	%	100	
2012	1	3.03	2	4.45	1	3.2	0	0	4	3.42
	25	%	50	%	25	%		%	100	
2011	0	0	4	8.88	3	9.7	0	0	7	5.98
	0	%	57.14	%	42.86	%	0	%	100	
2010	0	0	1	2.22	3	9.7	0	0	4	3.42
	0	%	25	%	75	%		%	100	
2009	1	3.03	5	11.12	5	16.1	0	0	11	9.4
	9.08	%	45.46	%	45.46	%		%	100	
2008	0	0	6	13.34	4	12.9	0	0	10	8.55
	0	%	60	%	40	%	0	%	100	
2007	1	3.03	4	8.88	2	6.5	0	0	7	5.98
	14.29	%	57.14	%	28.57	%	0	%	100	
2006	0	0	4	8.88	0	0	0	0	4	3.42
	0	%	100	%	0	%	0	%	100	
2005	0	0	2	4.45	0	0	1	12.5	3	2.56
	0	%	75	%	0	%	25	%	100	
2004	0	0	1	2.22	0	0	0	0	1	0.86
	0	%	100	%	0	%	0	%	100	
2003	0	0	1	2.22	0	0	0	0	1	0.86
	0	%	100	%	0	%	0	%	100	
2002	1	3.03	1	2.22	0	0	0	0	2	1.71
	50	%	50	%	0	%		%	100	
2001	1	3.03	1	2.22	0	0	0	0	2	1.71
	50	%	50	%	0	%	0	%	100	
2001 and later	33	97.06	45	93.75	31	100	8	100	117	96.69
	28.58	%	38.65	%	26.05	%	6.72	%	100	
2000	1	100	1	33.33	0	0	0	0	2	50
	50	%	50	%	0	%	0	%	100	
1999	0	0	2	66.67	0	0	0	0	2	50
	0	%	100	%	0	%	0	%	100	
1990–2000	1	2.94	3	6.67	0	0	0	0	4	3.31
	50	%	50	%	0	%	0	%	100	
Total	34	28.1	48	39.7	31	25.6	8	6.6	121	100

conducted in 2005, 2.22% were conducted in 2004, 2.22% were conducted in 2003, 2.22% were conducted in 2002, 2.22% were conducted in 2001, 2.22% were conducted in 2000, and 4.45% were conducted in 1999. When examined on a periodical basis, it is observed that 93.75% of the essays were published in the period 2001 and later and 6.67% were published in the period 1990–1999.

Among the scientific papers related to organizational uncertainty in education and school administration 12.9% of the theses were conducted in 2015, 12.9% were conducted in 2014, 16.1% were conducted in 2013, 3.2% were conducted in 2012, 9.7% were conducted in 2011, 9.7% were conducted in 2010, 16.1% were conducted in 2009, 12.9% were conducted in 2008 and 6.5% were conducted in 2007, and no thesis was published before 2007.

Among the scientific papers related to organizational uncertainty in education and school administration, 25% of papers were conducted in 2015, 62.5% were conducted in 2014, 12.5% were conducted in 2005, and no paper was published before 2005.

Among the scientific papers related to organizational uncertainty in education and school administration, 13.67% were conducted in 2016, 11.11% were conducted in 2015, 17.95% were conducted in 2014, 9.4% were conducted in 2013, 3.42% were conducted in 2012, 5.98% were conducted in 2011, 3.42% were conducted in 2010, 9.4% were conducted in 2009, 8.55% were conducted in 2008, 5.98% were conducted in 2007, 3.42% were conducted in 2006, 2.56% were conducted in 2005, 0.86% were conducted in 2004, 0.86% were conducted in 2003, 1.71% were conducted in 2002, and 1.71% were conducted in 2001. When examined on a periodical basis, it can be seen that 96.69% of the essays were published in the period 2001 and later and 3.31% were published in the period 1990–2000.

When the table is examined from right to the left; among the scientific papers related to organizational uncertainty in education and school administration published in 2016, 87.5% were books, 12.5% were essays, among the scientific papers published in 2015 38.46% were books, 15.38% were essays, 30.78% were theses and 15.38% were papers, among the scientific papers published in 2014, 33.33% were books, 23.8% were essays, 19.07% were theses and 23.8% were papers, among the scientific papers published in 2013, 18.18% were books, 36.36% were essays, 45.46% were theses, among the scientific papers published in 2012, 25% were books, 50% were essays, 25% were theses, among the scientific papers published in 2011, 57.14% were books, 42.86% were theses, among the scientific papers published in 2010, 25% were essays, 75% were theses, among the scientific papers published in 2009, 9.08% were books, 45.46% were essays, 45.46% were theses, among the scientific papers published in 2008, 60% were essays, 40% were theses, among the scientific papers published in 2007, 14.29% were books, 57.14% were essays, 28.57% were theses, among the scientific papers published in 2006, 100% were essays, among the scientific papers published in 2005, 75% were essays and 25% were papers, among the scientific papers published in 2004 and 2003, 100% were essays, among the scientific papers published in 2002, 2001 and 2000, 50% were books, 50% were essays, and among the scientific papers published in 1999, 100% were essays.

Examining the results in general, among the scientific papers related to organizational uncertainty in education and school administration published in 2016, 28.1% were books, 39.7% were essays, 25.6% were theses, 6.6% were papers. When examined on a periodical basis, it can be seen that of the scientific papers published in the period of 2000 and later, 28.58 % were books, 38.65% were essays, 26.05% were theses, 6.72% were papers, and all of the scientific papers published in the period of 1990–2000 were essays. Furthermore, looking through the scientific papers related to changes in the education system, it is striking that essays make up the majority of them. Similarly, the studies related to uncertainty, present the changes in the education system for discussion and present the same for discussion in academic environments, which are very significant environments, and present them as papers, increasing the number of papers.

When Table 30.3 is examined, it can be seen that the research designs of the essays from the period of 1990 onward related to organizational uncertainty in education and school administration were quantitative and qualitative, all the research designs of original essays and compiled essays were qualitative, and the study was conducted using literature reviews and conceptual analysis. Three of the essays in the research-note type were of a qualitative research design, and in two of them data were collected using an interview form and in one study the data were collected using a case-study approach. On the other hand, a sample of the essays modeled with qualitative research design were mostly comprised of teachers, candidate teachers, and students, and a questionnaire and scale were used as data collection techniques.

According to Table 30.4, when the research designs of the master's and doctoral theses conducted in the period of 1990 onward related to organizational uncertainty in education and school administration are examined, it can be seen that different types including qualitative research design, quantitative research design, experimental research design, and mixed research design were used. One may say that the all the internal stakeholders of educational organizations including teachers, scholars, students, candidate teachers, administrators excluding auxiliary staff, technical staff and parents were used as samples in master's and doctoral theses. Many tools including questionnaire, scale, face-to-face interview, semi-structured interview form, test, examination, journal, observation form, and experimental operation material were used as data collection tools in master's and doctoral theses.

According to Table 30.5, it can be seen observed that qualitative research design conceptual analysis method was used as the research design in the books related to organizational uncertainty in education and school administration published in the period 1990 onward and quantitative research design was used in two studies. Interview was conducted with three participants in a study where qualitative research method was used in the book section. 125 administrators were given scales in one of the two studies of book sections modeled with qualitative research design and in another study scale application was made on finance companies.

When Table 30.6 is examined, among the papers related to organizational uncertainty in education and school administration in the period 1990 onwards, a quantitative research method was applied in three studies and qualitative research method

Table 30.3 Methods of scientific papers according to essay-type basis

Type		Method			Year	
		Research design	Universe sample	Data collection tools		
Essay	Compiled essay	Qualitative-literature review	–	–	2014	
		Qualitative-literature review	–	–	2012	
		Qualitative-literature review	–	–	2011	
		Qualitative-literature review	–	–	2008	
		Qualitative-literature review	–	–	2007	
		Qualitative-literature review	–	–	2006	
		Qualitative-literature review	–	–	2003	
		Qualitative-literature review	–	–	2001	
		Qualitative-literature review	–	–	2000	
		Original essay	Qualitative-literature review	–	–	2016
			Qualitative-conceptual analysis	–	–	2015
			Qualitative- conceptual analysis	–	–	2013
			Qualitative- literature review	–	–	2013
			Qualitative- literature review	–	–	2013
			Qualitative- literature review	–	–	2012
	Qualitative- literature review		–	–	2011	
	Qualitative-case study		–	–	2009	
	Qualitative- conceptual analysis		–	–	2008	
	Qualitative- literature review		–	–	2008	
	Qualitative- literature review		–	–	2008	
	Qualitative- literature review		–	–	2007	
	Qualitative- conceptual analysis		–	–	2006	
	Qualitative- conceptual analysis		–	–	2006	
	Qualitative- conceptual analysis	–	–	1999		
	Research note	Quantitative	303 candidate teachers	Individualism-collectivism scale	2016	
		Quantitative	237 students	Scale of attitude toward uncertainty	2015	
		Quantitative	290 teachers	Questionnaire on teaching leadership of head masters	2014	
		Quantitative	479 public personnel	Questionnaire	2014	

(continued)

Table 30.3 (continued)

Type	Method			Year
	Research design	Universe sample	Data collection tools	
	Quantitative	488 teachers	Organizational learning mechanisms scale (ÖÖM)	2014
	Quantitative	161 persons employed in private courses	Perceived organizational change scale	2014
			Uncertainty scale	
			Scale of intention to resign	
			Job satisfaction scale	
	Qualitative	30 school administrators	Semi-structured interview form	2013
	Quantitative	263 male teachers	Audit focus scale	2011
		168 policemen	Arnet excitement seeking scale	
	Quantitative	45 administrators	Questionnaire developed by the researcher	2011
	Qualitative	39 participants	Interview	2010
	Quantitative	460 university fourth grade students	Scales prepared by the researchers	2009
	Quantitative	358 teachers	Scale of crisis management skills of elementary school teachers	2009
	Quantitative	265 teachers	Leadership-style scale	2009
	Quantitative	58 administrators	Questionnaire	2009
	Quantitative	665 teachers	Leadership profile questionnaire	2008
	Quantitative	8 participants	Questionnaire	2008

(continued)

Table 30.3 (continued)

Type	Method			Year
	Research design	Universe sample	Data collection tools	
	Quantitative	200 teachers, 90 administrators	Questionnaire	2007
	Quantitative	114 teachers, 61 administrators	Scale of time Management in the Class	2007
	Quantitative	250 teachers, 322 students	Scale	2006
	Quantitative	2,380 elementary school teachers, 1,191 secondary school teachers	Corporate culture scale	2005
	Quantitative	38 administrators, 380 teachers	Adjective review list	2005
			Scale of determining leadership behavior	
	Quantitative	203 candidate teachers	Questionnaire	2004
	Qualitative-case study	5 individuals	–	2002
	Quantitative	27 scholars, 252 students	Questionnaire	1999

was applied in two studies. Qualitative research design was used as a conceptual analysis method in one of the studies of full text paper type and in another study 20 teachers were given questionnaires, and this was modeled on quantitative research design. The method of literature review was used in three studies modeled on four qualitative research designs among the abstract paper studies, and in one of them interviews were conducted with administrators of 11 organizations. In an abstract paper study modeled on a qualitative research design, 172 headmasters were given scales and scale application was applied in the other study but no information could be accessed in the abstract paper text.

When Table 30.7 is examined, no findings and comments related to uncertainty could be found in five of the essays of the research note type among the studies related to organizational uncertainty in education and school administration in 1990 onwards. When the findings and comments of the studies of compiled essay type are examined, the findings and comments of the studies may be summarized under the titles of reflections of the attitudes of leaders against uncertainty to the organization, relationship between organizational learning and uncertainty, uncertainty and access

Table 30.4 Methods of scientific papers on a thesis-type basis

		Method			Year
		Research design	Universe sample	Data collection tools	
Theses	Master's	Quantitative	215 university students	Questionnaire	2015
		Quantitative	426 students	Personal information	2015
				Scale of intolerance to uncertainty -short form	
		Trial model	Experimental group 24 students, control group 22 students	Pre-test, last test, and permanency test	2014
		Qualitative	10 female, 20 male, total 30 schools administrators	Semi-structured interview form	2014
		Qualitative	5 teachers	Performed with aphenomenographic method by posing eight questions to the participants	2014
		Quantitative	328 teachers	Scale of "teacher perceptions of headmasters with respect to mixed system leadership characteristics"	2014
		Experimental research model	61 female candidate teachers	Scale of intolerance to uncertainty (BTÖ)	2013
		Qualitative durum research	14 candidate teachers	Focus group interviews with questions of semi-structured interview	2013
		Ordered explanatory mixed model	Scaling process 422 students, 2nd application 229 students of vocational school at ninth grade 391 students scale	Scale of class climate perceived by students	2013
		Qualitative-literature review	-	-	2013
		Qualitative	30 scholars	Interview form	2012

(continued)

Table 30.4 (continued)

Type		Method			Year
		Research design	Universe sample	Data collection tools	
		Qualitative	Totally 9 course books of three different publishing houses for sixth–eighth grades at each class level	–	2011
		Qualitative	48 private course founders and administrators	Face to face interviews	2011
		Special case study with qualitative interpretive paradigm	77 candidate teachers studying in mathematics teaching department and (36) teachers employed in the Ministry of National Education	Performance tests, interviews and document analysis	2010
		Quantitative	318 teachers	Corporate culture scale	2010
		Trial model	A study group of totally 162 individuals from public educational organizations provided 82 make up the experiment group and 80 make up the control group	Scale of leadership behaviors exhibited in managing chaos developed by the researcher	2010
		Qualitative-literature review	–	–	2009
		Quantitative	437 teachers	2 questionnaires	2009
		Quantitative	45 administrators	Questionnaire developed by the researcher	2009
		Trial model	Totally 75 students seventh grade (39) make up the experiment group and (36) make up the control group	Scale of motivational strategies with respect to learning scale of nature of science for elementary school level interview form	2009

(continued)

Table 30.4 (continued)

Type	Method			Year	
	Research design	Universe sample	Data collection tools		
	Quantitative	150 administrators, 690 teachers and 1,390 students	Three separate questionnaires, namely administrators, teachers and students	2008	
	Quantitative	58 administrators	Questionnaire	2008	
	Quantitative-trial model	Two groups of students created by dividing candidate teachers of third grade into two	“Wave package and uncertainty principle interview form” and “uncertainty principle classical examination”	2008	
	Qualitative	–	–	2007	
	Quantitative-trial model	192 students of eighth grade	Genetics achievement test as pre-test, final test, test of logical thinking, and learning approach questionnaire	2007	
	Doctorate	Qualitative	15 teachers, 6 students, 3 administrators and 3 parents	Semi-structured interviews, field notes and documents	2015
		Quantitative	650 academic and administrative personnel	Open leadership scale	2015
				Scale of adopting social networks	
				Organizational uncertainty perception scale	
		Quantitative	1,047 teachers and administrators	Questionnaire	2013
Quantitative		1,510 participants	Quality standards assessment questionnaire for online courses	2011	
Semi-experimental research model		111 candidate teachers	Questionnaire-letter	2009	
Experimental design	Experiment group ($n = 37$); control group ($n = 35$)	Experimental operation material	2008		
		Test of determining level of learning			

(continued)

Table 30.4 (continued)

Type		Method			Year
		Research design	Universe sample	Data collection tools	
				Metacognition awareness scale	
				Academic self concept scale	
				Scale of attitude toward the course of teaching design	
				Product assessment form	
				Observation form	
				Self-assessment report	
				Interview form	
				Journals	

to information, lack of job security and uncertainty, relationship between corporate culture and uncertainty, relationship between organizational change and uncertainty. However, when the findings and comments of the studies of the original-essay type are examined, the findings and comments of the studies may be summarized as complexity theory, environmental uncertainty and general uncertainty, remedying uncertainty in organizations, quantum theory and uncertainty, uncertainty and organizational change, entropy and uncertainty, communication and uncertainty, the role of leaders in uncertainty, avoiding uncertainty, human nature and uncertainty. When the findings and comments of the studies of research-note essay type are examined, the findings and comments of the studies may be summarized under the titles of corporate culture, attitude toward uncertainty, change management and uncertainty, organizational learning and uncertainty, management and uncertainty, reasons for uncertainty, results of uncertainty, benefitting from uncertainty, uncertainty and crisis management, uncertainty and risk management, uncertainty and indecisiveness, leadership style of teachers and uncertainty, general policy of educational organizations, power distance and uncertainty. One may say that reflections of uncertainty to educational organizations in studies of the essay type were examined with many various dimensions but usually the dimensions administrative processes, learning processes, and organizational change came to the forefront.

When Table 30.8 is examined, no findings related to uncertainty could be found in seven of the master’s theses and three of the doctoral theses among the theses related to organizational uncertainty in education and school administration in 1990 onwards. When the findings and comments of the master’s theses are examined, they can be summarized as the cultural values of university students on the business sector they intend to work and uncertainty, intolerance to uncertainty and psychological well-being, persons that the administrators consult under uncertainty conditions, the level of intolerance of female candidate teachers to uncertainty, uncertainty in class rules, uncertainty in teaching activities, uncertainty as a threat for the future

Table 30.5 Methods of scientific papers on a book-type basis

Type		Method			Year
		Research design	Universe sample	Data collection tools	
Book	Individual book	Qualitative- conceptual analysis	–	–	2016
		Qualitative- conceptual analysis	–	–	2015
		Qualitative- conceptual analysis	–	–	2009
		Qualitative- conceptual analysis	–	–	2002
		Qualitative- conceptual analysis	–	–	2001
		Qualitative- conceptual analysis	–	–	2000
	Book translation	Qualitative- conceptual analysis	–	–	2007
	Book with editor	Conceptual analysis	–	–	2016
		Conceptual analysis	–	–	2016
		Conceptual analysis	–	–	2016
		Conceptual analysis	–	–	2015
		Conceptual analysis	–	–	2014
		Conceptual analysis	–	–	2014
		Conceptual analysis	–	–	2014
	Book section	Qualitative- conceptual analysis	–	–	2016
		Qualitative- conceptual analysis	–	–	2016
		Quantitative	Finance companies	Organizational intelligence scale for business organizations	2016
		Qualitative- conceptual analysis	–	–	2016
		Qualitative- conceptual analysis	–	–	2016
		Quantitative	125 administrators	Stigma scale	2016
		Qualitative- conceptual analysis	–	–	2016
		Qualitative	3 participants	Semi-structured interview form	2016
		Qualitative- conceptual analysis	–	–	2016
		Qualitative- conceptual analysis	–	–	2016

(continued)

Table 30.5 (continued)

Type		Method			Year
		Research design	Universe sample	Data collection tools	
		Qualitative- conceptual analysis	–	–	2015
		Qualitative- conceptual analysis	–	–	2015
		Qualitative- conceptual analysis	–	–	2015
		Qualitative- conceptual analysis	–	–	2014
		Qualitative- conceptual analysis	–	–	2014
		Qualitative- conceptual analysis	–	–	2014
		Qualitative- conceptual analysis	–	–	2014
		Qualitative- conceptual analysis	–	–	2013
		Qualitative- conceptual analysis	–	–	2013
		Qualitative- conceptual analysis	–	–	2012

in the organizations, butterfly effect, corporate culture, chaos, complexity, leadership and uncertainty, uncertainty in project based learning approach practices, avoiding uncertainty. When the findings and comments of the doctoral theses are examined, they can be summarized as organizational uncertainty and social networks, uncertainties in teacher performance management and teacher performance assessment systems, uncertainties in teaching and learning processes. When the findings and comments of the thesis works are examined, one can say that the findings and comments on uncertainties on the processes within the organization were intense.

When the findings and comments of the books related to organizational uncertainty in education and school administration in 1990 onward are examined, one can say that there were no findings and comments on uncertainty. A shortage of papers related to uncertainty in book types in the literature is remarkable.

30.4 Conclusions and Suggestions

It was found that papers of a compiled essay type, original essay type, and research note type were among the scientific papers related to organizational uncertainty in education and school administration from 1990 onwards but scientific papers from

Table 30.6 Findings and comments of scientific papers on an essay-type basis

Type		Method			Year
		Research design	Universe sample	Data collection tools	
Paper	Abstract paper	Quantitative		Short form Minnesota Satisfaction Questionnaire (MSQ) scale	2015
				Dimensions of organizational learning” scale	
		Qualitative-literature review	–	–	2014
		Qualitative	11 corporate directors	Interview form	2014
		Qualitative-literature review	–	–	2014
		Qualitative-literature review	–	–	2014
	Quantitative	172 headmasters	National culture values scale	2005	
Full text	Quantitative	20 teachers	Questionnaire	2015	
	Qualitative-conceptual analysis	–	–	2014	

the categories technical note, case study, book critics, comment, letter to the editor, abstract, and expert report types were not available.

Looking through the papers of the essay type in general, one may say that the studies were conducted in 1999 and later and became more intense in 2013 and 2014. Whereas looking through the titles of the scientific papers of an essay type it can be observed that the titles of studies related to leadership and administration were intense.

It can be seen that the main concepts examined in the content of essays were chaos, complexity, corporate culture, change, risk, leadership, administration, organizational learning, and social networks in addition to uncertainty. One can say that uncertainty and leadership was examined intensely in the content of the papers of compiled type, chaos and complexity was examined intensely in the content of the papers of original content type, and leadership was examined intensely in the content of the papers of research note type.

It can be seen that research designs of essays are quantitative and qualitative, research designs of all original essays and compiled essays are qualitative, and examinations were performed using literature review and conceptual analysis. It can be observed that three of the essays of the research note type were of a qualitative research design, the data were collected using an interview form in two of them, and in one study the data were collected using a case study method. It can be seen that

Table 30.7 Findings and comments of scientific papers on an essay-type basis

Type		Findings and comments	Year
Essay	Compiled essay	Edward Lorenz’s experiment, emergence of assumptions of complexity theory and principle of uncertainty	2014
		While the leaders explore the inconsistent, changeable and uncertain situations we encounter, administrators bow to those situations	2012
		A learning organization is an organization which reacts to uncertainty, complexity and change and which can say ‘count me in’ change. Organizational learning on the other hand is concerned with the capacity of responding uncertainty and complexity in the environment	2011
		In the environment of complexity and uncertainty created today by globalization, knowledge has become a very significant strategic source for businesses and having knowledge and managing the same effectively has become one of the most significant conditions in global competition	2008
		Lack of job security covers the situations that lead the employee to worry about losing their job on the basis of uncertainty consideration arising as a result of all sorts of legal and illegal organizational changes that could prevent continuity of the existing job	2007
		The issue of how managements will increase their capacity to manage and success is still uncertain; naturally, this leads governance to encounter uncertainty in this regard	2006
		We observe that in enterprising and resistant cultural systems where the tendency to cope with uncertainty as a cultural value is high, centralization is still low and the lower the tendency to struggle with uncertainty and resisting power becomes, the higher centralization gets and a management avoiding responsibility begins to predominate	2003
		Visionary leadership contributes significantly to remedying the uncertainties of the organizations for the future	2001
		Under environmental conditions where uncertainty is high and it becomes gradually more difficult to make long-term plans and to make the correct decisions, administrators behave more cautiously about organizational change	2000
	Original essay	Unlike the idea of increasing the effectiveness of the organization through neutralization of factors, increasing environmental uncertainty and complexity as targeted by the contingency approach, the complexity theory emphasizes that those uncertainties and complexities are factors that trigger creativity for a new order	2016
		It could be stipulated that social network technologies can be used as an intermediary element in the process of obtaining organizational covered knowledge in order to remedy uncertainty in the organizations because social networks are natural and a “social practice group” alone	2015

(continued)

Table 30.7 (continued)

Type	Findings and comments	Year
	Another thing brought in line with change is uncertainty and unpredictability; because it is based on less control and predictability according to ancient science understanding and the direction of this wind can be predicted much less now	2013
	Quantum theory, relativity law, and principle of uncertainty led to a crisis which led the earliest physicians and even those who were not physicians to understand the limits of the machine model better	2013
	Failure of the top management to pay sufficient significance to communication or failure to explain the justification of change to the persons who could be affected by change may increase uncertainty and concerns and lead to resistance	2013
	Emergence of the principle of uncertainty, an element of the quantum theory its thesis and its effect on administrative and education sciences (chaos) has been examined	2012
	Although the concept of entropy is a concept which is directly related to many problems which have been integral part of daily life including disorder, uncertainty, chaos, complexity, failure to get organized, non-communication, pollution, aging, degeneration, decay, death and bankruptcies and which is defined by many thinkers as the most fundamental law of universe, it is not a concept known very well in all aspects	2011
	The process of construction of an elementary school in Kılıçköy/ Yalova with the social synergy after the earthquake has been explained in the example of communication interaction channels between different levels and different dynamics	2009
	A successful organizational socialization removes role uncertainty and provides role openness and high motivation and interest, high level of loyalty to the organization and the desire and right to stay in the job, increases job satisfaction and performance of workers	2008
	Emergence of certain results that are difficult to be estimated in advance in organizational change process is a situation which is expectable all the time. Removal of this uncertainty depends on good analysis of the organization and good performance of preliminary work	2008
	Leadership cannot be structured and predicted	2008
	Leaders are required to provide trust to be a model for their employees. Because in the process of change, employees experience uncertainty of future in the change process and they want to trust their leaders to guide them through this uncertainty	2007
	In cultures avoiding uncertainty, people seek for a structure allowing prediction of events in their organizations and relations and this naturally prompts them to engage in risky behaviors instinctively	2006
	The leader has to take the cost of potential failure into account in addition to opportunity costs despite uncertainty of the environment and future	2006

(continued)

Table 30.7 (continued)

Type	Findings and comments	Year
	Provision of intervening in nature, rearranging the natural world by mankind brings about uncertainties and risks	1999
Research note	One may say that the more the complexity level of culture increases, the more individualist tendency increases	2016
	We can say that “Scale of Attitude Toward Uncertainty” is a valid and reliable scale that could be used for the purpose of determining uncertainty levels of individuals	2015
	Distrust with respect to change management and uncertainties for the process play a significant role in this negative perception	2014
	From the dimensions of a questionnaire of pedagogical leadership behaviors of headmasters it is observed that the teaching process and assessment of students was the dimension perceived to be at the highest level and the dimension of supporting and developing teachers was the dimension perceived to be at the lowest level	2014
	The level of use of organizational learning mechanisms in schools is over the mid-point in society though not at the highest level	2014
	One may say on the basis of the research results that intentions of employees to resign are largely affected by the uncertainty they perceive	2014
	It has been observed that the effect of perceived organizational change on job satisfaction of employees partially mediated	
	Reasons for uncertainties	2013
	Uncertainty and crisis management	
	Uncertainty and risk management	
	Uncertainty and indecision	
	Consequences of uncertainty	
	Stakeholder effect on the decisions taken in the uncertainty situations	
	Expectations of administrators from teachers in situations of uncertainty	
	Hidden traps in making decisions in situations of uncertainty	
	Benefitting from uncertainty	
	Leader-administrator differentiation in situations of uncertainty	
	A positive relation between the tendency to take risk and audit focus was found; furthermore it was found that external-audit focused ones tended to take more risk than the internal-audit focused ones	2011
	–	2011
	–	2010
It both provides easiness to administrators and provides benefit to employees by decreasing uncertainties	2009	
When the low rate of employment is added to examination anxiety uncertainties for the future increase as well		

(continued)

Table 30.7 (continued)

Type	Findings and comments	Year
	There is a meaningful and positive relation between the perceptions of teachers with respect to their skills of crisis management and their perceptions on visionary leadership	2009
	Teachers with an authoritarian attitude usually threaten with low grades, disciplinary penalty, and beating. Since everything depends on the teacher, uncertainty exists	2009
	–	2009
	Significance of visionary leadership is based on the success of organizations in eliminating uncertainties for the future	2008
	–	2008
	Agreement of educational employees on the idea that uncertainty in the general policy of the education institution and in task definitions affects time management negatively at limits usually reveals a fundamental problem	2007
	It has been revealed that elementary school administrators and teachers adopt their schools and become ready for change	2007
	–	2006
	Although elementary schools generally have a stronger corporate culture, existence of a middle level of corporate culture exists in secondary schools	2005
	Organizational power distance in Turkish society being high and tendency to avoid uncertainty causes military leadership characteristics to come to the forefront	2005
	The values of female students for avoiding uncertainty are higher than male students, and the values of male students toward power distance are higher than for female students. There is a positive correlation between avoiding uncertainty power distance dimensions	2004
	Conflict within organization is natural; conflict in the computer department arises from scarcity of sources, uncertainty in division of labor, interruption of communication, and power struggle	2002
	Students and lecturers have been affected by the process of change positively	1999

the sample of essays of the research note type, modeled with qualitative research design, was usually composed of teachers, candidate teachers, and students, and questionnaires and scales were used as data collection techniques.

No findings and comments related to uncertainty could be found in five of the studies of the research-note essay type. When the findings and comments of the studies of the compiled essay type are examined, the findings and comments of the studies may be summarized under the titles of reflections of the attitudes of leaders toward uncertainty to the organization, relationship between organizational learning and uncertainty, uncertainty and access to knowledge, lack of job security and uncertainty, organization culture and uncertainty relationship, organizational change and uncertainty relationship. On the other hand, when the findings and comments of

Table 30.8 Findings and comments of scientific papers on a thesis-type basis

Type	Findings and comments	Year	
Theses	Master's	It has been observed that uncertainty in cultural values of university students differ on the basis of sectors they prefer to work in	2015
		Negative meaningful relation was detected between intolerance to uncertainty and level of psychological well-being	2015
		–	2014
		It has been concluded that school administrators firstly consulted with the persons around them or looked for examples similar to the situation they experience under uncertainty conditions	2014
		–	2014
		–	2014
		One may say that the BELYÖN program was effective at the levels of intolerance to uncertainty in female candidate teachers. Research results reveal that uncertainty is a phenomenon that could be coped with and managed	2013
		As a result of analyses of the interview records, candidate teachers stated that mathematical modeling activity was different from the problems solved in the class in terms of containing daily-life problems, subjectivity, value judgments, preferences, and having uncertainty of character	2013
		In a classroom with a positive class climate, as a consequence of a low level of interest of students in the lessons academically, a higher level of uncertainty with respect to class rules is experienced	2013
		–	2013
		It has been understood that traces of the butterfly effect were observed in educational organizations, a small malfunction in the education process created a bigger problem in later years	2012
		Private courses will probably encounter uncertainties both because of their failure to become a business and because of their failure to be accepted politically and socially	2011
		It is observed that course books of mathematics for sixth, seventh, and eighth grades discussed failed to give place to the subject of probability and statistics at all levels despite the fact that PISA determined uncertainty sufficiency scale as level 6	2011
		–	2010
		Perceptions of teachers commissioned in the elementary schools in the city center of the province of Denizli with respect to are at “neutral” level	2010
It has been revealed that the opinions of the education administrators in the organization where the research on leadership behaviors was assessed to be required to be exhibited in all aspects of managing chaos differ significantly	2010		
Complexity, speed, variability, and uncertainty are phenomena that today's professional people encounter all the time	2009		

(continued)

Table 30.8 (continued)

Type	Findings and comments	Year
	Organizational change aiming in providing equal power and development of the organization against uncertainty and changing environmental conditions is a continuous process	
	Leadership is decreasing fear and increasing hope: humans are naturally in uncertainty for the future in the process of change. It is difficult to generalize leadership arising from uncertainties and dangers because conditions change from one condition to the other and from time to time	
	In an “environment of uncertainty”, a school administrator may provide continuity of education services within the existing order exhibiting the necessary flexibility against needs and problems as required by new relations, by managing the significant conflicts and crises encountered	2009
	There is a meaningful difference between the capabilities of the students in the class where project based learning approach was implemented before and after implementation to the benefit of post- implementation in terms of understanding the aspects including creative nature of scientific knowledge, scientific method, estimation and uncertainty in scientific knowledge inquired with respect to the levels of understanding the nature of science	2009
	–	2009
	–	2008
	Although tendencies of disseminating headmasters to exhibit behaviors of avoiding uncertainty aimed to be measured in the research vary depending on seniority and education level, it is understood to be at medium level in general. This makes one think with respect to the school administrators provided long term disseminating education that education provided was not very effective on differentiating the tendency to exhibit the behavior of avoiding uncertainty on the group	2008
	Culture of the schools where the headmasters are commissioned is composed of bureaucratic structures and this decreases the tendencies of the administrators to exhibit the behavior of avoiding uncertainty at low level	
	Behaviors of headmasters to avoid uncertainty differ according to their seniority of directorship in the school they work in. The level of exhibiting the behavior of avoiding uncertainty in administrators with high seniority is higher	
	This difference is not valid for those administrators at the beginning of seniority of directorship and administrators with seniority ranging between 10 and 13 years. In this case, behaviors of avoiding uncertainty are related to individual and organizational factors including carrier, tendency to take risk, employment demands, degree of adopting corporate culture, and job satisfaction	

(continued)

Table 30.8 (continued)

Type	Findings and comments	Year
	The behaviors of the disseminating headmasters within MEGEP for avoiding uncertainty differ depending on their education level	
	Level of exhibiting behavior of avoiding uncertainty by university graduate administrators is lower. This makes us think that the duration of formal education provided may be related to the level of realization of the behavior of avoiding uncertainty	
	The behaviors of the disseminating headmasters within MEGEP for avoiding uncertainty do not only affected by individual factors. The administrators associated their tendency to exhibit behavior of avoiding uncertainty with their values, habits, and cultures as well. This makes us think that the level of exhibiting behavior of avoiding uncertainty may be related to both corporate culture and social culture, which has a broader field of effect in addition of individual factors	
	Semi-structured interview outputs have revealed that a hybrid teaching approach seriously decreased the difficulty of learning and misleading related to the “Principle of Uncertainty”	2008
	It has been revealed that problem-based learning students learnt the subjects of genetics better than traditional science teaching students and that they were more successful in terms of skills including use of the necessary information in the problem given, revealing uncertainties, organizing concepts, and interpreting the information	2007
	Anomy, one of the biggest dangers for any society is observed in alienated students. Students have fallen into a condition of lack of purpose, complexity, indecisiveness and uncertainty. They find the rules of the school and class unnecessary and unimportant and oppose these and have an aggressive attitude	2007
Doctorate	It has been detected in the research that open leadership could predict organizational uncertainty at the level of $\gamma = 0.49$ but this value decreased to $\gamma = 0.46$ upon inclusion of the variable of adopting social networks in this analysis	2015
	There are malfunctions and uncertainties in the processes of preparation of teacher assessment criteria and assessment of performance of teachers at school	2015
	–	2013
	–	2011
	–	2009
	The noise within the class environment, the anxiety caused by uncertainties at the beginning of projects, and student fatigue as a result of their roles in the process were assessed as restrictions of the process	2008

the studies of original essay type are examined, one may say that complexity theory, environmental uncertainty and uncertainty, the findings and comments may be summarized under the titles of remedying uncertainty in the organizations, quantum theory and uncertainty, uncertainty and organizational change, entropy and uncertainty, communication and uncertainty, role of leaders in uncertainty, avoiding uncertainty, human nature and uncertainty. When the findings and comments of the studies of research note essay type the findings and comments of the studies may be summarized under the titles of organization culture, attitude toward uncertainty, change management and uncertainty, organizational learning and uncertainty, administration and uncertainty, reasons for uncertainty, results of uncertainty, benefiting from uncertainty, uncertainty and crisis management, uncertainty and risk management, uncertainty and indecisiveness, leadership style of teachers and uncertainty, general policy of educational organizations, power distance and uncertainty. One may say that, in studies of the essay type, reflections of uncertainty to educational organizations were examined with various dimensions but usually the dimensions of administrative processes, learning processes, and organizational changes came to the forefront.

When the findings and comments of the essays of the period of 1990 and later related to organizational uncertainty education and school administration are examined, it is striking that despite the fact that there were no studies among compile and original essays without findings and comments uncertainty, lack of conclusions and suggestions, similarly despite the fact that there were five studies among the essays of research note type without findings and comments uncertainty, there were two papers without conclusions and suggestions.

When the titles of the studies of abstract paper type are examined, one may say that the concept of administration was highly used in titles and the concepts of uncertainty and organizational learning were used as well. Looking through the studies of full text paper type, it is observed that the concepts of leadership and education were used and the studies were conducted in 2014 and 2015. When the titles of the studies of paper type are examined generally it is observed that the concept of administration was highly used in titles.

It can be observed that the concept of administration comes to the forefront in the contents of papers in addition to uncertainty. One may say that uncertainty and organization culture, organizational learning was examined in the content of papers of abstract paper type, uncertainty and management was examined in the content of papers of full text type.

A quantitative research method was used in three studies of the paper type and qualitative research method was used in two studies. Qualitative research design was used as conceptual analysis method was used in one of the studies of full text paper type, and in another study 20 teachers were given questionnaires, which were modeled on a with quantitative research design. Method of literature review was used in three studies modeled with four qualitative research designs among the abstract paper studies, and in one of them an interview was conducted with administrators of 11 organizations. In an abstract paper study modeled with a qualitative

research design, 172 headmasters were given scales and scale application was made in the other study but no information could be extracted from the abstract paper text.

When the findings and comments, conclusions and suggestions of the books and papers are examined, one may say that there are no findings and comments, conclusions and suggestions on uncertainty.

It will be useful to research the effects and solutions of the amendments made in the legislation and in practice in educational organizations and practical areas of the education system in terms of organizational uncertainty will be useful for directing the education system.

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Chapter 31

Social Justice Leadership in Education in the Axis of the Chaos Theory Does Social Justice Arise From Chaos? Social Justice Leadership with Chaos Approach in Educational Organizations



İlknur Şentürk and Gökhan Kılıçoğlu

Abstract When the times that we live in witnesses unprecedented rapid changes and transformation compared to previous historical eras and processes. This process could reveal various opportunities and benefits for individuals and organizations, but it could also reveal an environment in which inequalities and injustice increase with unexpected and shocking consequences. Especially when educational organizations and the actors in these organizations are concerned, these rapid and sudden changes and could trigger rises and falls in these organizations and individuals, a school or individual that has been successful or advantageous in the past could find itself in a disadvantaged position. On the other hand, the opposite could also occur and a school or individual considered in a disadvantageous position could find itself in a totally different point in a short period of time as a result of a sudden change. Chaotic processes that could result from change and transformation could increase inequalities between the students and the employees in the educational organizations, reduce diversity and differences and prepare an unfair atmosphere. It is therefore expected of the education leaders to adapt the schools to environmental and competitive conditions in a constantly changing chaotic world, as well as to administer the schools to preserve it from the *uncertainties*, *complexities* and *chaos* that might arise as a result of sudden changes or unanticipated events and to maintain the school effectively and in social justice. Otherwise, alienation from the management of these uncertainties, risks and crises that education organizations might encounter, and a management style without social justice would make it difficult for schools to sustain their organizational development and to fulfill their institutional objectives.

İ. Şentürk (✉) · G. Kılıçoğlu
Eskişehir Osmangazi University, Eskişehir, Turkey
e-mail: ilknurkokcu@gmail.com; gkilocglu@outlook.com

At this juncture, education leaders need to be ready for the chaos process as an actor with knowledge on main elements and characteristics of the chaos process and equipped with social justice leadership characteristics and proficiencies. Thus, this chapter will focus on the chaos theory, foundations, characteristics and elements of this theory, its reflections on education and education management, and the role of social justice leadership skills of education organization leaders in chaos management.

31.1 Paradigm Shifts

The classical theory of physics based on Newtonian approach argues that particular reactions will create particular consequences and everything that occurs could be precisely measured, and it is possible to predict precisely which reaction would occur as a result of which effect. According to this theory, which was based on linearity, “there is nothing that is indefinite” and under same circumstances always the same conclusions arise, the whole universe consists of causes and consequences (Toffler 1980). Therefore, there are no problems or solutions that could not be solved or estimated within the context of cause-and-effect relation (Wichmann 1993). The positivist paradigm that develops parallel to this approach that aims to define the universe and guides scientific thinking and research in the fields of natural and social sciences, on the other hand, reflects determinism, causality, hierarchical structure of systems and states that the universe is a machine which functions like a clockwork and monotonous in itself, and thinking otherwise is irrational (Schwartz and Ogilvy 1979; cited by ŞİMŞEK 1997).

The positivist paradigm, which was effective in explaining the functioning of natural phenomena, was insufficient in explaining new complexities arising from innovations, sudden outbreaks of major changes and new significant events (Toffler 1980). The quantum physics theory that emerged in the beginning of the twentieth century gradually began to replace the classical physics theory by answering the questions that classical physics theory was not able to explain. Einstein’s theory of relativity and Heisenberg’s uncertainty principle, which laid the foundations for the quantum physics, destroyed the predictable, objective and absolute right of the positivist paradigm, while John Bell’s theorem demonstrated that the universe does not consist of independent and distinct parts, but all events and things are the pieces of a whole (Schwartz and Ogilvy 1979; cited by ŞİMŞEK 1997; Prigogine and Stengers 1996).

The new paradigm that emerged within the framework of quantum physics and expressed as post-positivism, is based on the premise that the truth is complex, the systems are heterarchic, the relations are not based on linearity but mutual causality, and since the universe does not behave mechanically like a clockwork, the future, consequences and the direction could not be predicted. Furthermore, the rise in this new paradigm deeply shook the core of the other natural sciences as well as increasing its influence on social sciences everyday, destroying the one

and absolute right approach and prepared a transition from world of single truth to a world of multiple truths. The chaos theory is the interpretation of Heisenberg's uncertainty principle in physics in social sciences (Gleick 2000).

31.2 What is Chaos Theory?

The concept of chaos was first described in the literature in the work of the French mathematician Jules Henri Poincare in the beginning of the 1900s. In his study that investigated the solar system, Poincare stated that the solution was sensitively dependent on the baseline conditions in the equation system that determines the movements of the solar system, however these baseline conditions could not be known, and used the notion of *chaos* for this unpredictable and undefinable state. Furthermore, Poincare pointed out that a small detail in dynamic systems could lead to significant results and that these were nonlinear events, and attempted to explain these events whose consequences are difficult to predict with concepts such as uncertainty, complexity and chaos (Ertürk 2012; Karaçay 2004; Mackey 1999). Another important contribution to the chaos theory came in 1960 from Edward Lorenz, a professor of meteorology. Lorenz, based the graph he plotted while preparing weather forecasts, observed that the graphics in the long run resulted in a pattern similar to a butterfly. Thus, he concluded that accurate and reliable weather forecasts could not be predicted for a long-term over a certain period of time due to chaotic behavior, and therefore predictions are not possible in any system showing non-periodic behavior (Gleick 2000).

Lorenz (1979) attempted to explain two basic features of chaotic systems, which appear to be irregular externally but have an internal order. The first of these is the precise dependency on the baseline state. This phenomenon, also referred to as the butterfly effect, states that “*when a Brazilian butterfly flutter its wings, this can cause a hurricane in Texas.*” Therefore, the minute effects that appear to be insignificant and ineffective in complex systems could lead to unpredictable and enormous consequences. Another feature of chaotic systems is that they are not random. Although chaos is literally defined as “disorder and disruption” and demonstrates itself in sudden events, it has an internal working order (Gleick 2000). Thus, chaos refers to a disorder which is unpredictable, unstructured, but expressing an *orderly disorder* of similar forms or a disorder with a purpose (Moseley and Dustin 2008; Tetenbaum 1998), and chaos designs a consistent new order (Morgan 1998).

In summary, chaos that concocts the irregularity in the system creates its own internal order. Furthermore, while chaos theory explains the nonlinear aspects of the universe, it is the bridge between the reductionist approach of the Newtonian model and the randomness of the quantum physics. On the other hand, the theory states that the universe is an open system, chaotic systems exist in nature and in a nonlinear manner, causal relations cannot be sought in systems, small changes in the system lead to great consequences, and several human systems could be explained by the chaos theory (Rockier 1990).

31.3 Chaos and Complexity

Another concept closely associated with chaos is the concept of *complexity*. Although the two concepts contain common points in the literature such as order by disorder and unpredictability, the concepts of chaos and complexity have different content. The concept of complexity, which appears later in the literature, has a meaning close to chaos when it is expressed for the first time. On complexity Mason (2008) states that: “A central concern of complexity theory is on the relationships among the elements or agents that constitute a particular and sufficiently complex environment or system” (p. 118) and places complex systems or the relationships between surrounding elements and agents. Furthermore, while chaos includes non-linear dynamics based on repetition, and the order created by cycles that repeat in the framework of rules, complexity is about adaptation, which in turn removes the repetition in complex systems and can cause rules to change during adaptation. Hence, there are no mention of constant rules and constant repetition in complex systems. As a result, it is necessary to separate the complex systems and the chaos theory and examine them under different topics (McMillan 2004; Mitleton-Kelly 2003; Saygan 2014).

31.4 Major Concepts of Chaos Theory

As mentioned at the beginning of our chapter, the foundation of the chaos theory, which were influenced by the quantum physics approach, includes certain principles. These principles are butterfly effect, onset on turbulence, dissipated structure, random shocks, strange attractors, recursive symmetries, feedback mechanisms (Griffiths et al. 1991), nonlinearity, bifurcation and face changes, self-organization, fractals and correspondence, self-revival, sensitive dependence on the initial condition, chaos pattern and universality (Murphy 1996; Lindsay 1989; Seeger 2002; Thietart and Forgues 1995). However, a literature review would show that five major concepts were highlighted in the administrative sciences and education management studies (Blair 1993; Gilpin and Murphy 2006; Griffiths et al. 1991; Liou 2015; Murphy 1996; Seeger 2002). Thus, in the present study, we focused on five major concepts. These five major concepts are nonlinearity, sensitivity to initial condition, strange attractors, bifurcation point and feedback mechanisms.

Nonlinearity is defined as the state of playing games through the exchange of rules. The important element in this situation is not the obstacles to be faced, but the road travelled and the speed (Gleick 2000). At the same time, it is stated that it is very difficult to predict the future in natural systems such as **nonlinear** education systems, and cause and effect relationship, predictability and linearity are rejected (Blair 1993; Morrison 2008; Stacey et al. 2000). When examined based on the education systems, organizational behavior and events occur through interactions in non-linear paths instead of a linear causality, resulting in changes with unpredicted consequences (Finch 2004).

Sensitivity to initial condition, or the so-called butterfly effect (Stewart 1989; Wheeler 1989), refers to the potentially vast influence of any minute action (Liou 2015). The smallest change in the initial condition can create a chaotic situation in an entire system, in other words small differences in inputs can cause major changes in output (Frear 2010). However, to be able to talk about chaotic order in the system, the small differences in input must be nonlinear. Because in linear relations, the cause have a single effect on the result, in non-linear relations, it can have more than one effect on the result (Boccaletti et al. 2000; Parker and Stacey 2007). Lorenz demonstrated this situation by stating that “*when a Brazilian butterfly flutters its wings, this can cause a hurricane in Texas.*” (Lorenz 1979).

Another concept stressed in chaotic systems is the **strange attractor** elements, which are related to the fact that small inputs lead to large changes due to the delicate structure of the system. While attractor elements point to the tendency of the system to be oriented to different directions (Morgan 1998), they also create a deep structure and order that limit erratic organizational behavior (Murphy 1996) and draw the boundaries of systems. Furthermore, identification of attractors in the system is significant for prediction of the system behavior and its possible reaction to change (Bright and Pryor 2011). On the other hand, attractors are latent regulators, which are unpredicted behaviors of a chaotic state and will always tend to return, as they constantly regress into a bounded range. These principles may lead to organizational change, but may also pull organizational behavior back to an equilibrium point (Liou 2015).

This concept, called the **bifurcation point**, or “**edge of chaos**”, indicates a point or area within the organizational system where the system is both irregular and disrupted in a chaos and irregular and at the same time organized and stabilized in a new order (Mittleton-Kelly 2003; Murphy 1996). In short, this point is the point where the order emerges after organizational disorder (Morgan 1998). Thus, while the system demonstrates a relatively orderly behavior until it reaches the threshold of turbulence, it loses balance and order in the turbulence process. However, loss of equilibrium in the system could lead to unpredicted results as well as providing an opportunity for new input and energy to the system. The edge of chaos, on the other hand, is a crucial point in the development of the organization by producing new energy from the environment that could be used to provide for both creativity and equilibrium of the system and also to develop resistance to future stimulations (Liou 2015). Therefore, systems driven towards the thresholds of chaos could become more creative and open-minded (Morrison 2008).

The feedback mechanisms provide an opportunity for an organization to reorganize itself within a unique system. Because, the chaotic system could never find itself at the same situation ever again (Thietart and Forgues 1995). At the same time, the output at one stage in chaotic systems is a feedback in another stage. Negative feedbacks adjust the system by regulating deviations in the system. Because these feedbacks could reduce the variations in the system and push the system towards its original state. Positive feedbacks, on the other hand, could inflate system deviations and lead to system instability, hence chaos. Therefore, the system could acquire a new pattern by moving away from its original state as a result of these feedbacks (Murphy 1996; Thietart and Forgues 1995).

31.5 Chaos and Educational Administration

Educational organizations are inherently complex structures and continue to exist non-linearly and with uncertainties. Educational administrators could try to maintain the stability and the status quo in the organization by seeking ways to escape from the chaotic process and uncertainties when they encounter a complex and chaotic situation, by applying more control and autocratic methods. However, chaos is a part of organizational life for educational organizations and when managed successfully, it can provide renewal, creativity and change for the organization. Furthermore, since conventional leadership theories are perceived as inadequate, there is a need to redefine new leadership and leadership processes. Therefore, it is expected of the modern education administrator to understand chaos, and manage it actively and successfully, create positive consequences for the institution in this process and should enable equality, justice and respect for differences, and a free atmosphere in the organization during changes instead of control and autocracy. Thus, the major components of chaos that we mentioned above could be expressed as significant points for the education administrator. Primarily, the education administrator, bearing in mind the butterfly effect and non-linearity principles, should not forget that small events at school could have significant consequences and schools have complex structures that do not operate like machinery. Thus, they should not overlook the principle of respect for justice and differences in all decisions they would make and applications they would develop in the school. Furthermore, the education administrator should take into account that the butterfly effect could affect the school hierarchically from top to the bottom, as well as a minor event at the bottom (students) could initiate a radical change in the school, and even could cause events outside the school in waves. More flexible and tolerant administrators who are able to adapt to events could overcome the reflections and fluctuations caused by these events (Baker 1995).

Schools are complicated, dynamic, unpredictable, nonlinear structures that could adapt to the environment, and extrinsic structures of which demonstrate constant micro and macro social change and which organize themselves, react to and shape the society they are in (Morrison 2008). The objective of education administrators in their organization should not be to maintain order and the status quo. Such an administrator is a major obstacle to organizational change, transformation and creativity. In order to reorganize and renew themselves, education organizations should be given the opportunity to introduce new energy and *feedbacks* into the system, information sharing and communications should be expanded, flexibility should be implemented based on *non-predictability* principle and organizational values that should be sustained must be maintained via teamwork. Chaos should be perceived as a process for renewal of educational organizations, correction of the pathological dimensions of organization, and that is a precursor of radical change, the chaos should not be feared. Especially during the chaos process, advantages could be gained by increasing creativity in the organization (Tetenbaum 1998; Griffiths et al. 1991). However, it must be noted that providing diversity for the organization is

important. Groups with the same and uniform approaches in the organization produce and maintain the same ideas. Yet, it is imperative that different groups should come together in the organization for creative thinking. It is a great opportunity for creativity to bring together individuals with different views, ideologies, lives, values, experiences and accumulations from different groups. The way to achieve this is to ensure that the education administrator respects and acknowledges the differences, creates a free environment in the organization by acting fair against the differences, in short, it depends the social justice leadership skills of the administrator. Furthermore, the sense of constant order and the preservation of stability could lead to an organization with an idle operation as well as preventing the change in the organization. It is important that in the new order that would be established in the organization with the chaos, *strange attractors* should be determined accurately and these attractors should recognize the differences between the organizational justice, personnel and other stakeholders in the education organization and should possess the skill to manage the organization by promoting diversities.

31.6 The Concept of Social Justice

The concept of social justice has gained different meanings and evolved through the different political, social, intellectual and legal stages of the history of civilization. Aristotle categorized the concept of justice as general justice and private justice. He explained general justice as conciliation and agreement, and private justice as fair distribution of welfare and good. He referred to political and legal decision-making mechanisms based on sharing of rights and responsibilities in institutional, organizational, and social structures. It is also described as the individual taking what the individual deserves in the liberal sense. Formal justice, on the other hand, is defined as sharing based on the consensus criteria and decisions and standards that aim fairness and justice. Material (essential) justice is the determination of adequate sharing criteria for allowances, needs and preferences. Therefore, it justifies the differences between social classes about sharing. Stability, balance and integrity in the social structure determine the values, perceptions and practices of the society about justice. The question 'what is fair share' indicates a significant normative domain. The essential justice criteria are usually limited by the qualities and progress of individuals. In this respect, the concept of social justice is an application that defines the nature, achievements, abilities and rights of individuals. Egalitarian justice is based on sharing based on need. Equality is, in principle, perceived as providing material equality between individuals and groups (Outwaite 2008). Social justice is the regulation of social and economic inequalities in social structure to benefit the most disadvantaged groups as conceived in fundamental freedoms. Justice criteria depend on the political, social, legal, institutional, cultural space in which the sharing takes place.

The American philosopher John Rawl is one of the individuals who influenced the concept of justice the most. The most effective theory of justice combines John

Rawl's concept and criteria of justice with the idea of "contract". Justice is a matter of fairness. It is the most important intellectual system for social institutions. Distributive justice, interactive justice, legal and natural justice are all components of social justice. In the modern sense, justice is based on the idea of social contract. Procedural justice reflects fairness in due process (Kidder 2014). The distributive justice is the definition of justice resources based on moral/ethical beliefs. It is the perception of justice, especially found in the social utopias of philosophical activists such as Thomas More and Robert Dale Owen. The liberal, utilitarian paradigm of bourgeois democracy was reflected on the concept of justice along with the works of Jeremy Bentham. Distributive justice is related to the transformation of Western bourgeois democracy into a social democracy. A wide range of social and economic equality services provide a policy of equality in opportunities and consequences. Social justice, which aims to remove inequalities that disadvantaged classes and income groups, those with a low share in welfare, and groups discriminated due to race, gender and disabilities face, introduces public administration and political formulas that aim to transfer resources to disadvantaged classes and members of society (Blim 2008). In the 1990s, social policies of global actors (World Bank, European Union, UNICEF, UNESCO, OECD, etc.) in the field of public health, basic education and vocational education, were defined to extend incentive and development programs to international disadvantaged communities and countries. The ideologies that were based on downsizing of the state advocated the free market economy in redistribution of property, capital and labor force. Thus, justice was no longer about distribution, but about the access to equal roles in the free market economy and competitive society. Rational choice theory confirmed the definition of social justice in this sense. With rational choice theory, individuals determine their roles, functions, needs and expectations in the social context using their rational choices. Society, therefore, is the field of interaction for individuals who make rational choices in the society (Blim 2008). Procedural (operational) justice focuses on fairness and equality in decision-making and application of processes. The problem of social justice and equality is perceived as a universal problem and is shaped by the specific social realities of the communities based on their unique history, structures and values (Lauderdale 2008). The notion of justice, when examined historically and comparatively, is not just economic indicators of injustice, but also includes cultural, social, ethnic and gender components. Variables based on hegemonic and cultural imperialism that impede social justice could also be revealed.

Contractual approaches (Immanuel Kant, J.J. Rousseau, John Locke, etc.) argue that natural equality is destroyed by the processes of socialization. They argue that social order based on equality and justice will be established by social consensus and contract. Utilitarian approaches (Robert Nozick, John Stuart Mille, etc.) emphasize that welfare will occur by expanding economic freedoms, and welfare will result in a society with justice. Legalization of individual freedoms and property rights, rendering these as a resource of law, effective economic relations are the key utilitarian concepts. Advocates of the egalitarian approach consider that social justice will take place when resources are shared by the whole social space based on the principle of absolute equality (Lauderdale 2008; Sunal 2011). As a result, the

concept of social justice is a concept that is multivariate and multidimensional in terms of process and functioning and it involves many chaotic situations and phenomena in management.

31.7 Social Justice in Education

Social justice has become an increasingly debated concept in global political, economic, social and legal context in our times. Educational organizations are also directly affected by the discussions on social justice and social justice practices as actors situated at the center of social and political change (Birkenmaier 2003). The concept of social justice has become a part of the human agenda during the historical period (the French Revolution) in which rights and liberation, democratization pursuits and demands became a part of political and social dynamics. Social justice became a key concept in explaining the concepts of democracy and pluralism with the development of social sciences in the twentieth century, and today, in discussion about the global effects of capitalism, neoliberalism, and globalization. In a way, social justice points to the social contract (Gürkan 2001). Social justice explains the prioritization of economic and social interests, achievement of common good, and equal distribution of economic, social and cultural capital among the social classes. Social justice aims to ensure that the balance of power in society is maintained favoring the oppressed social classes, to eliminate the inequalities in distribution of income, and to increase living standards. From a legal point of view, observance of social justice rights, fulfillment and ensuring basic needs and expectations of the members of the society reflect the safety of life and fair distribution and accessibility of resources (Miller 1999, 2004). Definition of equal citizenship without compromising cultural, racial, ethnic, economic, linguistic and religious discrimination and the legal safeguards of this citizenship model, equal access for all citizens to all opportunities, fair distribution of resources are the fundamental principles of social justice (Miller 2004).

The critical significance of social justice studies in determination of in educational research and policies has been understood especially during the last 10 years. However, the number of studies that assessed the concept of social justice in Turkey in the context of current educational policies and practices is extremely limited and inadequate. As far as educational policies are concerned, it is unthinkable that existing political, cultural, economic and legal conditions would not influence the educational organizations. Therefore, it would be appropriate to scrutinize the relationship between education and social justice based on the reproduction mechanisms created by the related superstructure formations. Social justice in education, in other words empowerment by transformation of oppressed groups left outside the dominant production and power relations, the codes and the logic that reproduce inequality through the schools, is the movement of equalizing the former. In education, social justice aims to foster social change, political influence and financial standing, as well as developing social rights and offering a qualified education system to germinate

the hope of renewal in the society. Social justice in education reduces the differences by preparing students to live together, and socializing the educational environment. For schools to implement social justice, school leaders need to start by identifying the reasons for the existing inequalities and the measures to be taken. In order to ensure social justice in education, administrators should also know how to organize a school structure that demonstrates the ways to create further support systems in order to increase the learning of the students (Tomul 2009, 130).

Efforts to ensure social justice in schools will be the driving force behind the expansion of these efforts across society. Educational workers, especially those who run educational organizations, have a personal responsibility for the social justice indicators in their communities. Social justice is a manageable process. School administrators could also develop strategies that would govern social justice in their schools. They could disable unequal and unfair practices. Marshall (2004, 9–10, cited by Polat 2007, 71) found that, as a result of ensuring social justice in their schools, administrators could remove unequal practices by investigating the applications that cause them, functionally define the boundaries of inequality, preserve the neglected or forgotten democratic values in schools, and include social justice in educational administration in the curriculum. There are cultural, social, economic, ethnic, racial and religious differences in every society. Although these differences are structured in social and political processes, the school can, principally, provide for the development of cultural and political rights of the students based on the freedom and equality of all (Bates 2005, 15–16, cited by Polat 2007, 77).

Social justice signifies the equality in political, cultural, social, economic areas (Touraine 1997). It aims to create the dynamics that would limit the negative power and influence of the government to ensure these equalities. To consider social justice in education, it is first necessary for schools to evolve into spaces with liberating effects on human nature. This evolution takes place through a liberating practice and creative thinking that emphasize individual and cultural differences. Social justice in education can be explained by the institutional and democratic struggle of schools for the recognition of their rights, freedoms and demands, identities and cultures and their roles in fair distribution of resources (Apple and Beane 2009; Banks 2013; Bates 2005; Polat 2007). Schools, and hence the school administrators, are an important part of the political strategy to eradicate social and economic inequalities. Thus, schools have to be on the part of the disfranchised social classes and individuals. The school is expected to use its facilities primarily for those who were affected by inequalities. However, it would be misleading to be content with only equal opportunities. Because, facilitating and equalizing access to opportunities is a very minor step in achieving social justice. It would create new inequalities where those who do not have access to opportunities are not protected. Schools should design and implement all managerial processes and outcomes based on the principle of justice (Bates 2005; Cırık 2008; Fraser 2001; Hayek 1993; Polat 2007; Şişman 2006; Tan 2006; Young 2006; Yazıcı et al. 2009).

Any indicator related to education and schools could be description of social justice or injustice (such as the infrastructure and design of schools, the distribution of financial and material resources, the number of teachers, teacher/student ratio,

course materials, teaching programs and activities, etc.). The decisive problem is how school administrators are able to reorganize and manage these indicators in the favor of disadvantaged individuals and groups in their schools. Therefore, research on social justice in schools is quite important. The justice approach in schools that are infrastructure institutions is the cornerstone of principles and strategies that would extend to the overall political, economic and cultural structure. Schools are areas that will remind the state of its obligations to the society on social justice and monitor the level of fulfillment of these obligations (Bates 2005). The relationship between distributive justice and education should be able to establish the common good primarily by creating the opportunity for each individual to improve her or his skills through education, as well as equalizing the resources for access to education and providing education as a public service by the government. Therefore, the function of distributive justice in education is to serve the objective of the abovementioned common good under the responsibility of the state. (Griffiths 1998, 187, Transcribed, Polat 2007, 79).

Another dimension that integrates social justice is recognition of all identities such as cultural, ethnic, linguistic, religious, etc., analysis of power relations about identities and the provision of cultural equality. Schools tend to reproduce and transmit the codes of the dominant culture in society and given social norms. Social justice, however, is present where school subcultures are visible as well (Pitt 1998).

It is multicultural education models that reveal the concept of recognizer justice, which is a dimension of social justice in education. A school with social justice is one that enables individuals to acquire cultural pluralism and differences of the society they live in, their own cultural identities and codes within this pluralism and differences and to recognize their lifestyles and ways of thinking, to question and live freely and to acquire the skills of living together. The method to develop social and cultural identity, active citizenship and political responsibility in the student is undoubtedly an education based on social justice. It is inevitable to explain social justice in education with the presence of democracy. The struggle for social justice in schools is also a struggle for democracy. Democracy is about transforming power fields for social interest and public benefit, providing participation in decision-making mechanisms and recognizing individual's domains of freedom and autonomy, and self-determination and expression. Democracy is about creating an active model of citizenship in schools on equality and justice that provides individuals problem solving ability (Aydn 2013).

Considering the relationship between school administrators and social justice, it is necessary to observe that there is a significant area of responsibility in the administrative sense. It is both ethical and professional responsibilities of school administrators to improve learning opportunities, create equalizing opportunities, be fair in allocation of resources, support academic, intellectual, social and psychological development of the members of the school and expand the areas of emancipation. School administrators could render the methods of addressing the problem of inequality with a scientific rationale visible through enabling social justice, leading the way to construction of social justice in schools. They can make the cultural and social codes of justice, democracy, equality, freedom and the quest for rights a part

of organizational culture. The relationship of alterity and awareness could be rendered manageable based on organizational behavior (Marshall and Theoharis 2007; McCabe and Mc Charty 2005; Polat 2007).

Aydın considered the concept of justice as a principle of ethical administration, and listed the areas where school administrators should act fair and the behavior where school administrators should act fair as follows (Aydın 2003, 102–103, cited by Polat 2007): “Awarding those who deserve,” “fair remuneration of individuals,” “treating individuals equally,” “not exploiting the rights of others,” “not taking sides in disputes between subordinates,” “distributing the work load equally,” “spending effort to correct injustices,” “providing adequate sanctions for the exhibited misbehavior,” “enabling individuals to use their legal rights,” “objective evaluation,” “avoiding to bend the truth,” “avoiding actions that could hurt individuals,” “respect for human rights,” “avoiding discrimination based on religious, political and racial differences,” “expecting a performance from subordinates in proportion to their abilities,” “avoiding fraudulent behavior,” and “maintaining gender equality.”

As Diaz (2011) put it, leadership, particularly in today’s educational organizations, is defined by the action capacity to consider the needs of organizational stakeholders, students and social groups with different profiles. Thus, it was emphasized that the efforts to develop preparation programs for managers, managerial and institutional practices, and social justice management models should be increased. Social justice leader is defines as the actor who thinks and acts towards establishment of a democratic society, and enables participatory decision making process in administrative practice. The social justice leader is the individual who supports corporate transformation, could analyze social dynamics, creates equalizing relationships and delegates his / her power.

Concept of social justice will draw school administrators’ managerial actions and processes out of the boundaries of the school and direct them to leadership roles to make social justice critical in the society in which they live. Since social justice is also related to the organizational, policy making approaches and the implementation and management of these policies in schools, it would be decisive in implementation of new and democratic administration paradigms in educational organizations. Social justice leadership in schools will become an indispensable element in the reorganization and strengthening of cultural, social, political and economic rights. With the strengthening of the social justice leadership, all stakeholders in schools would be transformed into social justice leaders as a result of the design of instructional processes with the themes of social justice and democracy in political arguments such as inequality, production and power relations, sharing and justice, responsibilities of the state and citizenship, being an individual and different, acceptance, empathy, and rights.

VanHorn (2011) states that school administrators are responsible for the adjustment of students with special needs in the school. Van Horn argues that the most effective way at this juncture is the facilitating power. He emphasizes the significance of sharing the leadership and strengthening the participation in decisions in school reform processes. Van Horn defines social justice management as a clearly

defined vision, acceptance of change, attitude of supporting the staff, focusing on students, designing teamwork between the staff, collaboration, providing encouragement to students and parents, continuing education, providing resources, materials and space. Burton considers the existence of democratic attitudes and qualifications, a democratic society, transformation of hierarchical power and authorities necessary to manage social justice. Primarily, he argues that it is necessary to aim at creating a cultural climate that supports self-awareness in individuals, especially among students, with positive components. He prioritizes the support of creative thinking and learning activities that are patterned by sociological factors and variables. He sees the school as an experimental area where the stakeholders reflect their social experiences and capital. Thus, he deems necessary for the class to multiply the voice of students in the learning process. He suggests to include cultural and social phenomena in all kinds of scenarios related to education and instruction. Because these phenomena structure our self-perception, and at the same time, reveal the hidden curriculum. Bussey (2008) underlined the necessity of first introducing different perceptions and knowledge about social justice in his research on the development of a program recommendation for social justice leadership. Thus, he considered determination of areas of knowledge and competence of education administrators as the first step towards this end. As a next step, he considered it necessary to reveal the components of the cultural environment in which social justice would be defined.

Griffin (2010) argues that cooperation and participatory management in schools and social justice could be strengthened in the managerial sense. Thus, it was aimed to demonstrate the processes of the school administrators in social justice administration ethnographically in public schools. Griffin concluded that the concepts that emerged in social justice management were professional socialization, problem solving, roles, power, authority and rewarding, conflict resolution, increasing opportunities for all students and participation.

Educational leaders should be able to solve and manage the contradictory and controversial meaning of social justice in a world where capitalist production relations dominate. In the managerial rhetoric and action structures of administrators, it is a priority to design research that reveals the hidden and implicit dimensions of managing social justice. The social justice leadership proposes that managers should not think within the terms of the status quo, but to become the actors of strategies that would extend the efforts of social justice management into the public sphere. It emphasizes the need for trust, equality, strong collaboration, and an ethical effort and calls for the support of these needs through academic processes and research (Thornburg 2014). Social justice leadership, as Bourdieu emphasizes, is expressed within the context of producing solutions for inequality, developing alternative policies for disadvantaged groups, in depth comprehension of cultural capital elements, supporting minority students, and recognition of subordinated elements beyond the dominant cultural and social capital components, and establishing in-depth and authentic dialogue with students and school district (Fredericks et al. 2014). In order for these elements to work, schools also need to experience pedagogical,

organizational, managerial autonomy and thus, organizational democracy. Thus, school administrators' activist characteristics and their abilities for decentralized leadership and continuous organizational change, knowledge management, collective learning, and collaborative institutional culture should be explored and defined. Social justice management includes individual, organizational and social ethics, communicative rationality, self-criticism, non-elitist behavior, integrative and egalitarian approach, dialogue with different groups, planning participative and change processes (Gairín and Rodríguez-Gómez 2014). Organizations that are empowered by students and governed by egalitarian principles recognize human rights as primary values, recognize differences, prioritize social benefits, integrate citizenship perception and support social skills (Rikowski 2000; White and Cooper 2014). One of the priorities is to establish a framework with a strong theory that will turn school administrators into social justice leaders. By compiling scenarios from schools, it is necessary to aim at concepts that would structure and empower social justice, turn it into a principle of organizational tradition and extend it. Social justice leadership requires a professional, intellectual and political role perception. In view of the fact that schools that focus solely on academic achievement today create significant gaps in equality and justice, it is imperative that the academic field should define social justice, make it a part of the current agenda, structure it as a managerial action in educational organizations, and include school administrators in this action plan at the first degree (Bogoth 2014; Feldman and Tysa 2014; Karanxha et al. 2014).

As could be understood from the social justice literature that could be read via conceptually different variables, social justice policies are the cornerstone of the struggle for democracy and development in societies. Thus, educational organizations should found the basis for the most robust organizational structure and place social justice as the central piece of this foundation and create an expanding living space as the organic zones of society. School administrators determine and manage the administrative area that would construct this foundation. Equalizing and justice forming managerial plans and actions of educational organizations would support and strengthen the construction of social justice in the operations and logic of other institutions. It could be argued that while the key concepts in education policies and practice in Turkey are social justice and equality, studies on this subject are limited and insufficient to produce in-depth knowledge.

It is necessary to concentrate on the intellectual struggles that would deepen the scientific and theoretical structure of the field of educational administration and on the problem areas that support these efforts based on the objective, scope, methodology and information. Especially in the 1880s, leadership, democratic leadership, equality, gender studies, education policies, disadvantaged individuals and groups in educational organizations began to appear in school manager training programs. The 1990s, on the other hand, resulted in discussions that scrutinized leadership with social variables. The social and cultural factors that affect the school were the primary topics in school administration. 2000s was a period in which concepts such as moral leadership, cultural diversity, social justice, transforming, distributive, authentic leadership approaches and ethics were reflected in studies (Oplatka 2014; Mansfield 2014). By supporting the rational and academic qualities of educational

administrators who were expected to be modern education activists, it would be easier to enact administrative decisions and practices that would equalize human freedoms, a participatory and pluralist administration and monitoring multicultural curricula (Bogoth 2014).

Democratic citizenship, citizenship rights, race, ethnicity, language, identity, gender, differences, disability are the variables that should be considered for management of social justice at schools. Social policies, political theory, freedom, equality, democracy, financing of education, ethical dimension, human development capacity, autonomy, rights, law, common good are the basic dimensions of social justice (Starrat 2014). If diversification of learning possibilities, understanding integrity, creativity, collectivity, responsibility, being a part of the global culture, and authentic learning could be achieved by individuals that would be prepared for life as political subjects in educational institutions, the dynamics of social justice could be created. Lopez (2014, 88) suggests that academic and social integration in educational organizations, citizenship perception and commitment, tolerance and openness, institutional trust, quality of human capital and intellectual development efforts are the driving force for a just social order.

Social theory research that was transformed from structuralism into ethnomethodology is effective in defining cultural codes of the social structure. Social justice is related to socio-cultural life and its values. Civil rights are defined by human rights indicators. It is necessary for school leaders and teachers to be able to read and analyze the institutional indicators of social justice, to understand the power structures and building a bureaucratic school culture. Cultural theory could categorize groups of power structures and group dynamics in the administration of social justice into the categories of individualist environment and individualism, bureaucratic environment and authoritarianism, solidarity and hierarchy, collectivist environment and egalitarianism. It will be appropriate for social justice applications to begin by resolving the social and institutional structure in the framework of these concepts and phenomena. In individualist societies, competitiveness, access to resources are limited, and ability ideology, personal competence and individual benefits dominate. Authoritarian society is defined by the mechanism and actors that decide for individuals and allocate the resources. Hierarchical society is a structure where control and power are institutionalized. In egalitarian society, collective culture, equal distribution of resources and products are significant (Bauman 2006; Habermas 2004; Harris 2014; Jenlink 2014; Turner 1997).

School leaders should be able to identify roles and relationships that cause inequality in school culture. The level of influence of these roles and relationships on personal autonomy and collective participation should be analyzed. In order to administer social justice in effective school development studies, it is necessary to understand the complexity of the day-to-day school operations. Inequality, distribution of power and resources, risk and chaos are the most complex variables in twenty-first century organizations. School administrators might be influential in observing and analyzing the processes and actions that cause social change, power relations, and inequalities by adopting a democratic approach that strengthens participation in decision-making in administrative processes.

31.8 Conclusion

In the twenty-first century, societies are increasingly complex and chaotic in the context of process and operation. As the dynamics of social diversity change, the components of manageability are rendering the administrative and organizational elements difficult. The most fundamental problem of modern societies could be considered as the constantly increasing and deepening inequality and injustice within the chaotic variables of the new world order. In this section, based on the abovementioned perspective, especially the concepts of chaos and social justice are discussed in conjunction.

The mechanisms that regulate social structure suggest that actions and policies in production, distribution and sharing stages would be based on a simple, clear and principled attitude, to justice instead of chaotic processes and applications. The defense of social equality and social justice, and the pioneering of actions and strategies, are also related to the position and intention of educational organizations. It is up to the quality of the administrators and their intention to observe social justice to direct the efforts of the education organizations to create a just social space into essential and vital praxes.

Social justice is political and economic determinant of international daily agenda; it is a multivariate and complex process that needs to be politically and legally administered. Individuals, institutions, societies, states and international organizations should define organizational and administrative variables within the framework of complex economic, political, sociological and ethical values which could not be formulated and resulting in justice or injustice. Educational administrators should attain the proficiency to implement organization constructs to manage consequences of ambiguity, complexity and chaos with the determination of belongingness, responsibility, morale, struggle, courage, and to defend and preserve law and rights and with the principle of common good and interest.

For education administrators, the following efforts and competencies could be effective in implementation of organizational justice in chaotic life:

- Adjustment to changing organizational structures,
- Following and understanding changing administrative approaches and paradigms,
- Minding the workers' rights,
- Considering social security elements as the basis of administrative effectiveness,
- Analysis and assessment of situations and phenomena that cause inequality,
- Providing a working environment that is adequate for humanitarian expectations,
- Adjustment, integration, contract,
- Ability to manage group dynamics,
- Developing problem solving strategies and academic vision,
- Resolving inequalities and unfair conditions that arise from factors such as race, gender, ethnicity, culture, religion, and economic, social and political status especially.

In today's operations that increase inequality and injustice, it is crucial for the educational administrators to manage the "uncertainty" and "chaos" by maintaining social justice. Academic collaborations and coordination studies could be planned for capacities of analytically assessing the complexity of the socio-economic-political process of the world order. Recognizing the dimensions of social justice at a theoretical dimension with the help of the social theory approach could help the design of organizational structure and administrative processes. Being able to observe the non-linear aspects of organizational life and to bend and transform management strategies in this direction would be an important step. Modeling solid indicators of social justice for educational organizations, and social justice administrative competencies, revealing the "social justice in education" leadership qualities, processes and administrative and organizational dynamics in the literature using continuous in-service training modules, ethnographic and action research could direct education administrators from uncertainties and risks to a fair process design.

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Chapter 32

Autonomy in Higher Education



Şefika Şule Erçetin and Leyla Yılmaz Fındık

Abstract Higher education system is getting more complex due to the recent growth and development. There has been an ongoing debate over the governmental structures of higher education institutions. Current international debate reveals a widespread institutional tendency to shift from centralized to decentralized system in higher education sector. The aim of the paper is to provide global trends related to autonomy and university autonomy and to outline the concept of autonomy. The study also seeks to provide long-term vision for the higher education sector related to university autonomy. The study concludes that there is heightened awareness among university leaders and policy makers that university autonomy is the key-stone for an effective and efficient higher education sector. It also summarizes that universities in the UK can freely decide on all aspects of administrative structures. Higher education institutions in Netherlands are largely free to decide on all organizational, financial, staffing and academic issues. Universities in France are perceived to lack freedom of action in nearly all areas of organizational, financial, staffing, and academic issues.

Ş. Ş. Erçetin (✉)
Hacettepe University, Ankara, Turkey

Lancaster University, Lancaster, UK
e-mail: sefikasule@gmail.com

L. Y. Fındık
Hacettepe University, Ankara, Turkey
e-mail: leylayilmazfindik@gmail.com

32.1 Introduction

Higher education system has been developing rapidly since the 1980s and has been progressing under the pressure of changes occurred worldwide. Its effects on economics become more and more important. Higher education sector has undergone dramatic changes, not only in terms of number of institutions but also in types of institutions and geographical spread. Universities are expected to produce knowledge, improve equality, and respond to the needs of society. They are also the key driver for the evolution of the knowledge society and compete with private sector and in international arena for students, for academic staff, and for research budget. Thus, universities are expected to fulfill new roles and tasks and respond to new challenges in an increasing complex and global environment.

Internationally increasing competition proposes a necessity to rearrange the universities' governing structure. System higher education reaches a complex structure, and it seems impossible to ignore the rapidly changes in various contexts. Universities and higher education system are managed to adapt these complex environment. All these complexity brings the question of how to govern universities. It is impossible for government to manage universities effectively in this complex environment. Researches defended that universities having autonomy could manage effectively in this increasing competition, adapt well to the changes, and meet the needs of recent times. The governance of higher education tends to change on a new administrative structure, which merges marketing power and government funding (OECD 2003). Higher education sector has been a particular focus of reform for a considerable time. These changes have generally been in the direction of providing universities with more autonomy within a framework of greater external accountability for performance. Autonomy has been considered as an alternative administrative approach.

32.1.1 *What is Autonomy?*

Autonomy is a combined word that comes from both “autos” which means self and “nomos” which means law in Greek. Turkish Language Society defined the term of autonomy as being independent to a certain extent from external supervision while managing self-authority and leading administrative structure (TDK). Autonomy and freedom usually replaced one another. Autonomy is a term that has been identified based on freedom, and freedom has been used instead of autonomy. Technically autonomy has been rarely used in philosophy and social sciences. Autonomy has various definitions in terms of philosophy (Cuypers 2010). Feinberg (1986, 28) identified autonomy with four contexts related to each other, and autonomy has been associated closely to four definitions: capacity to direct yourself, actual condition of self-government and virtues related to this, ideal character, and domination and self-determining. It is essential that autonomy is

usually associated with conditions as autonomy has existed under appropriate circumstances (Cuypers 2010).

Wohlstetter et al. (1995, 338) defined autonomy as the capacity of the leader to determine internal and external affairs independently, and the ability of self-management is considered as autonomy in school. Autonomy also refers to acknowledge people, treat equally, and respect people to take their own decisions without interfering in their freedom (Duignan 2006, 82). Gawlik (2008, 786) defines autonomy in education as the ability to take decisions related to internal and external affairs of the school in jurisdiction of a school principal as well as the authority and flexibility the school principal has in order to make changes and develop the situations related to education and learning. The notion of school autonomy refers to the ability to take decisions about the school management concerning government, staff, curriculum, teaching method, discipline, budget, student admittance, and learning activities, and school autonomy provides schools new areas and opportunities to produce their own practices (Agasisti et al. 2013).

Autonomy includes various definitions, and worldwide researches indicate that the term autonomy is usually associated with participation, localization, responsibility, leadership, accountability, and quality. In the past it was defined as participation in school government, supporting the meeting held for taking decisions and implementing democracy. However, autonomy is not the synonym of participation. Recently, autonomy is associated with both quality and quality education.

Autonomy facilitates the use of the local knowledge, (Hanushek et al. 2013) and this enables improving school effectiveness (Nechyba 2003). Moreover, taking decisions close to local community contributes to monitoring school by parents and local communities (Hanushek et al. 2013; Galiani et al. 2008). Administrator could take initiative and act while taking decisions despite lack of information. In this circumstance administrator may use autonomy for different reasons as well as to improve the students' performance. Autonomy could change the quality of the decision when local policy makers have limited technical capacity, and the communities do not have the capacity of high-quality services. All these issues indicate that the success of autonomy reforms depends on human capital (Hanushek et al. 2013).

Autonomy is considered a notion including freedom, independence, localization, privatization, delegation, devolution, and decentralization; however autonomy has recently emerged including all these notions mentioned above. Autonomy and localization are intermingled, so it is crucial to define the difference between these two notions. In the hierarchical system, localization is the delegation from the central government related to taking decisions and utilizing sources (Bray 1984, 5 cited in Fiske 1996, 8). Localization also refers to delegate from central authority to local authority (Rondinelli 1981). Brown (1990) summarized localization as delegating authority from upper to lower government unit. The logic of localization is based on having much more information about the needs and problems of local community. People via localization have the opportunity to participate in the issues related to them (Brown 1990; Hanson 2006; Sui-chu Ho 2006). Localization is identified as delegating the authority of taking decisions related to policies, planning, administrator, and allocations of resources and power to local community and school-based

administrator (Zajda 2006). Hanson (2006, 10) defined localization as to delegate authority of taking decisions and responsibility to the lower level of the government or among organizations. Localization in education refers to the policies to improve effectiveness, flexibility, accountability, and responsibility in both developed and developing countries (Hanson 1991; Kim 2000; Sui-chu Ho 2006). Localization is discussed in three different forms (Hanson 2006; Rondinelli 1981; Paqueo and Lammert 2000; Winkler 1991; Zajda 2006):

- Deconcentration is just sharing not the authority but the assignments and duties among units.
- Delegation is defined to delegate the authority to take decisions from central government unit to local government units; however this authority that could be withdrawn is needed.
- Devolution is to delegate authority to autonomous unit that acts independent and/or without permission.

The notion of autonomy and localization in the study is considered close to each other; however these two terms have different identifications. Autonomy is not associated with total independence (Ekundayo and Adedokun 2009; Nybom 2008), but autonomy is discussed as taking extensive decisions within limits. This means that less local power but more local responsibility (Nybom 2008).

32.1.2 Autonomy in Universities

Higher education systems are at center of development and economic growth. Higher education has had more and more complexity with the increases of public and private institutions. For this reason, it is accepted essential to govern effectively and monitor higher education system. Expanding higher education sector has been changing from public-controlled institutions to public-supervised institutions. Successful higher education systems require supportive government structure where universities and institutions have autonomy (Estermann and Steinel 2011; Fielden 2008; OECD 2003; Raza 2009). Higher education systems are replaced with university structures which succeed in autonomy and accountability (Babalola et al. 2007; Estermann and Steinel 2011; Raza 2009; Weber 2006). The government emphasized to support institutional autonomy including academic, organization, finance, and personal issues (Lisbon Declaration 2007).

Institutional autonomy in universities is approved across Europe, and studies related to autonomy are supported. Graz Declaration (2003), Lisbon Declaration (2007), and Prague Declaration (2009) emphasize improving autonomy in universities. Governments are highlighted to improve university autonomy via strengthening institutions and regulating budget and legal proceedings in Graz Declaration (2003). Lisbon Declaration (2007) emphasizes that universities in Europe are to support autonomy in administrative process. In addition, Prague Declaration (2009) highlights university needs and strengthened autonomy to serve better society.

The Universitatum of Magna Charta that was signed in Europe on September 1988 indicates that institutional autonomy is a prerequisite for the modern universities' effective and efficient operations. "Autonomy" is a journey undertaken over a period of time rather than a destination at a single point in time. Its implementation and context are different in different cultures, countries, and institutions.

Berdahl (1990) refers to autonomy as the university power by determining its own goal and programs. Autonomy is a heavily value-loaded concept. University autonomy strengthens universities to meet the request of communities efficiently and rapidly (Nybom 2008). Autonomy should include essential components to clarify its meaning. These components are (Ashby 1966, 296):

- *Freedom in selecting staff and students*
- *Freedom in determining curriculum content*
- *Freedom in allocating funds*

Autonomy provides universities to be free to manage their own affairs (Fielden 2008). Autonomy of universities can be defined as to give freedom to university governing themselves (Ekundayo and Adedokun 2009). There are four types of university autonomy: financial, staffing, organizational, and staffing. Organizational autonomy focuses on the universities that are relatively free to decide on their administrative structures. Financial autonomy of universities refers to autonomy which enables an institution charging tuition fee. Autonomy of staffing includes capacity to recruit staff. Academic autonomy includes both the capacity in defining academic profiles, introducing or terminating degree programs (Estermann and Nokkala 2009; Estermann and Steinel 2011).

Research claims that school autonomy has been associated with student performance, and studies also reveal that there is a statistically positive relation between autonomy and student performance and autonomy has a positive effect on student performance (Allen 2010; Clark 2008, 2009; Hanushek et al. 2013; Keating 2006; Machin and Vernoit 2011; Mizrav 2014; Paletta 2014). A study that studied the relation between university autonomy and performance indicates that universities in top-performing countries can enjoy degrees of autonomy (Aghion et al. 2008). In addition, autonomy helps to improve quality standards (Estermann and Steinel 2011; Lisbon Declaration 2007; Reichert and Tauch 2005; Surssock and Smidt 2010).

32.1.3 Dimensions of University Autonomy

There are autonomy's different dimensions discussed related with higher education: financial, organizational, academic autonomy, and staffing (Estermann et al. 2011; Turcan et al. 2016). In order to make a comparison between four dimensions of autonomy, higher education system is split into four clusters: countries in "high group" (100% and 81%), "medium-high" group (80% and 61%), "medium-low" group (60% and 41%), and "low" group (40% and 0%) (Estermann and Nokkala 2009; Estermann et al. 2011).

32.2 Organizational Autonomy

Organizational autonomy refers to a university where rectors and top management could make their own decisions related to legal existing and academic structure via internal administrative structures (Estermann and Nokkala 2009; Estermann et al. 2011). Organizational autonomy means setting structures of university and statutes, signing contracts, and electing decision-making individuals or groups (Lisbon Declaration 2007). Organizational autonomy includes rector election procedure, selection criteria of rector and resignation of the rector, and external members' selection and inclusion in governing bodies (Estermann and Nokkala 2009; Estermann et al. 2011).

Figure 32.1 indicates that the UK has the highest scores, 100% on all indicators in organizational autonomy. This means that universities in the UK can decide without state interference on all aspects of organizational autonomy. Netherlands scoring 69% in organizational autonomy is situated in the second cluster, meaning medium high in organizational autonomy. This medium-high cluster includes that higher education system in the second cluster is highly flexible related to academic structures, to create profit and nonprofit legal entities. Higher education institutions in Netherlands seem largely free in deciding on academic structure and establishing legal entity; however there is still state interference on some aspects of organizational autonomy. On the other hand, universities in France, scoring 59%, have medium-high autonomy that is the third cluster in organizational autonomy. Medium-low cluster means that majority of the system faces regulatory constraints in organizational autonomy's most areas. Higher education institutions in France have severely limited their capacity due to administrative issues.

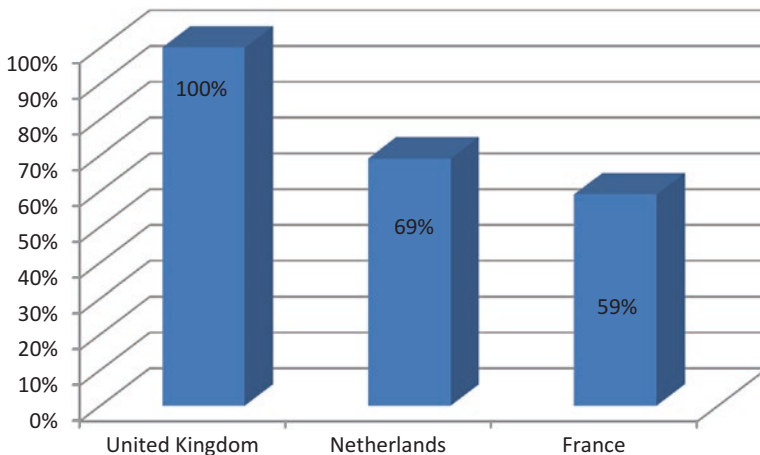


Fig. 32.1 Level of organizational autonomy (Source: Estermann et al. 2011)

32.3 Financial Autonomy

Financial autonomy is defined to decide without interference of state on all aspects of financial issues. This means institutions of higher education are free in deciding on acquired and allocated funds, tuition fees, and accumulated surplus (Estermann and Nokkala 2009). Financial autonomy also identifies that universities have the autonomy on budgeting system and budget allocation and in charging tuition fees and keeping surplus (Lisbon Declaration 2007). The study conducted by Aghion et al. (2008) claims that funding and autonomy are mutually reinforcing factors, and more funding has bigger effect on performance in more autonomous universities.

Figure 32.2 presents that the UK scoring 89% is situated in the top cluster which means institutions of higher education are considered to be highly autonomous in financial autonomy. This highly autonomous indicates that higher education institutions in the UK can decide on almost all aspects of financial issues without state interference. Netherlands scoring 77% has medium-high autonomy and is situated in the second cluster. This second cluster, medium-high financial autonomy in Netherlands, refers to relatively flexible public funding modalities, and this size of financial autonomy offers universities to keep surplus. Universities having medium-high financial autonomy can borrow money and own their buildings. Higher education institutions in France scoring 45% are in the third medium-low cluster. This medium-low cluster offers fairly flexible public funding modalities. Universities in France have limited financial autonomy in borrowing money, owning buildings, and charging tuition fees, and there are many constraints related to financial issues.

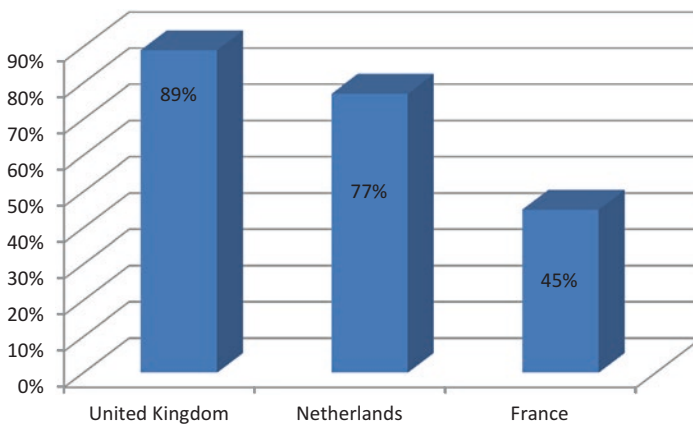


Fig. 32.2 Level of financial autonomy (Source: Estermann et al. 2011)

32.4 Staffing Autonomy

Staffing autonomy means that higher education institutions have the responsibility for recruitment salaries and promotions. Universities having fully staffing autonomy are free in recruiting and setting salary level for academicians and managerial staff (Estermann and Nokkala 2009; Estermann et al. 2011). Staffing autonomy includes capacity in deciding on recruitment procedure, salary, dismissal and promotion for all academicians, and managerial staff (Estermann and Nokkala 2009; Estermann et al. 2011).

Figure 32.3 indicates that UK's higher education institutions' scoring 96% falls in the top cluster in staffing autonomy. Institutions of higher education in the UK have a high level of autonomy in staffing freely deciding on all aspect of staff such as recruitments, dismissal and promotion procedure, and salary. Netherlands scoring 73% in staffing autonomy falls in medium-high cluster. Higher education institutions having medium-high autonomy in staffing retain autonomy over certain aspects of staffing. These universities in second cluster have some regulations related to staffing issues. France scoring 43% belongs to medium-low cluster in staffing autonomy. This third cluster means that higher education institutions in France face restriction on majority of staff issues and have little flexibility on deciding related to staffing profiles.

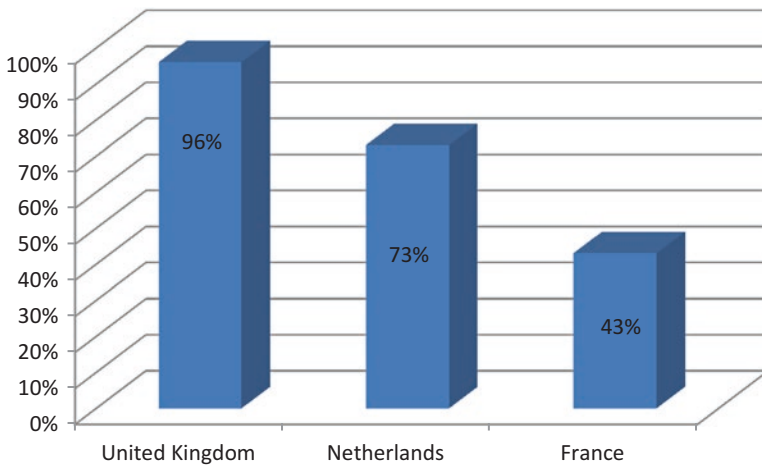


Fig. 32.3 Level of staffing autonomy (Source: Estermann et al. 2011)

32.5 Academic Autonomy

Academic autonomy means to decide on degree supply, curriculum and teaching, and research methods and areas. Academic autonomy refers to capacity in deciding on numbers of students, to selecting students, terminating programs, choosing the language of instruction, selecting quality assurance mechanisms, and designing degree programs' content (Estermann and Nokkala 2009; Estermann et al. 2011).

As shown in Fig. 32.4, UK scoring 94% is included in the top cluster, and higher education institutions are considered as highly autonomous in academic issues. This means that institutions of higher education in the UK can freely decide on academic autonomy's all aspects. Netherlands scoring 48% is situated in third medium-low cluster in academic autonomy. This means that institutions of higher education have restriction related to deciding capacity of universities on academic issues. France scoring 37% is included in the low group. This refers to institutions that lack flexibility in academic issues and face heavy restriction in academic content's most areas.

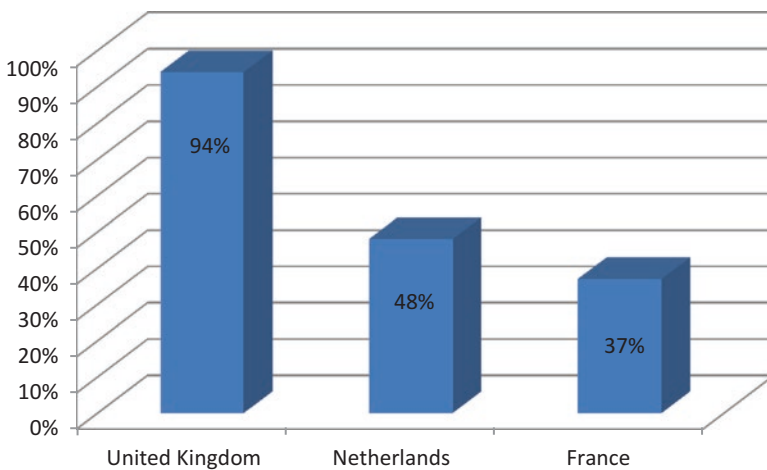


Fig. 32.4 Level of academic autonomy (Source: Estermann et al. 2011)

32.6 Discussion

Higher education has been expanded rapidly in recent years. For this reason, higher education sector has introduced variety of reforms to respond changing demands more closely. The focus is nowadays on increasing decentralization and organizational autonomy in higher education sector. Integral part of this changes and related reform grants more autonomy to institutions of higher education by governing itself.

University autonomy has been central to the intense discussions in today's world. Autonomy is being intensively discussed as the key driver to enhance overall effectiveness of higher education system. The need for autonomy has been attributed to the multifaceted missions of the universities and its responsibilities to create new knowledge to engage in critical analysis and transmit a cultural heritage to succeeding generations. The capacity of a university to govern itself without state interference is defined as autonomy.

Countries have various types of autonomy in institutions of higher education, and some universities may have more autonomous system than the other universities. The UK has a highly autonomous system of higher education with regard to organizational, financial, staffing, and academic autonomy. Universities in the UK can freely decide on all aspects of administrative structures. Netherlands is situated in medium-high and low cluster which means that higher education institutions in Netherlands are largely free to decide on all organizational, financial, staffing, and academic issues. France is included in mostly low cluster related to university autonomy. Universities in France are perceived to lack of action freedom in nearly most areas of organizational, financial, staffing, and academic issues.

The long-term intention of the higher education system is to continue adding competency and transfer responsibility to the universities and increase autonomy in higher education sector. Regulations related to administrative structure of higher education institutions weaken autonomy and impede effort making strategic decision to promote effectiveness and productivity.

Being autonomous seems to be an important alternative for the universities which are responsible to the changing need of the society and economy and contribute to find answers to global problems. Consensus among higher education specialist is to emphasize autonomy with the aim of ensuring responsive and flexible higher education sector. For these reasons, governments across the world are experimenting with reform in higher education that inevitably involves regulating higher education system and offering higher education institutions increased levels of autonomy. However, autonomy should not imply state withdrawal. Proper regulatory and financial environment for autonomous higher education institutions to operate well should be created by the state. It is essential to examine how the universities are occurring besides current system. The level of university autonomy can be changed according to the pattern of public government system of the countries and administrative structures of the institutions. University autonomy and its integration within the higher education sector are also shaped by having established its own norms and rules. In addition, politics and tradition play an important role in

perceived and implemented autonomy. Therefore, generalizing definition of autonomy as well as university autonomy seems impossible. Autonomy and university autonomy should be considered and discussed in terms of the countries' reality and government structures.

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Chapter 33

Application of Information Technology in Improvement of Teachers' Competence



R. K. Toleubekova and Galiya B. Sarzhanova

Abstract This study investigates the process of implementation of information technology (IT) in education, and the impact of computerization on the quality of teaching. In addition, the need to define the requirements of IT competencies of a present-day teacher in order to establish whether they are at the appropriate level is reiterated. Following the results of this study, it is concluded that the IT competency of a present-day teacher is one of the key indicators of the success rate of that teacher's activity and is also a necessary precondition for furthering the level of their professional competency. This therefore emphasizes the significance of working on a professional development system for a modern teacher, concentrating on the use of the IT system. This model of professional development allows for solving some tasks and increases the level of IT competency of a present-day teacher; however, it also has a number of disadvantages and does not fully cater to comprehensive problems on the part of teachers who rely so much on the active use of IT in their professional activity.

33.1 Introduction

The problem of formation, development, and improvement of information technology (IT) competency of higher education instructors is a topical one for modern higher education. After the technological revolution in the twenty-first century, all fields, organizations, and nations have tried to benefit from this chaotic process through a variety of modes—researchers, scientists, analysts, educators, governors, presidents, and organizations—to try to create useful solutions.

In spite of the realization of target-oriented programs, the World Bank Project “education system’s informatization” application level of IT by subject teachers is not that high. In total, by 2013 in Kazakhstan around 800 pedagogical staff underwent IT competency training.

R. K. Toleubekova (✉) · G. B. Sarzhanova
Eurasia National University named after Gumilev L.N., Astana, Republic of Kazakhstan
e-mail: galiya008@mail.ru

In the IES project, especially in the programs addressing acquisition of IT competency, 125 teachers were trained. In a similar case in Russia, following the results of research that was conducted at HSPU in Russia in 2013, 65% of teachers (research-based teachers from the regions who participated in the project IES at approbation of digital educational resources that constituted the integrated collection) actively use IT in their professional pedagogical activities, and a sufficiently large percentage of teachers (47%) have developed skills of informational teamwork in the educational network on the Internet (they are active participants in Internet use, Websites, etc.). This is a result of the state program “Electronic Education” carried out in Russia in 2011–2012 for the purpose of preparing schools for the transition to a new FSES within which training was conducted of around 1,500 tutors–methodologists and 65,000 teachers–tutors on program of use of new IT systems, new generation electronic educational resources, as well as GER in the educational process using distance learning (approximately 10–25 representatives from the teachers of innovative different subjects, including teachers of elementary school from each municipality comprising 75% of all regions of the country) (Sarzhanova 2014).

33.2 Teacher Requirements for IT

Requirements for application of the information and communication technologies by a subject teacher, which are designated in this study, include necessary obligations of each teacher as follows (OER 2012):

- Carrying out conscious choices of educational technologies, including information ones, and carrying out a choice of electronic educational resources;
- Realizing the control and valuation activities in the educational process by using modern valuation methods in information conditions and communication technologies;
- Being conversant with the basic operations of word processors, e-mail, and so on.

Accordingly, for effective introduction of IT into the sphere of formation, development, and competence increments for higher education teachers in RK there needs to be development and acceptance of corresponding state standards of preparation and retraining of pedagogical staff in the field of IT. As a conceptual basis for development of such standards there is a need to consider the “Standards of information technologies competency of teachers: modules of competence standards”, offered by UNESCO in which the emphasis is placed not only on the necessity to develop IT competency of teachers, but also on attention to updating the basis of IT within the scope of traditional techniques of training. After the development and official start of multilingual versions of “Competency framework for teachers concerning the structure of IT competency” in 2011–2012, this very document today forms the basis for development of the national standards of IT competency of teachers. At the same time, offers by UNESCO have to be considered as reference points, taking into

account the features of the national education systems, including that of Kazakhstan, the features of the informatization process, ethno-national cultural traditions, and so on (Buckingham Shum 2012). Further, we need to consider the directions adopted in defining requirements for the appropriate level of IT competency of a modern teacher.

The first basic direction is a shift in emphasis from technological level problems to pedagogical ones. An information educational environment should include electronic educational resources. A similar situation is observed at the level of high school where all processes' undergo transformation within the State education development program of PK (State Program of Kazakhstan 2011). Furthermore, circumstances that are connected to technological support of the educational process are changing constantly. This means that teachers and students become completely responsible for the solution to a problem via a selection of available IT tools, as is the case in self-education (Voogt 2012).

The second direction is the distribution of "cloudy technologies" and global educational platforms (educational environments) where a significant role is played by the distributed resources creating an interaction of authors. Web technologies are united in reaching a decision by the universal interface (from e-mail to file archives) and through high-speed highways creating a multimedia platform for the joint solution of IT tasks (MacNeill and Kraan 2010). Development of separate local offline products has lost its significance as a worthwhile example of almost any product now exists on the web, and going through the effort of creating something similar to an existing one is pointless, hence it is much more rational to unite in order to improve the available versions of products (Arum and Roksa 2011). For example, instead of writing their own articles in a Wikipedia resource it is more logical for the shareholders to correct and to add new information to already available articles (which can encourage more indepth studying of a topic). This second tendency means a transition to united creativity by collective authors in which the skills of social interaction, management of educational processes, and presentation of creativity gain special importance.

The third direction is associated with reflexive competence. A change in character and way of solving tasks makes traditional ways of control and assessment inefficient. Owing to the need for the correctness of a definite answer, a transition to version control takes place, and to monitoring chronological changes in a product that is a result of joint creativity. These are estimates with less compliance with the obtained result of any norm (except for those cases where a subject matter is standard) as a rate of active participation of individuals in a team project and readiness for reflection on the relatively reached results occurs. At a physical level, the result of reflection and at the same time the IT tool itself is the electronic portfolio in the form of author's site, blog, and forum (Conole 2012). At some point the teachers lose the opportunity to objectively estimate technologies as they are changing too often and too fast, consequently teachers no longer remain expert. The third direction thus means that in teaching IT much greater value is gained from the competencies of the general pedagogical characters, namely the ability of an organizer of the educational process in the educational environment (in this case a tutor), rather than the technological abilities of a programmer (UNESCO 2006).

All of the aforementioned requirements are a necessity in the realization of innovative models of professional development. However, in spite of the fact that pedagogical research has developed and approved innovative models of professional development on the basis of IT and remote educational technologies, these models have not found their place with regard to large-scale application in the professional development system. The course linear model of professional development still prevails, and consists of:

- The characterized pattern model of professional development using web and remote educational technology;
- A corporate model of professional development, assuming training in the educational institution bearing in mind the level of created IT of the saturated medium of the concrete educational institution and satisfying professional pedagogical inquiries of each listener and educational institutions as a whole.

In this regard, a necessary condition for the accumulative system of professional development is the environment of continuous training that assumes adequate content updating of IT development level and the modern educational technology as their basis.

As was shown by the analysis of programs of professional development of academies and institutes of professional development, initiatives and realizable initiatives within educational initiatives, in the majority of them there are no programs or modules that are focused on the preparation on modern educational technologies on the basis of IT, and there are insufficiently submitted programs concentrating upon the training of moderators, tutors, facilitators, and programs assuming training of teachers for pedagogical interaction by means of the Internet, which could show the teacher the possibilities of self-education to develop networks in pedagogical communities (Johnson et al. 2009).

It makes sense to design the content of professional development programs of teachers in the direction of using professional activity taking into consideration the formation regularities of the IT competency required.

When developing IT competency, it is important to use general strategies for task solutions in a problematic approach; information needs must be defined; information collection tactics must be known; the ability to synthesize information-received from different source and critical thinking are critical.

For the development of needed skills and ability, using thinking techniques as problem solving is important: formulation of hypotheses; analyzing, assessing, interpreting, and solving ideas; having a flexible approach; understanding difficult relations as well as solution-way transfers in new situations.

It is necessary to select the content and training methods that promote personality qualities that form systematicity, internal motivation, reflection, flexibility, and initiative.

It is necessary to build a program of increased levels of IT competency with a foundation upon which the didactic principles such as real context; feasibility of tasks; creative teachers' roles; and innovation spirit can rest.

To this end, IT defines the importance of working out of the professional development system of a modern teacher, focusing on the use of the IT system.

33.3 Conclusion

Social constructs are tied to initial conditions that are chaotic, interdependent, and non-linear systems (Erçetin et al. 2013, 2016). In a society or organization, every individual is a potential leader and it cannot be predicted where, when, and under what conditions this potential will develop into a leadership process, or which powers will come into effect at an individual, societal, or organizational level (Erçetin et al. 2013). Teachers are leaders of their classroom and their students. In the twentieth century, the youth were born into a different world, they grew up with technology. Scientists define them as a new generation, so teachers of this generation must adapt to the needs of these new generations, and they should develop their qualities in line with the increasing technology. The higher educational institutions of new generations will have to be different. Teachers should be trained with the necessary abilities to deal with the new generations. When the institutions envisage the future, they can use chaos as an opportunity to find success (Erçetin and Kayman 2014).

Mobile technologies have many advantages in the professional development of teachers (Pasnik 2007). Teachers should become effective and efficient following planned and specific efforts on both an individual and an organizational level to adapt to the changing profile of the educational institutions of the twentieth century (Erçetin 2001).

The models of professional development described above provide solutions to some of the problems attached to achieving an increase in the level of IT competency of modern teachers. Furthermore, they possess many disadvantage and do not allow full and active use of IT by teachers in their own professional activity. This reveals the necessity for creating a professional developmental model for teachers based on integration of current ideas into the considered models and modern teachers' personal inquiries.

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Chapter 34

A Study on the Morpho-syntactic Profiles of Syrian Children Learning Turkish as a Second Language



Lütfi Üredi and Ömer Gökhan Ulum

Abstract Having a multifaceted complex structure, language is a combination of a pile of mental states or thoughts which are transferred by means of shared rules or principles created on the grounds of phonology, morphology, and semantics. Language, being such a humanly and complicated formation, is highly in touch with a group of pertinent scientific zones like psychology and sociology, and this interaction may mirror the morpho-syntactic features of people. That is to say, selecting and forming any word, structuring a full sentence, and seeing the meaning of the sentence necessitate intricate rules or phases. With respect to this phenomenon, intricate mental or cognitive processes might be challenged in second language learning which means picking up the syntactic rules of a language and converting these rules into language skills. In this study, ten Syrian children, being educated in a primary school and owning different psychological schemas, as well as being not at similar ages, were inspected. The children were required to talk about the picture book *Smile Please* by Sanjiv Jaiswal “Sanjay” in Turkish language, and the narrations were audiotaped by the researchers. Being formed on a descriptive research design, the data were gathered and analyzed qualitatively. As a consequence of the study that checked the general morpho-syntactic profiles of Syrian children, both different and shared morpho-syntactic characteristics were found out.

L. Üredi (✉)
Mersin University, Education Faculty, Mersin, Turkey
e-mail: lutfiuredi@gmail.com

Ö. G. Ulum
Adana Science and Technology University, Adana, Turkey
e-mail: gokhanulum@adanabtu.edu.tr

34.1 Introduction

While morpheme is known to be the smallest meaningful unit of a language, morphology is the study based on how words are formed and related with each other. Examining the word patterns like stems, roots, prefixes, and suffixes, morphology considers the speech parts, stress, and intonation as well. Addressing the morphological structure, Crystal (1980) states that it is the formation of words mainly based on the practice of morpheme construct. Looking at Turkish language, it can be expressed that it is a notably agglutinative language in which the words have many grammatical suffixes or endings providing meaning. Moreover, Turkish vowels depend on vowel harmony, in that if a suffix is tied up with a stem, the vowel in the suffix typically accords a frontness or backness, as well as in roundedness with the last vowel in the stem. Besides, Crystal (1980) defines syntax as the study of links between elements of sentence structure and the rules directing the settlement of the sentences in sequences. Since morphology and syntax have common relations, they may be united under the title of morpho-syntax. A number of scientists such as Kiparsky (1982), Selkirk (1982), and Zwicky (1985) focused on morpho-syntactical issues in their research areas.

Languages differentiate between open and close class items in which verbs, adjectives, and nouns take place in the lexical category, while auxiliaries, conjunctions, prepositions, determiners, complementizers, and models are situated in the functional category. The distinction between lexical and functional categories has an important function in interpreting the syntactic characteristics of sentences (Chomsky 1986; Pollock 1989). Words in functional groupings represent phonological characteristics that are highly different from the words in lexical groupings (Berendson 1986; Zec 1993). Grammatical knowledge largely indicates the facility of processing the morphological and syntactic template of the spoken language, and disputably, its place in literacy progress is specifically accordant with steady writing systems using prosperous agglutinative morphology, just like in Turkish which is an agglutinative language: a range of suffixes are linked at the end of a verb or a noun. Yet, in such languages, kids are subjected to intricate multi-morphemic words at the very beginning of their literacy progress. The function of grammatical skills in the mentioned steady writing systems with prosperous inflectional morphology is still obscure (Babayiğit and Stainthorp 2010).

In our study, we investigated the morpho-syntactic profiles of Syrian children learning Turkish as a second or foreign language. Learning Turkish language will certainly make their lives much easier, as well as accelerate their integration process into the country. Besides an informal language learning, basic Turkish education is also given to Syrians in the courses that were opened in the refugee camps and at schools (Sengül 2015).

34.2 Aim of the Study

This study aims to get a general perspective on the morpho-syntactic profiles of Syrian children owning diverse schemas. In other words, the study identifies the morpho-syntactic characteristics of Syrian primary school students learning Turkish as a second or foreign language. In order to find out the Turkish morpho-syntactic profiles of Syrians whose mother tongue is Arabic, the answer was sought to the following research question:

How is the morpho-syntactic developmental profile of Syrian children learning Turkish as a second or foreign language, with regard to morphemes in Turkish language?

34.3 Significance of the Study

The study refers to the morpho-syntactic profiles of Syrian children learning Turkish as a second or foreign language. The findings will have great value as an exploratory study on the Turkish language competency level of Syrian children whose mother tongue is Arabic. Moreover, the findings will be a data source for the Department of Foreign or Second Languages. Additionally, the findings of the study will be a guide source for teachers of Turkish as a foreign or second language in their approaches toward teaching.

34.3.1 Participants

The data were gathered from ten Syrian children studying in the fourth grade (class). The participants of the study were all war victims in diverse schemas. The children were chosen voluntarily from different classes at Adana/Seyhan – 23 Nisan Imam Hatip Secondary School. Six of the participants were female, and four of them were male. Their ages dispersed between 9 and 10. We conducted the study during the second semester of the 2015–2016 school year.

34.3.2 Instruments and Procedure

The study was carried out through qualitative methods of data collection. The participants were asked to talk about the picture book *Smile Please* by Sanjiv Jaiswal “Sanjay (2010)” in Turkish language, and the narrations were audiotaped by the researchers. In other words, situated on a descriptive research design, the data were gathered and analyzed qualitatively. The Turkish language acquisition process and the backgrounds of the children were not monitored by the researchers; however the

experiences were inferred through the current data. The morpho-syntactic profiles were entangled by means of retrodiction, interrelating the next condition with the earlier one. A retrodictive approach examines an after-the-fact explanation for learning. As a result of the intricacy of classroom education, the sole appropriate approach to research is to take notes when one learns something and then to look back to conceive how this was achieved (Larsen-Freeman 2009). Therefore, this study is retrodictive in type, as well as being partly ethnographic which is a phase of discovery, making inferences, and going on investigation in order to acquire emic validity (Whitehead 2005).

34.4 Data Analysis and Results

The results of the study and the findings are described related to the data attained from the respondents by means of the data tools.

34.4.1 Inflectional Morphemes in Turkish Syntactic Structure

34.4.1.1 Turkish Plural Morpheme

In Turkish language, to get the plural noun from the singular, one is realized through adding the plural marker to the noun. The plural marker or the plural morpheme in Turkish is the suffix -ler (or -lar). The following samples refer to the words including the plural Turkish morphemes -ler and -lar which have been uttered by the Syrian children learning Turkish as a second or foreign language.

It was easily understood from the findings that the participants did not have any problems while uttering the singular nouns (*ceylan*, *fil*, *maymun*, *tavşan*, *geyik*, and *kelebek*) in Turkish language. Besides, as it can easily be understood from Table 34.1, the respondents simply and properly uttered the plural forms (*onlar*, *bunlar*, *geyikler*, *ceylanlar*, *ağaçlar*, and *hayvanlar*). It is simple to understand from the table that the children participants uttered *onlar* 40 times, while they uttered *bunlar* 38 times. Moreover, they uttered *geyikler* 38 times while uttering *ceylanlar* 30 times. Additionally, the participants said *ağaçlar* 25 times and *hayvanlar* 20 times.

Table 34.1 Turkish plural morpheme

Singular	{-ler, -lar}	Plural	<i>f</i>
o	lar	nlar	40
bu	lar	bunlar	38
geyik	ler	geyikler	38
ceylan	lar	ceylanlar	30
ağaç	lar	ağaçlar	25
hayvan	lar	hayvanlar	20

34.4.2 Turkish Progressive Morpheme

Progressive morpheme in Turkish language is expressed by the suffix *-iyor* added to the verbs. This progressive morpheme is used in the progressive tense sentences. The progressive tense gives the opinion that an action is in progress during a specific period. Besides, the progressive tense is named as the continuous tense. The following samples are taken from the picture book narrated by the Syrian children learning Turkish as a second or foreign language. The students were required to narrate what they were looking at in the book. Whereas they were called for narrating the overall story in present continuous tense (using the suffix *-iyor*), they often confused it with future tense (using the suffix *-ecek*) when talking about the story. They sometimes employed simple past tense and occasionally used no verb.

As it can easily be comprehended from Table 34.2, the participants employed progressive morphemes. In addition, they uttered statements in the simplest form: most often a one-word sentence. We can easily perceive from Table 34.2 that the children uttered progressive morphemes as in the following frequency of order: *koşuyor* (ten times), *yarışıyor* (ten times), *yürüyor* (eight times), *atlıyor* (five times), *düşüyor* (five times), *ağlıyor* (five times), *bakıyor* (five times), *sarılıyor* (five times), *kızıyor* (four times), and *seviyor* (three times). Nevertheless, when narrating the story using progressive morpheme, they often made statements in future tense as expressed in the Table 34.3.

One can easily perceive from Table 34.3 that the participants expressed statements in the simplest level, mostly one-word statement like *koşacak*. It can be simply seen from Table 34.3 that the children uttered future morphemes as in the following frequency of order: *koşacak* (six times), *yarışacak* (six times), *yürüyecek* (five times), *atlayacak* (three times), *düşecek* (three times), *ağlayacak* (three times), *bakacak* (three times), *sarılacak* (three times), *kızacak* (two times), and *sevecek* (one time).

Table 34.2 Turkish progressive morpheme

Infinitive	Suffix (-iyor)	Sentence	<i>f</i>
<i>koşmak</i>	<i>-uyor</i>	<i>Koşuyor</i>	10
<i>yarışmak</i>	<i>-iyor</i>	<i>Yarışıyor</i>	10
<i>yürümek</i>	<i>-üyor</i>	<i>Yürüyor</i>	8
<i>atlamak</i>	<i>-iyor</i>	<i>Atlıyor</i>	5
<i>düşmek</i>	<i>-üyor</i>	<i>Düşüyor</i>	5
<i>ağlamak</i>	<i>-iyor</i>	<i>Ağlıyor</i>	5
<i>bakmak</i>	<i>-iyor</i>	<i>Bakıyor</i>	5
<i>sarılmak</i>	<i>-iyor</i>	<i>Sarılıyor</i>	5
<i>kızmak</i>	<i>-iyor</i>	<i>Kızıyor</i>	4
<i>sevmek</i>	<i>-iyor</i>	<i>Seviyor</i>	3

Table 34.3 Turkish future morpheme

Infinitive	Suffix (-ecek)	Sentence	<i>f</i>
koşmak	-acak	Koşacak	6
yarışmak	-acak	Yarışacak	6
yürümek	-ecek	Yürüyecek	5
atlamak	-acak	Atlayacak	3
düşmek	-ecek	Düşecek	3
ağlamak	-acak	Ağlayacak	3
bakmak	-acak	Bakacak	3
sarılmak	-acak	Sarılacak	3
kızmak	-acak	Kızacak	2
sevmek	-ecek	Sevecek	1

34.4.3 Turkish Past Tense Morpheme

In Turkish language, the most used past tense morpheme is expressed by the suffix *-di* added to verbs. That is why this past tense morpheme is often named as morpheme *-di* in Turkish language. It has a few phonetically conditioned variations such as [dı], [du], and [dü]. The following are the samples covering the suffix *-di*, which have been stated by the Syrian respondents learning Turkish as a second or foreign language.

According to Table 34.4, it can be found out that the participants formed statements in simple past tense but at a very basic level. The expressed sentences with past tense morpheme *-di* were often one-word sentence with a hidden subject inside. One can grasp by looking at Table 34.4 that the respondents expressed past tense morphemes as in the following frequency of order: *koştı* (four times), *yarıştı* (four times), *yürüdü* (three times), *atladı* (two times), *düştü* (two times), *ağladı* (two times), *baktı* (two times), *sardı* (two times), *kızdı* (one time), and *sevdi* (one time).

34.4.4 Turkish Passive Morphemes

If a verb is passivized, it loses its agent, and as a result, the object becomes the subject. In the statements expressed by the Syrian children, there were both right and wrong made passive statements. The following samples represent the mentioned forms of the passive statements.

As it can be detected from Table 34.5, the Syrian children mainly expressed wrong passive statements like *Ceylan düşürttü* (the right form: *Ceylan düştü*), *Yere düşürttürdü* (the right form: *Yere düştü*), *Ağlattırdı* (*Geyik*) (the right form: “*Geyik*” *ağladı*), and *Sarılttı* (*Ayı, Geyik*) (the right form: “*Ayı geyiğe*” *sarıldı*).

Table 34.4 Turkish past tense morpheme

Infinitive	Suffix (-di)	Sentence	f
koşmak	-du	Koştı	4
yarışmak	-dı	Yarıştı	4
yürüme	-dü	Yürüdü	3
atlamak	-dı	Atladı	2
düşmek	-dü	Düştü	2
ağlamak	-dı	Ağladı	2
bakmak	-dı	Baktı	2
sarılmak	-dı	Sarıldı	2
kızmak	-dı	Kızdı	1
sevmek	-di	Sevdi	1

Table 34.5 Turkish passive morphemes

Wrong passive form	Right passive form
Ceylan düşürttü	X
Yere düşürttü	X
X	Sarıldı
Ağlattırdı (Geyik)	X
Sarıltı (Ayı, Geyik)	X
X	Yaralandı (Geyik)

34.5 Discussion and Conclusion

The transformation of the world from an industry-based setting into a knowledge-based environment has been hastily enhancing recently. Therefore, the educational world has updated itself and structured much pedagogy to catch up with the new system (Akbaşlı and Üredi 2015). In such a hastily altering world, uncertainties have also piled up at a fast rate, particularly in such sectors as economy, politics, and education (Üredi 2015). Such chaotic environments appeared in Syria recently, and researchers conducted educational studies accordingly. We know that the necessities of the current world have brought the requirement of proper approaches and pedagogies in the educational system. For instance, we can face several research studies conducted with the aim of bringing a light to the morpho-syntactic terminology within a spectrum of facets (Salaberry 2000; Perdue et al. 2002; Rooryck 2003; Montrul 2004; Mueller Gathercole 2007; Toth 2008; Lázaro and Garcia Mayo 2012; Shwayder 2014). Nonetheless, there seems to be no specific research study investigating the morpho-syntactic profiles of primary school students who are war victims and who own diverse schemas. Both external and internal factors affecting academic achievement were investigated (Ulum and Kara 2016), yet no such occurrence was seen in morpho-syntactic studies focusing on Syrian war victims learning

Turkish as a second or foreign language. Undoubtedly, successful achievement of the morpho-syntactic features may be well grounded on expressing the situation of natural settings, as well as be based on a related educational investigation and the employment of a related grammar system (Tarone 1988).

This study represents a synopsis on the morpho-syntactic profiles of bilinguals, in our circumstance Syrian children learning Turkish as a foreign language. The morpho-syntactic profiles of bilinguals report major commonalities (Montrul 2004; Lozano 2006), which are supposed to be perceived as standard processes of language formation of bilingual children (Bialystok 1991; Paradis and Crago 2004). In our particular study based on the morpho-syntactic profiles of war victims, the Syrian children were mentally disoriented on which tense morpheme to select while trying to narrate a story (Goldwater and McClosky 2005; Lopez 2008). They were occasionally uttering a future tense or past tense morpheme when a progressive morpheme was seriously required (Bybee and Pagliuca 1987; Giannakidou and Mari 2013). Moreover, the participants whose native language is Arabic had hard times when trying to figure out where to put an agent in a statement (Chang et al. 2000; Pickering and Garrod 2004). Although sometimes making very slight mistakes, the children did not have problems in terms of producing plural morphemes. Finally, the Syrian children had hard times expressing a proper passive morpheme (Newmeyer 2000; Beedham 2005). Based upon a description of the morpho-syntactic profiles of Syrian children learning Turkish as a second or foreign language, we can easily say that the children, being at an elementary level, are likely to be confused regarding when to use which time morpheme upon narrating a story.

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Chapter 35

The Perception of Administrators, Teachers, and Master Trainers Working for Public Education Centers Regarding Key Competencies of Lifelong Learning



Sait Akbaşlı and Mehmet Durnalı

Abstract The purpose of the research is not only to determine the level of perception of lifelong learning key competencies of administrators, teachers, and master trainers working for public education centers but also to find out whether or not this perception level of the sample reveals significant differences in terms of gender, profession, age, and years of experience. The research population included administrators (principals, chief deputy principals, deputy principals), teachers, and master trainers working for the public education centers in the province of Ankara during the 2015–2016 academic year. The research sample was *comprised of 39* administrators, 124 teachers, and 172 master trainers, a total of 335 participants. The data were collected using the “key competences for lifelong learning scale” developed by Şahin et al. (*Educational Research and Review*, 5(10), 545–556, 2010). A cross-sectional survey design was implemented in conducting the study. The data collected were analyzed through descriptive and parametric tests (one-way ANOVA and independent *t*-test). According to results, regarding gender, there are significant differences between females and males with respect to levels of the dimensions of communication in the native language, communication in a foreign language(s), and as for digital competences. Considering the profession variable, there are significant differences between teachers and administrators and administrators and master trainers with respect to the dimensions of communication in native language, mathematical and basic competence in science and technology, and also in terms of digital competence. Age and years of experience are also important variables for the significant difference with respect to the dimension of communication in a foreign language(s).

S. Akbaşlı (✉) · M. Durnalı
Hacettepe University, Ankara, Turkey
e-mail: sakbasli@gmail.com; durnali@gmail.com

35.1 Introduction

With constant work and development on science and art, human beings are in the process of acquisition of new information, producing new data by synthesizing old information and knowledge constantly. New inventions and discoveries have been made in disciplines of any kind with this motivation. For example, new devices to access information are being invented continuously; with old ones being renovated, new historical facts have been discovered, and many new works of art have been produced. In other words, as stated by Bosco (2007), both the speed of generating new information and advances in complex technologies are increasing rapidly day by day. As well as science and art people, the average person in a society needs to gather some of this information so as to facilitate her/his daily tasks such as transportation and communication. On the other hand, from a professional perspective, to work and do business, the necessary skills and talent require one to have some new information. In today's world, this fact demonstrates the importance of getting new information continuously throughout the life of human beings. It is obvious that this situation has led to the creation of the term "lifelong learning."

Lifelong learning is a concept as old as human history, even though it has turned out to be very common for the last few years. The ancient Greek philosophers emphasized lifelong learning in their studies. It was defined by Aristotle and Plato as a procedure of learning for philosophers which occurs throughout their life (Bosco 2007). On the other hand, in today's world, lifelong education was adopted by the European Union (1995) and UNESCO, and they have put it into a political perspective (Jarvis 2004).

Lifelong learning is not limited to the type of learning that takes place in schools and does not involve gaining school type of information. It is a comprehensive phenomenon which includes not only the learning provided by traditional schools and vocational training but also includes the other type of learning such as self-realization and self-development (Cropley 1980). Lifelong learning includes entirely all types of education, general, formal and nonformal education, and informal learning, which a person can undertake from birth till death. It leads the learners to improve their knowledge, competences, and skills regarding personal and professional development. What is more, it serves supervision and counseling (EU Commission 2011). Lifelong learning occurs in formal, nonformal, and informal learning which are *comprised of* learning behaviors, gaining information, understanding, ethics, and skills for personal development, social realization, economic welfare, democratic citizenship, cultural character, and occupation (South African Qualifications Authority 2013). Except for severely psychologically impaired individuals, learning for human beings takes place as a natural human procedure throughout life. Not only today but since the past, parents, relatives, friends, colleagues, and other information sources have been providing people with something to learn. This is valid whether they live in a distant rural or at the center of urban areas. The improvement of craft has been maintaining its creation by means of lifetime trial and error efforts (Bosco 2007).

According to Cropley (1980), lifelong education, as a kind of instrument which helps lifelong learning, would:

1. Continue during the whole life of every person
2. Result in the methodical gaining, renewal, upgrading and completing of information, skills, and attitudes so that self-fulfillment of every person can be realized in a life in which circumstances change repeatedly
3. Be considered to be successful enhancing people's motivation and ability in self-directed learning
4. Be aware of the fact of the contribution of formal, nonformal, and informal education

Lifelong learning delivers a comprehensive standpoint on the role of education for the entire life of an individual. It asserts that learning, which continues throughout life, is essential in order to enable people to adapt to, and cope with, the change and challenge in their lifetime by helping them interact with their surroundings through advancing information, improving skills and cognitive ability. In addition, it embraces all kinds of education and learning methodologies (Ahmed 2014). According to Nordstrom (2008), lifelong learning assists us in developing and improving all natural abilities, contributing to wisdom, broadening horizons, facilitating the curious mind, fostering the adaptation to change, increasing people's involvement in contribution to society, leading to an enriched life, and making the realization of self-fulfillment possible at the same time helping people make new friends.

The state bodies, schools, universities, nongovernmental organizations (NGOs), civil society organizations (CSOs), employers, business companies, industry factories, individuals, parents, friends, religious foundations, all in all, every person and every institution even an animal might provide lifelong learners with new information and knowledge as an input for learning. In today's world, with the advent of technologies, some of the main lifelong learning tools include the Internet, radio, TV channels, video web sites, audio books, rich textbooks, e-books, animations, simulations, movies, documentaries, cultural and touristic tours, and so on.

Lifelong learning can mean an individual procedure which lasts throughout the entire life-span. However, learning can also be regarded as holding formal and institutional perspectives, namely, the education system. It is a well-known fact that every kind of organization in a society, which is not directly in the service of education like companies, should provide a great number of learning platforms and build corporations where organizations provide education (Jarvis 2004). In Turkey, most of the lifelong learning activities are mainly provided by an institutionalized and formalized state body which is named as public training/education centers (Halk Eğitim Merkezleri). According to Kaya (2015), public education centers were founded in 1951. Since that time, its management structure and control body in centralized Turkish education system have changed many times. However, today public education centers are under the control of the General Directorate of Lifelong Learning, Ministry of Turkish National Education. According to the statistics of TÜİK, the number of these centers is 987 considering all across Turkey at the end

of the educational year 2013–2014. What's more, there were 6,334,884 course participants and 7,262 teachers and master trainers. At these centers, social and cultural courses such as Turkish Aegean culture folk dance and drama, vocational and technical courses such as hairdressing and ICT, and literacy courses such as reading-writing courses are provided for both young and adult Turks without any restriction to their educational level.

Not only the ability to pursue learning but also to set up a person's own procedure of learning is one of the essential skills required by lifelong learning among the many. Reading ability, numerical competence, and information technology skills are some of the elementary competences and skills required for gaining, processing, assessing, and assimilating fresh information and skills (European Communities 2007a). Moreover, individual lifelong learning skills can be listed as follows: ability to reach and get information from various sources; ability to use obtained information for problem solving, decision-making, and planning; ability to relate information to everyday life; and ability to use technological tools such as computers, the Internet, and others (Çolakoğlu 2002). According to Cornford (2002), learning-to-learn skills, which involve metacognitive and cognitive learning strategies, are indispensable with effective lifelong learning to improve throughout the whole lifetime. Adams (2007) has attempted to identify lifelong learners' skills and attributes in his study. He conceptualized a model for lifelong learning skills and attributes according to his research result. His model outlines lifelong learning skills as learning engagement, communicators, goal setters, multi-literacies, researchers, organizers, people, change agents, and disposition.

According to Eur-Lex (2006), competences are defined by Key Competences for Lifelong Learning-A European Reference Framework as a mixture of knowledge, skills, and attitudes to get used to a flexible world which changes fast and in order to extremely get unified day by day. Key competences mean individual realization and improvement, active nationality, social inclusion, and work needed by all people. As stated by Eur-Lex (2011), youngsters who are almost ready to finish obligatory education and training should acquire key competences through a procedure of improving and modernizing skills so as to be prepared for adult life, mainly for professional life, while establishing a framework on behalf of learning in the future. The gaining of key competences is in accordance with the rule of equality and access for all. According to Eur-Lex (2006, 2011), European Communities (2007b), and Şahin et al. (2010), the Reference Framework itemizes eight key competences:

1. Communication in the mother tongue
2. Communication in foreign languages
3. Mathematical competence and basic competences in science and technology
4. Digital competence
5. Learning to learn
6. Social and civic competences
7. Sense of initiative and entrepreneurship
8. Cultural awareness and expression

According to the Reference Framework cited in Eur-Lex (2006), the contribution of each of the key competences is predictable for a life full of achievement in today's world, "information age," and so each one of them is accepted as equally significant. Several of the competences interlock and overlap; for instance, features crucial to a part will encourage the ability of another. It is indispensable that competence in the major elementary skills of verbal, literacy, and mathematical ability and in information and communication technologies composes a basis for learning and learning to learn which aids the undertakings of learning totally. In all eight key competences, there are roles for creativity, decision-making, critical thinking, entrepreneurship, problem solving, risk assessment, and positive control of feelings. According to the Commission of the European Communities (2005), the growth of the information society needs the key competences in terms of the individual, community, and expert approaches. Not only are the methods to reach knowledge and services shifting, but framework and formation of societies are also changing.

Furthermore, today, the process of continuous production of information has resulted in a knowledge society, which can also be called a society full of complex and chaotic information, that mankind has been living in. It is important to choose the most accurate and appropriate channel of information in this bulk of information for professional, personal, and social development. In this way, leadership in complex systems approach would be the right approach in institutions providing lifelong learning education and training to solve this problem. In other words, tools should be developed to find solutions to make the complex and chaotic situation clear in lifelong learning. This study also provides a framework for core competences and skills of lifelong learning for professionals for them to find accurate solutions to problems under chaotic and complex situations with the help of the facilitation leadership.

35.2 Methodology

This part is composed mainly of six sections which include the purpose and the problem statement, design of the research, the population and sampling, the data collection instrument, the procedure, and the data analysis.

35.2.1 The Purpose and Problem Statement

The aim of the research was not only to find out the level of perception regarding lifelong learning key competencies of administrators, teachers, and master trainers' work at public education centers but also to examine whether this perception level of the sample reveals significant differences in terms of gender, profession, age, and years of experience or not.

Thus, the main and subproblem statements which were adopted to challenge the research in question are the following:

What are the perception levels regarding key competences for lifelong learning of administrators, teachers, and master trainers working for the public education centers?

- (a) Is there any statistically significant difference regarding the perceptions of the participants in terms of gender?
- (b) Is there any statistically significant difference regarding the perceptions of the participants in terms of profession?
- (c) Is there any statistically significant difference regarding the perceptions of the participants in terms of age?
- (d) Is there any statistically significant difference regarding the perceptions of the participants in terms of years of experience?

35.2.2 Research Design

The research was carried out through the cross-sectional survey design according to principles of descriptive design. ORI (2016) defines a descriptive study as “any study that is not truly experimental. In human research, a descriptive study can provide information about the naturally occurring health status, behavior, attitudes or other characteristics of a particular group. Descriptive studies are also conducted to demonstrate associations or relationships between things in the world around human being.”

35.2.3 Population and Sample

The research population was comprised of administrators (principals, chief deputy principals, deputy principals), teachers, and master trainers from the public education centers (Akyurt, Altındağ, Ayaş, Bala, Beypazarı, Çamlıdere, Çankaya, Çubuk, Elmadağ, Etimesgut, Evren, Gölbaşı, Güdül, Haymana, Kalecik, Kazan, Keçiören, Kızılcahamam, Mamak, Nallıhan, Polatlı, Pursaklar, Sincan, Şereflikoçhisar, Yenimahalle) in the province of Ankara during the 2015–2016 academic year. The research sample consisted of 39 administrators, 124 teachers, and 172 master trainers, a total of 335 participants.

35.2.4 Data Collection Instrument

The data were collected using the “key competences for lifelong learning scale” developed by Şahin et al. (2010). The scale involves 23 items in 8 dimensions which are communication in a native language, communication in a foreign language(s),

mathematical and basic competence at science and technology, digital competence, competence of learning to learn, the competence of social citizenship awareness, the competence of the sense of initiative and entrepreneurship, and the competences of cultural awareness and expression. The scale is a typical five-point Likert type. Each item is affixed at five points (a scale of 1–5) which are strongly disagree, disagree, neither agree nor disagree, agree, and strongly agree. In addition, the scale is comprised of four variables which are gender, profession, age, and years of experience.

35.2.5 Data Collection Procedure

Firstly, the permission to use the survey instrument in this research was requested from those who had developed the scale. The developers gave permission to do so. Secondly, in order to carry out the research, the necessary legal permission was obtained from Directorate General of Lifelong Learning, Ministry of National Education. Thirdly, the contact information of public education centers was gathered over the Internet. Accordingly, the three principals of three different public education centers were asked to participate in survey on the telephone, and they responded positively. After the 23-item and 4-variable survey was printed out on one sheet with a total of 200 pages, those 200 survey sheets were distributed to the three centers, of which 153 were completed and gathered one and a half month later. Of the 153 forms that were collected, 10 were omitted from the sample due to some missing values.

After distributing those survey sheets to the three centers, at the same time an online version of the survey was designed using a web-based form. The other principals of all public education centers in Ankara were asked to participate in the survey on telephone, and some of them also reacted positively. Instead of the paper version of the survey, e-mail invitations to contribute to the survey, with a link to the web address of the online survey and a brief description of the research, were sent out to their e-mails. Nearly 3 weeks later, 206 more responses were gathered through the online survey. Of the 206 forms that were filled, 14 were omitted from the analysis due to some missing values. Finally, online and paper survey resulted in a sample of 335 participants. It took almost 2 months to collect data.

35.2.6 Data Analysis

Firstly, the profession variable in the survey was classified into five different types (principal, chief deputy principal, deputy principal, teacher, and master trainer). After the data collection process, analysis of data revealed that the number of each group of principal, chief deputy principal, and deputy principal was less compared to the number of teacher and master trainer groups individually. Therefore, principal, chief deputy principal, and deputy principal were united under the name of “administrator” profession so as to get more accurate and efficient results of

statistical analysis. After this operation, these five types of profession were reduced to three which are administrator, teacher, and master trainer.

The data obtained via the scale were analyzed using the SPSS (Statistical Package for the Social Sciences). Firstly, independent sample *t*-test (a parametric test) was used to assess statistical differences between the mean scores of female and male for the scale's eight subdimensions. Secondly, the one-way analysis of variance, in other words, one-way ANOVA (a parametric test) was used to test statistical differences among the groups of profession, age, and years of experience according to the mean scores for the scale's eight subdimensions. The main reference point taken into account here to find out a statistically significant result was the *p*-value; if the *p*-value (*p* = probability) was equal to or less than 0.05, which means less than 5 %, the result was considered as *significant*.

35.3 Results and Discussion

Means and standard deviations of participants' level of perceptions in terms of dimensions are displayed in Table 35.1.

As shown in Table 35.1, the participants – administrators (principals, chief deputy principals, deputy principals), teachers, and master trainers – working for the public education centers thought that they strongly agreed with the dimension of communication competence in native language, at a very good level ($\bar{X} = 4.58$), while they thought that they neither agreed nor disagreed with the dimension of communication competence in a foreign language(s) ($\bar{X} = 2.52$). The scale developers, Şahin et al. (2010), examined preschool teachers concerning lifelong learning competences. They also reached very similar results which are communication competence in a native language ($\bar{X} = 4.39$) and competence in a foreign language(s) ($\bar{X} = 2.14$).

Table 35.1 Means and standard deviations of the participants' level of perceptions in terms of dimensions

Dimensions	\bar{X}	<i>S</i>
Communication in native language	4.58	,54
Communication in a foreign language(s)	2.52	1.14
Mathematical and basic competence at science and technology	4.09	,77
Digital competence	4.10	,80
Competence of learning to learn	4.40	,68
Competence of social and citizenship awareness	4.32	,68
Competence of the sense of initiative and entrepreneurship	4.29	,68
Competence of cultural awareness expression	4.26	,86

n = 335

Table 35.2 T-test statistics of the participants' level of perceptions in terms of gender

Dimensions	Female <i>N</i> = 229	Male <i>N</i> = 105	<i>T</i>	<i>p</i>		
	\bar{X}	S	\bar{X}	S		
Communication in a native language	4.64	,48	4.47	,62	2.62	,00*
Communication in a foreign language(s)	2.32	1.05	2.95	1.22	-4.78	,00*
Mathematical and basic competence at science and technology	4.07	,71	4.13	,89	-,73	,46
Digital competence	4.03	,78	4.23	,83	-2.10	,03*
Competence of learning to learn	4.41	,66	4.39	,71	,29	,76
Competence of social and citizenship awareness	4.34	,65	4.30	,72	,56	,57
Competence of the sense of initiative and entrepreneurship	4.27	,68	4.35	,68	-1.01	,31
Competence of cultural awareness expression	4.27	,86	4.22	,85	,49	,61

As it is seen in Table 35.2, the participants included 229 females and 105 males and were compared in terms of the mean score of each dimension through independent sample *t*-test. The test revealed that significant differences were found out regarding the following dimensions: communication in a native language [$t(332) = 2,62, p < 0.05$], communication in a foreign language(s) [$t(332) = 4,78, p < 0.05$], and digital competence [$t(332) = 2,10, p < 0.05$] according to the variable gender. In the current study, only the findings of communication in a foreign language(s) support the previous findings of Gencil (2013) who examined views of prospective educators toward their lifelong learning competences. In the current research, it was once more proved that females have better native language skills than males. Nevertheless, unlike many other research results, males had better foreign language skills than females. Moreover, Gencil found significant differences at competence of learning to learn and mathematical and basic competence at science and technology.

In addition, in detail, the mean score of females concerning the dimension of communication in a native language ($\bar{X} = 4.64$) was significantly higher than males' ($\bar{X} = 4.47$) at a statistically significant level ($p < 0.05$). On the other hand, the mean score of males concerning the dimension of communication in a foreign language(s) ($\bar{X} = 2.95$) was significantly higher than females' ($\bar{X} = 2.32$) at a statistically significant level ($p < 0.05$). Besides, the mean score of males regarding the dimension of digital competence ($\bar{X} = 4.23$) was significantly higher than females' ($\bar{X} = 4.03$) at a statistically significant level ($p < 0.05$).

As it is shown in Table 35.3, statistically significant differences were determined regarding the dimensions communication in a foreign language(s), competence of cultural awareness expression, digital competence, and mathematical and basic competence at science and technology in terms of the variable profession subgroups.

Table 35.3 One-way ANOVA statistics of the participants' level of perceptions in terms of variable profession's subgroups

Dimensions	(A) ADMS ^a N = 39	(B) Teachers N = 124	(C) Master trainers N = 172	F	p	The statistically significant differences between A,B,C,D,E,F	
	\bar{X}	S	\bar{X}	S	\bar{X}	S	
Communication in a native language	4.64	,53	4.61	,53	4.55	,55	,52
Communication in a foreign language(s)	3.50	1.30	2.34	1.14	2.42	1.00	18.02
Mathematical and basic competence at science and technology	4.45	,61	4.07	,73	4.02	,81	5.08
Digital competence	4.46	,65	3.97	,81	4.10	,81	5.47
Competence of learning to learn	4.47	,66	4.36	,63	4.42	,72	,52
Competence of social and citizenship awareness	4.47	,67	4.23	,66	4.36	,69	2.46
Competence of the sense of initiative and entrepreneurship	4.42	,55	4.21	,69	4.31	,70	1.58
Competence of cultural awareness expression	4.43	,68	4.08	,88	4.35	,86	4.61

^aAdministrators

AB, AC

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Scheffe test was conducted in order to reach the result of those differences in which profession's subgroups are statistically significant. Firstly, it was found out that there were statistically significant differences [$F(2,332) = 18,02, p < 0.05$], regarding the dimension of communication in a foreign language(s), between administrators and teachers and between administrators and master trainers. Additionally, another result reached is that there were statistically significant differences [$F(2,332) = 5,08, p < 0.05$], regarding the dimension of mathematical and basic competence at science and technology, between administrators and teachers and between administrators and master trainers. In addition to these, another result showed that there were statistically significant differences [$F(2,332) = 5,47, p < 0.05$], regarding the dimension of digital competence, between administrators and teachers and between administrators and master trainers. Lastly, another result revealed that there was a statistically significant difference [$F(2,332) = 4,61, p < 0.05$], regarding the dimension of competence of cultural awareness expression, only between teachers and master trainers.

As shown in Table 35.4, there were statistically significant differences regarding the dimension of communication in a foreign language(s) in terms of the variable age subgroups. LSD test was conducted in order to reach the result of those differences in terms of which age subgroups were statistically significant. It was determined that there were statistically significant differences [$F(5, 329) = 2,27, p < 0.05$], about the dimension, between the groups of 20–25 and 41–45 years old, 20–25 and 46+ years old, and 26–30 and 46+ years old. It can be claimed that new generation, young people take better quality foreign language courses and so they are really better at foreign language learning.

As it is seen in Table 35.5, there were statistically significant differences regarding the dimension of communication in a foreign language(s) in terms of the variable years of experience subgroups. LSD test was conducted in order to establish the source of those differences in terms of years of experience subgroups. It was found out that there were statistically significant differences [$F(4,330) = 5,77, p < 0.05$], regarding the dimension, between the groups of 0–5 years and 11–15 years and 11–15 years and 21+ years.

From a broader perspective, in the field of specialty in lifelong learning, it is found out that there has been an increase in numbers of researches conducted in the ways of practical base as well as theoretical base studies for the last decade. For example, Yazar and Yaman (2014) investigated teachers' tendencies on lifelong learning in their research entitled "Investigating of Lifelong Learning Tendency of Teachers (The example of Diyarbakır)." They used "Lifelong Learning Tendencies Scale" developed by themselves. In addition, Oral and Yazar (2015) examined the perception of prospective teacher about lifelong learning through "The Perception of Prospective Teachers about Life-Long Learning Scale" developed by themselves. Also, Kılınc and Yenen (2015) studied lifelong learning tendencies of the trainees in the Public Education Centre related to several variables through "Lifelong Learning Tendencies Scale" developed by Diker-Coşkun and ve Demirel (2012). Furthermore, Demirel et al. (2015) examined lifelong learning competencies of science teachers,

Table 35.4 One-way ANOVA statistics of the participants' level of perceptions in terms of variable age's subgroups

Dimensions	(A) 20–25 years old N = 20		(B) 26–30 years old N = 38		(C) 31–35 years old N = 61		F	p	The statistically significant differences between A,B,C,D,E,F
	\bar{X}	S	\bar{X}	S	\bar{X}	S			
Communication in a native language	4.31	,54	4.55	,59	4.59	,57	1.73	,12	
Communication in a foreign language(s)	3.03	,98	2.84	1.02	2.49	1.07	2.27	,04*	AEAF BF
Mathematical and basic competence at science and technology	4.11	,99	4.07	,94	4.07	,76	1,16	,97	
Digital competence	4.27	,76	4.07	,98	4.16	,77	1,75	,58	
Competence of learning to learn	4.40	,66	4.44	,64	4.44	,65	1,26	,93	
Competence of social and citizenship awareness	4.26	,62	4.19	,77	4.40	,58	1,51	,76	
Competence of the sense of initiative and entrepreneurship	4.38	,65	4.15	,73	4.38	,64	1,92	,46	
Competence of cultural awareness expression	4.50	,68	4.31	,87	4.24	,94	1,69	,63	
Dimensions	(D) 36–40 years old N = 67		(E) 41–45 years old N = 84		(F) 46 + years old N = 65		F	p	The statistically significant differences between A,B,C,D,E,F
\bar{X}	S	\bar{X}	S	\bar{X}	S				
Communication in a native language	4.64	,57	4.54	,54	4.68	,43	1.73	,12	
Communication in a foreign language(s)	2.57	1.14	2.43	1.32	2.25	1.03	2.27	,04*	AEAF BF
Mathematical and basic competence at science and technology	4.10	,72	4.14	,73	4.03	,70	1,16	,97	
Digital competence	4.18	,75	3.99	,84	4.05	,71	1,75	,58	
Competence of learning to learn	4.44	,68	4.39	,66	4.33	,78	1,26	,93	
Competence of social and citizenship awareness	4.33	,76	4.34	,58	4.32	,75	1,51	,76	
Competence of the sense of initiative and entrepreneurship	4.36	,68	4.28	,68	4.20	,71	1,92	,46	
Competence of cultural awareness expression	4.28	,88	4.28	,68	4.12	1.00	1,69	,63	

in terms of their sexual category, years of experience, schools types, and area of profession, using the “Lifelong Learning Competence Scale,” developed by Uzunboylu and Hürsen (2011). These practical researches conducted can be a demonstration of how important the lifelong learning concept is. However, not only the methodologies, text form, population selection criteria, content, and accurate terminology usage in the researches but also reliability and validity of the scales used are open to discussion. From the point of view of the theoretical perspective, for example, Toprak and Erdoğan (2012) analyzed the main characteristics of lifelong learning in depth: theoretical context; strategies of recognition; the place where informal, nonformal, and formal learning in the field of lifelong learning; methods for funding and measuring it; and perspectives of various global organizations. In addition, the Europe’s 2020 vision plans for education and training on lifelong learning are also assessed comprehensively.

35.4 Conclusion

This research explored not only the views of administrators, teachers, and master trainers from public education centers regarding lifelong learning key competencies but also whether or not this views of the participants reveal statistically significant differences in terms of gender, profession, age, and years of experience.

Overall, this study’s practical base weighs its theoretical base, and also the obtained results weigh against the article. That is, the article mainly focused on survey data and statistical results. The result obtained is adequate to support the purpose and problem statements. It is the result of the study which can provide lasting impact on a significant scale in its field of specialty.

Taking the mean score of each dimension of the scale into account, it can be alleged that the mean scores of perception level of the participants’ lifelong learning key competences were over 4.0 out of 5 for the dimensions: “communication in a native language, mathematical and basic competence at science and technology, digital competence, competence of learning to learn, competence of social and citizenship awareness, competence of the sense of initiative and entrepreneurship, and competence of cultural awareness expression, except the dimension of communication in a foreign language(s),” whose mean score of the participants’ perception level was 2.52 out of 5. As a final point, the participants’ learning can be chaotic and complex for the ones whose lifelong learning skills highlighted in the scale are at a low level.

The results in this research, which provided appropriate, valuable, and accurate information, can play an important role – at least it can lead to a simple but right idea – in expediting the preparation of clear, comprehensive, and precise leadership in lifelong learning educational policies on complex and chaotic training of leaders, administrators, and other educators’ work for public education centers. This study also provides a clear understanding of life learning

competence which may seem as chaotic and complicated. Alongside this, it provides a tool not only to test it clearly but also standardize it to a certain extent through the scale.

Regarding this scale, “The Scale of Lifelong Learning Key Competences developed by Şahin, Akbaşlı and Yelken (2010),” used in the current research, was also used by Gencil (2013) to investigate prospective teachers’ perceptions toward their lifelong learning competencies and also Kozikoğlu (2014) aimed to determine lifelong learning abilities of university and vocational school students in terms of their gender, branch, types of school, and aspiration for having postgraduate education. That can be a reference point to support the popularity of present research as well as reliability and validity of the scale. With the leadership of these kinds of scales developed for lifelong learning research, the results reached have been providing clear and accurate information in this special field, which could be called as complex and chaotic.

In today’s world, it is very important that new information should be acquired continuously throughout life. In order to be successful, especially the professionals, educators, and administrators are expected to be competent as emphasized by the Reference Framework (Eur-Lex 2006, 2011; European Communities 2007b) in communicating using the mother tongue, in communicating in foreign languages, and in developing a sense of initiative and entrepreneurship. Also, they should be successful in having competence in basic science and technology, in mathematics, in digital technologies, in learning to learn, in social and civic life, and in terms of possessing cultural awareness and expression. In this way, educators can inspire the new generation to learn new things in the best way in accordance with the rules of the new developing world. Lastly, they can find solutions to hardships they face during the teaching process easily.

As a result, public education centers, as complex systems, need to adapt themselves more easily to the social system in which they live in. To measure the level of lifelong learning skills of employees in these institutions as conducted in this study – that is, to search for the source and the nature of the problem – means managing complexity and chaos of institutional change in the right way.

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Chapter 36

Predicting Chronic Absenteeism Using Educational Data Mining Methods



Şebnem Özdemir, Fatma Çınar, C. Coşkun Küçüközmen, and Kutlu Merih

Abstract The rate of chronic absenteeism is important in assessing the validity of current educational practices conditions. Every student who exhibits this behavior faces the risk of failing to progress to higher level of education and/or dropping out/leaving the school. Students in this risk group represent not only a problem from an educational standpoint but also a potential and multifaceted problem with respect to participation in the economy, the development of a skilled labor force, and the ability to become well integrated into society. In the literature for Turkey, the framework of this problem was constructed using statistical methods, and it is important to analyze this problem in greater depth. The main objective of this study is therefore to employ educational data mining methods to predict cases of chronic absenteeism at high school level. The data, compiled from 2,495 students from different districts of Istanbul, was prepared for data mining operations based on the CRISP-EDM steps. The analysis process was conducted using R language and R language packages due to their flexibility and strength. The study results revealed that the random forest algorithm is able to establish a more successful model, while the C4.5 algorithm more accurately describes the problem in terms of decision rules.

This paper was supported by ‘Human Development Research Award’ given by Professor Çiğdem Kağıtçıbaşı at UNESCO Chair on Gender Equality and Sustainable Development, Koc University

Ş. Özdemir (✉)

Department of Management Information Systems, Beykent University, Istanbul, Turkey
e-mail: sebnemozdemir@beykent.edu.tr

F. Çınar

Capital Markets Board of Turkey, Istanbul, Turkey
e-mail: fatma.cinar@spk.gov.tr; fatma.cinar@datalabtr.com

C. Coşkun Küçüközmen

Izmir University of Economics, Faculty of Business Izmir, Istanbul, Turkey
e-mail: coskun.kucukozmen@ieu.edu.tr

K. Merih

Department of Quantitative Methods, Istanbul University (retirement) + DATALAB (Society of Data Science), Istanbul, Turkey
e-mail: kutlu.merih@datalabtr.com

36.1 Introduction

In the present era, individuals are expected to be more knowledgeable and better decision-makers. In the past, the aims of education were clearly specified in terms of “educating academically successful students” (Silah 2003) and “instilling consistent and desirable behaviors in students” (Ertürk 1973; Ayas 2013). However, the concept of education is now “described” rather than defined in very specific terms (Çınar 2014). Similarly, it is no longer considered sufficient that students are successful in a purely academic sense. Education now aims to produce students who create added value globally (Jones 2012), are innovative thinkers with entrepreneurship skills (Özdemir 2016), and have the leadership roles that will be further shaped in the future (Avcı 2009). However, the achievement of these goals is only possible when the student is actively involved in the education process and is able to complete the relevant stages of education he/she is involved within the expected time period.

Every student who exhibits chronic absenteeism is, soon after the emergence of this type of behavior, confronted with the risk of having to repeat their stage/level of education or dropping out/leaving the school completely. Cullen (2000) defines dropping out/leaving school as leaving school with limited qualifications, without having acquired sufficient skills, before the determined age or time period. At the level of secondary education in particular, this situation results in the individual remaining unqualified with regard to the expectations and requirements of our time (De Witte et al. 2013).

Every year, in Turkey, more than 1 million are involved in formal education. Despite the importance of this issue, it has not been possible to determine the number of students who are actually attending/continuing the education process (i.e., actively participating students) and the number of students who are at risk of abandoning school due to absenteeism. In the UNICEF Analysis of the Situation of Children and Young People in Turkey (2012), it is stated that chronic absenteeism is widespread in Turkey and that school nonattendance has increased markedly, particularly between 2007 and 2011. Similarly, it is understood that Turkey is in a critical condition compared to other OECD countries in terms of chronic absenteeism (tardiness, missing classes, missing school), in 2013 (Yıldırım et al. 2013).

Chronic absenteeism is not a problem specific to Turkey; Kena et al. (2015) state that each year in the USA, more than half a million leave school without graduating. The causes of such a critical problem are commonly investigated in the literature (Alexander et al. 1997; Battin-Pearson et al. 2000; Allensworth and Easton 2005; Allensworth and Easton 2007; Bowers et al. 2013; Allensworth et al. 2014; Data Quality Campaign 2014; Lansford et al. 2016). These studies have suggested many reasons, including the family (Alexander et al. 1997; Kadı 2000; Hanson and Woodruff 2003; Blue and Cook 2004; Altınkurt 2008; Tunç 2009; Özbaş 2010; Şimşek 2011), the students themselves (Jenkins 1995; Croninger and Lee 2001;

Allensworth and Easton 2005; Uysal 2008; Özbaş 2010; Gökyer 2012; Şimşek and Şahin 2012; Allensworth et al. 2014; Şimşek 2011; Yi et al. 2015), and the school environment (Rumberger and Thomas 2000; Ataman 2001; Lee and Burkam 2003; Van Houtte 2011; Şimşek 2011; Van Houtte and Demanet 2016).

Identification of students, who are members or potential members of this risk group in terms of school absenteeism, is a valuable information discovery process; however, in an environment where the overall number of students is high, it is very difficult for educators or administrators to achieve a reliable and objective overview (Cromey and Hanson 2000; Dringus and Ellis 2005; Zorrilla et al. 2005; Özdemir 2016). Educational data mining offers an approach to overcoming this difficulty and predicting students at risk.

The concept of educational data mining, EDM, refers to the application of data mining methods and techniques to data compiled from the field of education. The concept is particularly focused on the fact that, in the field of education, increasingly large amounts of data are being shared. By processing this data, it may be possible to obtain valuable data on a range of specific and general issues (Kurniawan and Halim 2013). EDM can be used to draw a number of meaningful conclusions based on the analysis of the data received from educational settings. The discipline has many benefits: it allows the determination of impact of learning data, the best use of data. It also enables the review and improvement of educational policy (Peña-Ayala and Cárdenas 2014), and at the macroscale, it can be used to develop decision and support and recommendation systems (Huebner 2013). EDM is frequently used in the international literature in predicting school failure (Kurniawan and Halim 2013), school dropout rates (Rumberger and Lim 2008; Dekker et al. 2009; Bayer et al. 2012; Bowers and Sprott 2012; Márquez-Vera et al. 2013; da Cunha et al. 2016; Sivakumar et al. 2016), and final grades (Abdous et al. 2012; Gamulin et al. 2013), as well as suggesting future courses based on past success (Bydovska and Popelínský 2013) and increasing the effectiveness of human resources in higher education (Osmanbegović et al. 2015).

36.2 Purpose

In the literature on Turkey, statistical methods have been used to construct the framework of the problem of chronic nonattendance behavior. Although this is not a proactive approach, it demonstrates the relationship between the factors causing the problem and the interaction between factors. However, in order to conduct a more in-depth analysis of the group at risk, a prediction model has been constructed. The main objective of this study is to use educational data mining methods that predict high school students who exhibit chronic school absenteeism.

36.3 Sample Group

The sample group of the study comprised students attending high schools (excluding vocational schools) located in different districts of Istanbul during the 2014–2015 and 2015–2016 academic years. The sample group was formed based on the purposive sampling method, which is one of the nonprobability sampling methods. A total of 2,495 students, including the most and least successful student from each school in each district, were selected to represent the general level of education in the districts. The sample group included 1,220 females and 1,275 males.

36.4 Methods

In the course of the study, the methodology steps of the CRISP-EDM (cross-industry standard process for educational data mining) were followed, as recommended by Özdemir (2016). The R language was used as analysis tool, while the RStudio setting was used for visualizing the data and writing the codes. R language is an open-source code and free software that can be used for statistical analysis and visualization developed in the Bell laboratories and is an extension of S language used in statistics and econometrics (Becker et al. 1988; Grunsky 2002).

36.4.1 Step 1: Identifying the Problem/Objectives

In this step, the general situation of the problem in the literature was examined. Following this, in order to accurately predict students with chronic absence behavior, it was important first to determine the factors influencing this behavior.

36.4.2 Step 2: Planning the Implementation Steps

At this stage, we carried out the design and/or selection of the necessary scales, inventories, and questionnaires for identifying the factors contributing to chronic absenteeism. This study used the data set collected by Özdemir (2016) as part of his doctoral thesis.

36.4.3 Step 3: Data Collection and Preliminary Examination

The collecting data tools consisted of the personal information form developed within the scope of a doctoral thesis; the Maslach Burnout Inventory (Maslach and Jackson 1981; Çapri 2006) and the State-Trait Anxiety Inventory (Öner 1978) were used as data collection tools. In addition to these forms, end-of-year grade point averages, grade repetitions, and periods of absenteeism were obtained from the school administrations. The personal information form (KBF-ÖGR) completed by the students included questions for determining the following points: gender, date of birth, place of birth, duration of residence in the city, satisfaction with the community, number in household, mother's educational status, mother's occupational status, mother's perceived control level, father's educational status, father's occupational status, father's perceived control level, parents marital status, average monthly income, any *extracurricular* support, study environment at home, time spent watching TV, time spent on the use of the Internet, time spent on homework, and questions determining inclination to undertake tertiary education. Burnout point ($\alpha = 0.88$) and desensitization point ($\alpha = 0.76$) of the Maslach Burnout Inventory and the Trait Anxiety points ($\alpha = 0.72$) of the anxiety scale were used.

36.4.4 Step 4: Understanding and Preparing Data

The data compiled in the study were organized under the file named chronic absence behavior – CAB.csv. The file contained a total of 27 variables (attributes) and 2,495 observation values. Table 36.1 presents all variables, display formats, and types relating to the CAB data set.

Table 36.1 shows that the CAB data set contains qualities in numerical and categorical types. It should be noted whether the numerical types from these qualifications indicate true numerical values. Understanding the data prior to the implementation of EDM algorithms is important in terms of redefining the types and, if necessary, obtaining correct and interpretable results. For this reason, although numerical in appearance, the categorical attributes (which do not represent real numbers) have been categorized (Fig. 36.1).

The target attribute in the research is “ABS.” It is crucial to understand the correlation between this attribute and other qualities to determine the predictive power of variables and to avoid obtaining misleading/manipulative results. For this reason, it was important to examine the correlation between ABS quality and AC_SUC, BURNOUT, DEPRSN, and ANXTY attributes, which express a real number value. In Fig. 36.2, corrplot package (Wei and Wei 2016) was visualized and correlated.

Figure 36.2 shows that correlations and target attribute of the numerical variables are at an acceptable level (AC_SUC with -0.52 , BURNOUT with 0.3 , DEPRSN with 0.23 , ANXTY with -0.06). For this reason, there is no need to subtract any numerical variable from the data set.

Table 36.1 All variables, display formats, and types relating to the CAB data set

Explanation	Display	Type
School average	AC_SUC	Integer
Total number of absentees (target attribute)	ABS	Integer
Gender	GNDR	Categorical
Residence in Istanbul	ACCOM	Numerical
Grade	CLASS	Numerical
Satisfaction with the community	HPPY_DISTR	Categorical
Number in household	FAM_SZ	Integer
Mother's education level	EDS_MOTHR	Numerical (0, illiterate; 6, higher education level)
Mother's occupational status	OCCS_MOTHR	Categorical
Father's education level	EDS_FATHR	Numerical (0, illiterate; 6, higher education level)
Father's occupational status	OCCS_FATHR	Categorical
Parents marital status	MARS_PAR	Categorical
Perceived financial situation	FINS	Numerical
Number of students in the class	CLASS_SZ	Categorical
Study support	SUPPORT	Categorical
Study environment at home	STDY_ENV	Categorical
Grade repetition	GR_REP	Categorical
TV viewing time (daily)	TV	Categorical
Time spent using Internet (daily)	NET	Categorical
Duration of study (daily)	STDY	Categorical
Perceived maternal control level	CONT_MOTHR	Numerical
Perceived paternal control level	CONT_FATHR	Numerical
Inclination to continue higher education	HIGHER	Categorical
Burnout score	BURNOUT	Integer
Desensitization point	DEPRSN	Integer
Constant anxiety	ANXTY	Integer

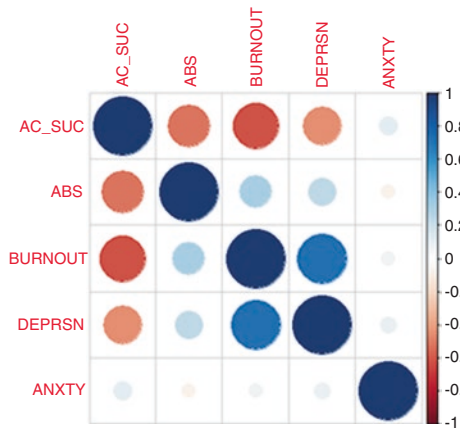
In Fig. 36.3, the car package (Fox et al. 2016) and the visualization of the numerical properties in terms of various graphic types is presented.

Figure 36.3 shows that the surveyed sample group was comprised of students of all levels of performance but mainly medium and good level (50–85) individuals. In terms of school attendance, the group has an average absence of 14 days with some absent for more than 100 days (individuals who dropped out/left school). Burnout score represents the indifference of the individual to the lessons and the school. This point in the histogram graph shows that individuals in the sample group have burnout scores at different levels. The desensitization point is also interpreted in a similar way. The distribution and the relationship graphs between burnout and desensitization scores show a clear relationship. In fact, Çapri (2006) stated that these two scores are expected to rise at similar levels, in parallel to the burnout of

AC_SUC Min.: 0.05 1st Qu.: 53.82 Median: 64.00 Mean: 62.15 3rd Qu.: 72.00 Max.: 100.00	ABS Min.: 0.00 1st Qu.: 5.50 Median: 10.50 Mean: 14.93 3rd Qu.: 16.50 Max.: 110.50	GNDR F:1220 M:1275	CLASS Min.: 9.00 1st Qu.: 9.00 Median: 10.00 Mean: 10.27 3rd Qu.: 11.00 Max.: 12.00	CLASS_SZ LYV2: 208 LYV3:1193 LYV4:1094	AGY Min.: 13.00 1st Qu.: 15.00 Median: 16.00 Mean: 15.67 3rd Qu.: 17.00 Max.: 19.00	ACCOM 10-: 316 10+:2179		
HPPY_DISTR N: 737 Y:1758	FAM_SZ 4-:642 4-:130 5-:815 5+:908	YDS_MOTHR Min.: 0.000 1st Qu.: 2.000 Median: 2.000 Mean: 2.064 3rd Qu.: 3.000 Max.: 6.000	OCCS_MOTHR N:2163 Y: 332	YDS_FATHR Min.: 0.000 1st Qu.: 2.000 Median: 2.000 Mean: 2.619 3rd Qu.: 3.000 Max.: 6.000	OCCS_FATHR N: 237 Y:2258	MARS_PAR N: 154 M: 543 P: 1406 VG: 8 VP: 330	FINS G: 208 M: 543 P: 1406 VP: 330	SUPPORT N:2084 Y: 411
GR_REP N:2337 Y: 158	STDY_ENV Min.: 1.000 1st Qu.: 1.000 Median: 2.000 Mean: 1.848 3rd Qu.: 2.000 Max.: 3.000	TV HG2: 783 UN2:1712	NET HG2: 960 UN2:1535	STDY HG2:1209 UN2:1286	CONT_MOTHR Min.: 1.000 1st Qu.: 4.000 Median: 5.000 Mean: 4.428 3rd Qu.: 5.000 Max.: 5.000	CONT_FATHR Min.: 1.000 1st Qu.: 3.000 Median: 4.000 Mean: 3.939 3rd Qu.: 5.000 Max.: 5.000	HIGHER N: 27 Y:2468	
	BURNOUT Min.: 4.00 1st Qu.: 9.00 Median: 12.00 Mean: 12.86 3rd Qu.: 16.00 Max.: 25.00	DEPRSN Min.: 3.000 1st Qu.: 5.000 Median: 8.000 Mean: 8.203 3rd Qu.: 10.000 Max.: 20.000	ANXTY Min.: 22.00 1st Qu.: 44.00 Median: 48.00 Mean: 48.13 3rd Qu.: 53.00 Max.: 73.000					

Fig. 36.1 Summary of the attributes in the CAB data set

Fig. 36.2 Examined correlations visualized with the corplot package



the individual. The Trait Anxiety score shows that the group consists of individuals who have anxiety points from each level. According to Öner (1978), 36–41 points represent a normal range for high school and university students.

The scatterplot3d package (Ligges and Mächler 2002) was used to examine the relationship between burnout, school achievement, and attendance. The graph obtained by this package, which enables a three dimensional visualization, is presented in Fig. 36.4.

Figure 36.4 shows that individuals with high levels of school achievement in the CAB data set (y-axis) have low burnout scores (z-axis) and low levels of absenteeism attendance (x-axis). It is understood that individuals with burnout close to 20 points have very high absenteeism values. An examination of these three values suggests that the CAB is a suitable data set for the purpose of the study.

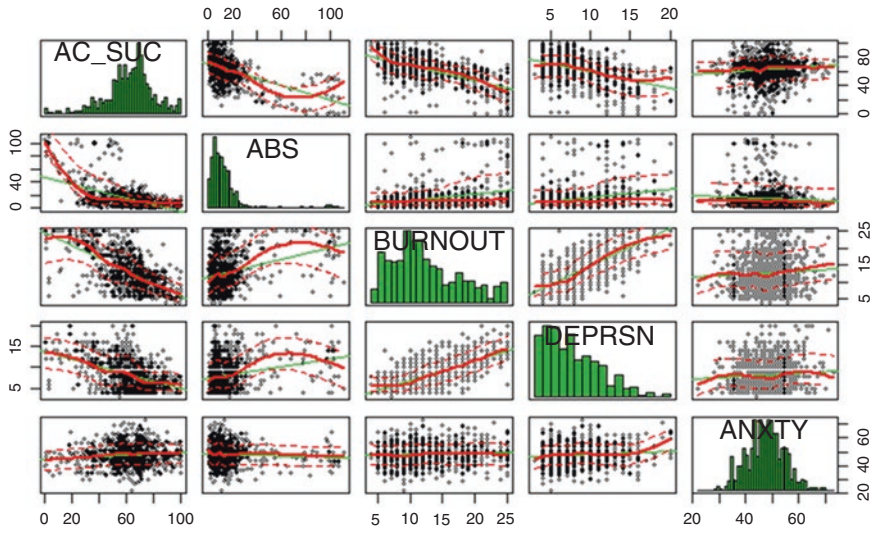


Fig. 36.3 Illustration of numeric attributes with different types of graphs

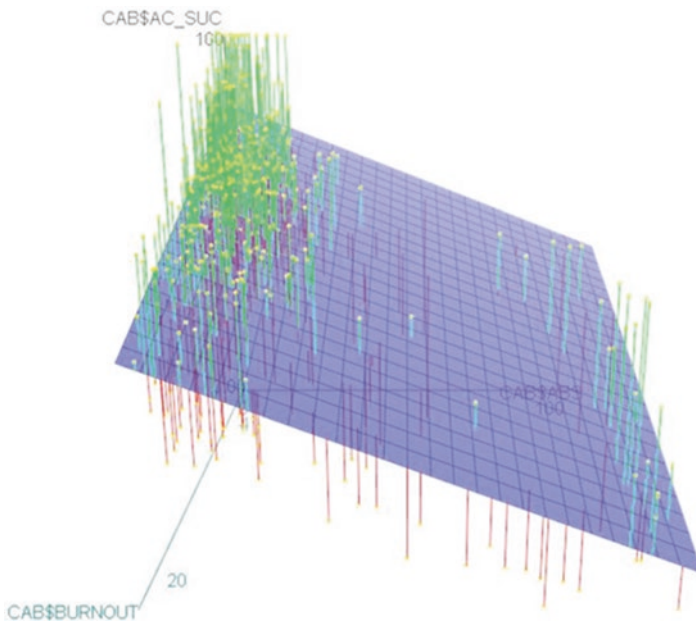


Fig. 36.4 Scatterplot3d package

The target attribute (variable to be estimated) in the CAB data set is ABS. To estimate this attribute, the algorithms used must first be categorized. Because of the information received from interviews with educators, 20 days absence or more were accepted as the line for at-risk group. On the basis of this information, the CAB data set was categorized as acceptable (A) level for less than 20 days absence, while 20 or more days of absence was categorized as at-risk (R) level. According to this categorization, the sample contained 2,083 students at A level and 412 students at R level.

36.4.5 Step 5: Modeling

At this stage, the algorithms to be used for estimation were determined and implemented. In this study C4.5, Gini, random forest decision tree algorithms, and naive Bayes classifier were used. Table 36.2 presents the packages to be used in model building process with the help of these algorithms.

Decision trees are among the most common algorithms in classification problems. These algorithms are based on the screening of the research space in order to obtain a solution with a strategy that proceeds from top to bottom (Kantardzic 2011). A decision tree is a tree-shaped flow diagram in which each node shows a measure of the attribute value, each branch represents an output of that measure, and each leaf on the tree indicates the class or the class distributions (Han et al. 2012).

As with any classification problem, naive Bayes classifier conducts learning and then accurately classifies newly acquired data on the basis of this learning, by using a vector with more than one attribute. The method is based on calculating as a probability the effect of each attribute on the result. The naive Bayes algorithm created from the Bayes theorem is a simple, effective method often used in the classification problems (Soria et al. 2011).

All the algorithms used are advisory learning algorithms. In such algorithms, the data set is divided into the training set and test set. The algorithm is learned through the training set, allowing the model to be formed. The model, i.e., the experience gained by the algorithm, is applied on the test set, which allows the examination of the model's predictive power.

Table 36.2 Packages used to build models

Algorithm	R Packages
C4.5	Rort (Therneau et al. 2015), RWeka (Hornik et al. 2015), partykit (Hothorn and Zeileis 2015), caret (Kuhn et al. 2015)
Gini	Rpart (Therneau et al. 2015), Ggplot2 (Wickham 2009), caret (Kuhn et al. 2015), e1071 (Meyer et al. 2014)
Random forest	Ggplot2 (Wickham 2009), caret (Kuhn et al. 2015), lattice (Sarkar et al. 2015), random forest (Liaw et al. 2009)
Naive Bayes	Caret (Kuhn et al. 2015), e1071 (Meyer et al. 2014)

36.5 Results and Discussion

This section gives the performance results of the models at the differentiation of the 75% training set and 25% test set, which were established using C4.5, Gini, random forest decision tree algorithms, and naive Bayes classifier.

36.5.1 Step 6: Model Evaluation and Selection Step

Estimation power of the models formed with the help of algorithms is interpreted in terms of accuracy, error, sensitivity, specificity, and F measure (Table 36.3).

Table 36.3 shows that the model formed by the random forest algorithm (Model_RF) was the most successful. This was followed by Model_C4.5 (model formed with the C4.5 algorithm), Model_Gini (model formed with the Gini algorithm), and Model_NB (model formed with the naive Bayes algorithm). However, performance does not depend on accuracy alone; it also requires sensitivity, i.e., success in estimating group A (acceptable level), and specificity, i.e., success in estimating group R (at-risk level). With regard to sensitivity, the order/ranking between the models is the same as for accuracy. A specificity value above 60% indicates an acceptable performance of the model is acceptable. When models are compared in this respect, it can be stated that Model_RF and Model_C4.5 are successful. The F measure is an integrated measurement, which is important for the correct evaluation of the model performance. The ranking with regard to F is Model_RF having the best performance, followed by Model_C4.5, Model_Gini, and Model_NB.

36.5.2 Step 7: Implementing the Selected Model

The implementation phase of the selected models included the application of the rules derived from the models, considering their levels of significance in the real world. At this stage, Model_RF and Model_C4.5, the two best performing models, are evaluated together.

Model_RF presents the ability of the attributes in the CAB data in predicting the target qualities or attributes. According to these coefficients, level of school achievement is the most important factor influencing chronic absenteeism behav-

Table 36.3 Performance values of the models

	ACC	Error	TPR	SPC	F measure
Model_C4.5	0.9149	0.0851	0.9711	0.6311	0.9501
Model_Gini	0.8731	0.1268	0.9673	0.3981	0.9271
Model_RF	0.9668	0.0331	0.9974	0.8122	0.9805
Model_NB	0.8186	0.1813	0.8865	0.4757	0.8908

ior (predictive coefficient: 112,786). The model determined burnout (46,314), desensitization (42,613), and anxiety (38,041) to be the major factors that caused absenteeism. This is followed by the mother's education level (29,001) and the father's education level (22,001). Model_RF suggests that parental control levels (father's control level was 24,015; mother's control level was 24,003) have an effect on attendance behavior. With Model_C4.5, 119 decision rules were obtained. Some are as follows:

- Rule 1: If a student's school achievement is less than 23.6 points, then this student is in the R group in terms of absenteeism.
- Rule 2: If a student's school achievement is between 23.6 and 37.2 points and the mother is illiterate ($EDS_MOTHR = 0$), then the student is in group R in terms of absenteeism.
- Rule 3: If a student's school achievement is between 23.6 and 37.2 points and the mother is a primary school graduate ($EDS_MOTHR = 2$), and the student studies less than 2 h of day ($STDY = UN2$) and is male ($GNDR=F$), and the father's perceived control level is so low as to be almost nonexistent ($CONT_FATHR = 1$), then he is in group R in terms of absenteeism.
- Rule 4: If a student's school achievement is between 37.2 and 55.72 points, and the anxiety score is more than 44 points, and the burnout score is more than 15 points, then the student is in group R in terms of absenteeism.
- Rule 5: If a student's school achievement is between 37.2 and 55.72 points, and the parents are separated ($MARS = Y$), and the anxiety score is more than 48 points, then the student is in group R in terms of absenteeism.

Yi et al. (2015) found that a low education level for the mother increased the likelihood of chronic absenteeism, supporting Rule 2 presented by Model_C4.5. The negative effect of anxiety in Rules 4 and 5 shows similarities with the studies conducted by Başarır (1990), Cassady and Johnson (2002), Yıldırım and Ergene (2003), and Chapell et al. (2005). The status of "having separated mother and father" mentioned in Rule 5 also shows the effect of domestic relations, previously illustrated in studies conducted by Alexander et al. (1997) and Özbaş (2010).

36.6 Conclusion

The greatest source of strength for nations is a well-educated human capital. This capital produces the leaders that will guide social forces and influence dynamics, as well as providing the innovative and creative minds to ensure a competitive advantage at a global level. From this perspective, every individual who exhibits chronic absenteeism represents a significant loss of potential.

However, this loss is not only a loss of potential resource that can be used by and for society; it also represents a potential danger for society. In fact, chronic absenteeism can result a plethora of problems including poor academic performance, family problems, a decreased tendency to learn, an increase in stress, and a reduction

in life expectancy (French and Conrad 2001; Rumberger and Lim 2008, Bowers and Sprott 2012). Individuals exhibiting this behavior face the risk of using harmful substances, acquiring harmful habits, and exhibiting criminal behavior (Maynard 2010; Şimşek and Şahin 2012). As an illustration, an analysis of TURKSTAT's data for 2011 reveals a high proportion of criminals are educated to only middle/secondary level.

Chronic absenteeism is not only an issue that negatively affects individuals of their social environment, but it is also an economic issue (Rumberger 1987; De Witte et al. 2013). While the participation of students into the educational system is expected to produce positive outcomes, a significant cost is incurred when students repeat stages or steps due to poor performance or when students fail to complete the relevant educational processes in the planned timeframe and with the expected outcomes. Through estimates provided by educational data mining methods and techniques, advances can be made in statistical approaches to describing a problem.

In particular, it provides a proactive approach for educators with limited resources to identify students who are likely to leave education process. A general education policy based on this approach has the potential to ensure a more efficient education process in terms of inputs and outputs but also a more accurate assessment of the potential of young people in education in Turkey.

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Chapter 37

Investigating the Educational Perspective of Atatürk, the Visionary Leader



Anıl Kadir Eranıl

Abstract This study intended to analyse the factors or possible factors that affected the character and personality of Mustafa Kemal Atatürk who was a visionary leader with a wide vision and left his mark in history. The effects of these factors on his educational perspective were also examined. In this context, first Atatürk's visionary leadership and his perspective on education was examined. Further on, it was intended to identify the possible factors that lead to the formation of Atatürk's character and personality by analysing the important points that occurred during his life. The intensive and complex relations between these factors are influential on Atatürk's visions. It was also concluded that these factors were influential in the shaping of Atatürk's sensitivity towards education. As a result, the factors that allowed the formation of Atatürk's character and personality did not remain limited to Atatürk, but they also affected the formation of the fate of an entire country.

37.1 Introduction

Leaders who directed the flow of history also directed the fate of their nations. Mustafa Kemal Atatürk, who was not only an important leader in the Turkish history but also left his mark in the world's history, was a visionary leader with a serious influence on the flow of history. Mustafa Kemal Atatürk, who was born in 1881 and died in 1938, spent a very intense period during his life which lasted only for 57 years. The influence of this period also affected the future generations. In the first part of the study, the vision and the visionary leadership of such an important leader was examined. In the second part, Atatürk's educational perspective was discussed. As a result, innumerable factors were detected that enabled the formation of Mustafa Kemal Atatürk's vision. These factors also influenced the character and personality of Atatürk and allowed the formation of his sensitive viewpoint towards the education.

A. K. Eranıl (✉)

Ministry of National Education, Kuyulutatlar Primary School, Nevşehir, Turkey

e-mail: eranilanilkadir@gmail.com

37.2 Visionary Leadership and Atatürk

The concepts of leadership and vision can be considered as intertwined concepts. When we think of a visionless leader, then that leader does not own one of the most basic elements of leadership. In other words, a visionless leader may lead to the questioning of his leadership.

According to Kotter (1995, 68–69), in the process of change, a good vision serves three important purposes; firstly, it identifies the general direction of the change and facilitates the hundreds and thousands of detailed decisions following this identification. Secondly, it motivates the people to move in the right direction, even if the first steps are personally painful. Thirdly, it helps to move thousands of different people effectively, quickly in a coordinated way. According to Erçetin (2000, 72), the concept of vision is the dominant element of the new leadership approaches with its intellectual and operational dimensions. In this context, we can see the intellectual and operational impact of the vision concept on the masses. In other words, there is at least one person except himself within a leader's group. If we considered that it is not one person but dozens or even millions of people, then we can see the tremendous influence of a leader. At this point, the vision followed by the leader has a significant influence on the mass. Consequently, the relationship between the vision and the visionary leadership is directly related to the quality of vision created by the leadership skill (Eranil 2014, 4).

There are many types of leadership. Visionary leadership among these types can be considered as a very important type of leadership, because according to Sollman and Heinze (1995, 27), the visionary leaders look at the problems globally and intuitively. Eranil (2014, 28) defines visionary leaders as a master of chess who can think a few moves forward. The leader who has this point of view is a leader who has gone through many stages of evolution. In other words, the level of visionary leadership can be considered as a kind of high-level leadership. This overlaps with the description of Sashkin (1996) who has revealed the concept of visionary leadership for the first time. Sashkin (1996) stated that visionary leadership behaviours include the *open leadership*, the *communicative leadership*, and *stable leadership*, the *leadership that cares about the opposite side* and the *creative leadership*.

Mustafa Kemal Atatürk who embraced the whole nation with his superior military and political intelligence and realized a great revolution is undoubtedly one of the leading visionary leaders of the history. The revolutions made by Atatürk made a great impact on how and to which direction the nation moved forward, and this impact will lead also the future generations. The examination of the vision of such a large effect also emerges as a very important issue. After the British navy invaded Istanbul on 13 November 1918, the following words of Atatürk “They will go as they came” revealed the right of these words after the period of the national struggle. These words of Atatürk who was a visionary leader can be considered as one of the most obvious signs that he had a vision based on firm belief.

37.3 Atatürk's Perspective on Education

During the period of the National Struggle, Atatürk did not only fight against the enemy on the front, but at the same time he allowed to raise individuals who were beneficial for the nation by finding the right path for the nation in the field of education. The fact that on such a tragic day the educational factor was brought to the forefront on the list of needs clearly reveals the importance which was given by Atatürk to the education, because Atatürk was a visionary leader who saw the salvation of the nation in the education. According to Burak (2008, 624), Atatürk was a founder of state who could understand the importance of education the best and the thought that the education lies behind each problem in economy, health, art and sport. In summary, Atatürk's perspective on education naturally determines his educational implementations.

Ozankaya (1990, 230–233) analysed Atatürk's speeches and statements on education in the following way:

During the Sakarya War, at the opening speech of the "Congress of Education" that was gathered in Ankara on 16 July 1921, in order to prepare a programme for the educational affairs of Turkey, the following points were emphasized by Atatürk:

- The biggest labour needs to be spent undoubtedly in the field of education and culture (intellectual road and culture) in order to heal the wounds that were caused in the structure of the state by the administrative negligence that went on for centuries.
- However, until we have wide and appropriate conditions and tools, we must work with all our power even during the times of war to reveal a national education programme that is prepared with care and great attention and to laid down its foundation by starting to run our educational organizations in an effective way.
- I want to talk about a national education programme that is totally free from the empty beliefs of the old era, has no relation to our natural characteristics and is free from all kinds of foreign influences coming from the East and West but appropriate to our national and historical characteristics. Because the development of our national democracy can be only achieved with such a culture. An arbitrary foreign culture may repeat the devastating consequences of the foreign cultures that were followed up to now. The culture (intellectual path, custom) is related to the environment. That environment is the character of the nation.
- In his speech made in Bursa on 27 October 1922 for the teachers, "A school is necessary for the scientific and technological initiatives. The name of the school should be remembered all together with respect. The school teaches the respect, the love for the nation and the country, the honour and independence for the young people... Independence; identifies that best way to be follow in order to save it when it is in danger...The people who want to save the country and the

nation should be an honorary expert and a scientist in their own field at the same time. The school is what can make it possible". The real salvation of a nation only happens in this way—I think (according to Atatürk) there are two main points in our program: (1) to comply with the requirements of our social life and (2) to meet the requirements of the era.

The following are the problems that were detected by Atatürk in our education system during and before the war: (1) there is a widespread illiteracy in our society, (2) our teaching methods are not appropriate, (3) the families have a press on their children, (4) our education is not national, (5) we do not have a stable education programme and (6) the aim of our education became to grow customer people who do not know themselves and life and have only superficial knowledge in every subject (Akyüz 2007, 336–338). In this context, the fact that the educational philosophy of the newly established state was designed during the period of war shows the broad vision of Atatürk's educational thoughts. Expressing that the damages caused by the administrative policies that went on for centuries can be solved through education makes it clear that Atatürk's newly created education policy had a very comprehensive and difficult mission. For the fulfilment of this mission, the necessity of the national education programme was emphasized. According to Atatürk, this education programme should be on the path of mind and science appropriate to our national and historical values and should stay away from the empty beliefs and from the Eastern and Western effects that are not related to our own culture. Ozankaya expresses that these thoughts of Atatürk which he emphasized on 1 March 1922 in the opening speech of the Turkish Parliament are the same thought saying *that the theoretical education should be carried out along with application and research* which is seen today in the field of education in every advanced countries. It was also not a coincidence that the famous American educational theorist John Dewey was invited to Turkey in 1924 to study and report the Turkish education system, but it was related to the wide-ness of Atatürk's vision. In summary, the only aim of a nation that is willing to live is to "prepare its children for life", and it is possible by creating a steady character in their personalities (Baltacıoğlu 1995, 17).

As a result, Atatürk's educational philosophy and politics can be interpreted in the following way: the shaping of a nation should not be left to chance, but it should be carried out by steady programmes that are appropriate to the nation's culture and science. The convention of education, the law on the unification of education, the proposal for the acceptance of the Turkish letters in the Izmir Economy Congress in 1923, the establishment of the Turkish History and Language Institute, the opening of the Ankara School of Law, the Gazi Educational Institute and the College of Agriculture and the transformation of the Ottoman University into the Istanbul University are the cornerstones of these policies. With the reshaping of each stone of Turkish education, it was intended to raise the Republic of Turkey to the level of contemporary civilization.

37.4 The Possible Factors that Affected the Formation of Atatürk's Visionary Leadership

Many elements such as Atatürk's family, the spirit of the city of Thessaloniki, his teachers, the books he read, the schools he studied at, his close friends and the places of his duty can be considered as the main factors forming the character and personality of Atatürk. The intense relationship between these factors could also play an important role in the emergence of the dominant traits in his character.

According to Ada (2014, 229), Mustafa Kemal was born in 1881 in Thessaloniki which was one of the most important cities of the Rumelia Region; it was the centre of contradictions that led to the collapse of the Ottoman State. Rumelia where Atatürk spent a part of his childhood and youth was the region being most affected by the West politically, economically and culturally since the eighteenth century. Thessaloniki which had such a structure found itself in such a complex situation with the intensive immigration from the Balkans towards Anatolia after the '93 war (Zeyrek and Akman 2013, 67). In addition, it changed the life of Atatürk who lost his father when he was a child and played an important role on his personality. The childhood orphanage developed his "empowered instinct", his ability of self-determination and his love towards the children (Güler 1999, transl. Uca 2006, 7).

The schools attended by Atatürk were the following: Neighbourhood School, Şemsi Efendi School, Thessaloniki Civil Middle School, Thessaloniki Military Middle School, Monastery Military High School, Military School and Military Academy. There is no doubt that he was affected and influenced by each of these schools and that these influences directed his development. The most intense influence that started to shape his world of thinking is considered to be his early youth period.

The first revolutionary thoughts and actions of Mustafa Kemal began to sprout in the Monastery Military School. Here, he developed his relations with his friends such as Nuri (Conker), Salih (Bozok) and Esat (Bulca) (Kongar 1993, trans. Ada 2014, 230). At the end of the military school, he was enrolled on 14 March 1899 to the infantry class of the Military Academy in Istanbul. In this way, for the first time, he left Macedonia and moved to the moving capital of the empire called Istanbul. Mustafa Kemal consciously prepared himself during this period. His political thoughts were maturing during the years of the academy (Ada 2014, p. 230). The teacher and branches attended by Atatürk during the period when these political considerations were shaped are presented below in Table 37.1.

When examining the places where Atatürk worked after he had finished the Military Academy, in 1899, he entered the Military School in Istanbul, and in 1902, he graduated with the rank of infantry lieutenant. He completed his training successfully in the army, and he became a captain in 1905. First, he was assigned to the 5th Army in Damascus, and then later in 1907, he joined the 3rd Army in Macedonia. In 1909, he served the Operation Army. In 1911, he went to Tobruk and joined the war to take troops to Tripoli, Italy. During the Balkan War, he served in the corps which took back Edirne from the Bulgarians. Between 1913 and 1915, he was the

Table 37.1 1895–1896 teaching staff of the Monastery Military School

Major Ahmed Efendi	Director
Regimental Order Mehmed Asım Efendi	Teacher of literature
Senior Captain Hasan Adli Efendi	Teacher of language
Senior Captain Yayha Efendi	Teacher of arithmetic
Senior Captain Mehmed Tevfik Efendi	Teacher of history
Secretor of Regiment Adem Efendi	Secretary
Captain Halid Efendi	Teacher of arithmetic
Captain Abdulhalim Efendi	Teacher of geography
Captain Orhan Efendi	Teacher of language
Captain Mehmed Ali Efendi	Teacher of art
Lieutenant Osman Efendi	Teacher of physical education
Captain İsmail Efendi	Officer of inner affair
Lieutenant Talat Efendi	Officer of inner affair
Lieutenant Mahmud Selim Efendi	Officer of inner affair

(Special yearbook of the settlement of Monastery, p. 88. trans. Demirel and Doğanay 2013. P 363)

military attaché in Sofia. In 1915, he joined the Gallipoli War as the Commander of the 19th Division in the First World War. He became famous as the Hero of Anafartalar. In 1916, he stopped the Russian attack on the eastern front as the Commander of the Corps, and he took back Muş and Bitlis from the enemy. In 1917, he was serving in Palestine and Syria after he was appointed to the 7th Army as a Commander. In the same year, he went to Germany with Crown Prince Vahdettin. The First World War ended in 1918, while he was on the Syrian front as the Commander of the 7th Army. After the Mondros Armistice Agreement, he came to Istanbul. He left Istanbul with the duty of Army Inspectorate by hiding his main aim to “save the Turkish homeland from the invasion of the enemy”. On 19 May 1919, he went to Samsun. On 22 June 1919, he published the Amasya Circular. He resigned from his post in the Ottoman government and left the army. He chaired the congress that was gathered on 23 July 1919 in Erzurum and on 4 September 1919 in Sivas (El-Benghazi 2008 p. 29–30).

When looking from another view, the books which he read at the schools he was studying and in the places where he was serving were the factors behind his steady vision and the mature of his ideas. The number of books he read was 3,997. One thousand seven hundred forty-one of these books are available in Çankaya, 2,151 of them are available in Anıtkabir, and 102 are in the library of the Istanbul University, while 3 of them are in the Public Library in Gazi, Samsun (Turan 2004 trans. Özlü 2012, p. 219). According to the catalogue of his private library, the classification of these books is the following: 879 *history*; 535 *literature*; 397 *linguistics*; 261 *military*; 197 *political sciences*; 195 *fine arts*; 187 *applied sciences (tip, agricultural engineering)*; 169 *law*; 160 *religious*; 139 *economy*; 109 *philosophy, logic, metaphysics, and psychology*; 104 *positive sciences*; 101 *education and training*; 75 *sociology*; and 33 *biological science* (the books read by Atatürk (2001) trans. Özlü 2012, 219). According to Özkan (2011 11), when looking at the books which were

available in Atatürk’s library, it is observable that these books were mostly related to history, linguistic and literature. In addition, there were 195 books directly related to education, and 94 of these books were said to be textbooks. He also emphasized that there were 37 books related to psychology and 61 books related to philosophy and its branches. It was stated that these books contained the movements of positivism, pragmatism, realism, rationalism and humanism.

The trace of the above-mentioned factors can be seen in the revolutions made during and after the period of national struggle. These traces cannot be explained within a simple causal relation. These relations are the complex non-linear relationships. In addition, Atatürk expressed the experiences and important points in his life in a four-volume book called *Nutuk*. In this work Eroğlu (2010, p. 107), it was intended (1) to explain the national liberation struggle and to clarify the conditions of the fight, (2) to explain the construction of a contemporary national state and (3) to attract the attention of the future generations for the continuity of the national identity, homeland independence and Turkish Revolution.

As a result, it is possible to say that there were many factors that influenced the character and personality of Atatürk. The factors which were considered to be dominant are given in Fig. 37.1.

Figure 37.1 presents the dominant factors that influenced the formation of Atatürk’s character and personality. After the books which were read by Atatürk left a huge influence on him, they also affected the selection of the books that he read later on. In addition, the categories of these books are useful for the analysis of Atatürk’s world of thought. The interactions he had with the schools where he studied and with the teachers teaching at these schools also had a serious influence on him. The psychological situation, which was experienced by a child who lost his father

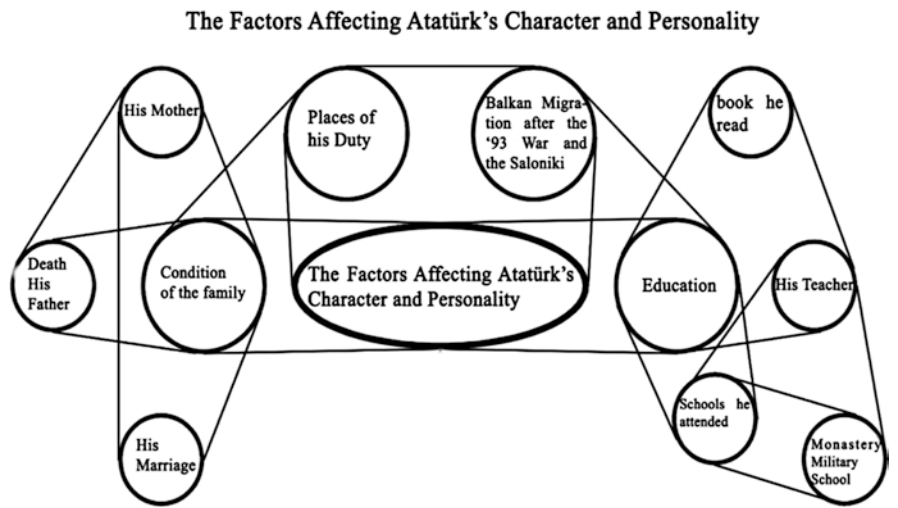


Fig. 37.1 Factors affecting Atatürk’s character and personality (this table was created by the author)

during his childhood, also affected more or less the relationships he had at the places where he worked, the relationships he had with his teachers and friends and even the books he wanted to read.

The depressed days in the Balkan affected not only the character and personality of Atatürk, but at the same time they also affected the climate of the schools in the regions and the attitudes of the families towards these events. In summary, Fig. 37.1 aims to emphasize the factors that influenced Atatürk's character and personality and also the interactions between these factors.

Consequently, there were numerous factors that lead to the formation of the vision of Mustafa Kemal Atatürk who was a visionary leader with his wide visions that made his mark in history. These factors affected the character and personality of Atatürk, and in this case, they also created his sensitive viewpoint of education. Atatürk who was a visionary leader often mentioned the importance of how to educate a society in order to raise a healthy society. Undoubtedly, the sensitivity he had in this regard was related to his vision.

37.5 Conclusion

In this study, it was intended to examine how the interactions between the events occurred before and after the birth of Mustafa Kemal Atatürk influenced the character and personality of Atatürk within the context of a complex system. Accordingly, the factors that influenced the formation of Atatürk's character were the following: the death of his father, his mother, his marriage, the places where he served, the situation of Thessaloniki after the '93 War, the books he read, his teachers, the schools he attended and many other unpredictable factors. These factors had intense interaction with each other. It also influenced the formation of Atatürk's character and personality. In this case, it is effective on Atatürk's vision. The vision of Atatürk undoubtedly influenced the fate of a whole nation.

As a result, the vast vision of Atatürk brought along his sensitive viewpoint about the education. The innumerable factors underlying this perspective influenced his whole thinking systems. The factors that influenced Atatürk and his thinking system cannot be evaluated independently; it is a situation far beyond all these factors. Furthermore, it does not seem possible to analyse each of the factors affecting Atatürk's system of thinking; however, discussing the dominant factors can present a general picture of the table of thinking. In summary, the formation of the quality vision requires the interaction of the qualitative and quantitative factors. It is very difficult to define the boundaries of such a vision. This vision of Atatürk was not focused only on one area; it was used in different areas which were related to each other. The most important among these areas was his vision about education, because the salvation and development of a nation are related to the vision applied in the education.

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Chapter 38

Re-discussing School Management Processes in the Light of Complexity Theory



Nuray Kısa, Nedim Özdemir, and Selçuk Turan

Abstract In our era, organizations are trying to stay alive in complex environments. There are many reflections of complexity theory on organizations. The aim of this study is to reveal the effects of complexity on management processes. This study is based on Gregg’s management process approach. With complexity, decision-making models changed, planning is not long-termed anymore, organizations tend to be structured more horizontally, communication should be maintained with all stakeholders, coordination is created by seeing the effect of workers on the total job, effecting is based on leadership, there are different leadership styles, and evaluating can be done with stochastic approach. These reflections on management process can be discussed in terms of school management processes too.

38.1 Chaos, Complexity, and Organizations

As most cases faced in management and organizations are “complex, dynamic, non-linear, far from the balance” systems, they can be evaluated with “complexity theory” (Gürsakan 2007, 109; Öge 2005; Polley 1997). To realize this, explaining these two terms—chaos and complexity—can be useful.

Jensen describes chaos as “irregular, unpredictable behaviors of non-linear dynamic systems” (Cited by Gleick 2005, 361). According to Bülbül’s (2007) definition, chaos is “uncertain cases that can’t be calculated” as well as being “unexpected possibilities.” There are some other definitions about “chaos” that explain it

N. Kısa (✉)

Niğde Ömer Halidemir University, Department of Educational Sciences, Niğde, Turkey
e-mail: kisanuray@yahoo.com

N. Özdemir

Ankara Directorate of National Education, Ankara, Turkey
e-mail: ozdemirnedim@gmail.com

S. Turan

Karadeniz Ereğli Uzun Mehmet Vocational and Technical Anatolian High School,
Zonguldak, Turkey
e-mail: selcukturan25@gmail.com

with its relation to “complexity.” In some sources, like Bülbül’s (2007), “chaos” is used as the synonym of “complexity.” But “chaos” is evaluated as the subset of the “complexity” in some other sources (Gürsakal 2007). “Complexity” is a system which has many pieces that have connections among, and they act collectively (Gürsakal 2007, 48; Vergiliel Tüz 2001). Chaos is a behavior type in complexity theory, and it is interested in the connection of fewer factors, while complexity is interested in hundreds or thousands of factors’ interaction (Gürsakal 2007, 54). According to this information, organizations can be thought as complex systems that would occasionally behave chaotically. As organizations can behave chaotically sometimes, understanding the features of “chaos” is worth thinking about. There are many terms related to “chaos” like “butterfly effect, non-linearity, chaos patterns, turbulence, strange attractors, iterations, fractals, self-resemblance, self-organization, collective behavior...” (Bülbül 2007; Gleick 2005; Erçetin 2001). Some of these terms (like butterfly effect, fractals, etc.) which are related to “the management process” are chosen and explained in a detailed way.

Edward Lorenz is a meteorologist who works in the field of weather forecasting. One day in 1961, he tried to make observation in an easier way on his computer. He started the program from the middle instead of starting it from the beginning. To make the circumstances same with the starting, he gave the same numbers with the previous one. He left the computer to create the new measurements. He was waiting for the same result when he came back with the previous one. But the result was not same. The only difference was that he entered a 0.506 value instead of 0.506127 to make his work easy. But the final result was extremely different. A little change has created a big difference. This case is named as “sensitive dependence to starting conditions.” Another word used for this is “the butterfly effect” (Gleick 2005). One more term existed after Lorenz’s study and that is “strange attractors.” It is the tendency of systems to move in different directions (Sayğan 2014).

Chaotic systems can’t be explained with linear equations. In linear equations knowing the value of the first variable is enough to calculate the second variable. But in chaotic systems, it is impossible. The feature of these systems can be named as “nonlinearity” (Vergiliel Tüz 2001). Nonlinearity is about the unforeseeable “reason-result relations.” Many reasons can be related to many results (Sayğan 2014).

“Fractal geometry” is another related term for “chaos.” “Fractal” is “generally a rough or fragmented geometric shape that can be split into parts, each of which is (at least approximately) a reduced-size copy of the whole, a property called self-similarity” (Uthayakumar and Easwaramoorthy 2012, 411).

“Self-organization” is the ability of organizing effectively a system when it is left to itself (Vergiliel Tüz 2001). In other words, it is about being “at the edge of chaos.” The edge of chaos is where creativity is developed through new patterns (processes and structures). Self-organization requires these new patterns, processes, and structures (Saul 1999, Cited by Balcı 2012).

After describing the related terms, relation among chaos, complexity, and organizations can be discussed. Because each probability that cannot be foreseen would create a chaotic situation, chaos is inescapable for organizations (Bülbül 2007). Though there is a common view in reverse, chaos is not a negative situation. It could

cause uncertainty, but it also offers opportunities that create innovation and change (Neyiřci and Potas 2014).

Organizations have to react appropriately to chaotic environments soon (Erçetin 2001; Öge 2005). Unless it is not done, systems can destroy or die (Erçetin 2001). Because of this, taking into consideration the reflections of chaos and complexity on management processes is thought as an important topic.

As education organizations, schools can also be managed according to complexity theory. Bülbül (2007) stresses that chaos management should be used in education because of its unpredictable features. In literature there are also studies that relate chaos and complexity theory with education systems and their management process (Erçetin et al. 2015; Erçetin and Bisaso 2015). In this study, management processes will be handled in terms of complexity theory, and some reflections for school management will be discussed.

There are many classifications about management process. As a comprehensive classification, Gregg's approach about management process can be accepted. They are "decision making, planning, organizing, communicating, effecting, coordinating and evaluating" (Aydın 2000, 126). Each of these processes will be evaluated in terms of complexity in the following part.

38.2 Management Processes in Complexity

Erçetin and Bisaso (2016, 24) stress on the understanding of management change to a new paradigm of chaos, complexity, and change from the old paradigm that has the idea of "no need to change." Chaos and complexity theories have many reflections not only on management but also on management processes. In this part, each process will be evaluated with the effects of complexity.

Decision-Making Decision-making is choosing probably the most appropriate solution about a problem (Aydın 2000, 126). In our era, finding "the most appropriate" seems difficult. Because the complex environment that organizations try to live inside may cause uncertainty about the cases (Neyiřci and Potas 2014). In addition to this uncertainty, nonlinearity would affect the decision-making process. This effect makes managers to use different perspectives while making a decision. "Probability theory and fuzzy theory" are the theories that may be used to make decisions under uncertainty (Özkan and Türkřen 2014). In addition to taking into consideration these theories while making a decision, thinking about an alternative, the decision-making models, also matters.

Tarter and Hoy (1998: 225) discussed the decision-making models in terms of the circumstances they fit best. According to this, if information is incomplete, decisions are complex and outcomes are uncertain "adaptive satisficing"; and there are no guiding principles and short-term strategy until policy guidelines are established; "incremental muddling" model can be used. These two models (adaptive satisficing and incremental muddling) seem too appropriate for complex decisions that will be

made in uncertain cases. In addition to this, Hoy and Miskel (2012, 315) offer a “situational approach” that lets leaders find the best approach according to the circumstance, because decision-making is a complex process.

Another effect of complexity on decision-making is about the people who will contribute to the decision. To establish self-organizing ability, organizations should consist of teams. These teams should be allowed to decide by themselves to self-organize (Vergiliel Tüz 2001). This means the only person who can make a decision is the manager and no more.

When these reflections are thought in terms of school principals, being aware of new theories and models about decision-making in a complex environment can be important. Another thing that can be suggested to principals is making decision as a shared process. Principals can also make decisions with teams or allow them to make their own decision in some cases.

Planning Fayol describes planning as “deciding to things will be done and ways to follow to fulfill an aim” (Aydın 2000). Deciding these things is related to foreseeing. But complex environment makes the future unforeseeable (İpek 2010; Öge 2005; Vergiliel Tüz 2001). Because things are dependent to beginning conditions in a sensitive way, all the things even the ones thought as “little” can change the conditions.

In complex systems, the future of a system can't be foreseen; instead questions can be asked about the system's irregular and aperiodic behaviors in the long-term future (İpek 2010). Making long-term planning has become impossible in the complex environment (Öge 2005; Vergiliel Tüz 2001), because an event would create plenty of probable results in a long time that can't be foreseen (Tekel 2006). But short-term future can be foreseen, and planning can be done for this period (Öge 2005; Tekel 2006).

In complex systems, to make planning, a “scenario method” can be used. The aim of this method is to make extrapolations about the future by using little scenario clusters (Gürsakal 2007, 123). On the other hand, Vergiliel Tüz (2001) offers finding the direction and trying to adapt on the situations lived, instead of making long-term planning.

School principals can also use alternative planning methods. Making short-term and flexible plans for the schools can be useful for managing schools in a complex environment.

Organizing Organizing can be defined as “constructing the necessary structure to fulfill an aim that requires working together” (Aydın 2000, 139). There are various organizing types like horizontal, vertical, and so on (Aydın 2000). Nowadays, a simple and more horizontal structure that can react easily to change is preferred for organizations rather than the hierarchical ones (Balcı 2012; Vergiliel Tüz 2001).

Aydın (2000, 148) stresses that a flexible and organic organizing type can be good when individuals in an organization are highly skilled and their needs are likely to become successful, have self-respect, etc.; technological changes are rapid and environment is relatively dynamic and complex. İpek (2010) also says that “organic organization type” attracted attention with quantum theory.

One important feature of the organic organization is self-organization. Complex systems that opened to their environment tend to lose the balance and direct themselves to a new structure which is called “self-organization.” For example, in these systems some teams are created that can manage themselves, can make their own decisions, and can control their behaviors and be responsible to the results of their behaviors. To realize this, workers are given authority, and they are encouraged to manage themselves (Vergiliel Tüz 2001).

School principals should be aware that the schools they manage have organic features and they have the ability to self-organize as complex systems. They should not try to solve all problems with the authority they have. They should create teams that will help to self-organize in chaotic situations.

Communication Communication is the process of conducting the orders, thoughts, explanations, and information from a person to person or from a group to another (Aydın 2000, 149). Within organizations communication can be from up to down, from down to up, or horizontal (Aydın 2000). As a result of dependence and interaction among all pieces of the system in complex systems (Sağyan 2014) in today’s organizations, communication can’t be thought only as “up to down” or “down to up.” In complex organizations, communication and interaction should be supplied from up to down, down to up, and for all horizontal dimensions (Erçetin 2001, 16–17). In addition to this, communication inside of the organizations can’t be enough in complex organizations; they must create communication among other organizations (İpek 2010). As Büyükbacı et al. (2012) cited from Sydow (2006), interorganizational networks refer to the relations with “shareholder, supplier, customer, competitors and any other possible stakeholders,” while intraorganizational networks refer to the relationships between employees. Büyükbacı et al. (2012) stress that an organizational structure should provide formal and informal communication channels. As a result of this, communication can be evaluated as a related process to organization.

Effective communication with social networks will help organizations to keep the energy spent for searching information with the communication based on trust, proximity, reciprocity, and social responsibility (Eckenhofler and Ershova 2011 cited by Büyükbacı et al. 2012). Also, complex systems, collective intelligence, and adaptation of the organization can be improved by increasing connections between people and determining the flow of information (Saul 1999 cited by Balcı 2012).

School principals should be open to communication. Every stakeholder should be able to reach him/her in the times needed. Principals should create multichannels to communicate inside and around the organization. Another important thing is being aware of informal groups and their dynamics.

Coordinating Coordinating is combining the contribution of people and items to realize the organizational aim. It is combining personal efforts to fulfill the aim of an organization. To create coordination, workers should see their effect on realizing the aim (Aydın 2000). The behavior seen in complex systems is called “collective behavior” which means individuals working together to create a holistic behavior. Holistic behavior is not the total of personal behaviors, it is

more than this (İpek 2010; Vergiliel Tüz 2001). The term called “synergy” sign to the same thing, too (Erçetin 2001, 73). It is like the butterfly effect. According to this information in complex systems, all workers must be aware of how big effects create in the role that they play in the organization. To make an effective coordination, a manager should also know this and combine all workers’ effort to create a big result.

Coordination of people can be thought of as “coordination of networks.” It is important to create the alignment of people’s tasks, process of making a job, etc. (Büyükbacı et al. 2012). Coordination seems nearly related to communication. An effective communication facilitates the coordination.

Principals can create synergy among the teachers to fulfill the aim of the school. He/she can remind the importance of each teacher for all activities done. He/she can create the necessary harmony among all teachers.

Effecting Effecting means “using authority, power,” in a traditional meaning, but “leadership” as a less stressed way of effecting has become important nowadays (Aydın 2000). Complex environments have changed the role of a leader, also. A leader has become the person who creates a productive future instead of controlling the future. Leaders are the people who decrease the bureaucracy and create organized irregularity (Gürsakar 2007). Leaders encourage their followers to gain self-actualization, developing them and involving them in the decision-making (Top et al. 2012). In addition to these general ideas, some specific leadership types are argued that fit to chaotic and complex environments.

According to Erçetin and Kamacı (2008), quantum leadership is a type that can be appropriate in chaotic environments. This approach says that leadership is unstructured and unpredictable. Leaders should have the ability of handling organizational chaos and its dynamic environment. One key feature of the leaders should be managing change and preparing the workers for it (Erçetin and Kamacı 2008). Another type of leadership is narcissistic leadership which is discussed in terms of chaotic cases (Erçetin et al. 2014). Glocal leadership with its “local literacy, managing social network, possessing vision and global literacy” dimensions can be thought of as an alternative leadership type (Erçetin et al. 2011). Vergiliel Tüz (2001) stresses that leaders supposed to manage the models, chaos, change and the act in complex organizations and offers “mentor leadership, situational leadership” types.

The principals’ leadership styles can change as an appropriate approach (like quantum leadership, situational leadership, etc.) to complex environments. Principals should support teachers to self-actualize themselves. One of the most important things that a principal can do is making uncertainty natural for stakeholders. Also he/she can create uncertainty sometimes to adapt to changes and development.

Evaluating To recognize if the desired aim is reached effectively, a well-thought-out evaluating system must be used. While evaluating something, firstly, the thing that will be evaluated must be defined, and then the criteria that will be compared should

be decided and accepted. The next step is to collect data about the criteria, analyzing and interpreting the data (Aydın 2000). During this process, statistical relations are used. But “statistical relations” are also being criticized as an effect of complexity theory (Öge 2005).

There are three types of relations—“deterministic, stochastic, and correlation.” With the effect of chaos theory, deterministic relations are accepted no more, and stochastic relations have become more meaningful. Stochastic relations are based on possibilities and used when independent variables are necessary but not enough to explain the dependent variable (Gürsakal 2007).

Principals should evaluate the performance of the school, in terms of various variables by using different stakeholder’s ideas (teachers, students, families, etc.). And interpretations should not be made with deterministic approach. Thinking about the cases according to different variables with stochastic approach can be useful.

38.3 Results

In this study “complexity theory” and “management processes” are evaluated together in terms of education systems. After making this evaluation, the effect of complexity theory on each management process can be seen clearly. With the effect of nonlinearity, new models started to be used in decision-making, and participative decision-making gained importance more. Long-term planning is used no more, and new planning approaches started to be used. Organizing has become more organic and structured more horizontally. Communication is thought of as a process done with all stakeholders. Coordinating the workers can be evaluated with the word “synergy.” Making workers know how they affect the big result with the things they have done. One of the most important ways of effecting is leadership. Leaders are supposed to effect workers to self-actualize themselves, and leaders can create uncertainty sometimes to adapt to change and development. Evaluating is deterministic no more. Evaluating “reason-result relations” with stochastic approach has become important. All of these changes in management processes can be evaluated in terms of schools as education organizations.

As a result of the holistic approach of complexity, each process is related. For example, leaders make followers decide as a reflection of involved decision-making. Good coordination is the result of effective communication. Structure should allow communication inside and outside of the organization. Seeing each process’ interaction is important.

This study can be thought of as an entrance to evaluating management processes according to complexity theory. For each process, detailed research can be done by other researchers.

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Chapter 39

An Interdisciplinary Study: Quantum Leadership and Hybrid Leadership



Berrin Şenses and Pinar Temoçin

Abstract Leadership paradigm has been changing in terms of meanings as well as notions as part of continual innovation; changing emerging with globalism does change organizations, organizations' culture, and the expectations of workers from the organizations and also from the leader. The first of these paradigms is quantum leadership that can be explained best with quantum physics' features like disorder, chaos, uncertainty, and uncontinuity. In this study, hybrid leadership and quantum leadership paradigms are studied separately, firstly quantum leadership. The second leadership paradigm is hybrid leadership by Gronn. Hybrid leadership, on the one side, focuses on the leaders that manage their organizations by legal ways. On the other side, hybrid leaders are expected to show distributed leadership features like being flexible, reliable, cooperative, and active and encouraging the followers. Then, these two leadership paradigms that have the leadership abilities of the twenty-first century are tried to be studied together with an interdisciplinary study in terms of their similarities and differences.

39.1 Introduction

Researchers state that scientific studies about leadership did not start till the twentieth century although leadership had been discussed extensively during the history (Northouse 2013, 1; Yukl 2010, 20). Since the twentieth century, leadership has been one of the most studied areas in order to find an answer to the questions of what is leadership and how a person can be a good leader. These studies contributed to the literature a lot in terms of new definitions and many new studies (Northouse 2013, 1). But there is not a reconciliation about the leadership term though it is studied and

B. Şenses (✉)
Hacettepe University, Ankara, Turkey
e-mail: bgereksenses@gmail.com

P. Temoçin
Başkent University, Ankara, Turkey
e-mail: payyildiz@baskent.edu.tr

examined by a lot of disciplines. As Yukl stated in his book, Bennis (1959) stated his observation about leadership many years ago that is still extant today “Always, it seems, the concept of leadership eludes us or turns up in another form to taunt us again with its slipperiness and complexity. So we have invented an endless proliferation of terms to deal with it ...and still the concept is not sufficiently defined” (Yukl 2010, 20). One of the reasons of this explanation is that the leadership term can be defined using different point of views by different researchers and it can also assimilate every new definition with itself. It is also natural for leadership to gain new terms or new definitions as continual change and innovation due to globalism change organizations, organizational cultures, and the expectations of workers from the organizations and managers. As Erçetin (2000) stated, scientific admitted the difficulty of giving a certain definition of leadership. She (Erçetin 2000) also expressed that cultural, organizational, and individual differences, today’s leadership concept, and what are expected from a leader make the term of leadership different.

A leader is always needed in any place where human being and organizations are though the term has not been defined in certain terms by scientific. Therefore, the question of what is a leader is usually be encountered, and the leadership term has been added new features together with the needs of the day. At the beginning of the nineteenth century, there was a belief that leadership characteristics are much more dependent on endowments and a leader is different from the followers in terms of both physically and characteristically. For instance, leadership was defined in a conference about leadership in the beginnings of the nineteenth century as the ability of encouraging the followers to collaborate, to respect, to be loyal, and to adjust organizational values with the will of the leader (Northouse 2013, 1). Moreover, as Kilbourne (1935) defined, leadership is an ability of executing that a leader has all the characteristics people admire (Erçetin 2000, 4). The definition of Kilbourne shows the attitude of this period to the leader. According to the definition of Knickerbocker (1948), leadership in the 1940s was accepted as a group movement, and it was emphasized that the leaders hold the groups together. The studies on leadership in Michigan and Ohio State Universities show that a successful leadership arises from the attitudes of leaders rather his personalities. In the 1960s, leadership was meant to affect people in the direction of common purposes (Erarslan 2004, Northouse 2013, 3). Katz and Kahn (1978) also defined leadership as a medium of motivation for the followers to show more performance rather than a mechanical adaptation to the organization’s routine orientations (Erçetin 2000, 7). In this period, a leader was expected to motivate the workers in the organizations to work for more success of the organization. In the 1980s, it was emphasized that leadership must be a kind of power which can affect the group for change and innovation. Since the 1990s, the terms for the leadership have been emerged. These terms attributed many different characteristics and together with this period, the understood of classical leadership was started to be exposed. Leadership is no more a movement of the great man who leads the group alone. In modern age, a leader is expected that he/she has the ability to affect the followers’ thoughts, feelings, beliefs, and attitudes, but while doing these, he/she should utilize the followers’ potential going beyond classical leadership features (Memişoğlu 2003).

The beliefs, definitions, and ideas on leadership have been going on change today. The only common point by scientists, after all those definitions, is that “there is not a certain definition of leadership” (Northouse 2013, 4). The most important thing is that a different manager who doesn’t adopt classical management methods is needed today; the information rapidly changes (Bourgeois 2003). Today globalism causes borders, national culture, economy, and political thought to disappear and political, economical, and cultural properties to intertwine. Borders in every sense among nations have been removed, and cultures and organizations with different needs emerge. So, it is almost impossible today to talk about one nation, one culture, or one political power (Tian 2013). Because the demographical qualities of working power and the expectations from the workers have changed too much, these changes are catalyst for leaders and turn leadership into guiding conducting leadership from the function of supervision (Bourgeois 2003).

Scientists are still questioning leadership that is a multidimensional and interdisciplinary field, and they even act in uniting a few leadership styles because leadership is such an open study field that it can be based on just one motto (Baloğlu 2011). As Kayman (2008) stated, the managers and organizations who are able to think that disciplines are always related and intermingled with each other and see that physics affects economy or economy affects education will be successful in the process of surviving. With the twenty-first century, leadership focused by science is tried to be redefined because of different interdisciplinary interactions. The interdisciplinary studies lead that the administrative science continually develops itself and creates new definitions about itself.

In this study, quantum leadership and hybrid leadership that come into being, thanks to the study of different disciplines, will be studied. Firstly, quantum leadership, an approach stating that there is always an interaction between the leader and the followers, that the leader is more superior than the follower, and that leadership is not permanent or there is not a certain kind of leadership (Erçetin 2000, 76), will be studied. Secondly, hybrid leadership that is based on both focus (solo) leadership and distributed leadership and that is a leadership style if needed ruling the organization alone or when appropriate sharing his/her position, collaborating with followers, or blending these two leadership (Gronn 2009a, 17) styles will be studied. Both these leadership styles are really different from the before-known leadership styles, and also they have some common characteristics due to their features.

In the literature, there are different studies on both leadership styles. All the resources reached by the researcher are made use. However, an interdisciplinary study on how quantum and hybrid leadership are identified or through which the similarities or differences between these two are highlighted could not be attained by the researcher. It is thought that this interdisciplinary study will be useful for the future leaders and contribute to the literature as the twenty-first century is the period of change, development, innovation, and collaboration and also as this century embodies uncertainty and discontinuity in it.

39.2 Method

The data obtained by literature review will be evaluated in this study as literature review is an approach that aims a situation as it is or as it was (Karasar 1986:80). At the first part of the study, quantum leadership and its characteristics will be explained. At the second part of the study, the identification points and the differentiation points of quantum and hybrid leadership styles will be explained with an interdisciplinary study.

39.2.1 *Quantum Leadership*

Chaos in economy, social life, and thoughts started to arise in the twenty-first century, and this redirects the organizations to a chaotic and uncertain world (Erçetin and Kayman 2012). Traditional leadership approaches are not sufficient enough to solve problems in organizations or to find solutions of problems because this age has accompanied a wave of non-estimative change. Diversity, flexibility, and customization are the key words for the future (Erçetin et al. 2013). In this period, the word change is not enough for explaining innovation. Instead of change, “transformation” is more proper to be used because the word “change” expresses fixing a structure with innovation and transformation means to transform a different structure with revolution (Papatya and Dulupçu 2000). While change is superficial, transformation brings radical change. In that case, it can be said that the twenty-first century is an age of transformation. Nothing in this age is predictable or in an order (Erçetin and Kamacı 2008). Chaos is the right word to explain this unproperty or unpredictability. Chaos means that there is no strategy or strategic targets fail and the outputs that would be obtained from strategies become impossible to predict. According to the theory of chaos, complexity is really natural, and they cannot be estimated. Complexity is explained as a term that there are, on the one hand, chaos, uncertainty, and unpredictability, while there are, on the other hand, stability and predictability. Therefore, the statement of “on the edge of chaos” is defined as complexity. In the field of complexity, systems are learned and developed. In the field of stability, nothing happens or nothing changes (Lewis 1994). Traditional organizations focusing on control and supervision nowadays fail to survive and keep up with change when complexity. It is accepted that the organizations adopting transformation is going to survive in the system because transformation requires durability. Leaders should attune this transformation as they can. All these explanations indicate a transition from traditional organization to chaotic organization (Erçetin and Kayman 2012). Youngblood defines this transition period as quantum age, and he examined this age in terms of organizations. He verbalizes his thoughts saying “A new breed of companies emerging that seems to thrive on chaos. These companies – I call ‘Quantum Organizations’ – operate on an organic model that closely mirrors the functioning of natural systems.” At first, it should be given an explanation about

classical physics and traditional organizations and leadership to be able to understand quantum organizations and quantum leaders better.

In classical physics, objects are isolated from anything outside. Every object has borders liberalizing itself from the environment. According to classical physics, human being and organizations are isolated from the environment, too. That environment is ignored and that the same rules and functioning in the organizations bring order are argued in classical organizations. The assumptions of classical physics and classical leadership in Table 39.1 show the importance of the given certainty and stability.

However, the validity of classical leadership characteristics based on classical physics summarized in Table 39.1 has started to lose. In the new century, certain rules and stability in order have started to disappear, and it is understood that the innovation emerged by transformation should be accommodated. The importance of environment is also emphasized. However, it is really hard to guess what the transformation brings. Classical administration styles, mechanical organizations, and an effort to link every situation with certain results have started to come to an end with a perpetual transformation. Instead of these mechanic organizations or classical administrations, the living organizations are responsive to the environment and ready for the uncertainties. As Erçetin and Kayman (2012) stated in their studies, all these happenings necessitate a transformation “from Newtonian world to Quantum world,” in other words “from classical organization principles to neo-classical, chaotic and uncertain organization principles.” The role of leader has been changing from shouldering the whole responsibility of organizations to understanding the complexity of transformation and to telling this complexity to the ones whom are influenced by it (Porter- O’ Gardy and Malloch 2009,1). All these explanations take us to the assumptions of quantum physics.

Quantum physics is a scientific field built on both math and logic. When the quantum age’s characteristics are examined, it is seen that everything that interacts or is related with each other is a whole (Porter-O’Grady and Malloch 2003). As in physics, there is no blank space in organizations. These spaces are defined as the interactions shaping individual or collective attitudes, and also they may be affected by power of different leaders (Erçetin 2000) Quantum age affects the organizations because of these characteristics. Quantum age rejects the organizations to be ruled

Table 39.1 Leadership assumptions based on classical physics

The assumptions of classical physics	The assumptions of classical leadership
Wave and particle are different from each other	1. Leadership is a whole of his characteristics
Everything depends on cause and effect relation	2. Leadership is explained cause and effect relationship
Energy is continuous	3. Leadership is continuous attributed to one person
The force applied and the energy produced are parallel to each other	4. The effect of leadership depends on the power.

Erçetin (2000). Lider Sarmalında Vizyon

by one leader. On the contrary, today's organizations are intermingled inextricably, and they are always connected to each other (Curtin 2011; Erçetin 2000). In that case, the notion of leadership is in a kind of transformation (Papatya and Dulupçu 2000). The role of leader in quantum organizations is to help the organization coalesces with environment, and to do this, the leader in quantum organizations actualizes the activities. There are three categories to perform these activities. First of these activities is that the leader and the follower should understand the ideology of the organization deeply. The second one is that organization should be transformed from mechanical organization to a living one. And the third one is the creativity category (Youngblood 1997). All the characteristics explained before are summarized in Erçetin's (2000) table about the assumptions of quantum physics and quantum leadership.

While traditional administration theoreticians see the organizations as the systems fulfill the aims, both organization and the workers in organization are accepted as a kind of energy of the planet where collaboration and interaction are interlocked. In that case, the ones who manage the organizations should create an energy always interacting and collaborating with followers, share the power they have, and create a shared vision with the followers (Erçetin 2000). While a quantum leader has all these characteristics, he/she should have also some other main characteristics as given below:

- There should always be an interaction between leader and followers.
- Leadership contains uncertainty, and it cannot be structured.
- Leadership is not continuous.
- Leader saves his effectiveness during his interaction with his followers (Alşal 2009).
- Leader should see uncertainty before anyone, and he can handle with it.
- Leader can take risk and think globally.
- Leader is able to use technology.
- Leader should share his leadership with someone else when necessary (Erçetin and Kayman 2012).

Quantum leadership approach was developed by Erçetin who grounded four main assumptions of quantum physics (Erçetin 2000) (Table 39.2). Quantum leadership should not be accepted as a simple postmodern paradigm. The principles of

Table 39.2 Leadership assumptions based on quantum physics

The assumptions of quantum physics	The assumptions of quantum leadership
There is wave-particle dilemma	Leadership is an interaction field between the leader and followers
Uncertainty and possibilities are main characteristics	Leadership cannot be structured or estimated
Energy is not continuous	Discontinuity of the leadership is fact
You may apply some force to an object to certain extent	Impact of leadership depends on interaction

Erçetin (2000). *Lider Sarmalında Vizyon*. Ankara: Nobel Yayın Dağıtım

quantum physics like disorder, chaos, uncertainty, and discontinuity are used to explain quantum leadership (Erçetin and Kamacı 2008). As in physics, there is no blank space in organizations because all the spaces are filled in interaction. Leader and followers share the leadership and contribute to the organization equally. Quantum leader distributes his leadership and runs the business with group working (Erçetin and Kayman 2012). The way followed by the leader is accepted as the best way to prevent conflict. A strong interaction between leader and follower causes a strong organizational culture. At that, conflict in quantum organizations is seen as a part of organizational development (Porter-O'Grady and Malloch 2003).

Leader in quantum leadership theory is not different from followers such as all the objects have the quality of wave and particle (Erçetin 2000). Leader is both follower and leader at the same time. Leadership cannot be shaped or predict because the chaos and complexity create uncertainty. The basic characteristic of quantum leader is the ability of overcoming uncertainty. Instead of avoiding uncertainty, quantum leader prefers to direct it (Erçetin and Kayman 2012). Discontinuity in leadership is also one of the main characteristics of quantum leadership as there is no continuous energy in quantum physics (Erçetin 2000; Erçetin and Kamacı 2008). All these explanations are the principles of quantum leadership that is based on quantum physics. It is understood that quantum leaders is different from the other leadership styles in every sense. These differences are because quantum leader has the quantum abilities. There are seven quantum abilities in nature. These abilities are based on the idea that quantum energy is really important and so all other things are dynamic and related to each other. As in quantum physics, every quantum skill is related to each other and is influenced by each other:

- (a) Quantum seeing: to be able to see everything consciously and to be aware of everything
- (b) Quantum thinking: to be suspicious of everything and to be able to have a multi-perspective approach
- (c) Quantum feeling: to be able to feel anything as if he were experienced, to be able to motivate himself, and to be able to send stress away
- (d) Quantum acting: to be able to take responsibility
- (e) Quantum trusting: to be able to trust the fluency of life
- (f) Quantum being: to be able to communicate, interact, and coordinate with people (Shelton and Darling 2001)

Leaders today are expected to make plans, and while planning, they should let their followers join this planning process. They are also expected to be aware of their talented followers and motivate them for taking responsibilities and for making a contribution to the development of organization (Alşal 2009). Quantum leaders are expected to embrace innovation and think multidimensionally instead of one-way thinking. Moreover a quantum leader has the ability of self-curing, and he shouldn't allow the organization to be affected by what happens outside the organization. A quantum leader should develop the organizations by taking responsibilities and risks. A quantum leader should trust the followers and become one with them as he is not only a leader but also a follower at the same time. As he cares

about his followers, the value and importance shown to himself are going to rise. Lastly, a quantum leader is the one who is aware that every interaction is a kind of learning and a chance for the development of organization.

39.2.2 Hybrid Leadership

Solo leadership is generally focused on organizations, especially in schools (Crawford 2012). It is believed that one leader can do everything and manage the organization in any condition. Gronn (2009b, 383) especially emphasized that the belief that a leader has the ability of highly grip strength and management ability is a useless past time effort. When it is thought, this statement is really true because solo leadership has given its place to distributed, shared, democratic, participant, and collaborative leadership (Crawford 2012). In time, it is understood that solo leadership and distributed leadership are related to professional identification and, on the contrary, the need on both leadership styles constitutes the basis of hybrid leadership. The formation of hybrid structure in leadership has led the new searches on both solo and distributed leadership characteristics (Baxter 2011).

The word hybrid, in Turkish Language Foundation (TDK), means “mixed,” and also it is defined as “a structure that reunite two different races in it.” The word hybrid emphasizes differentiation or complementarity of terms being contrary to each other. Moreover, it is accepted as a term that helps the progress in researches on leadership (Townsend 2015). Gronn explains hybridization as a structure that the relationship between two groups is recreated, and so, characteristics of each become integrated in different rates (Harris 2008). Hybridization means a strange process substituting cognitive borders among discourses accepted as certain truth (Gronn 2011). What is strange here is the disappearance of borders. The process of hybridization abolishes the assumption of purity. In the new period, there is already a need to hybridization instead of being pure because the manager is not only a leader but also a follower and he can be both depending on the situation. Therefore, just solo leadership or just distributed leadership has become a question mark, thanks to hybrid leadership.

Hybrid leadership is suggested by Gronn when distributed leadership theory that is both normative and descriptive is criticized by researchers. Hybrid leadership has both the characteristics of solo (focus) leadership and distributed leadership (Townsend 2015). Focus leadership is a kind of leadership that one person has the power to manage the organization (Harris 2008) and that the followers do unconditionally the orders of the leader (Gronn 2002). In social studies, focus leadership term was dominant for a long time. The crux of this leadership style is a strong loyalty to the leader. However, focus leadership theory was criticized by some scientists as it is not suitable for modern organizations. These scientists have suggested a leadership paradigm that is called as distributed leadership and that is accepted as an alternative to focus leadership. Distributed leadership that is the other part of hybrid leadership is a leadership style distributing the leadership to the whole

organization that means every follower in an organization can be a leader. However, just sharing leadership is not enough but also it is emphasized that the organization will be successful with cooperation, acting as a group and supporting each other. Distributed leadership is defined as power sharing by team members who can be the leader of the team when needed and can retreat when they complete their leadership duty (Northouse 2013, 244). In distributed leadership, it is defended that there should be a flow or interaction among people not the protection of one person as in focus leadership (Harris 2008).

Hybrid leadership is defined as a leadership style emerging as a mixture of both focus leadership and distributed leadership. Hybrid leadership explains the complexity of leadership very well (Gronn 2009a, b) as it is almost impossible to move in one way leadership in the twenty-first century. It is accepted that classical leadership behaviors do not help the development of the organization; on the contrary it will cause the disbanding of organization, deactivation of the followers, and getting harmed of the organizational climate. Hybrid leadership causes a person to become a leader who takes all the responsibilities individually if need be or who shares his leadership with the followers and gives importance to the interaction among members of the organization if need be (Boe and Hognestad 2014). Gronn (2009a) explicitly states that if leadership in organizations diverges from solid organizational culture and solid organization structure and if it inclines to the complex structures such as moving an organization to focus leadership together with distributed leadership, then the hybrid term is the best one reflecting this complexity and variability.

Hybridization as an administrative term starts with a systematic cooperation between classical management approaches and distributed leadership. For an ideal hybrid leadership, on the one side, there is a leader who should manage the organization formally, and on the other side, it is hoped that a leader should be responsive, reliable, self-reliant, cooperative, active, and incentive that are the characteristics of distributed leadership as a good leader not only exists at the time of cooperation or group work but also when he has professional management knowledge and ability (Jones et al. 2014). The most specific characteristic of hybrid leadership is to mix both hierarchical and heterarchical systems. While everything is dependent on the chief in hierarchical system, there is no hierarchy and everyone is equal in hierarchical system (Gronn (2009a, b), 208). Hybrid leadership reserves these two characteristics in itself. Hybrid leadership comes into being with the interaction between focus and distributed leaderships. It is important in hybrid leadership that people take over the leadership individually when needed, but at the same time, it is emphasized that leadership does not belong to one person and anyone in the organization can be a leader at any time. Hybrid leadership is a phenomenon defending that both leadership roles and the distribution of good relationships, communication, and interaction among people in an organization are necessary for the success of the organization (Townsend 2015). Hybrid leaders are accepted as innovator for actualizing the aims of group in the organization, as reformer redefining the culture of the group (Bass 1990). When considered from this point of view, it is seen that a hybrid leader is a mixture of the leadership that has the characteristics of the twenty-first century; therefore we can say that it is an appropriate leadership style for the new century.

Up until now, all the definitions, arguments, and studies on leadership have been trying to put the leadership into a pattern. However, information age, globalization, and disappearance of borders in everything show that leadership cannot put into a restriction with the new leadership paradigms for the development of organizations. Organizations, anymore, cannot be successful with people who have classical leadership characteristics. Therefore we can see quantum and hybrid leaderships as the new leadership paradigms that meet the expectations of the twenty-first century from a leader.

39.3 Conclusion

Classical management skills such as planning, organizing, managing, and controlling lead leaders to have mechanical opinions about organizations. In mechanical organizations, there is a belief that a rigid order-command system, dense hierarchy, and the existence of authority protect the organization. It is for that reason the destiny of organization is laid a burden on a few leaders. It is expected from these leaders to have superior abilities, to make detailed plans, to be much more intelligent from the followers, and always to have the strategy of winning. However, it seems that leaders of today's organizations must have the new abilities, suitable for the new age, as the organizations can keep up with the postmodern age.

It was explained the characteristics of both hybrid leadership and quantum leadership's own characteristics in a detailed way before. As Gronn mentioned, hybrid leadership is a concept emerging with combine of two different leadership styles. Quantum leadership was arisen out of four principles of quantum physics by Erçetin. As it is seen, both leadership styles came up with interdisciplinary studies. Interdisciplinary study is "a combination of two or more academic disciplines or studies" (Aktan 2007). While hybrid leadership is explained with a combination of focus (solo) leadership and distributed leadership, quantum leadership has the characteristics of quantum physics. It can be accepted that both leadership styles can be identified with each other as they are based on interdisciplinary studies but the differences between these two disciplines that hybrid and quantum leadership are based on must especially be emphasized. Hybrid leadership, founded by Gronn as an option to the distributed leadership, underlines that leadership cannot be distributed in every situation; sometimes just one leader has to manage the organization. It is known that quantum leadership is based on quantum leadership that is totally different discipline for social studies. In that case, even if they have common characteristics, these leadership styles indeed are different from each other. Moreover, both leadership styles emphasize interaction and sharing and that leadership does not belong to one person, because everyone has the chance to be a leader in the organization in hybrid leadership paradigm because of being a part of distributed leadership style. Hybrid leader continues the leadership till she/he completes the duty, and when the duty is over, the others can be the leader of the organization.

Table 39.3 The similarities of hybrid leadership and quantum leadership

Hybrid leadership	Quantum leadership
An interdisciplinary study based on both focus (solo) leadership and distributed leadership	An interdisciplinary study based on quantum physics
Interaction and sharing is important as characteristics of distributed leadership. Leadership does not belong to just one person	Interaction and cooperation between leader and follower is very important
There is a kind of uncertainty because it is not certain that focus or distributed leadership will be performed	There is a kind of uncertainty because of the uncertainty principle of quantum leadership. Leadership cannot be shaped.

But, the hierarchic structure of hybrid leadership shouldn't be forgotten. When it is needed, a leader takes all the responsibilities and manages the organization. Although these two leadership styles give really importance to interaction in organization, one characteristic of hybrid leadership that is different from quantum leadership is that organization can be managed by one leader in a hierarchic structure when it is necessary.

Interaction, uncertainty, and the structure of leaderships based on good communication can be accepted as the characteristics expected from a leader in the post-modern era. Despite the differences, Table 39.3 summarizes the similar characteristics of hybrid and quantum leaderships.

As it is seen in Table 39.3, one of the basic characteristics of quantum leadership is the integrity between the leader and the follower. There is no difference between the leader and follower. Quantum leaders give importance to the teamwork. The uncertainty principle of quantum leadership is also seen at the hybrid leadership because hybrid leadership is a mixture and nobody knows which leadership style, focus (solo) or distributed leadership, is necessary when it is time. These characteristics show that there are of course differences between hybrid leadership and quantum leadership, but it must be accepted that the similarities are much more than the differences.

The twenty-first century features development and transformation in it. Therefore, leaders open to interaction, cooperation, and innovation are needed for the organizations to survive and keep up with the age. All these characteristics of leadership can be found in hybrid and quantum leadership paradigms. In both of these leadership paradigms, leaders are aware that leadership is not stable. Today, even if the other leadership styles such as focus leadership and distributed leadership are effective because of cultural or social features, transformation and change will be inevitable in the future. Thanks to transformation, it will be understood that solo leader is not the productive one and anyone can be a leader in an organization. It is obvious that there will be a need to the responsible, prospective, risk-bearer, optimistic, innovative, and kick-start leaders. The study reveals that all these characteristics are in the mixed structure of hybrid leadership and the energy of quantum leader.

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Chapter 40

On the Possibility of Wise Leadership in Educational Management



Gülgün Çetin, Nazmiye Yıldırım, and Hayati Özcan

Abstract Leadership continues to be the most critical process of every formal organization. Any research, academic or scholarly attempt made to expound on leadership becomes a delayed initiative quite easily. Boggled by the same quest of transforming leadership potential, this article is a result of teamwork and a true sense of self-sacrifice and interest and a high level of enthusiasm attained through lectures under the effective guidance of Professor Şefika Şule Erçetin. The article explores wise leadership in the context of educational management. After reviewing a number of articles and works as a team, we tried to shape them with our own cues, expression styles and ideas. We have tried to give brief information about the concepts underpinning wise leadership in the hope that it will be useful. Firstly, we focussed on wisdom, by stating who a wise person is, through highlighting the difference between wisdom and being wise, by looking at the meaning of wisdom in Turkish history and analysing the source of wisdom and dimensions of wisdom as well as leadership, wise leadership and issues of wise leadership with regard to educational management.

40.1 Introduction

Our research area puts priority to the school, with many related topics being emphasized and stressed. In educational management, there is a leader and a wise leader. This is because studies premised on determining the factors that make up school culture have become extremely important today because education takes life as a complete whole and affects it positively or negatively. One of the most important of these factors is the leaders of schools, that is, school administrators. While basic values and beliefs constitute the substructure of school cultures, leaders are also models or representatives who actually reflect the values and beliefs in their own

G. Çetin (✉) · N. Yıldırım · H. Özcan
Hacettepe University, Ankara, Turkey
e-mail: gulguncetin48@gmail.com

personalities. In this context, significant developments are taking place in research on leadership. As in the other fields of social sciences, objectivity of leadership-related approaches and views leaves one to choose a theory of leadership that is most effective for a respective organization among the different approaches available by taking the philosophical base behind the theory in question.

One of such leadership approaches, which also constitutes one of the main dynamics of leadership research in recent years, is the wise leadership approach. It can be seen that the content, style, situation, perceptual dimension and internal dynamics of wise leadership differ in socialization and development aspects compared to other leadership settings.

40.2 What is Wisdom?

A closer look at the dictionary of philosophical terms (1975) indicates that wisdom refers to knowledge in a broad sense. In this context, the essence of knowledge, the sufficiency of knowledge and self-knowledge are described as tenets of wisdom. There is no complete and agreed upon definition of wisdom within the works and researches consulted.

Wisdom is much more than having definite knowledge; it is about efforts to pursue the knowledge, to be able to obtain it, regardless of who has put it forward. The misconception here is to describe an act of thinking, knowing, recognizing, learning, understanding and/or questioning in a wrong way. People are curious about what they feel lacking, and they always want to pursue it in order to get it. The questioning that a human being undertakes to find the truth is research. The most important part of this interrogation is that the person tries to question himself, to find himself/herself, in order to understand and describe himself/herself. The kind of questioning can be done by individuals who have a mind which regulates with critical thinking. Due to this reason, students should be given as much capacity as possible to work towards developing a critical mind mentality in the education system. Indeed, critical thinking should be trained in a well-equipped manner. In this regard, Socrates says “Unquestioned life is un-experienced life” (Patton 1997, 33):

In general, the definitions of wisdom or wisdom which are peculiar to the East and the West are explained by taking into consideration the “characteristics the society desires to have” (Ardelt and Oh 2010, 88). Discuss the influence of individual factors in the development of wisdom; but there is no satisfactory explanation of how wisdom develops within all people.

Wisdom is regarded as one of the most important aspects of development throughout human life. It is contended that the individual uses the experiences and knowledge he has gained throughout his life in the best way, and it generally means that he makes reasonable decisions and seeks a conscious life. If the person can apply the knowledge to his life, then the transformation of the information into his lifestyle begins to take shape.

40.3 Who is a Wise Person?

Topdemir (2010) defines a wise person as one who has complete knowledge. Türk Dil Kurumu (2000) describes a wise person as knowledgeable, with good morals, mature and exemplary. The term wise person can mean a person who is harmonious with the world and society, is self-sufficient, lives consciously and thinks of his actions and questions his undertakings. Someone is a wise person when they are intelligent, knowledgeable and self-conscious. They are also mindful of everything that takes place within and around them.

A wise person is one who has the right and reasonable decision-making ability and competence regarding many subject matters. What can be understood from various studies is that the greatest traits of a wise person are the questioning, critical, meticulous personality and self-knowledge aspects.

A wise person learns from every occasion and sees events as an opportunity to develop his own consciousness. Every creature, every human being and each event teach something to a wise person, and there is much to learn from whatever is available. The person approaches and interprets the events in a neutral way. A wise person tries to think about everything that is within his lived experience and questions its worth to himself and to humanity in general.

A wise person should be more interested in the consequences than events. A wise person strives to reach the unknown by moving from the known. The wise person, thus, constantly thinks, researches and accordingly focuses on continuous learning. The wise person generally tries to reach desired knowledge levels by positioning himself in a way that he knows nothing. The wise person is the one who keeps control of his life, is aware of his life and himself and continues to improve himself through self-renewal.

The wise person learns lessons from what is described as bad and turns things into opportunities for self-improvement. The wise person cares for everything and pursues everything he can learn. His aim is to acquire a high level of information from the events he has lived and experienced in his viewpoint. His knowledge always informs himself and other people about the environment he is in. The wise person takes care of every thought and event from the good side and looks for possible ways to be a better person. For this reason, it can be argued that the wise person attaches great importance to goodness, love, friendship and companionship in his endeavours. In many sources, it is argued that wisdom has more personal attributes and virtues playing an active role in knowledge searching, creation and transformation.

Every individual has a relative wisdom capacity, but it takes a certain amount of time and effort to reach the desired level of wisdom. People are creative because they are productive and critical. That is why it can be argued that the number of wise people in a society is directly related to the quality of information and level of development of that particular society. This is because wise people are custodians of information as well as knowledge and are vanguards of development.

A closer look at research conducted on wisdom in history would reveal that in the antique period, in order for a person to be considered as wise, such a person's lifestyle was put forward and examined in light of other people's life forms using a certain yardstick that would distinguish this person from all the others. Elderly men in general were seen as wise persons. They were, thus, expected to solve the problems of individuals and society.

Aristotle categorized wisdom into two, "practical wisdom" and "theoretical wisdom". Socrates is, however, a thinker who comes to the forefront when his precious and important ideas on the concept of "wisdom" are put into consideration. According to him, the greatest mistake people commit is to believe in the decisions of the judges and accept them unquestioningly. Socrates tried to make people develop the habit of questioning and a feeling of suspicion in different phenomena.

In Turkish history, generally, the wise gave their advice, and the advice they gave was always adopted as a wise way of life. Meanwhile, those who gave critical advice were held in esteem as wise men. Self-consciousness, which is the basic dimension of one's wisdom, is expressed in the words of Yunus Emre as self-awareness and self-knowing. In *Kutadgu Bilig*, written by Yusuf Has Hacib in the year 1069, wisdom and beauty are emphasized as very important features and essential concepts of life.

40.4 The Source of Wisdom

The general idea which can be drawn from the studies, articles and various works is that wisdom is all about the capacity to assimilate, internalize and apply various characteristics together with knowledge, awareness, common sense and intuitive understanding. It is thus relevant to consider wisdom as values that are important in the process of common sense, deep vision as well as reasoning in the process of application of knowledge. The concepts of reason and wisdom are two important characteristics and strengths that overlap and complement each other in terms of meanings. The idea here is that wisdom or profound opinion passes through cultural, philosophical and religious sources as a virtue but is held in the hands of people at every turn and today the importance of wisdom is not known to everyone but is significant and sensitive enough.

As a matter of fact, just as coined in the valuable work of Erçetin (2008,), it can be said that there are "different sources of wisdom". It can be thought that the source of wisdom is the orientation upon which the wise person is based and that this person also determines the type of wisdom abound. The orientation of those who are defined as wise may be related to a certain work setting, occupation, social events, lifestyle, religion and philosophical considerations (Erçetin 2008). Accordingly, wisdom is a different point of view and determination of events on the part of those who are extraordinary. The source of wisdom is essentially the way of life, environment, experiences, education and psychological structure of a person. Conversely, it is a concept that everyone cannot have.

40.5 Dimensions of Wisdom

Erçetin (2008) stated in her precious work that “the dimensions of wisdom include: life knowledge, intuition, awareness, positive emotional development, experience, creativity, patience, responsibility, confidence, sensitivity, sharing, morality, crystallization and cohesion”. The knowledge of life, intuition and awareness are discussed in the following subchapters, in order to show how wisdom is possible under different circumstances. It is necessary to be open to a philosophical and different approach in order to evaluate these concepts and opinions.

Pleasure or Joy of Life The idea of pleasure in life comes to mind when we talk of knowledge of life. People have to be aware of their lives after the pleasure of living in the past, and they should shape their lives in this direction. When we look carefully at our lives, there are life stages for all living things, birth, growth, development and death. In terms of people, it is always claimed that a person has lived for many years if such a person died at the age of say 98. However, the life mentioned here is only used for the survival period, not a life composed of life-loving notes. It is important to stake a claim that the real life of a person is the one that carries the joy of living. The time outside is not real life. A vehicle can only move as long as it has fuel. Life is like the energy of a moving car; it energizes man and makes him aware of life. Each person can keep alive and develop his or her life’s love and knowledge if we can correctly determine our energy sources. In fact, the basic energy source of people is usually the same.

Although the detailed secrets on life are different, the most important of the outwardly reflected sources is the “attempt to smile or laugh”. What is important in the life we live according to Nuvide Gultunca Tulgar’s “Find Your Own Polar Star” that was proclaimed centuries ago is reflected in the following analysis: “A monk went to do research. He entered the village graveyard first. Because he believed that the philosophy of life of cultures was hidden in such places. His eyes suddenly caught numbers like 3, 18, 567, 1440, 15643, 241 on the tombstones, although he did not think for long, he could not figure out the secret of these figures. He went to the wisest person in the village and asked for the mysterious meaning of these figures, which he could not make any sense of. The wise man smiled and gave the following answer. “When we get our babies, we get them hooked on the beller. Every time he laughs in life, we make a knot of that. After he died, we counted his knots in his bell, wrote his number of knots in the tombstone, and so we knew how long he had really lived”. It is ideal to think that the knowledge of life of a person should be in line with the joy or pleasure with which the life was lived. In other words, it is important to be able to look at eyes that are smiling in order to determine a jolly life because it is unfortunately the most overlooked subject.

To be able to understand life, there is a need to consider eyes that are smiling as these are an endless energy source. You can say that you have to laugh before you smile outside. You must be reminded, however, that even the burning fire that we are talking about turns the old splendour, including the diseases. In the results of the research done by the scientists, there are many contributions of the love of life. It has the merits showing that the body relaxes by providing secretion of the

endorphins – the natural happiness pill, calming the brain and giving hope and pleasure to the people – while also activating the immune and digestive system and allowing the nerves and organs to exercise. Even if you look at the cicadas that smile at people with the possibility of ordering many more items, you can see that your smile is back to us as a smile, just as the earth gives a toe and seven ears when you think of the other side of a mirror. The mirror we use every day often has a very important feature in the world, perhaps escaping from the eye that is not present. Whatever you give to it will be clear and transparent. In the morning, we go out of our homes, and if we do not want to see a person with a sullen face on the way, then we should not forget that the people around us are mirrors. The smile is the best investment in order to earn much more profit by taking advantage of the low cost and the generous nature of the earth in order to build love of life.

That way, the dissemination, reinterpretation, use and evaluation of original vital gains are achieved.

Intuition What usually comes to mind when we talk of intuition is knowing something without taking any interest in experiment. But what I would like to draw attention to is that the intuition of the sixth sense and the intuition of the things that pertain to many events that have been happening in the past are to be recognized and assessed in this respect. The human subconscious is the place where many impressions and memories are hidden. Numerous memories which are hidden here are shaped again under consciousness. Thus, without our knowledge, prejudices about certain events arise in our subconscious. When man encounters this kind of event in tandem with decisions made earlier, the results are known as conscious. Then we get to think that we actually know how something will happen ahead of time. For example, this kind of intuitive thinking which takes place in detective work, military planning, paper plays and science works is big and important. In general, although women are said to have a more intuitive intuition than men, this has come to be largely believed, albeit not yet exactly proven. Intuition, which has a reality of people, society, life and unfortunately a level of prejudice, has an important place in our lives. It provides us with the ability to look at our future by evaluating the past and to guide us in shaping our behaviours.

Awareness Awareness is primarily the ability to recognize, to look at things differently, to feel, to see and to understand someone. This is a potential or competence someone cannot feel immediately. Awareness is necessary and important to make life a wonderful adventure. Guidance is a concept that should be exposed to students in order to develop awareness, and it is useful to tell a story as from a magazine that underpins this: “A factory owner loses his precious watch in the factory. He promises rewards to whoever finds it. The next day a small child comes to the factory. “I can find your watch,” he says. The boss said, “I do not want you to be so much embroiled in this during working time my son. You can prevent productivity in the factory. After a few days, when everyone is gone, come to the factory and win the reward”. A few days later the child comes to the factory. The factory was quiet, everyone had gone home. The child walks around the floor where the boss lost his

watch and in ten minutes he was back with the watch. The boss was surprised and asked the child how he was able to find the watch. “Everybody searched for this clock for so many days. How did you find it quickly?” The child answered: “I only listened to the clock ticks.”

The conclusion we arrive at from this story is that most of us are so busy with the noise of everyday life that we do not even hear the ticks of the possibilities around us. Just as we cannot hear those of our own values. Discrimination is to be able to pay attention to what is happening around us. Being aware of the people, activities and environment of our surroundings allows us to enjoy our life experiences as a whole. For this, seeing, hearing and understanding are so critical, but doing it differently is the key in order to be able to evaluate and assess. Discussion allows us to evaluate how our conscious thoughts, feelings and behaviours and subconscious activities affect us. Then we are not reactive in the awareness of the moment; we are acting efficaciously. We give every moment its due right. Awareness is to know the truth about ourselves. It is our ability to see, to feel, to understand the ability that we have, our limitless potential, and the obstacles we have created against ourselves. Being a human being means having responsibility over our thoughts, our emotions and our behaviours. We are also aware of our potentials to the extent that our understanding of ourselves develops. The difference is labour, attention, desire and time.

In a story, I have heard and liked very much, “a famous Indian wise man and three friends were travelling in car while the “awareness” topic was heatedly discussed. At a certain point, there was a strong jolt on the car. But because of the intensity of the discussion, nobody paid attention to this jolt. The wise man turned to his friends and asked what they were discussing and they answered “awareness”. They all wanted him to participate in the debate. He, however, directed the following question to his friends:

“Have any of you even paid attention to what has happened now?”

“No!”

“We have knocked a goat; didn’t you see it?”

“No!”

“You were discussing awareness, weren’t you?”

Knowledge is the path to awareness. But it is not a guarantee of awareness. Information gives us keys. Awareness is to open the right door with the key of information and to see and perceive the whole scenery. Being able to assimilate the difference and reflect it in every moment of life is what is called wisdom. We can come to the conclusion from here. When information is not realized with awareness, we make constipation, and we live in sadness. Because if we are only the information store and our awareness does not live up to the expectations, our conscience and our consciousness cannot be satisfied. We can only remain as cautiously “happy” inhabitants living without understanding. In today’s world, there is awareness of an environment of knowledgeable but irresponsible people who are in bodily sense adult but in emotional settings are children; we are compelled to think that these are the characteristics of people, not human beings.

40.6 Wise Leadership

There is a need to explore the concept of leadership before explaining wise leadership. The meaning of the term leader is the person or team at the forefront in a competition (TDK 2000). There is a multiplicity of definitions regarding the term leader in the literature at this point in time, but it is wrong to define leadership with a single meaning. Leadership is a dynamic and living phenomenon. A leader in general sense is a person who is able to influence, direct, guide and use his/her knowledge and ability on a particular subject.

An effective leader takes into consideration the interests and desires of the group and ensures that the goals are achieved by establishing an informal relationship within the organization premised on the feeling that whatever is done within the group and organization is a replica of the views and thoughts of the group members.

Regardless of their personality, leadership style, talent or interest, it is possible to see that effective leaders have certain common behaviours. These common behaviours can be ranked as follows (Özden 1998):

- Leaders do not start with the question of “What do I want?” but instead ask “What needs to be done?”
- Leaders ask the question of “What should I do or can I do to make a difference?”
- The leaders are constantly asking questions like “What is the mission and purpose of this organization, and what are the key factors shaping the performance of the employees and the results of this organization?”
- Leaders value differences between people.
- Leaders are not afraid that their people are strong and talented.
- They always do what needs to be done; they do not prefer what is popular.
- They do not talk to others about what they should do; they do it themselves. So, the leaders model themselves in the behaviour they want to see in other people.

In this context, we must examine the meaning of wisdom in order to better explain the subject of wise leadership. The most general definition of the term wisdom is “knowledgeable, good morals, mature and exemplary character” (TDK 2005). When we evaluate the meaning given in the dictionaries, we can say that dimensions such as knowledge, morality, maturity, sameness, compatibility, self-sufficiency, comprehension towards the whole and action arise in relation to wisdom (Erçetin 2007).

According to Erçetin (2007), wisdom is a myth and at times has been attached to old age. Premised on this, it is possible to claim that the most important person in human life turns out to be the wisest, and this must be the mother and father of a person. They are not only the first teachers but also the most critical leaders in our lives. Our parents are the most important wise leaders in our lives. As time passes, we begin to distinguish people we define as wise leaders basing on different standpoints. Growth, thoughts, culture and religious views are some of them. They can

influence the masses in the style of living and direct them with their intellectual prowess by showing their wisdom of leadership.

In wise leadership, it is essential to respect love, trust, tolerance, understanding, opinions and beliefs in the face of the leader. It applies to the wise leader's opinions, by internalizing his beliefs as if he believes in oneself. That way, even the individuals that the leader approaches will feel themselves as more valuable and will accordingly fulfil their job responsibilities. This is made possible by the wise leader disciplining his own self and discovering the meaning of life.

40.7 Wise Leadership in Educational Administration

Every human being has the potential to become a leader. The most important thing is to be able to pass on this potential to action by believing and trusting in oneself. The basic standard of our education system is the school. The effective and productive education and training process is made possible by a leading school administrator and teachers. When we look at the types of leadership, it becomes clear that the ideal school administrator and leadership training that should take centre stage is wise leadership. A wise leader is ready to learn, is always clear about what he deals with and tries to reach out to the unknown. In a learning process, the most critical necessity of a student is being a leader with the aforementioned qualities and characteristics.

Erçetin (2007) offers different dimensions of wisdom commensurating with the movement of wisdom along an age lane. People move through characteristics of knowledge of life, intuition, awareness, positive emotional development, experience, creativity, patience, responsibility, sense of sensitivity, sharing, morality and crystallization, to realize the development of wise leadership which they later put into action.

As regards to the concept of education, we shall focus on knowledge of life, intuition and awareness. We acquire knowledge of the theoretical life in educational institutions in general, and if we use this information in our lives, we realize the practical experience of knowledge. The most important task here is to communicate the needs and interests of the individual in mutual ways. The teacher should be an assistant and guide in terms of transforming the theoretical knowledge of life into practice as a wise leader. When the life-long learning principle is considered in education, life knowledge gains more importance here. Life-long learning is the source of knowledge which stems from practising what has been learned in order to aid a student discover how he is much more than what he may think he actually is.

When we examine the intuition, which is another dimension, it can be observed that intuition is the highest point that can be reached in the type, level or grade of knowledge possessed in the sense of wisdom. Perhaps because of that reason, Spinoza is quoted to have said that the real purpose of philosophy is to achieve intuitive knowledge (Erçetin 2007). Thanks to personal intuitions, the facilitator facilitates the learning of children who are in different learning experiences and causes

their perception skills to increase. They can do a better scrutiny of the information presented to them at any stage of their learning as the level of intuition develops and improves.

A wise leader is aware of another wisdom dimension that he or she can utilize to lead the community. The discernment is to live, feel and be conscious of the present, focusing on ourselves and others in relation to the phenomena and the associations that make up the said phenomena (Jones 2005). The information that the wise leader gives to the students should give them the opportunity to create a real life. Accordingly, awareness actually provides personal competence. As put by Yunus Emre, it is possible that someone important can see “my inside” if he succeeds in creating this awareness. The ability to use cognitive skills (intelligence) and emotional, spiritual (moral) capacity while running to work can lead a manager to wise leadership. This is because wisdom means being wise and morally upright. For this reason, a true wise leader in the school environment (teacher or manager) must be influenced by the lives, culture and ethics of the student and must put these at the forefront of everything.

40.8 Conclusion

Leaders have thoughts, expectations, hopes, needs, desires and fears that act, influence and determine the direction of their activities and undertakings. It should not be forgotten that the way of behaviour manages more emotions than logic and reason. Those who are able to rule a community, guide them and work for their development are called “wise leaders”. Besides, we must not say that being a leader adds too much responsibility to a person. The leader must have the ability to make the right decisions in difficult situations. Leaders are people with faithful followers. Effective and wise leaders are both result-focused and have high emotional competencies. Also making some generalizations about the common features of the leaders, cultural differences, the environment in which they are educated, the educational status, the working time, the experiences they have and the conditions of the period can make the leaders very different.

As a result, there is no single leadership typology to be called effective. Leaders who can engage the changing and globalizing world of today are people with distinct qualities from country to country and from culture to culture. Different leadership behaviours may emerge from these different personalities. In order for a person to be a good leader, he must first know the subjects he leads, the society, the definition of the mass and the subjects they are sensitive to in order to aid the direction of development of leadership wisdom. We hope that the opinions we have expressed in light of Erçetin’s *Vision in a Leader’s Circle* book (2000) become entry points to having our paper strengthened and inspired in order to promote future analyses in the leadership realm.

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Chapter 41

Applicability of Glocal Leadership to Educational Institutions



Sonay Canbolat, Sibel Mumcu, Aycan Şahan, Fikriye Öcal, and Nergiz Akdoğan

Abstract Globalization has become a major feature in all aspects of life and more so in leadership systems. However, going global may imply ignoring important aspects of the local setting which are enshrined in cultural and ideological attributes. This is why it is important for leaders to have one eye on the global and another on the local aspects. This kind of leadership is dubbed glocal leadership, and it rendered this paper an urgent necessity. Nevertheless, educational institutions are also part of this global movement and have to live up to the global challenges while upholding the local dimensions in order to bring out a holistic product that fits within the local setting while equipped with a global understanding. This paper argues that this is only possible through a leadership system which obtains within both the local and global realms and thus it dissects the place of glocal leadership in educational institutions. The paper also expounds on how educational leaders can achieve global targets without sidelining key local tendencies.

41.1 Introduction

Man is a social entity, and the act of governance will always be in every place where man is. With people forming communities, forms of government have also begun to emerge. Management is defined as the process of organizing people who are brought together in order to carry out the tasks that aid achievement of predetermined purposes in an organization (Başaran 1989, 14).

One of the factors that influence societies in the face of rapidly changing and evolving conditions is the leadership prowess of those who are charged with managerial tasks. A leader influences his environment depending on the capacity of power and strength at hand. Accordingly, leadership is the process by which one person influences and directs the activities of others to achieve specific personal or

S. Canbolat (✉) · S. Mumcu · A. Şahan · F. Öcal · N. Akdoğan
Hacettepe University, Ankara, Turkey
e-mail: sonay_svs@hotmail.com

group goals under certain conditions (Koçel 2001, 465). Meanwhile, the leader is a person who drives group members towards an aim and influences group goals.

The essence of authority is fulfilment, carrying out responsibility and execution of tasks. Leadership is about influencing, giving direction, active service and vision (Paksoy 2002, 167). In organizational structure, while managers place importance on behaviours and rules in terms of the system, rationality and certainty, leaders are interested in widespread communication, production of ideas and transformation of these ideas. According to this distinction, the manager protects the status quo, but a leader succeeds in change and takes appropriate action to deal with change (Kavrakoğlu 2001, 137).

Leadership has attracted a number of concepts given its untold dimensions and effect. In tandem with this view, the concept of globalization is now widely used in leadership circles. Globalization has been and continues to be influential not only in meaning and content but also in consequences and scope. Globalization means that all the material and spiritual values and the accumulations built up in the framework of these values come out and spread widely. With globalization, the world as we knew it has become the proverbial “global village”.

The concept of “glocal”, which is as a result of combining global (general) and local (specific) concepts, means “to think globally and act locally”. Glocalization is, thus, a concept located between globalization and localization (Erçetin 2011, 8). According to Erçetin (2011), the main elements of glocalization are:

- To provide a synergy between the dynamics of globalization and localization (both are needed).
- To be able to take part in the international market without blindfolding and adhering to local realities.
- To use local and global practices together in the planning, production, sales and marketing activities of the firm.
- It is a good practice to ensure that a global company is able to operate optimally in the local market or a local firm being able to participate in a global market.

While competition is getting more and more intense, nowadays competition has come to be known in common life with various meanings like superiority, destruction by destroying others, being on top and monopoly. Today’s societies want leaders who are equipped with different competencies besides the usual executive model in order to be able to share with other communities. Classical management is different from leadership related to change. Administrators are people who manage the institutions and organizations and maintain the status quo; in short, they work to maintain the rules of the existing order (www.ba.metu.edu.tr, 2005). Management is a profession and has been created through the establishment of businesses. Leadership is a form of behaviour. Leadership can be said to be in every environment where people come together for a specific purpose.

It is the leader’s job to ensure sustainability between globalization and decentralization, and a leader is the key in ensuring alignment of localization and globalization. The amalgamation of these two concepts leads to the concept of “glocalization”, while the leadership concept that emerges is “glocal leadership”. Glocal leadership is defined as the leadership of the future. It has been emphasized that for leaders to

be at a glocal level, they ought to succeed in not allowing the two critical dynamics disrupt their features of identity, that is, neither over-globalized nor over-localized; this is a necessary feature in future leadership settings (Erçetin 2011, 8).

A glocal leader has a vision, follows events well all over the world and ensures their implementation locally. The glocal leader is thus, a universal thinker and local actor. The glocal leader uses information technologies in a good way. They know the local environmental conditions very well and provide the most suitable solutions. They gather detailed information on differences between cultures. It is, however, important that every service performed using local themes is basically acceptable throughout the world.

Glocalization is a concept that addresses the fear of lifting the differences created by globalization. Societies can benefit from the fact that they have the ability to share with the world without losing their self-culture and also have the luxury of having their different features or dynamics accepted in other societies.

Globalization is seen as the exact opposite of localization, but it is in fact concepts that are intertwined. While gaining importance in regionalization together with globalization, localization is increasingly antagonizing the global concept. In fact, if the conventional view of globalization is upheld, the implication would be that societies would have to abandon their ways and adopt, quite unquestioningly, the global ways of life in each and every aspect of undertaking.

Glocal is thus, simply the synthesis of global and local. That is, glocalization is formed by combining local and global. Despite the fact that communities follow a general policy, they have to keep up with local conditions as well. As a result, they adjust their conditions according to local conditions. In a sense, it is the synthesis of local applications with global principles. The relationship here is symbiotic, some aspects of the local setting can inform global operations, while key aspects of the global movement can be a blueprint for other local structures and practices.

For this to be realized however, Martins and Alvarez (2007) contend that “one needs to make a detour via place-specific governance patterns, and more precisely the key local stakeholders to be convinced, persuaded, or cajoled, to properly assess the urban international strategies” if glocal leadership potential is to be realized. Meanwhile, 4girls Glocal Leadership (n.d.) considers glocal leadership from a female perspective and posits that glocal leadership envisions a world where “every girl’s inherent worth and leadership potential is recognised, providing her the opportunity to empower herself and change her world”. Their focus is thus on the developing world, with a mission to not only ignite but actually nurture tomorrow’s female leaders in local communities as a stepping stone to advancing gender equity globally.

Whatever the angle from which it is considered or examined, glocal leadership can actually increase the level of social responsibility as well as innovation within various settings. According to Lundberg (2015), this can be done through the following undertakings:

- Cultivating glocal sustainable business
- Defining corporate identity and ethics
- Solving organizational challenges and limitations

- Integrating leadership capabilities and competencies
- Partnering with other glocal stakeholders
- Driving ongoing commitment and accountability
- Developing social innovation
- Integrating corporate innovation

41.2 Glocal Leadership and Educational Institutions

Educational institutions are the priority institutions that are expected to closely follow and apply all these contemporary developments and establish an institutional identity in this direction. By adopting a glocal understanding in educational institutions, global practices, educational programs and other educational activities will be organized taking local characteristics into consideration, thereby enabling them to be achieved in harmony with global targets (Gök 2014). The glocal approach can be regarded as an important step for both social and organizational development in educational institutions. For this reason, educational leaders' views on glocal leadership are of great importance. Universities are among the educational institutions where this approach can be effectively adopted and implemented.

It is a well-known fact that educational institutions which aim to raise cohesiveness closely follow contemporary approaches and incorporate them into their programs of practice. Adopting the glocal concept by administrators in the educational institutions can have an influence on the social and academic life of the institutions through principles and aims that can aid the attainment of the goals of contemporary education.

Scientific and quasi-scientific studies, which are building blocks in the path of modernization, are key aims being emphasized in universities in order to provide high level and quality education. For this reason, it is necessary for the university administrators to determine the strategies of offering better education by being aware of the sociological effect and position of the institutions. According to Erçetin (2001), the key variables in the twenty-first century are developments in globalization, lifelong learning and communication and information technology. These variables lead to changes in higher education institutions regarding purpose, structure, process and all other dimensions. University administrators are also striving to closely follow this change and reflect contemporary approaches within their management policies. Administrators with the glocal leadership qualities at universities and managers of institutions with a glocal understanding will ensure that the goals are achieved without compromising the cherished values.

Social life is in a rapid change and development setting, and it is necessary that the understanding of organizational management is renewed in this process in order to adapt to the developing age. The biggest challenge for organizations that adopt a global structure can be said to be the training of leaders who can create a global-local balance. For leaders with global objectives, it is difficult to incorporate local values and methods into organizational processes and create a common culture.

In the context of education, universal opening in order to live up to the innovations of the age is an application that can create problems. An education system based on a management understanding that is balanced by global and local values can contribute to the development of individuals who catch universal standards by using their own values, responding to local sensitivities and at the same time creating global consistency.

Although there are expert opinions on the need to apply the glocal approach in the field of education, there is little and scholarly research on how glocal management can be established in education. Training programs should be presented with objective content, and feedback should be sought on how the local can benefit globally and how individuals can be trained according to this approach.

What is crystal clear however is that for any aspect to be institutionalized within education, aims and objectives should be well set, appropriate content selected, ideal learning experiences designed, proper and appropriate teaching and learning methods selected and most crucially, a clinical system of assessment and evaluation set in motion. This should not only favour supervision and monitoring but should also guarantee a proper follow-up system to avoid any plausible breakdowns at different levels or stages.

While the concept of manager is the first to come to mind when management is mentioned, the concept of a leader is often perceived as a strategic task. However, leadership is regarded as a concept that is very comprehensive and handled with the same value as the manager, except that it is a position that contains only strategic planning. Leaders stand out as individuals who influence, direct and shape the structure within the organization. Along with the results of globalization, the leader is seen as an individual who creates comprehensive work fields, influences multidimensionally, produces different solutions, is sensitive to differences and attaches importance to the protection of national values. Along with these features, global leadership roles are expressed as follows (Erçetin and Hamedoğlu 2007, 2):

- To have a vision
- Global literacy
- Nationality
- Shared leadership
- Ethics

New values in social life also affect educational institutions. At this point, educational administrators and leaders need to embrace this change and build the necessary structure and culture. Educational leaders in the information age are individuals who can create educational programs based on scientific approach, exhibit management understanding with new approaches and incorporate new values into the development of an ideal school culture (Özden 2010).

Another feature for effective managers who are expected to carry their leadership qualities along with them in the information age is vision. Vision, as a good leadership feature, can be described as “designing, developing and sharing a futuristic future”. Vision is “to be able to balance with a simple reality that is needed”, “to be able to take action within the environment in tandem with personal values”, “to be able to perceive social patterns in a wide scope” and “to be able to take positive risks” (Erçetin 2000, 88).

One of the problems encountered in the globalizing world is the training of individuals with contemporary knowledge, skills and attitudes who can protect national culture and values. In the age of knowledge, the most important task in raising individuals with these qualities falls on the family, community and educational institutions (Çalık and Sezgin 2005). The role of educational institutions in change is to closely follow developments and translate them into their practices.

The changes that globalization has made in education according to Özden (2010) are as follows:

- Training programs will be knowledge based.
- The educational environment will be prepared for the education of children with analytical thinking skills, so that a social structure formed by individuals who think, research and evaluate thinking will come to the fore.
- Adult education will be part of education and will be supported by continuing education.
- Course contents will not focus on transferring theoretical knowledge but on more critical thinking, understanding and analysis.
- Educational institutions will lead the student to learn.
- In education, versatile mind development will be targeted, not just in certain areas.

The globalization approach makes itself felt in the education system through applications and program content that both educators and educates can benefit from. It can be said that these practices, which are based on the principle of sharing knowledge and experience, have brought new dimensions to individuals and education lives and thus contributed to their development. The changes brought about by globalization have also diversified the role of the administrators in education institutions to another level. In this process, it is expected that education managers should first understand the change and be a leader in the transformation drive. In the global information society, the educational institution manager turns into an educational leader who has to take more initiative, understand and manage change, create a supportive culture and motivate his employees, as opposed to a formal organizational manager who follows rules and structures to the letter (Gök 2014).

The twenty-first century has shaped management and directed the functioning of organizations. Educational leaders are expected to have competencies in this process of change affecting social life in every field (Özden 2010); these are:

- Creating change
- Recognizing the direction of change
- Being able to adapt to new thinking and behaviours
- Being able to catch the opportunities that they can reveal

Along with globalization, it is necessary to educate individuals who can be active participants in all economic and cultural activities. On the one hand, it is envisaged that there is a need to train individuals who are world citizens, with universal values, and who can tolerate others' values, while at the same time, they are more aware of their national and social values than ever before. The establishment of a balance between these two, however, is very difficult (Karip 2005).

41.3 Conclusion

There are very few resources and researches related to education and the glocal approach. Experts engaged in research on this issue suggest that educational leaders and managers are often trapped in the formal work of education, such as steering, directing and managing. For this reason, some researchers believe that educational leaders need to develop a knowledge-based work understanding, such as political literacy, cultural literacy, moral literacy, pedagogical literacy, information literacy, organizational literacy, spiritual and religious literacy and literary literacy. These can be ideal gateways to conceptualizing glocal leadership and can inform future practice. This paper, therefore, was a foundation stone upon which further academic and research discourse can be mounted in order to institutionalize glocal leadership within the values, content and practices of educational institutions the world over. It, therefore, can be considered a beacon of hope in light of leadership transformation.

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Chapter 42

Multidimensional Perceptual Leadership Model: Implications for Education and School Leadership, Old Officials, New Officials and New Global Challenges



Meral Balta Uçan, Fatma Süheyla Ayaz, Merve Karagöz, Oya Çetin,
and Buse Özaksoy

Abstract In our evolving and changing world, leadership perception processes and leadership definitions emerge in different forms. Work on leadership began in the first half of the twentieth century and continued to change and develop by gaining momentum during subsequent periods. Nevertheless, leadership remains elusive both as a concept and a practice leading to untold inefficiency in many settings. This is premised on the assumption that leadership is largely multidimensional and thus, considering it from any other perspective, renders it inconclusive. Some studies have been conducted to address the multidimensional nature of leadership. The aim of this paper, therefore, was to examine the multidimensional perceptual leadership model developed by Erçetin and Düzer in 2008 in terms of educational management whilst adding the leadership types published by Erçetin, Açıkalm and Bülbül in 2013. This was done in light of new challenges engulfing education as well as the call for a reconceptualization of school leadership.

42.1 Introduction

In today's world, perception and management are gaining importance due to the rapidly developing information and communication technologies. Thoughts, expectations, hopes, short needs, desires and fears activate people's lives and determine the direction of their activities. It must be remembered that the way of conduct of individuals manages more emotions than logic and reason can. Perceptions have a very important place in all forms of relationships. This is because people perceive

M. B. Uçan (✉) · F. S. Ayaz · M. Karagöz · O. Çetin · B. Özaksoy
Hacettepe University, Ankara, Turkey
e-mail: meralbaltaucan@hotmail.com

and evaluate every living thing and inanimate objects around them through their senses. Our perceptions and evaluations about people in the neighbourhood can be different from those of other people who are related to the same people because of the way they affect us and because they have variables that are quite different from other areas or parts of the world.

Leadership, on the other hand, is essentially a matter of management science. Leaders are individuals who are active in adopting attitudes, creating new values and differentiating between anticipations. However, leaders can identify new goals and trends and change their thinking about needs and possibilities (Erçetin 2007). Perceptions play the most fundamental role in the emergence of leaders and followers (the most important elements of leadership) in the process of leadership.

The perceptual leadership approach is addressed by Erçetin and Düzer (2008) within the framework of the hypothesis that a leader cannot be spoken of without followers. Situations that may occur in the structure of leadership were accordingly examined by introducing a multidimensional model.

42.2 Multidimensional Perceptual Leadership Model (Muldimperlead)

According to Erçetin and Düzer (2008), there is a strong relationship between personal characteristics of leaders and perceptions of their followers. However, this relationship should be analysed by considering different variables such as task and time. At the same time, leadership cannot be explained only by the leader's personal characteristics. This is because leadership is much more than personal traits.

The world dynamics that are constantly evolving and changing have influenced and transformed the aspects of the leader and views of the led. Today, as communication and information flow is accelerating more and more, modern approaches are emerging in leadership. Modern approaches have been explained basing on the interaction between leaders and followers. These approaches are transformative leadership and charismatic leadership. In addition, glocal leadership, quantum leadership and plasma leadership are among the modern approaches taking centre stage.

The multidimensional perceptual leadership model presented by Erçetin and Düzer (2008) was analysed according to the following points:

- Basic assumptions on which the model is based
- The four major situations of leadership in dimensional form
- Variables that affect the perception of certain forms
- Variables that affect perception in general

42.3 Basic Assumptions of the Model

This model is based on five assumptions. These are:

- Everyone is a potential leader.
- The foundation of leadership is perception.
- The status of leadership determines the perception of the leader and followers. So, perception can be analysed at two different levels. These are individual level and group level.
- Evaluation of leadership can be made at a specific point in time.
- Leadership status as a result of perceptions of leaders and their surroundings does not show us whether an individual is an effective and successful leader or not.

42.3.1 *Everyone is a Potential Leader*

The most important issue that confuses leaders about leadership is the dilemma of being a leader. For many years, our general opinion in society has been that leadership is an innate feature. When viewed from this frame, if people have leadership qualities owing to creation, they are judged as to whether they can be leaders or not. However, the approach proposed by Erçetin and Düzer (2008) adopted the premise that “Everyone is a potential leader”. For this reason, it is unlikely that you will know who, when and where to present or determine leadership potential within an individual. Different situations, conditions and positions that people experience may lead them to leadership. In a clearer sense, the process of differentiation in terms of location, status and conditions is a process that affects leadership. For this reason, leadership is not constant but specific for a specific time period. The reason for this difference is perceptions about leadership.

42.3.2 *The Basics of Leadership Create Perceptions*

Leadership is a dynamic perception between leaders and followers. Certain factors influence the presence of leadership and leadership style. Our perceptions about a person cause us to get impressions about that particular person. This has led to development of a configurable model of impression development. According to the model, the basic features are used at first when making the impression, and these basic features have important effects on the final impression. In addition to this, the basic features influence the meaning of other features and perceptions about other people.

42.3.3 The Sense of Leadership is Determined by the Leader and Followers

Leaders are perceived by their followers through their senses. Leaders are also subjects who perceive their leadership settings. The perceptions of the leaders themselves are at least close to the perceptions of their followers. In light of this assumption, the model states that there are two levels of perception. These are the individual and the other is group perception.

42.3.3.1 Individual Perception

Individual perception refers to the perception of the leader about his leadership. Perceptions about the leader's own leadership may differ from those of his followers about his leadership. Leaders may not be aware of their followers' perceptions of themselves, and there may be conflicts between their own perceptions and their followers' perceptions (Sen 2006).

42.3.3.2 Group Perception

Group perception is a social perception that reflects the level of acceptance of followers' leaders. The leadership qualities developed in previous studies are all factors that affect individual and group perceptions. These factors are:

- Physical properties (age, height, weight, physical appearance)
- Intelligence (reasoning, decision-making, effective communication)
- Personality (independence, self-confidence, assertiveness)
- Social background (education, social status)
- Work-related qualities (success, need for responsibility, interest in others, interest in results, need for security)
- Social qualities (orientation towards co-operation, honesty, need for power)

42.3.4 Assessing Your Leadership Can Be Done at a Specific Point in Time

It is often thought that leadership is a natural process. With this thought in mind, we seek to reach an effective judgement about the leaders. However, leadership should be assessed under the influence of a variety of factors. For this reason, it is not possible to evaluate this process objectively, because of the complexity of the factors and their interrelationships. As a matter of fact, the evaluation is limited to the evaluator, and each evaluator obtains different results. It is much easier to assess the leadership

for a given point in time. This is because the factors that influence leadership and leadership itself will remain constant at that point. Thus, a more objective assessment is possible, and this objective assessment can provide more efficient results.

42.3.5 Leadership Status as a Result of the Perceptions of the People Around Leaders Cannot Tell Us Whether One is an Effective and Successful Leader

The perceptual leadership model is not interested in whether a leader is successful or not. However, it deals with the individual and group perceptions required to be successful and effective and how these perceptions will be influenced positively.

The multidimensional perceptual leadership model assumes that leadership has four states as follows (Fig. 42.1):

Implicit leadership This refers to a style of leadership that is not commonly mentioned. The people in this group are usually passengers, they have no confidence, and they are trapped. They do not see themselves as leaders or they do not want to be leaders. They mostly prefer to be followers. Others do not see them as leaders because of the signals they send to their environment. But that does not mean that

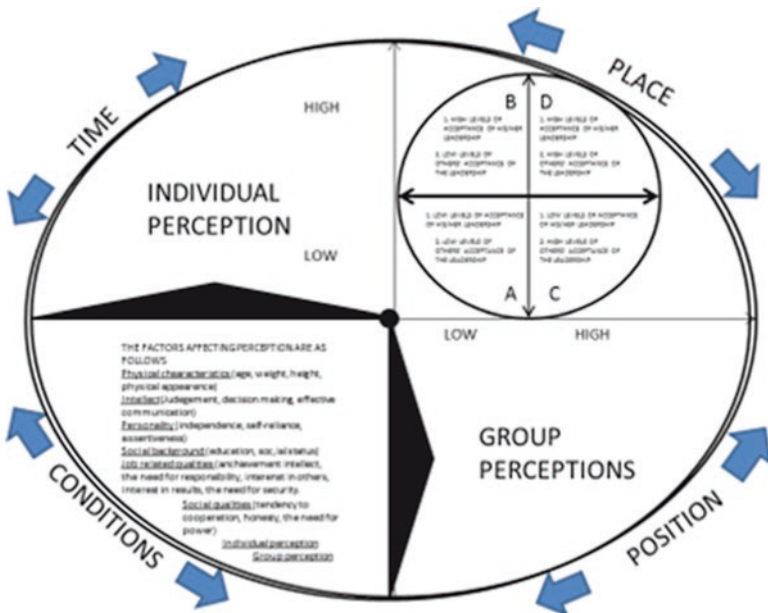


Fig. 42.1 Multidimensional perceptual leadership model (Erçetin and Düzler 2008)

these people cannot be leaders. If necessary, they can become leaders when circumstances arise. Under certain circumstances they can adopt another leadership style.

Potential leadership The people in this group are actors and their confidence is high. These people have all the qualities necessary to be leaders and are ready to take responsibility. However, they may experience some problems with their followers in terms of communication and interaction.

Reluctant leadership Such leaders may have interactive problems with their followers. There can be two situations here. In the first case, the person does not want to be a leader but acts as a leader as a result of environmental pressure. In the latter case, they act as leaders because of their managerial positions. Such a situation can reduce the perception of one's own leadership status. Or on the contrary, followers may not be able to meet the expectations of the appointed leader.

Ideal leadership This is the desired and necessary leadership. Both leaders and followers ensure and apply appropriate communication and interaction conditions. An important feature of this situation is that individual perception and group perception are consistent (Erçetin and Düzer 2008).

In the case of the four leadership forms mentioned in the model, Erçetin et al. (2013) extended on the tenets of the model by adding two new leadership situations or types as "covert" and "dull" leadership. The covert leadership reflects a situation in which the leader does not perceive himself or herself as a leader for a variety of reasons, but after a certain period of time, an ideal leadership setting develops in which both the leader and the followers identify themselves accordingly. In this leadership situation, when there is a change in perceptions, there is potential to change from "covert" leadership to "reluctant" leadership and finally to "ideal" leadership situations. Dull leadership refers to a situation in which, after a certain period of time in an ideal leadership setting, the leader perceives himself as an effective leader and the followers too perceive him or her as an effective leader for a variety of reasons.

The perceptions of the leader and those of his followers are the major sign posts to describe any one of the six leadership situations identified in the model or any other leadership situations that can be developed thereafter. However, it may not be possible to measure and describe the speed, intensity and direction of the various factors that affect the perceptions of leaders and followers. Indeed, minor differences in the initial perception may lead to major changes in the person or society.

As a result of the detailed examination of the model, there is no obstacle in accepting the premise that each individual is a potential leader. We can, thus, say that evaluating people in a society or organization as more important or less important does not give the right results. A person who is perceived as insignificant can take decisions and implement actions that can lead to serious consequences which are not targeted and covered by shifting to the ideal leadership position due to sudden as well as less important perceptual changes in the perceptions of himself and the society.

Group and individual leadership perception is shown in the figure below (Fig. 42.2).

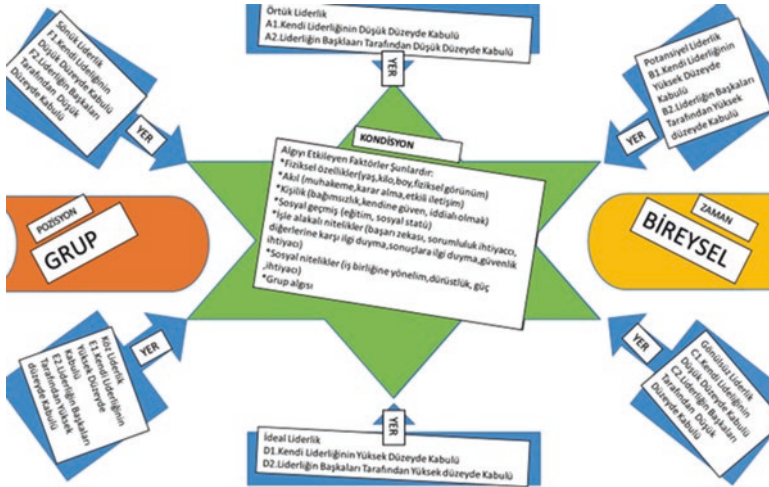


Fig. 42.2 Group and individual leadership perception

42.4 Perception and Perception Management

Perception is related to views about one another in the minds of individuals as a result of interaction between individuals. Perception is about the personality of an individual or organization. The impressions people make are good at influencing and directing the other's behaviour. From an individual perspective, perception is very important. Individuals are expected to be successful in organizations, be able to adapt, have a happy and fulfilling job, and therefore be productive. (Demir 2003, 2)

Perception management is an effort to control the impressions or perceptions of others. Different ways are used by the perceiver to influence the one being perceived, that is, the target. As a result, behavioural matching between perception and the perceiver reveals situations such as self-support, adherence to situational norms, appreciation of others and/or coherence.

It is possible to be successful in perception management by embracing all people regardless of differences and making everybody a service principle without exception. There are also organizational benefits of managing individual differences. Competition and productivity, job satisfaction, increased creativity, the formation of organizational synergies, the development of organizational adaptability and the maintenance of occupational continuity are some of these.

The perceptive leader is a leader who recognizes the moral values of those who work with them, with respect to their differences. The management of differences can be defined as the process of managing the social system and the environment

together with the organizational climate and culture. It involves recognizing, accepting, respecting, being open and evaluating all kinds of differences between people. The aim is to create a positive working environment for all occupations (Ricucci 1997).

42.5 Multidimensional Perceptual Leadership in Educational Administration

Educational management is a process geared towards achieving the goals and visions of educational organizations in order to successfully meet the needs and aspirations of society as well as furthering development thereof. As understood, in educational administration there is a need for a plan which is compatible with realizing the process of achieving organizational goals. However, the current leading definitions vary from past to present, and despite the emergence of new models, there is no clear definition supporting education management in a full exegesis. Existing definitions are not sufficient enough and need to be reshaped according to new conditions and circumstances, which leads to the creation of new definitions. The “multidimensional perceptual leadership” model, in which Erçetin offers one of the new definitions, is a critical entry point in leadership literature. Erçetin (2008) states that leadership is a cultural process and that it makes sense through the cultural environment. This is why educated leaders must have traits transcending place, space, time and interaction. This differentiation stems from differences in the perceptions of people and groups. This is because the same people can give different reactions to the same aspect at different times. Until then, experiences they have lived and changes in their minds as well as events influence their perceptions and reactions in their minds. These perception schemes are influenced by their cultural background.

A school is an open system which allows managers, teachers, students and social groups to come together for effective interaction. The perceptions of leadership in school management vary from one generation to another depending on the manager, the teacher and the student. School administrators are perceived by both students and teachers as potential leaders and find themselves in the position of being a subject of individual perception. Therefore, we can say that the definition of leadership in educational administration is inextricably interwoven with a kind of perceptions. School administrators need to use individual perception and group perceptions positively to be successful and effective leaders. In this case, educational management should work on how positively the individual and group perceptions can affect and constitute a perceptive leadership behaviour that promotes effectiveness of the school organization. According to the perceptual leadership model, leadership is a process of change in which the change in leadership must take shape in educational management leadership. Educational leaders are also potential leaders, so they can

have different types of leadership. Erçetin (2008) contends that change is caused by changes in individual perception and group perception. Therefore, there is also individual perception and group perception in school organizations.

In this case, the leader within the realm of educational administration should be one of the people who can create individual perception in school organization, which is trustworthy, equilibrium in every issue, forming an environment of respect, good example to the environment and most importantly adopting his or her own leadership. According to Andrews et al. (n.d.), there are features that must be present for “leadership” to take shape. In this context, it is emphasized that leaders are needed in order for education to be effectively carried out in schools and that educational leadership must also have certain characteristics. In short, an educational leader provides the opportunity for realizing the aims of the school by organizing the education and training resources and environments, establishing an ideal communication climate in the school, guiding the teachers, taking necessary precautions for the education and teaching to be supervised and interrupted in order to improve them. However, existing definitions do not suffice, because the most important element which is the human being is always ignored. As reactions change according to time and place, leadership also has to change the style. In this case, leaders at every level of the national education units, such as the class teacher, the principal and the assistant, must start by recognizing the group so that they can transfer motivation and necessary knowledge to achieve their goals and objectives.

As Akyüz (2002) states, it is not enough for school leaders to be one-way leaders in the Turkish society today. For this reason, the schools and the Ministry of National Education units, which we can define as an organization, should choose managers who have this leadership ability to harness the perceptions of each employee and the leaders of their units considering their perceptual leadership characteristics. However, in some of the researches conducted on existing leaders, it was established that there is need to train managers/leaders for our schools, improve on the situation in the schools, analyse the characteristics of teachers and students and use different types of leadership.

Erçetin and Düzer (2008) stated that four different leadership situations may occur depending on the position, place, time and conditions that relate to leadership and perception, both in terms of the individual and the masses. When the two types of leadership proposed by Erçetin et al. (2013) are included, studies have been conducted on six leadership styles, including implicit, potential, reluctant, ideal, covert and dull leadership based on the perceptions of the leader and his group. Leaders in educational administration should consist of persons who accept individual perception, especially within school organizations, depending on where, when and where they are located. For this reason, the perceptual leadership model should hold an important place in school organization structure. Schools are institutions with social status, and the manager has an interaction with his/her teachers and students. Teachers and students adopt the leadership styles of the school administrators in a group of perceptions and should perceive these leaders as model leaders who decide on their trustworthy as well as reasoning skills.

The experiment that professor Zimbardo made in the 1970s emphasized the importance of group perception. In Zimbardo's trial, he divided a group of students into prisoners and guards and closed the prison for 2 weeks. During this time, the brutal force guards were obliged to finish the experiment on the sixth day. This study shows that group sense, given authorities and the attitudes of those influencing the group (leaders), determines the views and structure of our leadership.

In short, all the studies and works that have been done show that group perceptions have always been examined, and the concepts and interpretations of leadership are shaped according to these perceptions. Findings and interpretations are based on the group's perceptions. Leadership status reveals whether leaders and their perceptions are resultant, successful or influential leaders when examined over a specific time frame. However, if we ask the question of which types of perceptual leadership can be understood in the realm of education, we can explain this with the following examples.

If we look at the student dimension, teachers (leaders) leave students with negative traces in the educational experience by preventing them from being accepted in the group, when they are students with problems in their classes, they try to understand the problem and endeavour to solve the problem. Such behaviour is tricky for students who are implicit because they will have a low level of leadership perceptions about themselves and their followers (friends). In addition, when the student identified in the sample becomes a teacher (leader), he or she tries to analyse and solve problems, respects differences and will renew his/her self-confidence with change, by reducing communication problems and taking a potential leader position.

If we look at the dimension of the teacher, let's think about a departmental meeting in middle school. After 10 years of successful managerial life, we assume there is a mathematics teacher, a quiet geography teacher, an active music teacher and an authoritarian principal assistant. The task is to distribute responsibility, and the geography teacher is asked to organize a meal. The geography teacher does not want to do it at first, but the majority in the group tells him that he will do it and will succeed, and he is given the task. The teacher who is given this job performs the duty by experiencing difficulties in adjusting to the time and the place and ends up realizing reluctant leadership. The mathematics teacher is given the task of "crime intervention team" because he had saved the life of a student who was about to commit suicide, but this time he refuses the task because of lack of self-confidence for various reasons. This is an example of reluctant and dull leadership. However, at the second board meeting, it would be an example of ideal leadership if it is agreed upon to give the task to other authorities and it is accepted.

As a result, perceptual leadership model should hold an important place in school organization structure. Schools are institutions with social status, and the manager has an interaction with his/her teachers and students. Teachers and stu-

dents adopt the leadership style of school administrators in terms of a group of perceptions and perceive these leaders as model leaders who take decisions basing on their trustworthy and reasoning skills. Therefore, this situation is gaining attention from the viewpoint of the school management's functioning, and it is effective for the school administrators to be ambitious managers who make their duties better by being effective with the groups and putting the group perception at the forefront when taking decisions in order to avoid entering into conflicts. Hence, the perceptual leadership model shows us that education management and school management have gained importance in terms of effective and clinical functioning.

42.6 Reflection of Covert and Dull Leadership Features in Education

By using Erçetin and Düzer's (2008) multidimensional perceptual leadership model as an example, we have identified four leadership situations, implicit, potential, reluctant and ideal, based on the perceptions of the leader and his followers. It has been established as an assumption that the leader and followers change their leadership positions according to different variables. If we consider the schoolmaster as a leader in educational administration, the perceptions of teachers, students and school staff as the followers towards the leader change in response to various events taking place in the school system.

Erçetin and Düzer's multidimensional perceptual leadership model, which was developed and presented in 2008, was extended by Erçetin, Açıklın and Bülbül in 2013, and two new leadership positions were added to the model, namely, covert and dull leadership. The covert leadership implies the fact that ideal leadership reflects a situation in which the leader does not perceive himself or herself as a leader for a certain period of time, and this kind of perception is also reflected within the views of the followers in this case teachers and students. Nevertheless, with time, this situation changes, and an ideal leadership feeling and perception develop within the school system. As far as studies on school leadership are concerned, school leaders may not be perceived as leaders by teachers, students and school staff, who are indispensable elements of education, for a variety of reasons over time.

Therefore, the changes that may occur in the school administrators themselves may be translated into the perceptions of teachers and students, thereby causing changes in the way they look at school administrators. Changes in the perception situation can lead to big differences in teacher and student perceptions. In this case, school leaders can show more than one leadership quality as they are potential leaders. According to school events, school administrators sometimes make the transition to the ideal leadership position in the school organization where there is a slight change in the perceptions of teachers, students and school staff. A person who

appears to be insignificant can make decisions that will lead to very important consequences, by shifting to the ideal leadership position due to perceptual changes in his and others' perceptions that are instantly and precisely determined and unmeasured.

Thus, some school administrators with low leadership potential and ability in the eyes of teachers, students and school staff may, unexpectedly and in the unlikely event of a leadership vacuum situation in the school organization, take up the mantle and oversee an ideal leadership prowess if they were to be offered chance to exhibit their leadership behaviours and qualities. Therefore, it is observed that the school administrators display "covert" or "dull" leadership qualities according to the school organizations and environmental conditions they have experienced and the expressions they show with their decisions.

42.7 Conclusion

The most important employees of our education system are teachers and school administrators. Today, the leadership behaviours of school administrators have gained importance, and studies are being conducted on the leadership of educational administrators. According to Erçetin et al.(2013), it is seen that the school administrators exhibit reluctant leadership behaviours during the changing time periods. It is effective for school administrators to take control of management in the face of all kinds of events happening in the school, especially for effective communication with teachers, students and school staff, and to show different leadership qualities.

The school culture in which the school administrators are involved influences administrators in both positive and negative ways. It cannot be denied that school administrators with weak leadership ability for various reasons have low energy levels in their work and low involvement with the people around them. In such cases, it is observed that managers do not accept their own leadership and even perceive themselves as low-level leaders in the eyes of teachers and students. When such a leadership feature is shown, it is also possible that such school administrators can reach an ideal leadership position depending on the positive or negative situation in the school organization. The success of the school in any kind of competition with other schools as reflected in the awarding of prizes, the promotion of the school and the projects of the teachers and the students is premised on effective communication with the administrators. Whilst such communication has a positive impact on school administrators, it also leads to an ideal leadership within the school system.

As a result, whether school administrators are "dull", "reluctant", "covert" or "ideal", their leadership behaviours affect educational management in two situations. This is not just positive and negative but also self- and group perception. The features and behaviours which school administrators exhibit cause different perceptions of leadership in the eyes of teachers and students, yet they also affect self-perception on the part of the school leader.

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Chapter 43

Mobbing in Educational Organizations



Belgin Tura and Nursel Yardibi

Abstract Originally explored as a mere academic concept, mobbing has of late gate-crashed the research and scholarly party to stake a bigger claim for attention on the part of academicians, scholars and researchers alike. The enabling factor in this case has been the discovery of the various elements and forms attached to mobbing hitherto a distant thought. Along with this, the prevalence of the crime within scores and a multitude of organizations as evidenced by the effects of mobbing on the victims and the productivity of organizations cannot be neglected anymore. While the conventional view born of the definition, types, effects and plausible solutions to mobbing is no longer a point of contention, there is no gain saying that mobbing poses an inextricable challenge when examined within the realm of legal frameworks. Even more crucially, when chaos and complexity theory is infused into the equation, mobbing turns out to be an ultimate threat. This paper, therefore, has examined mobbing from the conventional stand as well as engaging its applicability to legal structures while attempting an exploration of its implication for chaos and complexity theory. Effort was also made to dissect the place of mobbing in educational organizations while paying particular attention to its influence on school leadership.

43.1 Introduction

Owing to the rapid globalization prevalent today, the global crises that are experienced from time to time cause organizations to endure a hard time and accordingly struggle too much to survive. In addition to the economic measures taken in this period, the atmosphere within the organization is strong, and the employees' morale is high, which is an important factor for the survival of the organization. Nevertheless, mobbing creates serious and negative effects on employees who work for organizations living on the brink of collapse and can cause harm within the systems of organizations especially those with complex organizational networks.

B. Tura (✉) · N. Yardibi
Hacettepe University, Ankara, Turkey
e-mail: belgintura@gmail.com; dryardibi@gmail.com

Mobbing is a psychological terror and organizational disease. If not prevented, like cancer cells during metastases, they spread to all “organs” and cause great job loss. While mobbing causes serious psychological and physical disturbances for its victims or individuals ranging from job dissatisfaction to departure or even suicide, mobbing can also result in both material and human losses that harm both the organization and the economy of the country. For this reason, it is of vital importance that the mobbing phenomenon is well recognized on the basis of organizations, the state and society, so that preventive measures are taken quickly.

43.2 Definition and Importance of Mobbing

The concept of “mobbing” comes from the root word “mob”. The word “mob” means an irregular crowd that violates the law. The word is derived from the word “mobile vulgus”, which means “uncertain crowd” in Latin. The word “mobbing” implies siege, collective attack or distress (Davenport et al. 2003, 3).

The concept of mobbing was first used by the Austrian scientist Konrad Lorenz, who studied animal behaviour in the 1960s in order to describe the behaviours of animals aimed at removing an opponent or a hunting enemy. Here, a few weak individuals come together to exhibit aggressive behaviours against their enemies, such as the gathering of geese and the abduction of a fox (Davenport et al. 2003, 3).

The concept of “mobbing” was then used by the Swedish doctor Peter-Paul Heinemann to describe the destructive behaviours of small groups of children, often directed against a single child (Leymann 1996, 167).

The concept of mobbing was equally used in the 1980s by a German working psychologist Heinz Leymann. This was based on the findings of a similar work in the form of long-term, hostile and aggressive behaviours (Tinaz 2006, 12).

According to Leymann, mobbing is a situation where one individual or more people are systematically exposed to socially hostile behaviours by another individual or more people almost every day and over a period of several months (Leymann 1996, 168).

The concept of mobbing in Turkey is described by the Ministry of Labour and Social Security (MoLSS) as destructive actions of usually one or more persons in the workplace against another person or persons, systematically maintained for a certain period of time and aimed at intimidation, pacification or dismissal. This may also involve malicious and intentional negative attitudes and behaviours which are harmful to the values, professional positions, social relations or health of victims (MoLSS 2014, 9).

The elements that a behaviour must have in order to be considered mobbing according to MoLSS (2014, 9) are the following:

1. It should be experienced at the workplace.
2. It must be carried out by the superiors over their subordinates, subordinates towards their superiors or among equals.

3. It should be done systematically.
4. It should be repeated within a certain period of time leading to continuity.
5. It must be done intentionally.
6. Its objective is to intimidate, disqualify people and distance them from the job.
7. It should harm the personality, professional position or health of the victim.
8. Negative attitudes and behaviours towards the person can be hidden or open.

Behaviours considered as mobbing were classified by Leymann in five groups (Leymann 1996, 170):

1. Prevention of communication, interception of words, verbal attacks on the person, work of a person, etc.
2. Attacks on social relations leading to exclusion
3. Repeated attacks, gossip, ethnic or physical disability or mockery
4. Attacks on the occupational position leading to poor-quality work or meaningless work
5. Attack on the health of the person, giving someone dangerous work, physical assault or sexual harassment

43.3 Types of Organizational Mobbing

Defined by Heinz Leymann as psychological terror in the workplace (Leymann 1996, 165), mobbing is a social action aimed at intimidating or disenfranchising the victims in their organizations, leaving them helpless and vulnerable. Mobbing practitioners do this not only by their own strength but also using the institutional power they possess, and as a result the victim has to cope with these aggressive actions, not just in terms of the practitioners of mobbing but also the power vested in them. Mobbing can be applied vertically or horizontally within the hierarchical structure of organizations (Tutar 2004, 105–106).

Vertical mobbing is a kind of two-way psychological violence that superiors apply to their subordinates or subordinates apply to their superiors. Mobbing from the superiors reflects violence exerted on the subordinates, and in organizations where executives apply violence to their subordinates, both the mobbing practices and mobbing managers become agents of mismanagement. In the type of mobbing applied from the bottom to the top, however, the employees act together and pressurize their supervisors with psychological violence which is a replica of the directives from their superiors.

Horizontal mobbing or functional violence is the type of psychological violence that individuals at the same level apply to each other in other words between equals. Horizontal violence often arises in cases such as jealousy of successful colleagues, competition and insecurity. The horizontal form of mobbing is that side of management which causes the action of mobbing to be reflected at a level of organizational conflict and transform psychological violence so that the victim has to struggle with both the management and his work colleagues.

A well-known historical example of horizontal mobbing is the serial binding observation chamber experiment which took place in the Hawthorne experiments starting from 1924 and continued for 8 years. This experiment which was conducted to analyse the effect of a complex incentive system on workers by examining their experiences can be given as an example of horizontal mobbing. During the experiment, workers who had been operating in the production unit were exposed to group pressure by their colleagues in the shape of stinging, naming, mocking, punching on their shoulders, cutting off the incentive system, losing their jobs or worrying about slowing down (Robbins and Judge 2013, 281). In order to protect the group norm, it is ensured that the amount of production is kept at the predetermined level every time the workers are subjected to each other's intimidation.

Nowadays, with the developing technology, mobbing actions have been extended to virtual environments, and images and photographs taken by mobile phones have been published on the Internet, causing virtual mobbing actions that threaten people within the virtual environment, thereby attacking and denting their reputations. Virtual mobbing expands the frame of known mobbing species and provides more sophisticated tools beyond the abuse based on psychological harassment among subordinates. This is made possible by using personal information obtained via the Internet against employees and becoming an element of pressure (TBMM 2011, 4).

43.4 Effects of Mobbing on the Organization

Organizations need to be able to sustain their human and other assets in order to achieve success by acting in line with their pre-stated goals. However, the organization can only benefit from the skills of employees and equipment by ensuring a suitable work environment. A quality work environment will increase the employee's confidence and commitment to the organization as well as impacting on performance positively (Karcioğlu and Çelik 2012, 72). Thus, when the employee is provided with job satisfaction and appreciation, he or she can add a significant contribution to the organizational goals leading to more confident steps being taken thereof. In this context, it is doubtless that mobbing is a source of terror and a form of chaos that threatens the existence of organizations.

The concept of mobbing has both economic and social risks in terms of organizations. Economically, mobbing can lead to resignation of experienced staff as well as constant application for sick leave on the part of those who are tortured at the place of work; this necessitates recruitment of new staff as well as training of the same staff. The end result is multiplied costs as well as falling performance standards. Meanwhile, the legal struggle that ensues as a result of mobbing victims trying to insulate themselves against allegations about also puts financial burdens on organizations (Tinaz 2006, 18).

Social mobbing harms the image of the organization and creates loss of reputation. Creativity and synergy in the organization are also lost when unity, spirit and trust among the employees are lost.

Employees in Turkey often remain silent in lieu of mobbing actions, while some stick to observation without action when mobbing takes place. American educational psychology professor Tarek Grantham described such people as bystanders, i.e. witnessing the influence of mobbing on other people only through monitoring and observation behaviour. In the face of mobbing and harassment, other employees remain as observers due to reasons of self-protection, psychological, emotional and physical harm, fear that the individual does not have the capacity to prevent the prevalent problem, the complexity of the situation and the chaos created by other audiences (Grantham 2011).

Employees who witness the mobbing action lose confidence and commitment to their organization due to the fear that the mobsters they are watching will someday channel their actions towards them. As a matter of fact, it has been established in a research conducted by Karcioğlu and Çelik (2012) in order to determine the effect of mobbing actions on organizational commitment in the workplace that there is an inverse relationship between mobbing and organizational commitment and in particular the employees' emotional attachment to their organizations. In other words, employees' mobbing actions reduce their organizational commitment and their emotional commitment to employees' organizations.

Organizational managers lose key personnel if they are allowed to continue their mobbing activities under their administration, causing disruption within the organization, sudden increase in the turnover rate of the workforce and a negative organizational climate. Given that there is a decrease in the level of general respect of the employees, there is a considerable decline in organizational culture and values (Tınaz 2006, 19).

Mobbing is not only a problem on the part of the victim, but a great harm to the whole organization. The role of managers in the prevention of mobbing is critical. Managers should pay attention to the following aspects to protect themselves and their employees and therefore their organizations from mobbing and harassment (Robbins and Judge 2013, 423):

1. An effective policy defining the elements of harassment and mobbing should be identified, employees must be informed about the fact that employees with such conduct are to be fired from the workplace, and procedures should be set up to ensure that complaints are handled.
2. In case of a complaint, employees should be guaranteed that they will not face retaliation.
3. Each complaint must be investigated, and the legal and human resources department should be informed.
4. Make sure that the harassment behaviour is terminated.
5. Organize in-house seminars to raise employee awareness of harassment behaviour.

Managers are obliged to protect themselves as well as their employees against a hostile working environment. Managers may not be aware of the prevalent mobbing and harassment. However, being unaware of the situation does not protect the managers and organizations. If the investigators believe that the manager may have been informed of this, both the manager and the institution are held responsible (Robbins and Judge 2013, 424).

The manager's ethical decisions affect organizational action and decision. Adopting ethical behaviours must be initiated in senior management and transferred to intermediate managers and then to all employees. Protecting ethical standards at work ensures that you have high ethical values (Yardibi 2014, 335). This ensures that the manager protects himself and his employees from mobbing and harassment behaviours.

Mobbing can lead to further confusion in complex organizations that are already on the brink of chaos especially given today's business world where globalization and harsh competition are exacerbated by chaotic situations. In a chaotic organization, the effects of individual mobbing increase exponentially, and they continue to repeat themselves until they find a solution point. This phenomenon, also called butterfly effect in literature, is defined as producing a meaningful result with a small error in response to the starting point (Gökmen 2009, 72). The mobbing action is usually a powerful phenomenon that starts with an individual and spreads its waves like butterfly wings to create harmful effects on the organization, society and country and can even lead organizations into turbulence.

Mobbing thus, given such characteristics above, owes its abode to chaos and complexity theory in a way; this becomes clearer when the basic tenets of chaos and complexity theory are put into consideration. The basic premises of chaos and complexity theory in question can be listed as follows:

- Order creates irregularities.
- There is an order in the disorder.
- Order arises from disorder.
- In the new order, change in compromise and commitment appears as short term.
- The achieved new order evolves into a self-organized process in unpredictable directions.

The characteristics belonging to chaos and complexity theory which also describe the behaviour of chaotic organizations are indeed numerous. When one faces mobbing, the situation may become even more complex as one act of mobbing may have detrimental effects on the entire system. The same may become recurring and may re-emerge at different times during the course of managing the organization. The characteristics of chaos and complexity theory would bring out the picture of mobbing in the following realm:

- Self-similarity: this reflects scale invariance which is an exact form of self-similarity where at any magnification there is a smaller piece of the object that is similar to the whole (Glickman 2001). In this case, mobbing practices in different departments of an organization may be similar to one another.
- Iteration: the repetition of a process or utterance. The mobbing practices may be repeated at different levels and departments within the organization.
- Self-organization: a process where some form of overall order or coordination arises out of the local interactions between smaller component parts of an initially disordered system (Mennin 2010). In some cases, employees in an organization may come together to counteract mobbing practices from the top brass of the organization.

- **Dynamic process:** this involves a series of dynamic processes which reflect the growth and evolution of structure (Fischer and Immordino-Yang 2002). The forms of mobbing come in terms of dynamic structure, sometimes less similar and less familiar. Mobbing thus becomes hard to detect and manage.
- **Simple regularization:** this refers to tuning or selecting a preferred level of model complexity to allow a model function better in terms of predicting or generalizing (Hoffman 2010). In lieu of this, mobbing may be easily converted into “disciplinary measures” as far as the practitioner is concerned.
- **Emergence:** this reflects the ability of individual components of a large system to work together to give rise to dramatic and diverse behaviour (Dean 2000). In this case, mobbing may be practised by an organized group of people against another group. Sometimes mobbing can come from anywhere in the organization.
- **Co-evolution:** systems exist within their own environment, and they are also part of that environment (Erçetin et al. 2015). It is no surprise that the ones practising mobbing and the victims all exist in the same environment despite each having their own cocoons.
- **Suboptimal:** a system has to be slightly better than its competitors and any energy used on being better than that is wasted energy (Hoffman 2010). The ones practising mobbing always seek to ensure that they outdo the others. Indeed, this is one of the major causes of mobbing, the need to outcompete one another.
- **Requisite variety:** a repertoire of responses which help in dealing properly with the diversity of problems the world poses (Mennin 2010). Both the practitioner and victims seek mechanisms of surviving within the system or organization.
- **Connectivity:** the agents in a system connect and interact with one another (Erçetin et al. 2015; Mennin 2010). The practitioners and victims of mobbing tend to have units aimed at promoting their respective motives, that of torture and survival, respectively.
- **Simple rules:** the rules governing the function of the system are quite simple (Dean 2000; Hoffman 2010). Sometimes a bystander attitude develops among people in the organization when mobbing is at the apogee. They all seem to fear being the next should they interfere. This is more of a simple unwritten rule within mobbing circles.
- **Edge of chaos:** this is somewhere between order and disorder or between a chaotic and complex situation (Glickman 2001). The victims of mobbing are always about to resign or even commit suicide albeit having undergone psychological torture. However, if they persist and carry on, they become battle hardened and find the organization quite easier to deal with.
- **Nested systems:** no system is absolute and self-reliant at any level (Teichler 2002). Mobbing creates confusion within the system as it may turn out that everyone is mobbing another, and everyone is thus a victim. It becomes more of a tangled web.

43.5 Mobbing in Educational Organizations

It is inevitable that there will be certain conflicts brought about by people in organizations especially in communities where the majority are the youth. However, the methods of solving conflicts that appear in schools especially in Turkey seem far from belief and realism. In the face of such critical and challenging events, the upper echelons are demanding that they produce their own solutions and force those in the lower enclaves to accept these solutions. Otherwise, harsh measures are resorted to, and in cases where the incident is further intensified, intimidation weapons are introduced. This situation is evaluated as a disciplinary practice rather than intimidation according to the harassing persons (Çobanoğlu 2005, 144–145).

In a study conducted by Educational Unions Strategic Research Center (EBSAM n.d.) on 1,024 female teachers working in 12 primary education and secondary education in order to determine the mobbing perceptions and experiences of female teachers in 2015 in cooperation with Gazi University, approximately half (47.9 %) of the female teachers were exposed to mobbing. Approximately half of the female teachers (43.7 %) met mobbing at least once a week, while the vast majority (77.8 %) reported that mobbing took longer than 6 months, and most of the female teachers (72.6 %) were exposed to more than one mobbing situation. The majority (72.1 %) of the female teachers who participated in the survey stated that there wasn't any policy to prevent mobbing in schools. Meanwhile, 23.3 % of the teachers who participated in the research stated that they did not do or cannot do anything against the mobbing action they were subjected to, and 42.6 % thought that even if they did complain about the situation, nothing would be done. The rate of teachers who said that there were other teachers who had mobbing in their surroundings was 83.2 %. The results of the research show that mobbing is not generally perceived as a type of violence in the schools, and therefore preventive measures are not available. In addition, interviewed teachers were found to have learned helplessness because they thought they could not end the mobbing action they were subjected to, and therefore they have been forced to accept the situation the way it is (www.egitimbirsen.org.tr).

Teachers in Turkey are exposed to mobbing through being taunted by the school administrators, being accused of incompetence by the parents, being accused of professional inadequacy, being subjected to different behaviours according to their political views, being demanded to work outside the office, being threatened by relocating their place of work and being changed to other places. Some school administrators remain spectators when witnessing the mobbing activities and allow the practice to thrive. Exception is only made for teachers from privileged or rich and reputable families; these receive protection from mobbing practices. Teachers are targeted in mobbing behaviours via criticism or insults by their colleagues; discrimination according to their professional branches; being provoked by students; and discrimination according to union, political opinion or country, mocking their clothing style and beliefs. School principals are also subjected to mobbing by being questioned by the authorities of the Provincial and District Directorate of National Education, humiliated by being brought to a passive position, frequently questioned by inspectors and threatened with exile (Gökçe 2008, 65–66).

In a research conducted by Erçetin et al. (2008) in order to determine the mobbing situations of the administrators and teachers working in primary schools in the province of Hendek, Sakarya explored 38 administrators and 133 teachers and established that the managers applied the most intense mobbing applications. Colleagues and people working under the victims followed the administrators. Research shows that respondents who have 11 year or more experience are exposed to mobbing applications more often than others, and men are exposed to mobbing applications more often than women.

A study conducted by Çomak and Tunç (2012) in order to determine the mobbing situations of the teachers working in primary schools explored 382 teachers and established that contract teachers were subjected to more mobbing practices than permanent teachers, statistics teachers experienced more mobbing than culture teachers and teachers with professional experience of 0–5 years also suffered more mobbing effects compared to teachers with more than 6 years' experience, while teachers aged 20–30 years were exposed to mobbing more than those of 31 years of age and above.

A study done on mobbing victims by Yaman et al. (2010) explored 14 teachers and established that victims were exposed to discrimination, communication barriers, humiliation, verbal sexual harassment and later motivation problems, unwillingness to work, uneasiness as well as depression.

In a research conducted by Altunay et al. (2014) on mobbing victims with five teachers and academicians, the victims' reasons for mobbing were as follows: competence and success in the field, career advancement, social personality, opposition to plan, jealousy, negative corporate culture, poor leadership and management understanding, ambition to improve, manager's inadequacy and respectability and ignorance about mobbing. The victims were found in individual struggles such as abusive language, retirement, psychological support and medication, as well as reading personal development books for mobbing. Meanwhile, the victims stated that they did not get any fruitful results from the legal methods they applied, and they could not get help from the superiors they complained to.

A peculiar case of a mobbing activity witnessed by the author of the paper in question reflects a teacher who taught a course in a workshop room and was reprimanded by the school manager because the class was not cleaned sufficiently, even though the class cleaning job belonged to the school cleaning staff. In fact, the teacher was asked to clean the class after the lesson. In another example, the school administrator instructed teachers who were close to the school building to consider taking up guard duty. However, when the departure and arrival times of these teachers were evaluated, it was not found important by the school administrator to put the teachers who were on guard duty into consideration. Meanwhile, the success and reward documents found in the register file of one teacher who was a victim of mobbing were removed and destroyed. Those who witnessed the case were left at the level of mere claims, and the events did not move to the legal dimension.

As seen from research as well, mobbing has the potential to have dangerous consequences on educational organizations. The problems experienced by teachers who are mobbing victims are not confined to themselves and their families only but can

be reflected within the students they are obliged to provide education to. This brings about a spiral element in terms of expanding the said problem. This situation can exacerbate the negative psychological consequences to the students, and this reveals that the potential of life of the younger generation, which is the most valuable heritage and future of any country, is under a serious psychological threat. All stakeholders, therefore, ought to take action aimed at saving the “leaders of tomorrow” from getting frozen out by the absurd acts of mobbing prevalent in all systems.

43.6 Legal Framework of Mobbing in Turkey

Psychological harassment or mobbing in the workplace was first mentioned in Article 417 of the Turkish Code entitled “Protection of the Personality of the Worker” of Law No. 6098 of the Code of Obligations.

Article 417. The employer is obliged to take measures to protect and respect the worker’s personality in relation to the service rendered and to provide a system in accordance with the principles of honesty at the workplace and in particular to prevent workers from suffering psychological and sexual abuse and prevent further suffering of such harassment if any exists.

The employer must take all necessary precautions to ensure occupational health and safety in the workplace and to keep the tools and equipment in a perfect condition. Workers are also obliged to comply with all kinds of measures taken on occupational health and safety.

The employer is subject to the provisions of liability arising out of contravention of the contract, including the above provisions, compensation for damages due to the death of the worker, damage to the integrity of the body or violation of personality rights.

An important step has been taken to ensure legal protection against the psychological harassment that the employee may encounter at the workplace. The payment of damages arising from the conduct of the employer in violation of Article 417 is subject to liability provisions arising out of a breach of contract.

Mobbing issues are evaluated within the scope of the Labour Law No. 4857, Article 5 entitled “The Principle of Equal Treatment”, as well as Article 24 entitled “Amendment of Working Conditions and Termination of the Labour Contract”. The same is enshrined in Article 10 entitled “Duties and Responsibilities of Civil Servants in the State of Amir”, while Article 8 of the Civil Servants Law No. 657, “Behaviour and Cooperation”, states that public servants should cooperate with their officers on the basis of justice and equality (MoLSS 2014, 31–33).

In 2011, the 2011/2012 Circular on Prevention of Psychological Harassment (Mobbing) in the Workplace was published by the Prime Ministry with the issue number 27879 dated 19.03.2011. It has been stated that psychological harassment incidents in public and private sector establishments have led to measures to protect employees from psychological harassment because they impair employees’ reputation and dignity, reduce their productivity and cause their health to be adversely affected.

It has been decided that through the ALO 170, the Labour and Social Security Conversion Centre in accordance with Article 4 of the Circular, psychologists will provide assistance and support to mobbing victims. In this direction, a total of 11,393 mobbing applications were made to ALO 170 between 19.03.2011 and 06.04.2014. While 30 % of these applications originate from the public institutions, 70 % belong to the private sector. There are 392 (11.53 %) of the applicants belonging to the public sector stem from the Ministry of National Education (MEB), and 233 (6.85 %) belong to the universities (MoLSS 2014, 36–37).

The first mobbing case in Turkey was opened by a male bureaucrat on the grounds that he and his family had entered into depression due to psychological pressure while working at the Toprak Products Office. This bureaucrat demanded compensation of 15,000 TL from the administrators because he was subjected to acts of psychological pressure and mobbing, lowering his rank despite winning the case and requesting for his resignation to be granted (TBMM, 2011, 3-4). This case entered the literature as the first mobbing case in Turkish Law.

43.7 Conclusions and Recommendations

Mobbing in the workplace is an organizational issue that causes a climate based on tension and conflict within the organization, disrupts the organization's health and affects the job satisfaction and organizational commitment of the employees negatively (Tetik 2010, 87). The continuation of this situation causes qualified personnel to be pushed out of the organization resulting in high workforce losses and damage to the country's economy. Institutions and employees in Turkey are beginning to become aware of the issue given the widespread nature of mobbing actions. Despite the fact that the concept of mobbing is often encountered in schools, which are educational organizations in particular, neither the managers nor the teachers consider the issues as clear mobbing tendencies. In terms of managers, mobbing is seen as a means of dispute resolution and disciplinary action, while teachers are turning to the option of accepting or resigning to their fate by changing workplaces and consoling themselves along with the survivors as well as victims. Teachers who are aware of mobbing often find it very difficult to prove and, as a result, opt for individual psychological combat methods; indeed, only a small part of them are handling the issue at the legal level.

Despite the legal steps taken in Turkey, there is still a long way to go. First of all, it is necessary for organizations to define the concept of mobbing and to draw its boundaries clearly. Given the traditional and conservative nature of the Turkish society, there must be a way to stop silence within the audience in the wake of mobbing actions in order to prevent fatal behaviour. The necessary arrangements must be made to direct employees to seek rights and redress in the wake of harassment and oppression and to provide institutional support for their struggles.

The following proposals have been developed in order to prevent mobbing actions in educational organizations:

1. Further research on mobbing in educational organizations should be conducted.
2. The scope and limits of mobbing actions in educational institutions should be determined by the MoNE, and preventive policies should be developed.
3. Educational managers and teachers should be given seminars to raise awareness about mobbing and its results.
4. Uniform employment of teachers should be considered, and the different types of employment such as permanent, contractual and wage should be abandoned. It is a fact that non-permanent teachers are in an open position liable for exploitation than permanent staff.
5. Teachers who are victims of mobbing should not be abandoned to their fate, and, accordingly, psychological support should be provided. Psychologically, teachers should not be forced to enter the classroom when they are harmed; this is because they will not only influence themselves negatively but will also affect the direction of learning of the students.
6. Trade unions must support mobbing victims among the staff and provide guidance and counselling in the legal process when necessary.
7. The concept of mobbing should be placed in accordance with teaching programmes. Students and their families should also be aware of mobbing. This is because mobbing is a phenomenon that can be experienced not only between teachers and school administrators but also students and parents.

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Chapter 44

Managerial Approaches Adopted by School Directors with Diverse Personality Characteristics: A Sample of Mersin City



Lütfi Üredi, Mustafa Özarıslan, and Hakan Ulum

Abstract The primary aim of the leadership mission is to locate the institutions into the desired point by means of providing all the required needs. Leaders undertaking this mission look for diverse solutions in a possible chaotic situation on the way to goals. The solution that the leader will find is directly related to his psychology. The structure of personality which is reflected within psychological approaches shows different characteristics of every human being. So, the leaders bearing different personality characteristics will be representing diverse leadership approaches as well. The success of the leaders undertaking the mission of advancing the institutions may be attained by being aware of the owned personality characteristics. The leader who is aware of his or her own personality characteristics might possibly analyse the leadership approach that he or she adopts. With all these in mind, this study has been conducted with the aim of investigating the relationship between the personality characteristics of school directors and the leadership approaches they adopt. The personality characteristics and the adopted managerial approaches reflected by the directors with different personalities have been identified by means of considering different variables. The study is based on a survey design. The sample of the study is composed of 298 school directors employed in the central counties of Mersin City. The data of the study was collected through scales on personality characteristics and leadership approaches. The data transferred into the computer was analysed and interpreted by means of statistical techniques. According to the findings of the study, it was established that while the school directors represent such personality characteristics successively as easy-going, open to innovation, extrovert, self-disciplined,

L. Üredi (✉)
Mersin University, Education Faculty, Mersin, Turkey
e-mail: lutfiuredi@gmail.com

M. Özarıslan
District Governorship of Yenişehir, Mersin, Turkey
e-mail: info@mersinyenisehir.gov.tr

H. Ulum
Ministry of National Education, Ankara, Turkey
e-mail: hakanulum@gmail.com

and emotionally stable, they represent traits of leadership in the shape of transformative, interactionist, and emancipatory. Besides, there stands a significant relationship between the personality characteristics of school directors and their leadership approaches. Lastly, it was suggested that there exists a positive relationship at medium level between the total score of personality characteristics reflected by the school directors and their multidimensional leadership approaches.

44.1 Introduction

The change of the manufacturing world into a knowledge world has been accelerated by the rapidly improving technology in this changing world. In respect of this, the education world has renovated itself and formed more pedagogy to meet such a new system (Akbaşlı and Üredi 2015). Certainly, in such a fast-changing atmosphere, uncertainties have piled up rapidly, particularly in the fields of economy, politics, and the education system (Üredi 2015). So, the requirements of the modern world have brought the necessity of current approaches in the education system, which refer to students, teachers, and educational leaders. The personal characteristics and leadership approaches adopted by educational directors are included in these new pedagogies which have been put forward.

Educational institutions plan to reach a group of goals with the aim of getting the individual to adopt a desired behaviour and of providing effective teaching. Some problems might be faced on the way to reaching the desired goals. Yet, it is the duty of leaders to respond to these problems and attain the expected results. When the related literature is investigated, several definitions of a leader are found out. Leadership is the total of abilities and knowledge that activate people who point at common objectives in order to make them reach their goals (Eren 1998, 342). A leader is part of a societal structure, while leadership is formed through the relationships with every individual in a society (Şerif and Şerif 1996, 210).

Leadership means orienting more than one individual through power and influence. With this regard, two diverse leaderships appear based on power and influence: while the formal leader has an impact on the society by his/her authority, the informal leader is integrated into the society by means of the behaviours he/she represents. School leaders are defined as formal leaders, while they may also be thought of as informal leaders in terms of motivating and orienting teachers (Çelik 2013, 3).

Leadership is a term that has existed since the beginning of humanity. Until now, people have exhibited the habit of living together. This habit has been brought with the formation of groups with diverse trends. Where interaction among people exists, not every individual is at the forefront, so the leadership of an individual is approved by others. As a result of this, leadership is defined as the output of interaction, as well as being diverse in the roles that are played (İbicioğlu et al. 2009). While playing these roles, the leader is affected by several factors. When the issue is educational leadership, the factors that affect the leader are expected to be closely related with education.

Educational leadership is a perspective which does not underestimate the components of education in the process of leadership. An educational leader is one who serves the school without limiting the democratic atmosphere of the institution and also being aware of cultural differences. An educational leader should follow the recent developments continuously. Educational leadership asks for leaders who own rich knowledge buildup, who are energetic, who consider improvement opportunities, who simplify complex issues, who own both vision and mission, who are productive, and who can develop empathy. School leaders are those initially responsible for every step taken in education process. The formal authority and power offered to a school leader are not adequate for proper school management and academic success as well (Akçadağ 2008). If the school leaders own the characteristics that educational leaders need to bear inside, the exact aim of the school which is to enhance academic success is always bound to be achieved. As a result, the institutional success will be distinguishable.

The current era which faces an accelerating change has witnessed various factors affecting competition power, and among these factors, the standout one is the potency of the institution leaders. The classical management perception which focuses only on institutional productivity and maintaining the current status of the institution makes it hard to achieve the institutional goals. Yet, the leaders taking roles in the operation of the institution, motivating the staff, interacting with them, and preparing them to be ready for development, may easily operate their institutions and form synergy (Çağlar 2004, 91). As a result, success is achieved at this competitive setting.

Leadership has diverse difficulties in every educational institution. So, the leaders may include every member of the staff in the management process in order to avoid these difficulties. Besides, the leaders should bear some specific characteristics to integrate the output into the institutional expectations (Stewart and Finch 2016).

Institutions will be in need for good leaders in the future just like now. The institutions cannot function for long by only preserving their current condition and maintaining the risks at the lowest level and also if they do not have an effective leadership. So, both the leader and leadership terms attract people more than before and enhance the related literature as well (Tengilimoğlu 2005).

There is not an ideal leadership model whose validity and reliability are stable in any society. Cultural diversity of societies makes it obligatory to develop the perspectives on characteristic leadership and management. Similarly, institutions functioning in different fields should develop a leadership concept by means of being aware of their own culture (Kılıç 2015). Several leadership approaches formed according to the current institutional conditions respond to such a need. Multidimensional leadership occurs among them, which is defined as the theory formed by means of taking the developmental characteristics of the individuals forming the institution into consideration (Yukl 1999).

When the concept of personality is investigated, many definitions are encountered in the related literature. Personality stands among many factors making humans different from each other. Each person symbolizes an individual, and individuality is the structure of relationships developed uniquely by people themselves

and derived from the personality of a person. In other words, personality is the overall specific, stable, and consistent characteristics of a person (Aytaç 2001). It is the specific, complicated, and turning integrity of physiological structure, psychological and emotional reaction patterns, and self-formation peculiar to humans. This integrity covers all the negative and positive characteristics appearing in the lives of humans. The personality development may be based on society, socioeconomic status, and cultural impact as well (Bakircioğlu 1982).

Personality has a significant effect on the perceptions and evaluations of the personnel towards their workplace. The personality characteristics of the staff members have been taken into consideration as a significant variation in research studies since this case was realized (Schneider and Smith 2004, 425). One of the first coming components of the staffs at institutions is leaders. The leaders' perspectives and evaluations towards their institutions are closely related to their personality characteristics. So, leader attitudes and personality characteristics will be orienting factors in the formation of institution atmosphere. In the formation of this atmosphere, the attitudes and personal characteristics of the leader interact with each other.

There are many factors affecting the leadership attitudes of a director. This impact is clearly seen in the phase of the development of the leadership terminology. Initially, personality characteristics of the leaders and then their behaviours were investigated in the research studies conducted with the aim of exploring leadership. The attitudes represented by people are affected by personal factors (physiology, psychology, intelligence, terminology, cognition, belief, thought, etc.), environmental factors (culture, religion, tradition, custom, social norms, family, etc.), and the situation (education, job, income, status). It is probable that, being human beings, leaders are affected by these factors (İbicioğlu et al. 2009). In other words, personality characteristics affect the attitudes of leaders.

The aim of the majority of the scientists interested in personality issues is to specify the peculiar characteristics of individuals and categorize these individuals according to their personal characteristics. As a result of this, many researchers have expressed that five dimensions occur on the ground of personality (Topçu 2015). These five dimensions are extraversion, adaptation, self-discipline, emotional stability, and openness to change.

44.2 Aim of the Study

The aim of this study was to comprehend the personality and leadership characteristics of the directors employed by the Ministry of Turkish National Education and to discover the relationship between these two sets of characteristics as well: personality characteristics and leadership characteristics.

Parallel to the research aims, the answers to the following research questions were sought:

1. What are the personality characteristics of school directors?
2. Is there a significant difference between the personality characteristics of school directors and the school type they are employed at?
3. Is there a significant difference between the personality characteristics of school directors and their education status?
4. Is there a significant difference between the personality characteristics of school directors and their age?
5. What are the leadership characteristics of school directors?
6. Is there a significant difference between the leadership characteristics of school directors and the school type they are employed at?
7. Is there a significant difference between the leadership characteristics of school directors and their education status?
8. Is there a significant difference between the leadership characteristics of school directors and their age?
9. Is there a significant difference between the personality characteristics and the leadership characteristics of school directors?

44.3 Methodology

44.3.1 Research Method

The study is based on a descriptive research design as it tries to explain the already existing situation as it is. Besides, correlational models were employed in the study, which are based on a descriptive approach. Statistical techniques such as mean, median, mode, standard deviation, frequency, percentage, etc. were utilized in order to analyse the overall data. In the study, a descriptive approach was used in order to have an overall idea about the personality and leadership characteristics of school directors, while a correlational research approach was resorted to understand the relationship between the personality and leadership characteristics of school directors.

44.3.2 The Sample of the Study

The sample of the study includes the school directors employed in Mersin City, Turkey. As it is not possible to reach all the school directors, cluster random sampling was utilized. The participants include 298 school directors. The demographic data of the participants are presented in Table 44.1.

Table 44.1 Demographic data of the participants

	(F)	%	Total
School type	Public	250	298
	Private	48	
Age	25 and over	1	
	26–35	36	
	36–45	118	
	46–55	92	
	56 and over	51	
Education status	High school	49	
	Faculty	194	
	Master's and doctorate degree	55	

44.3.3 Instruments

In the phase of data collection, with the aim of gathering data about the personal information of the participants, a personal data form structured by the researchers, a multifactor leadership questionnaire developed by Bass and Avolio (1993) and adapted into Turkish by Canbaş (2004), and The Big Five Inventory developed by Benet-Martínez and John (1998) and adapted into Turkish by Sümer (2005) in order to specify the personality characteristics of leaders were all utilized.

44.3.4 Data Analysis

Statistical Package for the Social Sciences (v.24.0) was used to analyse the gathered data, based on two phases: descriptive analysis and correlational analysis. The Pearson correlation value was employed to figure out the relations between variations such as personality characteristics and adapted managerial approaches. In order to test whether there stands a significant difference between the personality characteristics and leadership approaches of directors and educational status and age factors, one-way ANOVA was used. Besides, in order to see whether there is a significant difference between the personality characteristics and leadership approaches of directors and school type, the Pearson product moment correlation was utilized.

According to the findings of the study, the school directors reflect their personality characteristics belonging to diverse sub-dimensions, at differing rates. The personality characteristics that the school directors reflect are expressed in Table 44.2.

According to the findings of the study, one can easily understand from Table 44.2 that directors reflect the personality characteristics, respectively, adaptive ($\bar{X} = 4.1685$), open to development ($\bar{X} = 4.0638$), extrovert ($\bar{X} = 3.9732$), self-disciplined ($\bar{X} = 3.7595$), and emotionally consistent ($\bar{X} = 2.0352$).

Table 44.2 Descriptive statistics of multifactored personality characteristics

Descriptive statistics of multifactored personality characteristics	N	\bar{X}	Sd
Emotional stability	298	2.0352	0.57206
Extraversion	298	3.9732	0.58000
Openness to change	298	4.0638	0.50362
Adaptation	298	4.1685	0.47938
Self-discipline	298	3.7595	0.34905

Table 44.3 The variation of the total scores of five-factored personality scale of the school directors according to the school type employed at

Sub-dimensions of five-factored personality scale	Type	N	\bar{X}	S	Sd	T	P
Emotional stability	Public	250	2.0620	0.58268	296	1,851	,065
	Private	48	1.8958	0.49555			
Extraversion	Public	250	3.9465	0.56700	296	1,818	,070
	Private	48	4.1120	0.63174			
Openness to change	Public	250	4.0568	0.50242	296	,544	,587
	Private	48	4.1000	0.51364			
Adaptation	Public	250	4.1538	0.49164	296	1213	,226
	Private	48	4.2454	0.40548			
Self-discipline	Public	250	3.7560	0.35595	296	0.395	0.693
	Private	48	3.7778	0.31343			

ANOVA test results were analysed with the aim of discovering whether there is a significant difference between the personality characteristics of school leaders and the school type they are employed at and are presented in Table 44.3.

Regarding the findings of the study, it can easily be understood from Table 44.3 that establishment of whether there is a significant difference between the scores derived from sub-dimensions of the five-factored personality scale of the school directors and the school type they are employed at is described as follows: there is a significant difference between emotional stability and the school type ($t(296) = 1.851, p > 0.01$), while there is no significant difference between extraversion and the school type, ($t(296) = 1.818, p > 0.01$); openness to change and the school type, ($t(296) = 0.544, p > 0.01$); adaptation and the school type, ($t(296) = 1.213, p > 0.01$); and self-discipline and the school type, ($t(296) = 0.395, p > 0.01$), respectively.

ANOVA test results were checked with the purpose of finding out if there is a significant difference between the personality characteristics of school leaders and educational status and are presented in Table 44.4.

With respect to the findings of the study, it can easily be understood from Table 44.4 that establishment of whether there is a significant difference between the scores derived from sub-dimensions of the five-factored personality scale of the school directors and their educational status is described as follows: there is no significant difference between emotional stability and the educational status, $F(2, 295)$

Table 44.4 One-way ANOVA results of five-factored personality scale of the school directors according to the educational status factor

Sub-dimensions of five-factored personality scale	Variation	S	Sd	\bar{X}	F	P
Emotional stability	Between groups	0.314	2	0.157	0.478	0.621
	Within groups	96.879	295	0.328		
	Total	97.193	297			
Extraversion	Between groups	2.044	2	1.022	3.080	0.047
	Within groups	97.866	295	0.332		
	Total	99.910	297			
Openness to change	Between groups	3.354	2	1.677	6.873	0.001
	Within groups	71.975	295	0.244		
	Total	75.329	297			
Adaptation	Between groups	0.068	2	0.034	0.146	0.864
	Within groups	68.184	295	0.231		
	Total	68.252	297			
Self-discipline	Between groups	0.324	2	0.162	1.334	0.265
	Within groups	35.860	295	0.122		
	Total	36.184	297			

= 0.478 $p > 0.01$; extraversion and the educational status, $F(2, 295) = 3.080$ $p > 0.01$; adaptation and the educational status, $F(2, 295) = 0.146$ $p > 0.01$; and self-discipline and the educational status, $F(2, 295) = 1.334$ $p > 0.01$, respectively, while there is a significant difference between openness to change and the educational status, $F(2, 295) = 6.873$ $p < 0.01$. The scores of openness to change and the educational status are presented subsequently as master's and doctoral levels ($\bar{X} = 4.2491$), licence (faculty) level ($\bar{X} = 4.0546$), and pre-licence (high school) level ($\bar{X} = 3.8918$).

ANOVA test results were evaluated to see whether there is a significant difference between the personality characteristics of school leaders and age and are presented in Table 44.5.

Referring to the findings of the study, we can easily understand from Table 44.5 that establishing whether there is a significant difference between the scores derived from sub-dimensions of the five-factored personality scale of the school directors and their ages is described as follows: there is no significant difference between emotional stability and age, $F(4, 293) = 598$ $p > 0.01$; extraversion and age, $F(4, 293) = 0.261$ $p > 0.01$; openness to change and age, $F(4, 293) = 3.112$ $p > 0.01$; adaptation and age, $F(4, 293) = 0.403$ $p > 0.01$; and self-discipline and age, $F(4, 293) = 1.051$ $p > 0.01$, respectively. In other words, there is no significant difference between the personality characteristics of school leaders and their age dispersion.

Table 44.5 One-way ANOVA results of five-factored personality scale of the school directors according to age factor

Sub-dimensions of five-factored personality scale	Variation	S	Sd	\bar{X}	F	P
Emotional stability	Between groups	0.787	4	0.197	0.598	0.664
	Within groups	96.405	293	0.329		
	Total	97.193	297			
Extraversion	Between groups	0.355	4	0.089	0.261	0.903
	Within groups	99.556	293	0.340		
	Total	99.910	297			
Openness to change	Between groups	3.070	4	0.767	3.112	0.016
	Within groups	72.259	293	0.247		
	Total	75.329	297			
Adaptation	Between groups	0.373	4	0.093	0.403	0.806
	Within groups	67.879	293	0.232		
	Total	68.252	297			
Self-discipline	Between groups	0.512	4	0.128	1.051	0.381
	Within groups	35.673	293	0.122		
	Total	36.184	297			

Table 44.6 The scores derived from multifactored leadership scale

The scores derived from multifactored leadership scale	N	\bar{X}	Ss
Transformative leadership	298	3.3087	0.39688
Traditional leadership	298	2.1834	0.42618
Releasing leadership	298	0.5394	0.78678

According to the findings of the study, school leaders reflect the leadership characteristics of diverse sub-dimensions at differing rates. The leadership approaches that the school leaders reflect are displayed in Table 44.6.

According to the findings of the study, the leaders represent the leadership characteristics in the following order of priority: transformative leadership ($\bar{X} = 3.3087$), traditional leadership ($\bar{X} = 2.1834$), and releasing leadership ($\bar{X} = 0.5394$).

In order to see whether there is a significant difference between the leadership characteristics of school directors and the school type, one-way ANOVA test results are displayed in Table 44.7.

With reference to the findings of the study, we can easily understand from Table 44.7 that establishing whether there is a significant difference between the scores came from sub-dimensions of the five-factored personality scale of the school directors and the school type they are employed at is described as follows: there are

Table 44.7 Regarding the leadership style, the variation of the total scores of five-factored personality scale of the school directors according to the school type

Sub-dimensions of five-factored personality scale	Type	N	\bar{X}	S	Sd	T	P
Transformative leadership	Public	250	3.3078	0.39524	296	0.092	0.927
	Private	48	3.3135	0.40956			
Traditional leadership	Public	250	2.1837	0.42658	296	0.020	0.984
	Private	48	2.1823	0.42861			
Releasing leadership	Public	250	0.5340	0.80494	296	0.271	0.786
	Private	48	0.5677	0.69140			

Table 44.8 One-way ANOVA results of five-factored personality scale of the school directors according to educational status factor

Sub-dimensions of five-factored personality scale	Variation	S	Sd	\bar{X}	F	P
Transformative leadership	Between groups	0.428	2	0.214	1.363	0.258
	Within groups	46.354	295	0.157		
	Total	46.782	297			
Traditional leadership	Between groups	0.203	2	0.101	0.556	0.574
	Within groups	53.741	295	0.182		
	Total	53.944	297			
Releasing leadership	Between groups	0.060	2	0.030	0.048	0.953
	Within groups	183.789	295	0.623		
	Total	183.849	297			

no significant differences between transformative leadership and the school type, $t(296) = 0.092$, $p > 0.01$; traditional leadership and the school type, $t(296) = .020$, $p > 0.01$; and releasing leadership and the school type, $t(296) = 0.271$, $p > 0.01$.

Table 44.8 illustrates one-way ANOVA test results pertaining to whether there is a significant difference between the leadership characteristics of school directors and their educational status.

When we look at the findings of the study, we can easily understand from Table 44.8 that establishment of whether there is a significant difference between the scores derived from sub-dimensions of the five-factored personality scale of the school directors and the educational status is described as follows: there are no significant differences between transformative leadership and educational status, $F(2, 295) = 1.363$ $p > 0.01$; traditional leadership and educational status, $F(2, 295) = 0.556$ $p > 0.01$; and releasing leadership and educational status, $F(2, 295) = 0.048$ $p > 0.01$.

Table 44.9 One-way ANOVA results of five-factored personality scale of the school directors according to age factor

Sub-dimensions of five-factored personality scale	Variation	S	Sd	\bar{X}	F	P
Transformative leadership	Between groups	0.707	4	0.177	1.124	0.345
	Within groups	46.075	293	0.157		
	Total	46.782	297			
Traditional leadership	Between groups	0.616	4	0.154	0.847	0.497
	Within groups	53.328	293	0.182		
	Total	53.944	297			
Releasing leadership	Between groups	3.881	4	0.970	1.580	0.180
	Within groups	179.968	293	0.614		
	Total	183.849	297			

Table 44.10 The Pearson correlation (p) values of the scores of sub-dimensions of multifactored leadership scale and the scores of five-factored personality scale of the school directors

Five-factored personality scale	Multifactored leadership scale	N		
	Transformative leadership	Traditional leadership	Releasing leadership	
	(p)	(p)	(p)	
Emotional stability	-0.365	0.128	0.360	298
Extraversion	0.457	-0.031	-0.275	298
Openness to change	0.486	0.018	-0.263	298
Adaptation	0.410	-0.129	-0.371	298
Self-discipline	0.450	0.144	-0.081	298

Table 44.9 displays one-way ANOVA test results pertaining to whether there is a significant difference between the leadership characteristics of school directors and their dispersing ages.

Upon looking at the findings of the study, one can easily understand from Table 44.9 that establishing whether there is a significant difference between the scores derived from sub-dimensions of the five-factored personality scale of the school directors and their ages is described as follows: there are no significant differences between transformative leadership and age factor, $F(2.295) = 1.124$ $p > 0.01$; traditional leadership and age factor, $F(2.295) = 0.847$ $p > 0.01$; and releasing leadership and age factor, $F(2.295) = 1.580$ $p > 0.01$.

When taking a look at Table 44.10, one can grasp the relationship between the scores of sub-dimensions of multifactored leadership scale and the scores of five-factored personality scale of the school directors.

The findings of the study suggest that in terms of emotional stability, there is a negative relation with transformative leadership at an average level (p , 0.365), a positive relation with traditional leadership at a low level (p , 0.128), and a positive relation with releasing leadership at an average level (p , 0.360). Regarding extraversion, there is a positive relation with transformative leadership at an average level (p , 0.457), a negative relation with traditional leadership at a low level (p , -0.031), and a negative relation with releasing leadership at a low level (p , -0.275). By looking at openness to change, there is a positive relation with transformative leadership at an average level (p , 0.486), a positive relation with traditional leadership at a low level (p , -0.018), and a negative relation with releasing leadership at a low level (p , -0.263). When it comes to adaptation, there is a positive relation with transformative leadership at an average level (p , 0.410), a negative relation with traditional leadership at a low level (p , -0.129), and a negative relation with releasing leadership at an average level (p , -0.371). Referring to self-discipline, there is a positive relation with transformative leadership at an average level (p , 0.450), a positive relation with traditional leadership at a low level (p , 0.144), and a negative relation with releasing leadership at a low level (p , -0.081).

44.4 Discussion and Conclusion

The results of the study suggest that the leaders represent such personal characteristics as adaptive, open to change, extrovert, self-disciplined, and emotionally stable, respectively. Accordingly, the leaders tend to aid other people, are open to change, are able to cope with stress, and are energetic and eager. With this conclusion, this study may be given as an example of a similar study conducted by Topçu (2015) who collected data from 421 directors in his thesis.

According to the results of the study, there is no significant difference between the personality characteristics of school directors and the school type (public school or private school). In other words, there is no significant difference between such characteristics as extraversion, adaptation, self-discipline, emotional stability, openness to change, and the type of institution (public or private).

While extraversion, adaptation, self-discipline, and emotional stability characteristics of school leaders are not affected by their educational status, the characteristics of openness to change are affected by educational status in that leaders with master's and doctorate degrees are more open to changes (or developments).

Besides, according to the findings of the study, such personality characteristics as extraversion, adaptation, self-discipline, emotional stability, and openness to change are not based on age dispersion Benet-Martínez and Waller (1997).

Additionally, the results of the study express that school directors represent characteristics of transformative, traditional, and releasing leadership, respectively. This result implies that leaders mainly motivate those who follow them, consider ethnicity important, and spend all the energy and resources on innovations. The leaders are those who unveil the potential of their followers by means of keeping

interaction stable and alive. According to the study conducted by Ercan (2007), by looking at the scores of leadership characteristics, it was found out that transformative leadership scores were higher and interactive leadership scores were less, while releasing leadership scores were the least among them. This finding may be given as an example similar to the findings of our study as well. Moreover, as another dimension of the study, it is clear that there is no significant difference between the leadership approaches (transformative, traditional, releasing) that the school directors adopted and educational status and age.

Furthermore, another result established is that while the leaders possessing personality characteristics such as extraversion, adaptation, self-discipline, and openness to change adopt transformative leadership approach, those holding the characteristics of emotional stability discard transformative leadership. What is more, while the leaders with characteristics of extraversion and adaptation discard traditional leadership, those representing the personality characteristics of self-discipline, openness to change, and emotional stability may be representing characteristics of a traditional leader as well. Additionally, while the leaders with characteristics of emotional stability represent the behaviours of a releasing leader, extrovert, adaptive, self-disciplined, and open to change leaders are far away from representing such behaviours of a releasing leader.

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Chapter 45

The Application of the New War Thesis to the Conflicts of Xinjiang, Kashmir, and Assam and Nagaland



Abdulsalam Dallal

Abstract Post the Cold War which ended in 1991, several scholars have argued about the change in conflicts' nature which started to take place in the world, and they touched upon different elements involved in them. Mary Kaldor has set these differences in her book *New and Old Wars: Organised Violence in the Global Era*. Her new wars thesis proved to be applicable to different areas of conflicts despite that she applied it first to the conflict of *Bosnia and Herzegovina*. This chapter navigates the new war thesis facets which can be traced in the conflict of Xinjiang in China, Kashmir, and Assam and Nagaland in the Indian Northeast.

45.1 Introduction

After the Cold War finished in 1991, several scholars argued that the manner in which wars had been conducted changed. They also argued that the qualitative nature of recent or current wars is different from that of the ones which took place earlier. Mary Kaldor shed light on this in her book *New and Old Wars: Organized Violence in a Global Era*. Although the book has been criticized from the historical point of view which suggests that the characteristics of the new wars could have existed in old wars as well, the reply written by scholars to the new war thesis criticism suggests that the word “new” in the term “new war” does not mean the newness of the warfare, rather it is used to address the need for having novel approaches when we deal with conflict assessment. Therefore, the new war thesis is very important because it is able to help us understand and assess the nature of the contemporary conflicts and have better ideas about their different aspects.

Understanding the scope, elements, and patterns of wars have become a fundamental objective for scholars and politicians. Scholars have always wanted to

A. Dallal (✉)

Department of PPR, Lancaster University, Bailrigg, Lancaster, UK

e-mail: abdulsalamdallal7@gmail.com

describe, anticipate, and explain armed conflicts, while politicians have wanted to notice, analyze, and understand the nature of the conflicts because they help them to implement efficient policies to prevent conflicts from occurring and to achieve reconciliation. The new war thesis has become very important to scholars, students, politicians, and decision makers because it has become more inclusive and analytical for describing the nature of new conflicts by highlighting the elements, aspects, and causes of armed conflicts. Several scholars wishing to explore the nature of violent conflicts, especially the contemporary and civil ones, have argued that these wars are different from previous ones in terms of both quality and results. Mary Kaldor's argument about the new war is that "The new wars can be contrasted with earlier wars in terms of their goals, the methods of warfare and how they are financed" (Kaldor 2006, 6). Human rights activists such as Vibona Bhave said "We can't fight new wars with old weapons" (Bhave 2016), indicating that the new wars have become different and we should deal with them differently.

In order to understand to which extent the new war thesis helps us to understand the conflicts in Asia, this Study (analysis) will have a look at different aspects of the conflicts in Xinjiang China, Kashmir, Assam and Nagaland as case studies. The reason for discussing these four cases is because that they are similar to each other: all of them are secessionist movements seeking independence. The second reason is that these conflicts became heavily militarized as they developed and lots of external bodies started to take part in them. Therefore, this paper's aim is to dig deeper into applications of the different aspects of the new war thesis to have a better idea about how these conflicts are conducted, who are the major players of these conflicts and what is the impact of these conflicts.

Mary Kaldor has named the new types of conflicts that emerged in the post-Cold War era as "new wars" (Kaldor 2006, 1–2) in order to differentiate them from earlier ones which were classified as classical warfare. Despite the fact that Kaldor has written her thesis to describe the conflicts that took place in East European conflicts (Bosnia-Herzegovina), her thesis is still applicable to other conflicts that happened elsewhere. Therefore, academics wanted to utilize Kaldor's "new wars" in other conflict zones such as South Asia, the Middle East, and Africa. Similarly, this essay attempts to analyze the conflicts that took place in Asia in light of Kaldor's new war thesis to understand better about the nature of these conflicts and dig deeper into the reasons, the elements, and patterns involved in them.

The conflicts in Xinjiang, Kashmir, and Assam and Nagaland in the Indian Northeast, which took place after the Cold War, have witnessed an increase in the level of violence despite the fact that the root causes of these conflicts can be traced back to earlier times. Therefore, it is worth mentioning that not all the new conflicts that took place after the Cold War are considered "new" since there are always links to the pre-Cold War era (Newman 2004). Michael Clarke argues that "China became more concerned regarding the security of Xinjiang with the collapse of the Soviet Union in 1991" (Clarke 2010, p. 215). This conflict has greatly acquired specifications of the "new war" as Kaldor argues in her new war thesis. So, this essay does

not dig deep into the details of these conflicts. Rather, it will argue to what extent Kaldor's "new war" thesis helps us to understand the conflict in these conflict zones.

45.2 Kaldor's Argument About the "New War"

In the beginning chapters of her book "Old and New Wars," Kaldor talks about the characteristics of what she calls "new wars." Kunal Mukherjee describes Kaldor's new war theory as "most certainly a powerful argument and travels far and wide to explain most present day conflicts including some of the conflicts in inner Asia" (Mukherjee 2016, 30). This shows that other conflicts that have taken place in other parts of the world can be assessed within the scope of Kaldor's thesis. In other words, the features of the new wars are seen in conflicts that took place in the post-Cold War era in Eastern Europe as well as in other places of the world. According to Kaldor, "new wars" are the conflicts that starting taking place in the 1990s, and they should be differentiated from the old ones. She also argues that in these particular kinds of wars it is hard to determine for sure what is global and what is local – the external attacks which are referred to as aggression and the internal ones which are referred to as repression. She argues that these wars should be analyzed and understood within the context of globalization.

In her book, she focuses on the idea that new wars are wars taking place within the "era of globalization" (Kaldor 2013, 2). The participation of the diaspora community is very much clear in these conflicts, and the political identity is clearly shown as well. These wars are intensively militarized with a significant presence of paramilitary factions and armed forces. The sources of funds for these wars are different from that of the old ones. In old wars, states usually provide funds to these wars through revenues, while in the new wars the diaspora who thinks that they are so much connected to their people in the area of the conflict might provide the needed funds for these conflicts. Throughout the course of these conflicts, there is a presence of local and global actors. The local actors are the original actors. In other words, the warring parties are the warlords, political bodies, and ethnical actors such as the Islamists, etc., while the global actors can be represented by humanitarian NGOs or United Nations Agencies, i.e., Peacekeeping missions. These are some of the "new wars" characteristics that Kaldor raised. There is a great division between the "local" and the "global" economy as Kaldor argued. Another feature of the new war is that human rights abuses due to the different armed factions and warring parties tend to take place. Though these wars seem to be in specific geographical areas, countless numbers of connections spill over the border which affects the intensity and the continuity of the conflicts. "New wars" emerge in the context where the state authority is eroded and not able to control its whole territories (failed states). New wars erupt

in a context where state incomes decline due to the decline of the state Gross Domestic Product (GDP) and governance. They also take place where criminality and corruption spread in the failing states.

45.3 The Weakness of the New War Thesis

The main idea of the new war thesis is that “during the last decades of the twentieth century, a new type of organized violence has developed” (Kaldor 2006, 1). The term “new” in this context refers to current wars that have taken place and still are taking place after the 1990s. The other idea behind this debate states, that new wars are internal wars that take place within the state that are completely different from traditional intrastate wars. However, this could be argued as one among other faults of the thesis since it does not take into consideration the historical events when it comes to analyzing the conflicts. Newman writes that “all of the factors that characterize new wars have been present, to varying degrees, throughout the last 100 years” Newman (2004, 179–180). Therefore, the “presence or absence of certain factors is best explained by the peculiarities of specific conflicts rather than linear historical changes” Newman (2004, 179–180). The Spanish Civil War of 1936–1939 and the American Civil War of 1861–1865 (Harbom et al. 2009) are not new but still have elements of the new war, which problematizes the notion of the novelty of the new war thesis.

Regardless of this weakness, Kaldor’s “new wars” thesis has been backed by some scholars. Martin Shaw backed Kaldor’s view that the new war was the result of the failure of the state or states that are on the verge of collapse. He wrote “the new warfare, Kaldor argues, is all a political rather than a military challenge. It is about the breakdown of legitimacy” (Shaw 2000, 172). Shaw adds political diversity to the new war thesis as a means to prevent state failure by further elaborating what Kaldor meant by cosmopolitan in her work: “Cosmopolitanism here is a set of principles and a positive political vision, tied to the rule of law” (Shaw 2000). Trying to reflect some of these features in conflicts that took place in Asia, this study (analysis) closely examines the situation of Chinese Xinjiang, Kashmir, and Assam and Nagaland in Indian Northeast.

45.4 Xinjiang

Xinjiang is the largest province in China, forming 18% of China’s territories (Mukherjee 2010). It is in the north west, and it shares a large border with Muslim countries such as Pakistan, Afghanistan, Kazakhstan, Kyrgyzstan, and Tajikistan. The majority of its population are Muslim Uyghurs who see themselves as a part of Uyghurstan or East Turkmenistan but not as a part of China. Xinjiang people are very connected to their Islamic identity and do not accept the major atheist character of China, since the education system before 1870s had generally Islamic features

(Schluessel 2009). This factor among others made Beijing worried about the situation there. Therefore, they started taking measures to confront the rise of Uyghur ethnicity. Enze Han has argued that the cultural complaints of the Uyghurs were basically due to two reasons: (i) the strict repression of Chinese government toward the Islamic identity in Xinjiang region, and (ii) the language of the curriculum in the schools of Xinjiang was completely changed (Han 2011). In 1984, Mandarin was introduced by the government starting from the third grade then it started getting introduced in the first grade. Before that, the Uyghur students would study it in middle school (Han 2011). The grievances were not only on the level of culture and language but also on economic and political ones. The policies adopted by Beijing in regard to any protest or disagreement were always harsh, especially when they contain ethnic separatist tendencies included within a political movement. At the economical level, there was an exploitation of Xinjiang's natural resources. One of Beijing's current measures is to send the natural resources extracted in Xinjiang such as oil and natural gas to the eastern regions of China (Han 2011). Economically speaking, the estimation of Xinjiang's reservoir is "35.7 billion tons of oil and 22 trillion cubic meters of natural gas" (Mukherjee 2016, 31). This reflects the importance of Xinjiang as a province full of resources which may increase the inclination of the Uyghurs to think about claiming independence and break away from China.

Another issue that has made Beijing uncomfortable is that the Uyghurs identify themselves differently from the Han Chinese. The Uyghurs' consciousness about their ethnicity started to be demonstrated after 1978, and it is associated with the tension between the indigenous Uyghurs and the Hans, the main ethnic group in China. This tension escalated the conflict in Xinjiang (Zang 2013). Nimrod Baranovitch writes that "a large body of literature makes clear that although the state plays a dominant role in the definition and representation of ethnic identities in China, ethnicity is a negotiated process and minorities are active agents in the negotiation of their ethnic identities" (Baranovitch 2003, 726). In order to confront the rising local Uyghur identity, the Chinese government sent more Han Chinese to Xinjiang to establish or take jobs there. The argument was that they sent Han ethnicity because they were more advanced, and the locals would benefit from their help in developing their work. Contrarily to Beijing's claims, the Han migration has a negative impact on the economy even if Beijing argues that the purpose of Han migration is to boost the economy and achieve development by improving the living standards of the local population of Xinjiang. A great mark of this is that the benefits of the economy are concentrated in their hands instead of giving them to the Uyghur community (Dillon 2003). These measures fueled the status quo in Xinjiang and forced the Uyghur people to draw closer to their own Islamic identity. In order to express this, they started distributing posters of their historical figures who are viewed as heroes such as Yusup Hajib and Mahmud Qashari, activities which started irritating Beijing which still stresses that Xinjiang is a historical and an integral part of China (Baranovitch 2003). In response, the Uyghur people started clinging to their identity more and more and started supporting and empowering the East Turkestan Islamic Movement (ETIM). Beijing's politics viewed religious differences as threats to their state unity, i.e., a threat to great China, therefore every different religious or cultural difference was viewed as suspicious (Mukherjee 2016).

This makes us understand the measures that were taken by Beijing in order to keep the country unified and integrated. Based on this argument, it is very noticeable that “identity politics,” one of the characteristics of the “new wars” thesis, is clear in the case of Xinjiang. In order to crush the Uyghur’s uprisings, the government of Beijing deployed armed forces and militiamen to crack down on them as soon as they took place (Mukherjee 2016). This procedure goes with Kaldor’s argument about the “new wars” which suggests that new conflicts witness the emergence of paramilitary groups and armed forces.

Another feature of the new war thesis that Kaldor points out is that “new” armed conflicts should be considered and understood in the framework of globalization. Borders among states are becoming blurred, there are probably strong connections and maybe roles played by neighboring countries – new conflicts may seem local but still factors may spill over the border. In the case of Xinjiang, it shares important borders with Muslim states such as Pakistan and Afghanistan where the ETIM is thought to be affected by the political Islam identity in these two countries. On the other hand, nationalism in central Asia inspired Uyghur nationalism. Uyghur militiamen had military campaigns in Afghanistan and Pakistan. In the age of globalization, activists and armed factions have great opportunities to use technology (Mukherjee 2016). Gladney argues in his study that the spread of technology and internet which gave the Uyghurs the opportunity to launch campaigns to achieve their right to independence become more organized and heard in other parts of the world (Gladney 2003).

There are many ways in which globalization affected the rise of Islam in China. Over the last few decades, Islamic revival has become a global phenomenon, and China has become part of it. This strengthened the identity of Uyghurs as Muslims as it has become involved with different parts of the world. Stephen Blank states that the growth of violence comes as a result of international violence such as terrorism, which has become an issue in the Muslim world, and the rise of identity politics (Blank 2003). Having said that, it is clearly noticeable that two aspects of Kaldor’s thesis can be mingled together in particular events where globalization is presented with identity politics (Mukherjee 2016). This indicates that the spread of technology played a major role in marketing the Uyghur case and drew so much attention to it. This increased the awareness and anger of Muslims from all over the world who feel so connected to their identity to come and support the Muslims in Xinjiang considered as their brothers (Mukherjee 2016). Nonetheless, it is clear that globalization played a great role in fueling the situation in Xinjiang, intensifying it and increasing the sense of connectedness of Muslims across the globe. This is another aspect of the “new wars” that Kaldor already talked about which is the participation of diaspora in these kinds of conflicts.

Kaldor also talked about how the eruption of these conflicts exists when a state is not able to have a control over its territories, and where the authority of the state is weak and challenged. This is the case of Xinjiang because the Uyghurs wanted to break away from China. In other words, ETIM is a secessionist movement (Mukherjee 2016).

Since China cares about the integrity of its territories, they started to Hanify Xinjiang region. Becquelin has argued that the Han migration had been promoted by Beijing where it is obvious that the numbers of Hans started to increase notably in Xinjiang, especially in the urban areas (Becquelin 2000). For example, The New China News Agency pointed out that in 1997 that “a phenomenon similar to the building sites in Beijing or south China’s booming areas, where waves of migrant workers come looking for jobs, is taking place in northwest China’s Xinjiang” (Becquelin 2000, 72). Uyghurs saw the Hans as outsiders who came to their areas because they believe that they are not a part of China anymore, rather they have their own identity and nation, while on the other side, Xinjiang was seen as a part and parcel of China. This is very much into Kaldor’s “New War” thesis which suggests that in contemporary conflicts it is very difficult to determine what is external and which is internal.

Kaldor’s point about the participation of diaspora was clearly pronounced in Xinjiang’s case, and this kind of participation strengthened the violence in China. Concerning this point, a very famous human rights activist named Rebiya Kadeer has exerted great efforts to free Xinjiang. Rebiya is “the leader of the Uyghur community and although based in the United States, she fiercely supports the movement for a free East Turkestan from exile” (Mukherjee 2016, 34). So, this is a participation from an activist on the civilian levels, but as this paper analysis (study) has mentioned earlier the diaspora community may militarily participate in a conflict either by sending funds or by sending militants to fight against the oppression that is taking place in that state against a certain ethnic group.

Since there was a heavy military presence in Xinjiang, human rights abuses are very much likely to take place. These kinds of abuses have been stated in a report released by Amnesty International in April 1999 explaining these types of abuses (Amnesty international 1999). This is one of the facets of the “new wars” thesis that Kaldor talked about. Other characteristics of the “new wars” thesis can be seen in other conflicts that took place in other places of Asia such as Kashmir.

45.5 Kashmir

Geographically Kashmir is located to the North of India. In the case of the Kashmiri conflict, Kaldor’s idea about identity politics is very much clear. Kashmir wanted independence and refused to be a part of Pakistan or India. India wanted to attach Kashmir because India wanted to promote its secular principles, while Pakistan wanted to attach Kashmir because Pakistan believed that Kashmir was part of the Historical Pakistan meaning that “Pakistan, as a country would be incomplete without being able to incorporate a Muslim region that leans against it. Thus, from the Pakistani side, the element of identity politics is very strong” (Mukherjee 2013, 94). Because Islam is so much present in Kashmir, this reflects the identity politics of Muslims in Kashmir. Moreover, the Muslim community in the diaspora actively participated in the conflict throughout the Jammu and Kashmir Liberation Front (Mukherjee 2013). This reflects Kaldor’s argument about the participation of the diaspora. Another form of the

diaspora is the participation of British Kashmiris who wanted to defend their brothers by fighting next to them since “they feel strongly about the “ummah” (worldwide Muslim community) as a part of their collective sense of Islamic identity” (Mukherjee 2013, 94). This also shows how new conflicts tend to become more ethnic which complicates and fuels them and make them last longer. Another aspect that can be found in the Kashmir conflict is the deployment of the paramilitary. Data states that “in 1994 {Kashmir} had 5,000 troops, all of whom served in Jammu and Kashmir. Some observers expected the force to grow to 30 battalions, with around 25,000 personnel”. Due to the heavy militarization of Kashmir, lots of human rights abuses took place. Amnesty International had revealed the violations in its report titled “Denied” in 2015 (Amnesty International 2015).

45.6 Indian Northeast: Assam and Nagaland

Moving to another place in South Asia to see to what extent the “new wars” thesis is applicable, it is important to also look closely at the conflict that erupted in the Indian Northeast or the Seven Sisters States, namely, Arunachal, Pradesh, Assam, Meghalaya, Manipur, Mizoram, and Nagaland. These conflicts were heavy militarized with no less than 100 armed factions differing in intensity (Tariq 2011). The Indian government’s inability to provide basic needs for the people in these states led to public resentment and dissatisfaction. Feeling exploited in addition to lacking any means of empowerment were the main reasons behind these conflicts and the demand for breaking away and having local autonomy.

45.7 Assam

Assam is renowned for its natural resources as was Xinjiang, though mainly for tea plantations. New Delhi did not pay any attention to the migration from the neighboring countries which was taking place. Thus, tensions between the original inhabitants and the migrants took place, and sometimes these tensions escalated to become conflicts that involved the participation of tribal communities which wanted to have self-independence. The government on the other side was not able to deport the new migrants. Kaldor’s argument about the new conflict involving identity politics is very much clear in what happened in Assam. Another aspect of the “new wars” thesis presented in what happened in Assam is the erosion of the state where the government of New Delhi was not able to deport the migrants. Here the conflict also can be seen, similarly to Kashmir, as a secessionist movement which has been strengthened and wanted to become an independent state due to the carelessness of New Delhi toward what was going on in Assam.

45.8 Nagaland

Nagaland is one of the states of North India and is considered the first and the longest secessionist movement in South Asia, lasting from 1954 to 2010. This means that the people of Nagaland wanted to have their own sovereign state and unique identity. But India had not granted them self-independence, and they decided to break away and fulfill their autonomy (Tariq 2011). Since it came into existence, India has not had good relationships with its neighbors, which is reflected in the Indian Northeast region itself (Tariq 2011). The external intervention of the neighboring countries such as China where the Indian government accused China of providing military assistance to Assam and Nagaland armed groups fueled the situation (Tariq 2011). Nagaland shares an international border line of 258 kilometers long with Myanmar (CDPS 2008). Since there are mutual historical and cultural connectors, Nagaland's rebels were backed by Burma especially by the "Kachins of North Burma" (Hussain 2003).

The neighboring countries' intervention in Nagaland's conflict stirred it up and made it very complicated. By providing the insurgents with arms and training, they "strengthened the forces of secessionism in the region" (Mukherjee 2013, 95). This confirms one of Kaldor's "new wars" thesis elements where there is no clear distinction between whether these conflicts are local or global. In the case of Nagaland, though it seems local, the connections of China and Burma to the conflict are very vital.

45.9 Conclusion

The new war thesis helps both scholars and policy makers analyze as well as understand these conflicts in Asia on a larger scale. It does not only define the patterns of these conflicts, but also explains the causes behind them and the methods in which they are conducted. Kaldor's discussion about the new wars is that they take place when the state is weak and does not have full control over its territories. This creates a context of corruption which has disastrous consequences such as the spread of criminality, and it makes certain groups in the state to become less loyal to the center of the state as is the context of China, Kashmir, and Indian Northeast. These conflicts are primarily secessionist movements. In other words, they are centrifugal movements that want to break away from the mother state and form independent states by themselves. The pronunciation of identity politics is clear in the context of the above-mentioned conflicts which is another facet of the new war theory that Kaldor has talked about, along with other facets such as the effect of globalization, the existence of different military bodies including state, and non-state actors, i.e., paramilitaries and the occurrence of human rights violations in such heavy militarized conflicts. One aspect of the new war theory can interrelate with other aspects. This is the case with the conflicts that this essay analyzed, but it is more evident in the case of Kashmir where the strong hold of identity politics paved the way to have

multiple warring parties which committed human rights violations. Overall, it is true that the new war thesis can be applied to the conflicts of Xinjiang, Kashmir, and Indian Northeast but it looks like that the new war thesis is applied more to the conflict context of Xinjiang than the other areas. In other words, more facets of the new war thesis are clearer in the Xinjiang case than in Kashmir or in Indian Northeast.

In order to identify a solution addressing the conflicts that this paper analyzed, it is important for decision makers to consider the different reasons of the conflicts, especially the grassroots ones. On the social level, the central government of China should stop the Hanification policy which escalated the conflict and widened the crack between the Uyghurs and the Hans where the former always feel themselves occupied by the Hans. On the other hand, handing the development projects over to the Uyghurs that Beijing claimed would contribute to resolving the conflict and make the Uyghurs feel that they are contributing to their land's development, would reduce the tension.

At a political level, allowing the Uyghurs to participate in the political life in China would reduce the enmity toward Beijing and push them to reconsider their ambition of seceding from China. Consequently, taking part in decision making process will create a sense of satisfaction among the Uyghurs who will never feel that they are marginalized. On the diplomatic level, there should be effective negotiation process among the warring parties and a strong will from every side to put an end to these conflicts.

Kaldor's new war thesis can be used to analyze other conflicts that took place in different parts of the world. Even though Kaldor framed her theory on the conflict that happened in East Europe, the new war theory can still be considered a handful frame that greatly contributes in analyzing conflicts that took and still are taking place in Asia, and beyond.

Newman describes the new war thesis as one that "has done a great service in deepening the understanding of civil war" (2004, 186) since it offers an actual analytical approach that analyzes the different features such as the political, social, and economic ones which contribute to shaping the nature of the current armed conflicts. The new war thesis is considered as a novel approach in providing an insight into the causes behind the eruption of armed conflicts, the influence of the globalized war economy, and the manners through which a war can be conducted in addition to the impact of intrastate conflict on humanity (Kaldor 2006). In other words: how the new wars affect civilian lives. The new war thesis greatly describes how the contemporary wars affected the civilian population by having them become a target. Consequently, human rights abuses take place in addition to mass displacement. Taking into consideration these terrible consequences, the new war thesis provides the causes of these results which helps us understand the patterns and trends of these wars and what the potential reasons behind its severity, complexity as well as continuity (such as "identity politics" which was pronounced in all of the conflicts) that the paper sheds light on. The analysis of Kaldor about the use of legitimate power not becoming monopolized by the state when it is eroded, and the rise of several fighting parties motivated by ethnic or geopolitical interests gives an insight into the nature of these conflicts and justifies the participation of the diaspora in different

forms, whether in sending money to the conflicting parties or militiamen to participate actively in the conflicts.

Irrespective of its gaps, the new war thesis is still providing us with great understanding of new and contemporary armed conflicts. Therefore, it is worth to bear in mind that the word “new” in the new war thesis is no longer referring to the novelty characteristics of the contemporary wars, rather it helps us to understand the new armed conflict better and make us differentiate them from the earlier conflicts. Mary Kaldor wrote “the ‘new wars’ thesis is both about the changing character of organized violence and about developing a way of understanding, interpreting and explaining the interrelated characteristics of such violence” (Kaldor 2013, 4).

In response to criticisms claiming that the term “new” was controversial, Kaldor confesses that new wars are not essentially new in the complete sense of the word, therefore, she asserts using this term because of the need for a new strategy to respond to these wars and tackle them (Kaldor 2009a).

Though most of the “new war” thesis patterns are seen in earlier violent armed conflicts, the new war thesis has been written to notify policy makers and make them understand the current wars perfectly to be able to put the right policy forward. Therefore, Kaldor said in an interview in 2009 “my aim was to change the way policy makers and policy shapers perceive these conflicts” (Kaldor 2009a, 2009b, 6). Governments’ procedures are always seen by the population as the reasons behind having political, economic, or social turmoil, therefore, deterrence steps should be taken by governments to prevent having conflicts. Every conflict has reasons, and there is always a way to end it. By exerting excessive efforts to have effective political policies, development plans, disarmaments, integrating armed men into the main military or different security branches, addressing the economic gaps, stopping the message of hatred, and spreading the message of peace, these conflicts will be resolved. This is the role of politicians, decision makers, religious men, and civil society organization. Otherwise, these conflicts will continue and will export radicalism of different forms such as political, religious, and ethnic not only in the place where the conflicts take place but also all over the world. Policy makers were aware of the changes in patterns of warfare, such as Ban Ki-Moon who argues that although classical threats such as terrorism as well as nuclear spread continue to pose a threat to the global world, we “face a new constellation of modern threats” (Ki-Moon 2010).

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Chapter 46

Complex Relationships of Symbiotic Organizations



Elif Gamze Özcan

Abstract This chapter advocates the symbiosis which is established between the different species – in biology discipline they are described as livings within the unions – and can be used as a tool for understanding the formal organizations’ relationship with each other which are social subsystems. Subsequently complex relationships of symbiotic organizations were discussed. With the effects of the complexity theory, interorganizational relationships in literature have recently been evaluated as symbiotic organizations. With this study, symbiotic organizations as an analogy are discovered and described with its biologic literature base. Symbiotic organizations phenomenon is described with definitions and discussions, and the importance of this study is located next to other views. Complex symbiotic relationships of the organizations are discussed in the last section of this chapter.

46.1 Introduction

This chapter advocates the symbiosis which is established between the different species – in biology discipline they are described as livings within the unions – and can be used as a tool for understanding the formal organizations’ relationship with each other which are social subsystems. Subsequently complex relationships of symbiotic organizations were discussed.

With the effects of the complexity theory, interorganizational relationships in literature have recently been evaluated as symbiotic organizations.

E. G. Özcan (✉)
Muzaffer Çil Anatolian High School, Eskişehir, Turkey
e-mail: egamzeozcan@gmail.com

46.1.1 *Symbiotic Organizations*

Since *The System of the World*, which is part of Newton's *Principia* that was submitted to the Royal Society of London on the 26th of April 1686 talking about the law of universal gravitation, was applied to the social structures as much as the organizational management, science has grown rapidly, and the scope of science has expanded to an unbelievable extent (Prigogine and Stengers 1998, 33). The existence of new paradigms which are suitable for the twenty-first century has been caused by new developments in cultural, social, and economics fields. The diversity of new paradigms has caused people to think about how to clarify those paradigms and also to comment on and question them. Especially, there are paradigms in cultural, visionary, and quantum leadership. In addition to this, research that has been conducted on the relationship between organizations has been popular (Akbaba 2012, 33).

The closed-type system of organization, which works like a clock (Erçetin 2001, 37) that is the symbol of mechanic functioning and has a definite input, operation process, and output, has changed in time, and the idea of an open-living system which doesn't have a mechanical working like a clock (Balçı 2014, 122) unlike the predictable and stereotyped behavior of human system has become more valid. With a more flexible job definition, it has been emphasized that some kind of "organic" organization which would enhance the mutual cooperation and enforce the organizational relationships will be beneficial (Eren 2004, 594), and the phenomenon of living systems which can be explained with chaos and complexity theory (Tüz 2001, 20–21) has emerged.

Organizations, which are social systems created and maintained by people (Kaya 1993, 83), have complicated relationships with other organizations, and they evolve in this direction by maintaining their relationships. Because open-living systems take complicated organic molecules as input, they process them and become more complicated in this way (Erçetin 2001, 36–37). According to the concept of open system, organizations obviously live in symbiosis with their environment, whether in order to reach their goals and ensure effectiveness as when looked from the perspective of task or because of their cooperation as required by their structures, norms, culture, and cognitive roots like in organizational theory (Aldrich 2008, 290; Hoy and Miskel 2010, 253–267; Pfeffer and Salancik 1978; Ulrich and Barney 1984, 472). For example, interorganizational process which starts with the conceptualization of societies and cities as the "total of organizations which emerge, disappear, change, merge and establish with each other" has recently been analyzed in the field of sociology because the approaches and terms used before in literature fail to define the social structures of urban societies which become more and more complicated every day (Turk 1970, 1). According to Sharfman et al. (1991, 181), emergence of interorganizational partnerships in different types and shapes made it necessary for organization theories to be reevaluated; and Klijn excluded interorganizational relationships from the field of organization sociology and suggested a different concept (Klijn 1997, 19).

Interorganizational relations provided a basis for “system concept” (Türker 2010, 71) which asserts that it is more effective to analyze the organizations within a scope and in terms of the relations with other cases instead of analyzing separately and independent from environmental conditions. The system concept which gets included in the organization and management literature from the science of biology and tells that the organizations supply information, human, money, etc. from environment in accordance with their goals of foundation has “evolved” with a biologic analogy in itself. As this evolution process still goes on, the order of interorganizational relations in complexity which can be explained to some extent with system concept evolves as symbiotic organizations in chaos and complexity of modern day. As in the system concept, the term symbiosis is of biology origin, and it is a successful term in corresponding to the interorganizational relations in the field of organizational behavior.

As organizing of people in order to reach their common goals together, interaction and cooperation of the organizations are a natural process. Thus, individuals belonging to a population¹ in nature associate with individuals belonging to other population to make life easier. As in lichen² symbiosis,³ fungi species and green algae may unite with each other on the basis of cell⁴ or tissue⁵ and provide each other the raw materials they need from the nature. This is an obligate association⁶ which both sides benefit from. There is a non obligatory beneficial association between shorebirds and Nile crocodile which they feed by cleaning their teeth on.⁷ However, their association may not always be beneficial for both sides. Pilot fish which swims over or around sharks feeds on the remainder of shark’s prey. In this association, while pilot fish feeds, sharks neither benefit from pilot fish nor get harmed by them.⁸ There is also the kind of relationship which is based on the exploitation of parasites like pinworms living in intestines, and while one side suffers, the other side benefits⁹ from this relationship. Having so many examples from natural life relationships like these which are examined under the branch of ecology of biology, the phenomenon of symbiosis¹⁰ exists among the organizations founded by human beings as well.

We know that human communities are pretty complex systems which have fearful number of potential bifurcations exemplified with cultural diversity it developed in relatively short history of humanity (Prigogine and Stengers 1998, 364).

¹Population is the group of organisms of the same species which live in a particular geographical area.

²Lichen is the composite organism that arises from algae or cyanobacteria (or both) living among filaments of a fungus in a symbiotic relationship.

³Symbiosis; living together.

⁴Cell; the functional basic unit of life.

⁵Tissue; a group of biological cells that perform a similar function.

⁶Mutualism.

⁷Protocooperation.

⁸Commensalism.

⁹Parasitism.

¹⁰Symbiotic life.

Accordingly, any development in an area in the process of evolution affects and changes the other, and this change makes others and the first system different and complex. Nature and artifact, art and technique, and culture and civilization evolve and reshape in a coherent integrity (Erçetin 2001, 12). Rosnay argues that this evolution is universal and human beings are the cells of this evolution. All people are connected to each other with artificial organizations and communication network they created and form cyber¹¹ living beings as a whole (Rosnay 1998, 17–18).

Cyber living being is a macroscopic living being corresponding to the data of macrobiology and symbiotic evolution, in other words, a physical, organic, and natural creature. They are born like other living beings, but also they are manufactured. They have spirits, they live, and they control their functions, but they are kept alive from the interior by cells. This is self-structuring. Symbiotic human of the third millennium is a neuron capable of thinking itself, part and whole, inner sphere, and its own consciousness. In this way, there comes up a fluid, reticular, and continuously configured brain network (a.g.e. 344–345). Thus, it is important to be the accelerator and creator of coevolution process which is in progress in the third millennium and to succeed in being a symbiotic human and making the life common. Because in order to maintain existence, it is important to attend and contribute to this process which seems irrevocable. Attending and contributing to this process provides the opportunity to control the disparities that will endanger the future of humanity in this process (Erçetin 2001, 13). Reflection of these ideas on organizational behavior is cybernetic system metaphor. According to Leblebici, in cybernetic system analogy, organizations reorganize their actions according to negative feedbacks from the environment like the brain processing the information, and in this way it can maintain the balance with the environment (Leblebici 2008, 354–355).

Just as the information processing is compared to the functioning of the brain, symbiotic relationships of organizations with other organizations may be compared to the symbiotic relations in biology. Rosnay associates businesses to a super organism in evolution like a living system from the symbiotic point of view. According to the symbiosis model, organizations are crossbred system evolved in a distinctive place, both biologic and artificial and human and mechanical and under distinctive difficulties and restrictions. Its functioning depends on symbiosis relations between human beings, machines, and other organizations at various levels (Rosnay 1998, 244). Because systems consisting of many organizations consist of individuals whose actions affect each other according to a formal system. Thus, structures of the organizations are the result of mutual actions of formal and informal aspects. This structure itself is an adaptable organism as a whole and reacts to the effects from the outside (Selznick 1948, 28). Besides, stability of the organization depends on its healthy relations and collaborations with the environment (Selznick 1948, 34).

¹¹ The term cyber arises from the roots of cybernetics. It was firstly used in 1958 by Louis Couffignal who was regarded as the father of cybernetics science which explores the communication discipline between organisms and machines.

Relations established within the scope of coevolution between individuals, organizations, and machines make the mutual adaptation of structures and functions easier. Adjustment and arrangement of evolutions in different subjects and coordination and synchronization of the operations owing to better comprehension of system dynamics create the convenient conditions for coevolution (Rosnay 1998, 349). As a result of symbiotic evolution, organizations with the features of promptness in action and reaction, adaptation, flexibility and ease in functioning, skillfulness, vitality, intuition and foresight, open-mindedness, imagination, and innovation carry on, that is to say, smart organizations survive (Rosnay 1998, 248; Erçetin 2004, 67; Kayman and Erçetin 2014, 244, 249). Organizational intelligence is the ability of learning and managing information and using this information to take effective decisions and adapt to the change (Iyer and Ghosh 2009, 31; Erçetin et al. 2011, 11, 257). Dynamic intelligence of an organization is a sort of reasoning and using skills which enables to adapt and influence the organization to its environment (Erçetin 2008, 5).

To sum up these ideas briefly, systematic and symbiotic culture has met with the organizations as well as the new fields of science and technology. System theory has been successful in business management and configuration of expansive information networks, ecology, and medicine. Reconfiguration of the businesses, reticulation of organizations, and flattening of hierarchic structures are the indications of the paradigm shift we experience. This paradigm shift is catalyzed owing to the emergence of biologic and ecologic culture apart from the mechanics dating from the nineteenth century with new information and communication technologies (Rosnay 2000, 239).

In addition to symbiosis approach of Rosnay which generalizes all organizational systems, there are some researchers who argue that even if not all, some features of organizations are influenced by interorganizational symbiotic relationships. In their articles named “Collective strategy: Social ecology of organizational environments” dated 1983, Astley and Fombrun evaluated the organization and environment relations on the basis of interorganizational association relations and analyzed focusing on commensalism and symbiotic relationships, which are two of the kinds of phenomenon of symbiotic relations in biology. They categorized boards of trade and trade associations as cartels which control the economy of the organizations they are affiliated to and indicate indirect commensalism based on flow of information. They categorized the managements of the same kind as the organizations which control each other with social sanctions or competition and indicate direct commensalism based on the workflow. They categorized the state offices as the organizations which control each other with legal sanctions and indicate direct symbiosis based on the workflow. They categorized the organic societies as institutionalized legal network organizations and defined them as organizations which control each other with political impact indicating symbiosis based on impact flow.

As it is considered as necessary to understand such sources in literature and to comprehend and define benefit-harm interactions of symbiotic organizations, it is necessary to explain the biologic categories of symbiosis which include commensalism, mutualism, and parasitism. According to Keeton and Gould, these categories about

Table 46.1 Symbiotic relationship types between two living beings

Symbiotic relationship types	Benefit or harm situation ^a
Commensalism	+, 0
Mutualism	+, +
Parasitism	+, -

Source: Keeton and Gould (2003, p. 483)

^aSymbolization descriptions +, Side benefits -, Side suffers 0, Side is not affected

symbiosis help us organize what we know about nature and shape them as testable hypothesis (Keeton and Gould 2003, 483).

Symbiosis comes from the term symbiosis in biology. Symbiosis means living together or mutualism (Walpole et al. 2011, 366). Living beings prey, feed, or protect themselves more easily by means of symbiotic associations. Moreover there are some groups of living beings which get harmed by some associations. Symbiosis is the associations which include commensalism, mutualism, and parasitism between the living beings¹² (Walpole et al. 2011, 593).

Commensalism is the situation in which one side of two species benefits and the other neither benefits nor gets harmed. In mutualism, both species benefit and in parasitism, one side benefits and the other gets harmed (Keeton and Gould 2003, 483). In parasitism, parasite doesn't generally kill its host but makes it weak against predators, its opponents, and other stress sources (Solomon et al. 2011, 1218). A human being is both a commensal and a parasite with respect to certain overall functions of the Earth (Rosnay 2000, 72) (Table 46.1).

Symbiotic relationships between living beings are also used to explain leadership in organizations. In his study dated 1992, "Symbiotic leadership: A creative partnership for managing organizational effectiveness," Edwards defines symbiotic leadership as a leadership which promotes all of the members of organization to increase their contributions to the organization and thus increases the performance.

The phenomenon of interfirm symbiosis appeared in Haruki Murakami's study "KYOSEI Movie of Japan" published in 1994. *Kyosei* was used in the meaning of symbiosis, and symbiosis was discussed for both competition relations and associations they formed with local and interregional firms. He explained the success of Japan in coming out of the crisis without any loss as a management move which helped the businessmen question themselves.

There is a similar study titled "KYOSEI as a New Management Mentality" published by Özgen and Doğan in 1996. Writers compare the connection of behaviors between people to symbiotic relationship. According to this comparison, symbiotic cases between people hold people together in their economic and industrial relations. Symbiotic relationship is defined as the ability of two beings to dwell on those who are different and have no common grounds but live together, share what they have, and live on in this way.

¹²Protocooperation may be added to these categories. However, in many resources, protocooperation is associated with mutualism.

Another study where symbiotic leadership is mentioned is Doğan's PhD thesis "Management and vision-based leadership" dated 1999. According to this study, leaders/managers and employees are partners, and they depend on each other for their success. This kind of relationship contributes to both sides and leads the firm to success.

Köksal's study in 2011, "The new way of gaining organizational effectiveness: Symbiotic leadership," tells that with the implementation of symbiosis concept in business literature, there developed more relationships based on mutual assistance; thus, organizations provided a competitive advantage. While this study focuses on symbiotic relationships between the businesses, it leaves the case of getting harmed by relationship out of the scope and focuses on mutualism. The primary concern of the study is the symbiotic leadership implementations of businesses. The type of symbiotic leadership enables organization members to show their abilities and encourages them to contribute to the organization. Besides, it is emphasized that the teams carrying on activities within the organization indicate the characteristics of symbiosis.

As is seen, in literature, interorganizational symbiotic relationship is used in the meaning of business partnerships established with agreements between profit-oriented firms. Another example for this is Davis and Eisenhardt's study in 2010 titled "Rotating Leadership and Collaborative Innovation: Recombination Processes in Symbiotic Relationships." Writers defined interorganizational relationships as the heart of organization and center of organizational innovation. They gathered information, meeting with employees from various organizations and making use of other communication means. The focus of their study was the question that while some of the technological partnerships between ten firms in the computer sector and communication sector bring innovations, some partnerships didn't do the same. It was understood that recombination processes like transformational leadership are important for interdependent and dynamic environments like in the computer and communication sectors in terms of developing symbiotic relationships.

Erçetin and Neyişçi's article in 2015, "Social Networks: Connections in structures," focused on the fact that the interactions between groups, organizations, and societies are established with various connections, and these connections may be useful in defining these societies. In addition to being in the form of material or service sharing, these connections may arise from closeness or legal foundations.

Relationships based on interorganizational assistance are defined with the concept of interorganizational citizenship (Özdevecioğlu 2009, 47). Although the concepts of symbiotic organizations and interorganizational citizenship resemble each other, symbiotic organizations don't only consist of associations which include mutual benefit. Symbiosis may include the relationships which while benefiting one side don't effect or even harm the other. In other words, the term of symbiotic organization is a concept which includes and embraces the concept of organizational citizenship. Studies carried out about organizational citizenship owing to its closeness to the phenomenon of symbiotic organization are within the scope of literature search of this study.

Özdevecioğlu's study of 2009, titled "Interorganizational Citizenship Behaviors: Theoretical Framework and A Study of Scale Development" presents that there are dimensions of interorganizational cooperation. These dimensions are interorganizational tolerance, interorganizational loyalty, interorganizational honesty, interorganizational assent, interorganizational constructiveness, interorganizational relationship-development and the dimension in which one organization develops another. Besides these, the study develops a four-dimensional evaluation instrument that organization can use to question interorganizational citizenship behaviors.

While interorganizational relationships are analyzed in literature (Murakami 1994; Doğan 1999; Davis and Eisenhardt 2010; Köksal 2011), the cases of mutual benefit are generally exemplified with commercial partnerships, and their competitions are exemplified with their moves aimed at keeping or expanding their market presence. In this respect, stress is set apart as the result of benefit or interorganizational competition. Competitor firms go into a marketing partnership, but this situation doesn't mean they are symbiotic.

In short, studies closest to the subject of symbiotic relationships between organizations briefly analyzed or deduced these matters:

1. Symbiotic leadership: it has been defined as a leadership which encourages the organization members to contribute to the organization and thus increases performance.
2. *Kyosei*: it has been used in the meaning of symbiosis for Japanese firms; symbiosis is mentioned for both competition relations and partnerships of local and interregional firms.
3. Symbiotic events among people keep them together in economic and industrial relations.
4. With the implementation of symbiosis concept in business literature, there developed more relationships based on interorganizational mutual assistance; thus, organizations provided a competitive advantage.
5. Interorganizational symbiotic relationships in business literature have been used in the meaning of business partnerships established with agreements between profit-oriented firms.
6. It has been understood that recombination processes like transformational leadership are important for interdependent and dynamic environments like in computer and communication sectors in terms of developing symbiotic relationships.
7. Interorganizational citizenship: relationship based on interorganizational assistance has been defined with the concept of interorganizational citizenship.

In literature, the cases of mutual benefit are generally exemplified with commercial partnerships, and their competitions are exemplified with their moves aimed at keeping or expanding their market presence, but as in the case of parasitism, it is not argued that there is a possibility of getting harmed by these relationships. This difference sets apart the concept of symbiotic organizations from the scope of interorganizational relationships and makes it easy to comprehend the evolution of the phenomenon of symbiotic organizations and distinctness of this phenomenon in a state of chaos and complexity.

46.2 Complex Relationships of Symbiotic Organizations

In the twenty-first century, interactions of various disciplines are at the center of attempts and discussion about redefinition of approaches which will be adopted by scientific researches. As a result of these attempts and discussions, management science is expected to constantly define and improve itself using the findings of other disciplines (Erçetin and Kamacı 2008, 865). At the present time, management and control of human communities in real time and directing of evolution meanwhile necessitate a new culture of complexity. Although biology and ecology provide the key elements of such a culture (level of structuring, feedbacks, adjustment mechanisms, adaptation, networks and cycles), the necessity of a more systematic and far-reaching symbiotic culture will be felt. General theory of the dynamics of self-structuring and complex systems (i.e., symbiosis), hybridization of natural and artificial, mechanization of the field of biology, and more biological machinery are significant tendencies which feed and strengthen this necessity (Rosnay 1998, 311).

Symbiosis, which is defined as the associations of different species in their natural life (Keeton and Gould 2003, 483), is used in the literature of organization and management science in the meaning of the evolution of human beings, organizations, or other systems formed by humans by means of relationships between each other, and it is defined as symbionomy (Rosnay 1998, 63–64, Erçetin 2000, 510). Symbionomy analyzes a synthesis taking place between the sciences of complexity and chaos theory and between analysis (polysemy/unlimited thinking) and systematics which separates the fields of interaction into various systems in sociology (Erçetin 2000, 510).

Rosnay (1998, 59–62), who assumes that all natural systems have a chaotic order, expressed the general theory of self-structuring and dynamics of complex systems with the concept of symbionomy. He defined the term symbiosis (or in other words, symbiosis) as the analysis of the emergence process of complex systems by means of self-structuring, self-selection, coevolution, and symbiosis. Accordingly, he mentioned the symbiotic processes or evolutions to describe the cases related to the emergence of structured complexity similar to the ones in molecule systems, insect societies, other social systems which he meant as businesses, markets, and economies; and ecosystems. He used the concept of symbiosis for both natural systems and in a way that will include similar relationships people built in the artificial world with machines, organizations, networks, or cities (Rosnay 1998, 63–64).

There are three important points about symbiotic evolution (Rosnay 1998, 66):

1. From elementary particles to communities, structures, and organizations which are built by and evolve with human beings, there is a completely “generalized” evolution.
2. This evolution is not linear; its acceleration is not unidimensional as well. It takes place in multidimensionality in separate “time bubbles” which have different densities and different time “qualities.” Each symbiotic evolution takes place in a fractal time.

3. Symbiotic evolution can be presented with a spiral orbit. In each turn (self-organization, coevolution, symbiosis, emergence), a new degree of complexity emerges, and there comes the next level in hierarchy.

There are some concepts we need to know in order to understand better the symbiotic evolution which regards every organism living in micro- or macro level as actor and which actualizes with chaotic mechanisms. Rosnay explains these concepts as follows (Rosnay 1998, 64–67):

Agent: an individual operator with functions that allow it to act on its environment (molecules, cells, bees, people, companies, organizations).

Links: agents have mechanisms and means of connection and assembly, an interaction that allows them to create material or immaterial links with each other.

Reproduction: agents can encode and reproduce their structures and functions.

Reinforcement: exchanges among agents are enhanced (or eliminated) by the reinforcement (or inhibition) of certain links or regulatory loops.

Network: agents, with their links and exchanges, form the nodes and connections of networks in which multiple operations are carried out in parallel, simultaneously.

Chaos: the dynamics of interactions lead to random fluctuations, generating a large variety of unpredictable states, situations, and behaviors.

Amplification: certain states, situations, and behaviors are amplified by positive feedback, quickly absorbing flows of energy, matter, and information. Amplification can come about from autocatalytic or cross-catalytic reactions among many agents or subsystems.

Self-selection: acceleration resulting from amplification mechanisms isolates the system in a time bubble of higher density, leading to a temporal divergence with other systems in evolution. The system self-selects through the competitive exclusion of concurrent systems.

Organization: an individual system that can maintain its own structure and functions. An organization is defined by its overall functioning which results from the interactions among the agents that make it up (cell, company, city, society).

Emergence: the overall functioning of a complex system leads to the emergence of unpredictable new structures, functions, and properties.

Transmission: information related to structure and function and to relational, reproductive, and evolutionary mechanisms is stored in memory in a coded form that can be passed on to subsequent generations. This coding can have a material or immaterial form (the shape of molecules, DNA, plans, laws, social codes, cultures).

Symbiosis: an association of organisms or organizations that results in mutual benefit to the partners. These associations are created through the mechanisms of coevolution, and they give rise to more complex forms of organization. A new generation of agents may be born.

Multiple agents who have the ability to reproduce and maintain their structural working build up a community with their environments. Chaotic interactions taking

place by means of communication networks between them bring out many various structures, situations, and behaviors. Some of these behaviors gain strength with positive feedback mechanisms, protect themselves, and survive with the operation and effects of catalysis mechanism. Autocatalyzing results in self-selection and acceleration of evolutions of the systems which have best adaptation to environment (Rosnay 2011, 314).

46.3 Solutions and Recommendations

This phenomenon, which is called symbiosis, is founded as based on mutual benefit of two organizations; it facilitates the life of organizations, but it may harm the sides unilaterally or mutually. For example, while the organization gets financial support or service from the organization b, the organization b may add its own ads on the products of this organization. Such approaches are seen not only in the private sector but also in the public sector. For example, let's discuss the relationships of schools with other organizations it has symbiotic relationship with; schools are in symbiosis with the municipality, district directorate of national education, and canteen. Municipalities carry out environment planning for schools, provide financial support in school ceremonies, or procure vehicles, but they advertise by flying the municipality flags over the schools. They mutually benefit. As for the harmful relationship, when there is corrosion at schoolyard, municipalities pave the ground with asphalt and demand money for this from the school. As they demand too much money for the school to pay, school conveys this need to its legal symbiosis, for example, to district directorates of national education. The district directorate of national education conveys this demand to the provincial directorate, gets the answer, and conveys to the school; correspondence goes on and this bureaucracy wears out the school, but in the end, the school gets financial support. The district directorate for national education which mediates between the school and provincial directorate of national education doesn't always provide benefit for the school. It takes share from a part of the income of the school canteen. It exploits one of the insufficient financial potentials of the school while it benefits. And the canteen is run by private enterprises which gets the tender initiated by the school. While selling food and stationery to the students, it gives part of the income to the school. Although there may be sometimes mutual benefit, canteens underhandedly sell the products which aren't allowed by the school and cause health and discipline problems at school. As it is seen, a symbiosis includes the dimensions based on not only mutual benefit but also mutual harm. Then, the concepts of interorganizational relationships or organizational citizenship are insufficient in defining these complex relationships. We should use the concept of "symbiotic organizations" as it corresponds to both the multidimensionality and complexity of interorganizational relationships.

46.4 Future Research Directions

Evolution, which occurs from mechanic conception to complexity theory in understanding of organizational behaviors, changed the idea of regarding organizations as a closed book into symbiotic organizations. In this 100-year process, perceptions of the subject moved with the times as well. Profit-oriented businesses live in symbiosis based on partnerships in the matters like material supply, in-service employee education, product marketing, and transportation and establish more qualified relationships in comparison with public organizations. In the future public organizations will substantially free themselves from these bureaucratic ties which slow down the adaptation and leading of this rapid change. Thus they will be able to establish more active relationships in the environment of organization without establishing symbiosis because of legal obligations. New studies may be carried out about the problem in this respect. Besides, it mustn't be forgotten that symbiosis doesn't only rely on the basis of benefit, also it may cause harm, and so "symbiotic organizations" or "interorganizational symbiosis" concepts should be studied as it examines the dimension of getting harmed instead of the concepts; "interorganizational relationships or organizational citizenship" which have limited scopes.

46.5 Conclusion

Both private and public organizations build symbiotic relationships due to reasons like positional proximity and legal obligations. Organizations may benefit from these relationships or one side may benefit while other is not affected or one side may benefit while other gets harmed. Besides, benefits and harms may be in different dimensions. In such cases, domination levels of the sides, in other words, the benefit organization gets from a symbiotic relationship it built with another organization, should be compared, and the future of this symbiotic life should be questioned. The concepts of interorganizational symbiosis or symbiotic organizations which derive from biologic literature and become a specific term with its subdimensions defined with this research will enable the lives of organizations to be understood in today's complex order.

46.6 Key Terms and Definitions

Adaptation: Keep pace with change

Commensalism: Commensalism is the situation in which one side of two species benefits and the other neither benefits nor gets harmed

Mutualism: In mutualism, both species benefit, and in parasitism, one side benefits and the other gets harmed

Parasitism: In parasitism, one side benefits and the other gets harmed

Symbiotic Organizations: Organizations' associations based on one side or mutual benefit or one side exploitation

Symbiotic Evolution: All living systems drive coevolution up to their nature sharing, energy shares, and needs

Symbionomy: Symbiotic relationship and its evolution established with each of the artificial system created by humans

Symbiotic Relations: The symbiotic relationship maintains between livings exist in nature, people in social systems and in all systems of man-made structures.

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Chapter 47

In Chaotic Situations in Preschool Institutions, Do Leaders Reach Through the Game?



Behiye Ertaş

Abstract This study was conducted taking into account the chaotic situations that frequently occur in schools in Turkey. Within the scope of the study, 34 “teachfers who work in the kindergartens in Yozgat in 2016–2017 academic year were asked about the situations that would create chaos in their classes.” Class environments are social constructs in which chaotic situations can emerge, and leaders may emerge depending on the starting points of these chaotic situations. When the circumstances are considered in this context, it is not possible to predict when a preschool class will go into chaos, who can assume the leadership role accordingly, and the consequences of these situations. Given the chaotic situations of the classes in this study, games were prepared taking into account the “processes that are expected to be drawn in the leadership profile” of Erçetin ŞŞ, Açıklan ŞN, Bülbül MŞ (2013). A multi-dimensional approach to leadership in chaotic environments. In: Chaos and complexity theory for management: Nonlinear dynamics in the “Multidimensional Approach to Chaos Environment and Leadership” studies.

47.1 Introduction

Situations that are defined as “chaotic” in preschool education institutions have come to the fore recently. The authors of this article took into consideration the situations in which class complexity may arise in that sense. In the first part of this article (background), the authors addressed the concept of chaos. In the central part of the article, some games were suggested in terms of helping student teachers to be ready for the complexity and unpredictability of the classroom, taking into consideration the basic features of chaotic systems and the ways to reveal leadership skills in students.

Within the scope of the study, 34 teachers working in kindergartens in Yozgat during the academic year of 2016–2017 were asked the question “what are the

B. Ertaş (✉)

Bozok Universty, Vocational School of Health, Department of Child Development,
Bozok, Turkey

e-mail: behiyeertas5884@gmail.com

Table 47.1 Chaos Conditions

Chaos conditions to occur	Frequency (f)
Not sharing toys	20
Hurting friends	17
Crying	15
Abduction	12
Complaints	8
No eating	8
Non-sequencing disruption	5
Disrespectful behavior	5
Harming school property	4
No one wanting to brush their teeth	3

elements of chaos in your class?” The frequencies and percentages of the situations that might generate chaos in response to the responses are calculated (Table 47.1). Games were prepared to prevent the butterfly effect out of the size of the chaos to be prevented in advance in the preschool education institutions. It was decided that these games prepared in 2016–2017 education year can be applied by playing together with the students of the child development department of a university. Opinions of five teachers and one psychological counselor were obtained about whether the games would have effects on chaotic situations. Changes were made to the games in the direction of the teachers’ suggestions.

47.2 What is Chaos?

According to dictionary definitions, the chaos universe lacks the form before it enters the plane, and its incongruous and mixed situation is in a state of turmoil. When we look at the scientific meaning of chaos, there is a discipline that examines interrelated situations and processes that exist in the events that appear at random, and the following are the basis of these events: a smooth flow from irregularity that shows random behavior and whose rules of operation will never be known. In this context, chaos is not only a matter of “mess” but also a “theory” (Mutlu and Sakiç 2006). Erçetin et al. (2013) say that chaos is also the reality of living and regulating systems for organizations and people at the same time. Karaçay (2004) refers to dynamic systems or behaviors that do not predict chaotic behavior. When we think of a paradigm shift in the past, Erçetin et al. (2015) represent a great change in the chaos theory, simply shifting the concept of traditional chaos: unorganized, irregular, random, etc. The theory of chaos actually means that the apparent “chaos” does not originate from random or unknown factors due to chance, contrary to the fact it does not coincide with the traditional idea. Therefore, chaos theory is about nonlinear relations that cause something to appear at random. According to Erçetin (2001),

paradigms vary considerably in this regard. The dimensions of these transformations are as follows: (1, 2) complex social systems are in chaos and rearrangement. (3) Small changes in the system have great effects (butterfly effect). (4) Complex social systems are institutions that interact with simple and complex external environments. Models used in other disciplines should also be used in social research.

According to Wheller (1989), the effect of the wing flapping in Beijing is influenced by the weather in New York a month later, as Erçetin (2001) mentions that it is from chaos dimensions. To exemplify the effect of butterflies on pre-students, one should think about not sharing a game with their friends. Two students are fighting because of the toy brought on the toy day. The situation is getting bigger; they are hurting each other, one's head is swollen, and the other's head is purring. That evening the student's father and his wife go home and see these bruises and swelling on the child's body. The next day the parents come to the school and ask for a teacher account. The situation is getting serious and is carried to school administration. The investigation is open. The teacher and the school administration are restless. The restless teacher reflects this situation to his wife and children at home as well. The chaos of not sharing a small toy among the main class students affects the teacher's home child. Butterfly effect affects each member like a chain.

According to Radford (2006, 84), schools are organizations formed by circles that consist of multiple interrelated elements, which also develop from many other unpredictable elements. There are potentially too many special point directives for organization, and most of the hidden factors affect the organization or institution. If this situation were to be considered in preschool institutions, there would be a lot of situations that would impact students obscurely. An example of this is any kind of tension between two children. Problems may arise when the complexity of the systems continues for a short period of time (Erçetin et al. 2014). When a system approaches the edge of a chaos, a very small change in environmental conditions will not only lead to unpredictable results but also to non-repeatable results that cannot be repeated at the same time. In order to prevent this, organizational managers should protect the organization from approaching this shore, literally dancing or surfing the organization near the chaos (Smith and Humphries 2004). A preschool teacher must also take precautions to avoid situations that cannot be predicted when approaching the chaos in the classroom. He should intervene urgently in cases he observes.

Baker (1995) mentions that decisions and behaviors that are considered to be minor in educational systems can produce enormous effects. According to Trygestad (1997, 8), classes are nonlinear and chaotic, and processes are unpredictable. Teachers respond by chaos classification method to reduce ambiguity and increase the desired behavior rate. In this context, a preschool teacher can also avoid unwanted behavior that creates chaos in the classroom. For this, it will be very convenient for the students to use games that appeal to a lot of intelligence. It is possible for a child in a game age to gain many behaviors with the game. According to Töremen (2000), it is emphasized that learning and thinking are nonlinear systems and that even very simple nonlinear systems include very rich dynamic behaviors, which is an invigorating element for the chaos education system. In this case it can

also play a revitalizing role in a preschool institution. Even chaotic situations can change the direction of their results, making the teacher entertained.

According to Gleick (2000), when a snowflake drifts into the Earth and falls to the ground, the preferences made by the branched ends are precisely tied to conditions such as temperature, humidity, and the presence of dust particles in the atmosphere, each falling from the atmosphere, and the final forms are quite different from each other. Even if a snowflake is affected by the environment, it is not possible for each child to be affected differently from each stimulus he or she receives, while the shapes are different. Therefore, the theory of chaos tells us that minor changes will cause great effects. When organizations predict potentials in the future, change and chaos will become an opportunity (Erçetin and Kayman 2014). Cvetek (2008) suggests that teachers should ensure that learners accept the complexity and unpredictability of teaching as natural conditions and help them become “chaos representatives” in class. To accomplish this task, teachers must accept the complexity and unpredictability of their teaching environments and thus create new possibilities for learning and development of students. The complexity assumes predictability and stability assumption, as well as the balance between uncertainty, innovation, and change. This reality enhances the interest of leadership theories by reflecting the complexity of the world (Neyişçi and Potas 2014). Chaos and leadership issues can be classified, combined, and rated in various ways (Erçetin et al. (2013).

In preschool classes, teachers should also intervene in situations of complexity in class with the help of games. They should even try to uncover leading individuals in their class using these situations. It is now accepted that play is one of the most important spiritual foods for healthy development and education of a child in the physical and spiritual direction, being as important as nutrition and sleep and after love (Aral 2000, 15).

47.3 What is Leadership?

There are a fair number of definitions in the literature on leadership. Leader, as a word, conjures images of effective and dynamic individuals who capture superiority (Neyişçi and Potas 2014). According to Lipham, leadership is the beginning of a new structure and path toward achieving or changing goals. According to Stogdill, leadership is the process of influencing the activities of a group organized in order to identify goals and achieve goals (Aydın 2014, 151). Vries (2007, 20) describes leadership as a person who shows the way to the people he moves on foot to the front. When the difficulty of defining the leadership was accepted, Erçetin (2000) mentioned the following judgments on leadership. Leadership and management are different. Leadership is not tied to a formal position. Leadership is politics. Leadership is cultural. Leadership is a phenomenon that requires spiritual processes such as determination, risk-taking, self-confidence, giving importance to ethical values, and rational thinking. Neyişçi and Potas (2014) state that individuals interact

with each other in relation to leadership qualities. Thus, the braid and the resources are brought together in useful ways to this end. In general, a definition of leadership can be “the process by which an individual influences a group or organization to achieve a common goal” (Northouse 2014, 5). Leadership has many different values and qualities when it comes to management and when it comes to confrontation as an important issue. Institutions need to organize themselves to realize their human ends, which are seen as the most precious and crucial elements. In addition to these developments in the global dimension, organizations need to find new forms of leadership. If we consider the contemporary reflections of the term, leadership now includes terms such as organizational culture and empathy, influence, and identity for organizations (Erçetin 2000).

47.4 Are Leaders Born or Made?

“A natural leader, a natural leader” is a very audible concept. These expressions are by those who consider leadership with regard to personality traits. Such point of view of personality suggests that individuals have features or qualities that naturally lead them and that these characteristics distinguish themselves from those who are not leaders (Northouse 2014, 7). According to Adair (2004, 17), the born leader will naturally emerge in some way. Because the qualities of the mind, the spirit, and the character will give him a definite and unquestionable title, which means that an individual with innate leadership skills will emerge sooner or later. On the other hand, the leaders of Acuner (2002) evaluate the existing problems as problems that can be solved and anticipated, and these people can be seen as those who take precautions, and the common feature of them is not to preserve what is present but to have a vision and also to lead this structure so as to affect other people. These values that make up today’s understanding are the components of emotional intelligence such as being creative, being empathic, getting to know yourself, establishing good communication, and adopting our understanding. These are not inherited properties but features that can be improved later by experience and training. In other approaches, Dobrzanska (2005), in his work, states that “Leader is not born, he is a leader.” Peterson (2001, 151) speaks of two approaches to learning, based on learning, about the training of leaders. These are experiential learning and school-based learning (tutor-based) theory-based leadership training models. According to Erçetin et al. (2013), leaders, in a chaotic environment:

1. Is aware of the system first
2. Explores the basic elements affecting the system
3. Periodically discovers the relationship of those who act on the system from these elements
4. Takes this network into account when making management decisions

They stated that a leadership profile should be taken into account, also bearing in mind their processes.

In this case, the teachers have to apply for the first game they do to the children in play to prevent chaos in the kindergarten and lead the leaders out of these environments. While the following games were being prepared, the processes by Erçetin et al. (2013) were followed.

47.5 Games

Game related to chaotic situation where a toy is not shared:

1. **Game name:** You and I also play

Explanation

While this game was being prepared, “chaotic sharing” chaotic situation which is quite common in preschool education institutions was taken into account. A toy brought in on a toy day or to a class can become chaotic if it is not shared between two or more students. Teachers are asked “what do you do in such a chaotic situation?” When the question is asked, the usual answer is that “both sides take the toy by hand.” However, this solution can create some other chaos instead of being a solution to the chaos that is experienced. The following can reduce the tension that would arise in class.

Game System

If a toy cannot be shared in the classroom, it is possible to discover that with a toy, even the whole class, not just one person, can play.

Exploration of the basic elements affecting the system

Children also understand that their games can be fun when they experience situations such as sharing, playing games together, and using toys for different purposes.

Periodically discovering the relationship of those who influence the system from these elements

The toy change that will take place in this game is to make sure that we understand that we can be happy even if we play by sharing the original purpose of the game.

Taking this network into account when making management decisions

The main purpose of this game is to make the children realize that toys can be used in different ways in the world of imagination, and then they can play it by transforming it into a toy in any player’s mind. At the same time, sharing and playing together enables them to behave in an individual way.

Purpose of the game: To reduce the tension of the students when the toy is not shared, to prevent the unshared player from having a crisis influencing both sides, to improve the creativity of students, to improve the sense of sharing, and to make them realize that they can play together.

Attainments:

1. The player uses the original toy in a different way.
2. You can realize that you can play more than one game with a toy.
3. When you play together, you discover that you can have more fun.
4. Creativity is prominent when you play games.

Number of Players: All classes

Place to play: Class and garden

Age group to play: 3–6 years

47.5.1 Game Process

When the teacher realizes that it is an unsharable toy in the classroom, he says, “yes, the kids are playing a game right now,” to say that they need an unshared toy to start the game. Unshared toy is taken. Students take a play position in the circle. The toy is given to a player, and he says that I want this to wander from hand to hand for review, and it is circulated from hand to hand. Then all the students study the toy and then the teacher comes. The teacher takes the toy and makes a move with it. For example, for a plane he says I fly with it. In turn, students are also asked to play a game. In this way, every student uses his creativity to make a game about the “unsharable toy.” When everyone participates in the game at the same time, the chaotic situation is prevented.

47.6 Chaotic Situation Game

2. **Game name:** Treasure hunt

Explanation

While this game was being prepared, the “underground kidnapping” crisis situation which is quite common in preschool education institutions was taken into consideration. Children can be late for the restroom for unknown reasons. This can become a chaos especially for a student who misses it. Cold, rash, wet clothes may spread bad odors; they may be exposed to the regiments of other students. Then the child may become trapped. When we asked the teachers what they did in such a situation, we got the answer “we want the other students to take it out without notice and replace the staff with their spare clothes.” The student who turns out can then create a chaotic situation on other students. Teachers can constantly ask questions about their outgoing friends. A child who goes to change her clothes may feel bad when she arrives. Everyone may be aware of what he is going out for.

When we turn this chaos into a game, for the child who finds himself in the game, this situation will be a tension. In our game, the teacher starts playing the game where he realizes a student who is late for the restroom. The player who will go out will notice that he is actually in a game.

Game System

To make sure that the student who goes out to change his clothes finds the object that his teacher and his friends have always kept together. While this object is found, it is like joining the mystery by pretending to look for a treasure.

Exploration of the basic elements affecting the system

After he notices the child, he creates a game environment and asks the child to find it by a simple map by calling him after a certain period of time. At this time, the child suffering from the kidnapping crisis is relieved without being caught by his friends.

Periodically discovering the relationship of those who influence the system from these elements

Removing the problem without disturbing the other children with the help of the child who kidnaps the child makes it impossible for the child to feel that he has done something wrong. Thinking that he is in the game makes it very easy to get out of this crisis situation. However, if this situation is repeated continuously, the game will become a reinforcement for the student, so the reasons for this situation should be solved by meeting with the teacher, the student, and his family.

Taking this network into account when making management decisions

While the situation of wetting the gold during the game is lifted from the middle of the game, the student in the crisis situation is corrected without reflecting this problem. The student feels himself in the game, and the problem walks away without creating any chaotic situation. It should be noted here that if the student has a habit of soaking the gold, it is necessary to determine and solve the other factors that uncover it.

Objective of the game: To find the object hidden, to prevent situations that will create tension for the student missing, and to prevent negative situations such as humiliation or teasing among the students.

Attainments:

1. Acts according to verbal directions.
2. Rough motor skills develop.
3. You will realize that you play games together.
4. Emotional tension is reduced.
5. It reads a simple sketch.

Number of Players: All classes

Played by: Class

Age group to play: 3–6 years

47.6.1 Game Process

When the teacher realizes that a student is late for the restroom (even while the activity is being held and the game is being played), he or she can start playing the game with the “treasure hunt” play direction. Our treasure hunter (the name of the kidnapper) is said and is taken out and handed over to the officers to change his clothes. Meanwhile, the teacher tells everyone what to hide. He lets the students staying at the school register together, and they decide where to hide things jointly. Taking a little krokisini of class, he says “Let’s draw our treasure map.” The crocodile also determines the location of the hiding place. The teacher evaluates this period effectively until he changes the student. A treasure map is given to the hand of the student who has changed it. The student finds the treasure by taking advantage of the soul. He is applauded by his friends.

47.7 Harm to Friend and Respect Game About Chaotic Situation

3. The name of the game: Hat dance

Explanation

The tendency to harm friends in preschool institutions is revealed by the teacher as the frequency of the second highest chaos situation.

Game system

Children should start playing with different colored hats and greet the nearest person when the music stops.

Exploration of basic elements affecting the system

It is expected that children will have fun while playing music accompaniment, greet each other in the frame of courtesy rules with each other, and discover positive communication between them.

Periodically discovering the relationship of those who influence the system from these elements

The change of the hat in this game is to greet each other gradually with different friends and in this process to understand that the game is to respect human beings against its original purpose.

Taking this network into account when making management decisions

In the process under these three headings, it is ensured that those who may create a chaotic situation are prevented from harming their friends in the game process and that this situation becomes a positive behavior in the continuation of the experience. It feels that you will give yourself more happiness by showing respect to others rather than harming them.

Purpose of the game: To ensure that they learn to respect each other.

Achievement: Rough motor skills develop.

It imitates.

Provides physical coordination.

Auditory sensation develops.

Number of players: All class

Played by: Class or garden

Age group to play: 3–6 years

47.7.1 Game process

The teacher prepares hats from the cards in different colors. Two shades of each color can be prepared. These hats should be up to the classmates. When friends are hurt, it is said: let's say let's do a hat dance and try to get rid of the tense atmosphere in the classroom. Each student is given a hat. The music starts; children dance by jumping on and off the hippies in music accompaniment. When the music stops, everyone is greeted by removing the hat with the nearest one. The girls are lightly satiated, and the men are greeted by leaning forward. The game is continued for a while like this.

47.8 Toothbrushing Related to Chaotic Situation

Toothbrushing Chaotic Situation Game

4. **Game name:** Robot-dent

Explanation

In kindergartens students brush their teeth in order to get a toothbrushing habit especially after meals. However, some students do not want to brush their teeth after meals. When a few students do not want this, this situation becomes unwanted in all classes. The goal in preparing this game is to prevent this situation from becoming chaotic and to ensure that students acquire the habit of brushing teeth.

Game system

In this game, the teacher acts like a robot. Students are directed to brush their teeth.

Exploration of basic elements affecting the system

After meals, toothbrushing should be done. When a few of the students do not want to brush their teeth, the teacher starts the game by starting the story without spreading to all of them.

Periodically discovering the relationship of those who influence the system from these elements

If the child has not acquired a toothbrushing habit, the storytelling robot game will be willing to brush his teeth. At the end of the game, relevant consciousness is created by toothbrushing comes to amusement.

Taking this network into account when making management decisions

At the end of this game, brushing behavior becomes a habit. As a result, tooth-related diseases that may occur and chaotic situations such as toothaches are prevented.

Purpose of the game: To make dental brushing behavior a habit.

Attainments:

Listening skill develops.

Self-care skills are provided.

47.9 Rough Motor Skills Develop

Number of players: All class

Played by: Class

Age group to play: 3–6 years

47.9.1 Game process

The teacher turns to class and says: Let's play a game. There is a missing robotic robot. The name is robot-dent. This robot finds children who do not brush their teeth around and did not wash their hands and let them wash their hands and brush their teeth. "Do you know how he does it?" When he finds a child like this when he is traveling around, the buyer says he would work and he would have to pay. When he goes to this child, he turns into a handful of water. He has a toothbrush in his belly. That beautiful boy immediately picks them up, brushes his hands, and brushes his teeth. One day a class comes – all these kids are the ones who cannot brush their teeth. The circuits are mixed as he shouts. Children do not understand what happens first. A lot of toothbrushes come out of their belly. They immediately take the toothbrushes and run to the right sink. They brush their beautiful teeth and come back. They all play robotics together. Teacher makes robot-dent movements while this story is told. They also guide students for toothbrushing. They brush their teeth and play games by making robot movements together with incoming students. Then students are asked to circle and the following moving game is played.

Three to three times a day (when these words are spoken, the number 3 is shown with one hand).

Morning to lunch (in this case when the morning is called, the arms are lifted up as if one is waking up, the movement of running when the lunch is called; when the evening is called, the two hands are combined, and sleeping is done by putting them on the side).

Brush your teeth (brush your teeth as if you have a toothbrush).

Brushless teeth (both hands and eyebrows are raised to symbolize negative behavior).

Decay goes inside (punches are squeezed; faces are squeezed).

When you are writhing from pain (all the students go to bed with writhing).

The pearl teeth of the arars (all students make a search motion as if they have a lens in their hands by slightly leaning on the ground).

47.10 Chaotic Situation-Related Game

5. **Name of the game:** Find it where to find it?

Explanation

In the kindergartens, students do not eat properly because they choose what to eat.

Game system

To teach healthy and unhealthy foods to the students and to ensure that healthy foods in the class are gathered in an entertaining accompaniment with applause.

Exploration of the basic elements affecting the system

During the first stage of the game, students are required to have the knowledge of healthy and unhealthy foods. Later, mixed food materials can be picked up and distinguished.

Periodically discovering the relationship of those who influence the system from these elements

It is aimed that students learn healthy and unhealthy foods and their effects on health and to discover in a fun way; the consequences that may arise if they consume them are shared. In order for the game to be successful, it is ensured that the benefits and damages of healthy and unhealthy foods are underlined.

Taking this network into account when making management decisions

It is ensured that the student exhibiting the food selection behavior learns about the food and feels the situation of chaos if he continues the same behavior.

Finding out a solution to the crisis and especially what foods should be preferred are of crucial importance. As a result, they are made to feel that they have a healthy body and prefer beneficial foods.

Game Aim: To gain regular eating habits by recognizing healthy foods.

Attainments:

Can reach objects in different places.

It recognizes the foods that are useful for their health.

He notices unhealthy food.

It distinguishes healthy and unhealthy foods.

Number of Players: All students in the class will participate in the game.

Played by: Class

Age group to play: 3–6 years

The teacher already identifies healthy and unhealthy foods and brings them or their pictures to class. Types of chocolate, kinds of chips, gelibon, cola, gum, ready-made cakes, milk, yogurt, cheese, pasta, walnuts, and hazelnuts (can be increased). Students sit in a circle.

The students turn their food around one by one and ask whether they are healthy or unhealthy. He then chooses the students who choose to eat and turns healthy food and unhealthy foods so that students can see and reach where they can reach. Students ask for only those foods that are healthy. After all the healthy ones have been collected, the student(s) are applauded. Finally, a toothpick and a rolling pin are shown. If you consume a lot of unhealthy food, you will become weak and fragile like toothpick quickly, and you will get sick quickly, but if you eat healthily, you will be strong and not easily get sick (try to break the roller). Later, a painting page describing healthy foods is given.

47.11 A Game for Students Who Make a Chaotic Situation when the Arrow Launches Newly

6. **Game name:** What's in the jar?

Explanation

This game is designed for students who do not want to leave their parents when the schools are first opened. These students constantly weep and do not want to participate in class activities.

Game system

Introducing the sections of the student school and the employees who are reluctant to read the book with the help of a fun game and actually feel how pleasant the environment is.

Exploration of basic elements affecting the system

Creation of the environment suitable for learning with the help of the game is vital, and for the recognition of persons and departments, it is essential to emphasize it. In doing so, it becomes also amusing the student turns the situation into one where he may be willing.

Periodically discovering the relationship of those who influence the system from these elements

To make friends, school, teachers and other negative elements that can be animated in the mind of the student in the crisis to be turned into positive with this game. In addition, interact with other friends to get peer fobis removed.

Taking this network into account when making management decisions

The guidelines and practices in this regulation are to ensure that the “crying” behavior of the learner (especially the fear of the school and the fear of leaving the parent) is terminated without becoming chaotic and transformed into a positive one. The main point here is that the teacher should be able to determine the reasons for the crying behavior in the case of the learner. With this game, although the crying behavior cannot be completely removed, the time of cry will gradually be reduced gradually without chaos.

Purpose of the game: To get students to start school and to remove crying behavior due to school fear.

Attainments:

Rough motor skills develop.

Follows the guidelines.

It imitates.

Number of Players: All students in the class will participate in the game.

Played by: Class

Age group to play: 3–6 years

47.11.1 Game Process

Before the teacher comes to class, she puts papers in a jar where the directions are written. “Jump 5 times, take 3 steps, shake your head, like. The number of these directives is increased as desired. The teacher puts in another jar the words “Look under the teacher’s table, look in front of the window.” In places where these guidelines are placed, write directions to teach the school and teachers,” “Take your friends and take a toilet, jump to the kitchen, play the role of eating, crawl on the science corner, go to the music corner like playing drums, shake hands with your assistant.” He puts every student in the game. (The crying student also watches the outsiders, and if he wants to join the game, he is included in the game.) This game will make the school think that the school is a fun place for beginners.

47.12 Chaotic Situation-Related Game

7. **Game name:** Colored Sek Sek?

Explanation

This game is designed for students who do not want to go to a cafeteria or brush their teeth in school.

Game system

Following the command given by the students in the team, they pass by pressing the appropriate stones in order. This can be done without disrupting the order.

Exploration of basic elements affecting the system

Provide students with the opportunity to explore teamwork and order as they face each other.

Periodically discovering the relationship of those who influence the system from these elements

This is to ensure that the game will be completed in accordance with the rules of the game without disturbing the order in which the game will be played.

Taking this network into account when making management decisions

Students should be able to play as a team in order to learn the sequence and order and to know that even if one of the team breaks the order, the game will not reach the end result.

Purpose of the game: To be able to move without disrupting the order.

Attainments:

Rough motor skills develop.

Listening skills develop.

Number of players: All class

Played by: Class and garden

Age group to play: 3–6 years

The teacher already prepares square cartons of color (paste cardboard underneath to reinforce them; this game material will be used in many other rounds). Stones are used to cover the play area from different colors. The students are sorted in succession. A story is told as follows. “This is a lake, people have made their way from stone to cross. However, some of the stones are slippery, and we may lose it when we press it. Only the red stones are not slippery. If we break ourselves, all of the stones will be slippery, and we will not be able to cross over. So it no one should make mistakes and break the order.” The game is started; after the player in the front

row presses the stones and takes the second step, the player behind it is allowed to start the game. At the same time, everyone tells them not to turn around. The game continues until all players have crossed over.

47.13 Continuous Complaint Chaotic Situation-Related Game

8. **Name of the game:** Colorful wagons

Explanation

This game is designed for students who complain about everything in school. These students complain about every situation.

Game system

Students who wear colorful hats that the teacher has already prepared will walk around in the form of a train and then become a complaining situation where the student will live with a change of hat.

Exploration of basic elements affecting the system

To prevent the occurrence of constant complaints by ensuring that they move together. Playing in the form of a train, stopping the train, and changing the hobs.

Periodically discovering the relationship of those who influence the system from these elements

The student listens to the solutions suggested in the game.

Taking this network into account when making management decisions

When the proposed complaint is shared, it should be remembered and passed on to the solutions. At this point, it is tried to be removed systematically and slowly.

Purpose of the game: Constantly changing the hats, trying to remove the complaint from the middle.

Attainments:

Rough motor skills develop.

Listening skills develop.

Number of players: All class

Played by: Class and garden

Age group to play: 3–6 years

47.13.1 Game process

The teacher separates class into three groups and allows each group to wear different colored hats. There is a train with the students wearing the hats. The train itself becomes the locomotive. They go inside the class. Then one stops and everyone turns around and says “take a friend’s hat.” The student at the end (the student will be at the forefront for his return) will not have a hat in his head (this student is actually a student who constantly complains about everything while editing the game). It is estimated that he will be found by the teacher because he is not a student hat. Without a complaint, the teacher immediately asks the blue-hatted students to leave the blue wagons trendy and asks them how the remaining friend without the hat is feeling. The students who answer the question are told to get the train again. Red wagons are asked to be separated. Teacher says: “What do you do with the red shackle, your friend will be asked to worry.” As soon as their answers are heard, the teacher gives the student the hat he has bought, and it is ensured that he is the locomotive. The game ends for a while when the train finishes its movement.

47.14 Damaging School Supplies Chaotic Situation Game

9. **Game name:** “Ayşe Ninenin Antikalari”

Explanation

When this game was being prepared, chaotic situations were taken into account in order to prevent students from harming school equipment.

Game system

Given that students have the tendency to harm school property, the students will be given responsibility in the game, and they will be protected.

Exploration of basic elements affecting the system

In this vote, students will realize that they need to take responsibility, protect classroom and school supplies, and warn those harming the property. The fact that this is a game, it will provide students with the opportunity to have fun while shopping for their products.

Periodically discovering the relationship of those who influence the system from these elements

With this game, students will be able to discover that they can play with them for longer if they do not harm the equipment and protect them.

Taking this network into account when making management decisions

The main purpose of this game is to protect school supplies, realize the importance of taking responsibility, and integrate it into the whole school life.

Purpose of the game: To give students a sense of responsibility in order to ensure that their school-class supplies are protected.

Achievement: Rough motor skills develop.
Listening skills develop.

Number of players: All class

Played by: Class and garden

Age group to play: 3–6 years

47.14.1 Game process

All class students are taken to the playground. The teacher tells him that he is Ayşe Nine and shows the class and that the rate is also home. “Sometimes my house is damaged by wind, rain, snow. I’m old now too. I can not repair it. But I have my grandchildren, my young ones like you, and they will protect the things of my house.” Then the following moving song is sung.

I’m hopping (I’m hopping and jumping)

I picked apples from branches (done like apple gathering)

I close my eyes (eyes closed and expected)

Ayşe nine comes (teacher comes walking like Nine)

He gives me a place (a student is told where he or she is responsible for his or her name)

Say goodbye to her (eyes open)

It is said that all students are given a place or a property protection. It is said to be secret. So every child who takes responsibility will be willing to protect school-class supplies.

When this game is played frequently, each student will remember his/her responsibility, and damage to the property will be greatly reduced or abandoned.

47.15 Future Trends

There are situations that will cause complexity in preschool institutions as well as in every system. These complexities and situations of chaos can take leaders to the front in organizations. The important question for those students in the game age is how to develop leadership processes in the chaos environment and how the classroom environment and the class organization will be shaped. It is possible

through gaming that these situations become more chaotic and that leaders can take the lead in situations. While writing this section, it was once more understood that most of the classrooms have the potential of chaos like not eating properly. If these conditions are not met in time, it can be thought that they may lead to new chaotic formations. In preschool classes, games will be able to expose children to chaos, as well as new leaders. At the same time, it will be possible to develop new skills in the games. What is clear is that with the passage of the raid plan and the emergence of leaders, each individual can be provided with the game of learning to share, with developing creativity and problem-solving skills, with thinking flexibly, with being open to transformation and change, with enjoying themselves, with developing attention, and with empathy at the same time developing more positive behavior.

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Chapter 48

Analysis of Margaret Thatcher as a Woman Leader



Anil Kadir Eranil

Abstract In this study, the familial and political history of Margaret Thatcher as a woman leader was analysed. In this context, information was presented about Thatcher's history and her political period. As a result of this examination, it was concluded that the word "Thatcherism" coined by Margaret Thatcher has a profound interaction with three major perspectives in the form of free economy, union associations and assembly. This interaction is also reported to have complicated relationships with a chain of events occurring before, during and after this term without being limited to "Thatcherism". In addition, the flow of these complicated relationships has had telling repercussions on the world. In conclusion, it was stated that events that took place in the Thatcher era had complicated and profound relationships.

48.1 Introduction

Undoubtedly, the most important of all impacts we can see in traces of almost every aspect of our lives is political policies and their repercussions. These policies also have the power to affect the systems inherent in themselves and even the whole world, as well as to affect individuals. In addition, it is also possible to see political leaders at the core of these impacts. There have always been leaders inside the political formations, but there are some leaders who have always left their mark. The effects and implications of these leaders are stronger than the others. Margaret Thatcher is an outstanding political figure who was the Prime Minister of the UK from 1979 to 1990 and went down in the history of the UK as the first woman leader. In this section of the study, information was presented about familial and political history of such an important leader.

A. K. Eranil (✉)

Ministry of National Education, Kuyulutlar Primary School, Derinkuyu, Nevşehir, Turkey
e-mail: eranilanilkadir@gmail.com

48.2 Margaret Thatcher as a Woman Leader

Margaret Roberts was born in Grantham in 1925 and began her primary education there. When she was 11 years old, she started her education life at a girls' high school named as Kesteven and Grantham. She graduated from Somerville known as one of the constituent colleges of the University of Oxford in 1943. She became president of the Oxford University Conservative Association in her final year in Somerville. It can also be said that she gave the first signs right here that she was a strong woman leader who would become the prime minister of the UK for many years in the future. After that, she was invited to the annual conference of the Conservative Party in 1946. When it came to power in 1948, she attended her second conference as a representative of Graduates' Association and also met representatives of Dartford voters here. In 1951, she met Dennis Thatcher, her husband, and would bear his surname for many years while Margaret was continuing her political activities. Margaret kept working after her marriage, in particular, in the field of law on tax subject (Edwards 1989, 203).

In 1952, funded by her husband, she studied law and qualified as a barrister in 1953. Due to the birth of her twins, she could not contest for the 1955 general election but soon returned into the political arena. She won her first election campaign in 1959, winning the seat of Finchley in London, a position she held till she retired in 1992. She rapidly rose within the ranks of the Conservative Party, holding a variety of positions, and finally entered the Shadow Cabinet in 1967. In 1970, Margaret Thatcher, as the Minister for Education, advocated an increase in the education budget and the creation of more schools. However, her tryst with infamy began when she earned the title of "Thatcher, the Milk Snatcher" when she abolished a scheme providing free milk to primary school children during school hours. She attracted a lot of negative publicity for her impulsive actions, and soon, frustrated with then Prime Minister Edward Heath and his contrasting ideas, she ironically declared "I don't think there will be a woman prime minister in my lifetime" in 1973 (Thatcher 2017).

She was elected as the leader of the Conservative Party in the last three elections, and Thatcher was deemed worthy of the President of Great Britain in 1979, which was a breaking point of the chaotic period, by her considerable policies. Through her success, she was describing herself as a politician who was deeply committed to a firm and sincere belief, activities, ideas and policies of her own. The word "Thatcherism" was coined after this belief (Edwards 1989, 204–206). There are several sources that influenced Thatcher's reforms. Her economic theories were drawn mainly from monetarism and supply-side economics. Thatcher's emphasis on traditional values of the British society was derived from traditional conservatism. The main goal was the renewal of such values as family life or attitude towards work and entrepreneurship. Thatcher tried to change this attitude and find incentives to work more. She also wanted to reduce government power over such decisions (Práce 1998, 9). Three major perspectives express this ideology. It may be useful to examine them in order to better understand Thatcherism. These include (1) the

thought moving towards a freer economy in order to reduce monetary inflation with public finance; (2) the need to limit the power of associations within the state, particularly of union associations; and (3) the prevention of attacks on hostile perceptions of labour, socialism and free market enterprise to control the local councils. Some members of her own cabinet used the nickname TINA, which means “There is No Alternative”, for Thatcher since Thatcher expressed her beliefs as Thatcherism. In addition, Thatcher was charged as the “Iron Lady” by *Pravda* the official media organ of the Communist Party’s Central Committee in the period of the Soviet Union. To further understand what is implied by Thatcherism, her familial history and political activities may be useful to look at so as to thoroughly discuss the conditions of that period (Edwards 1989, 204–206). All of these suggest that items constituting the term Thatcherism contain a scope for the economy and privatization policies. This had firstly affected the UK’s economic and social policies and then the world’s economic policy by growing like the butterfly effect.

Thatcher’s election victories during and after 1979 allowed her to adopt British policy, thus having strengthened her own labour, economic and philosophical reform, too. Thatcher also changed the world economy through great merit via promoting impact of Thatcherism. Therefore the name of the new democratic model, which is much admired and thought to be more successful than the socialist economy, was imprinted on the memories as Thatcher model, as soon as the socialist economy of Soviet Bloc crashed in 1989 (O’Sullivan 2013, 5). This can be interpreted in the way that socialism drifted into a state of chaos and yielded to neo-liberal policies, forming a new entity. In addition, this model may have enabled Thatcher to make her mark herself in the world history as an important woman leader by influencing leadership policies.

48.3 Analysis of Thatcher’s Success

Even though Thatcher saved a “state-dependent culture” and Britain, which was just about to weaken, it may be useful to re-evaluate her success in several aspects:

1. Thatcherism is presented as a stimulant effect that reinvigorates poor British economy that foundered in a sluggish growth and resistance of unions which posed an obstacle to change in economic growth. Iron Lady is depicted as a figure who had renewed long suppressed British economic power in the midst of wreckage and defeated her opponents through her reform.
2. Thatcher is remembered for trying to pick up a corrupt order in the British state through placing restrictions on privatization and public spendings. Nevertheless, the fact that she attempted to prevent unearned incomes with austerity policy in other parts of the country budget and exerted a severe pressure on inspection teams which led to taxes of British taxpayers to be boosted. In the 1930s, governments put up unemployment together with poverty at the top of their agenda. This also affected Thatcherism, and Thatcher developed policies that regarded unemployment as a problem.

3. Thatcher performed the Big Bang reform that led to the liberalization of banking in 1986, and this Big Bang reform led to reverberations in the meltdown of the financial sector in the twenty-first century as well as decades later. Besides, this also reverberated through many active powers in the world economy (Trumpbour 2014, 256–258).

Despite all these, some people's joyful welcome of the day she died appears to be one of the interesting issues that need to be addressed, given that she was a woman leader performing important tasks (Nicoll 2013, 221). These events were difficult to predict during the presidency of Thatcher. In other words, Erçetin and Aydın (2016, 191) state that roles of women have their roots deep down in a number of areas such as culture, religion and power. This can be explained in the way that implications of policies Thatcher pursued have a situation beyond a cause-and-effect principle.

As a result, although Thatcher was effective in many areas, she was a leader who had imprinted on world memories, with her neo-liberal policies that she pursued in terms of the economy. Her policies caused the world economy including the UK's economy to enter into a new formation. We can also easily see the impact of this formation in the policies today's governments follow.

48.4 Thatcherism

Thatcher spent her 10 years on tax cut, the gradual removal of state controls (deregulation), privatization and reforms filled with immense hardship. By the time she had implemented her own policies, inflation and unemployment initially jumped, and some companies shrank, but Thatcher did not compromise her own principles of economic policies. This stability allowed half a million people to own their own homes before 1982 (Ellis 2014). Even though these concepts seem as an independent actor in itself, they appear to us to be two concepts having a profound interaction with each other and in themselves. In fact, this can be explained as an evolution process beyond affecting each other.

Three major points of view that constitute Thatcherism are free economy, union associations and assembly. These concepts were examined in Fig. 48.1.

According to Fig. 48.1, three major points of view that represent Thatcherism are referred as free economy, union associations and assembly. These three major perspectives represent the concept of Thatcherism. This concept influences their formation where they are located by interacting with each other. The formation where they are located also affects entities and individuals working within this structure and brings along a cyclic system – in other words evolution. These structures that form the concept of Thatcherism not only contain this cycle in themselves, but also these three major perspectives interact with each other to a great extent, also causing each other to evolve.

The Components of Thatcherism and Interaction Among Each Other

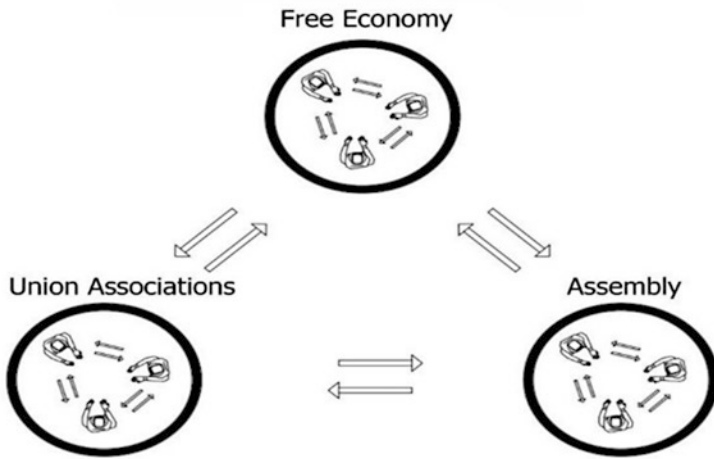


Fig. 48.1 The components of Thatcherism and interaction among each other (Table created by the author)

In summary, the three components obtain Thatcherism’s important parts in the table which are connected to each other and affect each other’s actions. Thus, each part is varied. This table is an open system and open to all kinds of effects. Being open to all kinds of effects coming from the outside shows that it is far away of steady state. Similarly, the three components in the table are in interaction as similar as with the three components in its own. In addition, the concept of free economy coming out of these concepts not only remains within the borders of Thatcherism but also spreads through the whole world in the form of the butterfly effect. All these enabled England which experienced adversity before 1979 to drift into a great state of chaos in 1979 and to bring new formations by experiencing a break together. These formations also have an impact on the whole world without being limited to England. Consequently, this impact will again get back to the states as a form of feedback and bring about new formations by influencing all subsystems. The kind of formation which will take place and in which direction it will is truly an unpredictable situation indeed.

Thatcher’s political career, emergence of the concept of Thatcherism, plays an important role in the formation of this concept. In other words, everything occurring in the past is a fundamental frozen accident that shapes the future. For this reason, when analysing the leading events during Thatcher’s political period, Selçuk (2013) listed these as follows:

Thatcher:

- Voted to abolish the use of a vehicle as a punishment in 1961 which was opposed to her party

- Was one of few Conservative Party deputies who upheld the view to decriminalize male homosexuality
- Voted for abortion to be allowed
- Was, on the other hand, opposed to abolish the death penalty and voted against the proposal made to facilitate divorce
- Claimed that politics was “not only a step towards socialism but communism as well” in her successful speech given against tax policy in 1966
- Was the minister responsible for education in 1967

Taking her conservative political formation into consideration, these decisions Thatcher made are an effective factor. All situations suggest that Thatcher formed heterogeneity not homogeneity in her party. In summary, this difference creates a more profound tangle of relationships by increasing the interactions.

Erçetin and Bisaso’s (2014, 114) mode of utilization of the social media and social networking has an influence on the way a person perceives a leader. In this context, studies made in social media indicate in what way people perceive women leaders of the last two centuries.

Dore (2015) states that Thatcher was considered as the most influential woman of the last two centuries. Figure 48.2 shows this information.

According to this table, Thatcher was named as the most influential woman of the past 200 years by a rate of 41 % according to Scottish Widows, although she stopped free milk for school children, waned union’s power, deregulated the financial sector, closed the mines, went to war with Argentina and imposed a population tax (Dore 2015). In sum, Açıkalın (2016, 24) expresses that the world history is made by leaders’ discourse and decisions. Thatcher created her own country’s history. In this context, Thatcher went to Falkland war in 1982, and 255 British soldiers were killed. Some thought this could fail her in the 1983 elections, but the situation was the exact opposite. Thatcher won a landslide victory in 1983 and kept her seat as the president of the UK.

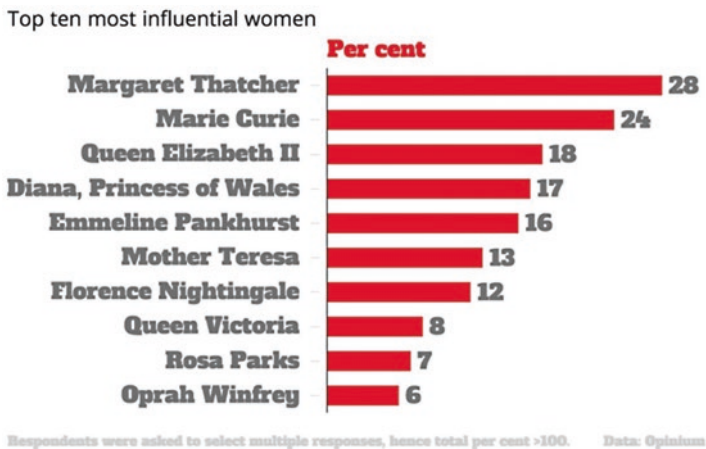


Fig. 48.2 Top ten most influential women (Dore 2015)

48.5 Conclusion

This study examined Margaret Thatcher's political landscape before and after 1979. Three major perspectives representing the concept of Thatcherism that emerged in the period when Thatcher presided over leadership from 1979 to 1990 were referred as free economy, union associations and assembly. It was stated that these concepts have a profound tangle of relationships with each other and with the concept of Thatcherism, as well. Moreover, it was emphasized that the consequences of the events which occurred during the Thatcher period were so unpredictable. The most important of this unpredictability is decisions that Thatcher took in a conservative political movement which made her political platform. These decisions were inappropriate from the viewpoint of political groups where she was.

In conclusion, Thatcher's policies are decisions independent of each other and in themselves. These decisions appear to us as a cycle of decisions having profound and complex relationships with each other. This cycle appears to us as another table in total, and this emerging holistic table also shows us a different picture which is different from pieces. Interaction of pieces with each other and with the whole brings about reciprocal evolution by serving evolution with a direction of the future. Selecting Thatcher as the most influential woman leader of the last two centuries also appears to us to be one of these holistic tables.

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Chapter 49

Analysis of Dissertations Addressing Key Issues Like Leadership to Lifelong Learning in Education



Emel Terzioğlu Barış

Abstract In this research, leadership and other basic dimensions of lifelong learning in graduate dissertations have been examined by content analysis method in Turkey. The purpose of the study is to analyze the graduate dissertations on lifelong learning in education in Turkey. Dissertations are aimed to be discussed in terms of years, types, and their scope/focus such as leadership, teachers, students, conceptual, and others. In the research, document examination technique was used, which is among qualitative research methods. Research universe consists of 46 master theses and 13 doctoral dissertations, totaling 59 dissertations on lifelong learning in education which are on YÖK (Higher Education Board) database in Turkey. The data were analyzed in three stages: description, analysis, and interpretation. Due to the research results, it is seen that graduate dissertations on lifelong learning in Turkey started in 1996. This can be because it was “European Lifelong Learning Year” then, with the decision of the European Parliament and Council of Europe No. 2493/95. The least number of dissertations on lifelong learning phenomenon is on leadership dimension. It is observed that most of the dissertations on leadership are about public education centers. In the future, articles and other scientific publications can be examined in lifelong learning in Turkey.

49.1 Introduction

One of the most important tools in achieving necessary amount of learning for one is through education, and the individual can have an access to a desired lifestyle again through that (Göksan et al. 2009). In recent years, in the countries that are striving to become information societies like Turkey, the importance of knowledge has become clear, yet how information can be obtained and how it can be used have become debatable. Economic growth is increasingly being governed by information, and any country can sustain its permanent survival without feasible scientific

E. T. Barış (✉)

Educational Sciences Department, Karabük University, Karabük, Turkey

e-mail: emelterzioglubaris@karabuk.edu.tr

knowledge (Berberoğlu 2010). In this sense, lifelong learning is emerging as an important tool in raising the quality of human resource which is the most important asset of the countries in earning the economy and employability (Aksoy 2013).

The European Union (EU) Lisbon strategy itself and its emphasis on lifelong learning is an extension of the tools and frameworks that have been developed to effectively alleviate the previously emerging European employment strategy (YPK 2009). 1996 was adopted as the “European Lifelong Learning Year” with the decision of the European Parliament and Council of Europe No. 2493/95.

Lifelong learning has occupied an important place in the life of individuals and society with the increasing importance attached to the stages, the effect, the speed of change, and the transformation (Aksoy 2013). Lifelong learning, contrary to the belief that education and learning process of individuals are concentrated on a certain part of their lives, takes place at home, at work, at a cafe, and others that will last anywhere and all throughout life (Soran et al. 2006).

In the twentieth century when lifelong learning was on the agenda of politics, education has gained importance as an individual right, and learning has gained importance as a key to richer life and individual development tool (Ersoy and Yılmaz 2009). Lifelong learning also means providing a second opportunity for the person through the updating of basic skills and offering further learning opportunities (Soran et al. 2006). Lifelong education is not an alternative to formal education but can be seen as the later completion of incomplete and inadequate data in formal education or the discovery of skills that have not been discovered before (Göksan et al. 2009).

In this sense, it is necessary to establish a lifelong learning management system and discuss the concepts of leadership in lifelong learning. According to Erçetin et al. (2013), “leadership became one of the main topics of a great deal of studies in the field of management; since the beginning of the 1900s, both theoreticians and practitioners have put significant effort into analyzing leadership.” These efforts have led to more than 5,000 studies on leadership and more than 350 different definitions of the term (Erçetin 2000). So, in this research, leadership and other basic dimensions on lifelong learning in graduate dissertations have been examined by content analysis method in Turkey. The purpose of the study is to analyze the graduate dissertations on lifelong learning in education in Turkey. Dissertations are aimed to be discussed in terms of years and types of their scope/focus such as leadership, teachers, students, conceptual, and others.

49.2 Method

In the research, document examination technique was used, which is among qualitative research methods. Research universe consists of 46 master theses and 13 doctoral dissertations, totaling 59 dissertations on lifelong learning in education which were on YÖK (Higher Education Board) database in Turkey then. The data were

Table 49.1 Findings on dissertations in terms of published years

Years	Master		Doctoral		Total	
	<i>n</i>	%	<i>N</i>	%	<i>n</i>	%
2016	9	90	1	10	10	16.95
2015	7	63.64	4	36.36	11	18.64
2014	10	90.91	1	9.09	11	18.64
2013	1	100	0	0	1	1.69
2012	2	50	2	50	4	6.79
2011	2	50	2	50	4	6.79
2010	6	85.71	1	14.29	7	11.86
2009	1	50	1	50	2	3.39
2008	4	100	0	0	4	6.79
2007	2	100	0	0	2	3.39
2006	0	0	1	100	1	1.69
2005	0	0	0	0	0	0
2004	1	100	0	0	1	1.69
1996	1	100	0	0	1	1.69
Total	46		13		59	100

analyzed in three stages: description, analysis, and interpretation. You can see the findings and results in tables below.

When Table 49.1 is examined, it is seen that graduate dissertations on lifelong learning in Turkey started in 1996. When the table is examined, it can be seen that 16.95% of the dissertations are completed in 2016; 18.64% in 2015 and 2014; 1.69% in 2013, 2006, 2004, and 1996; 6.79% in 2012, 2011, and 2008; 11.86% in 2010; and 3.39% in 2009 and 2007. It seems that there is no doctoral dissertation as such in 2005.

In addition, theses prepared in 2013, 2008, 2007, 2004, and 1996 were all master dissertations, and all of the theses prepared in 2006 were doctoral dissertations. Ninety percent of dissertations made are master, and 10% of them are doctoral dissertations in 2016; 63.64% of theses made are master, and 36.36% are doctoral dissertations in 2015. In 2014, it is seen that 90.91% of dissertations are master, 9.09% of them are doctoral dissertations, 50% of the dissertations made are master, and 50% of them are doctoral dissertations in 2012, 2011, and 2009. In 2010, it is seen that 85.71% of dissertations are master and 14.29% of them are doctoral dissertations.

When Table 49.2 is examined, it is seen that 59 dissertations which are published on lifelong learning phenomenon in Turkey are grouped in five dimensions such as leadership ($n = 6$), teachers ($n = 21$), students ($n = 8$), conceptual ($n = 12$), and others ($n = 12$). In leadership dimension, 83.33% of dissertations are master, 16.67% of them are doctoral, and the leadership dissertations are 10.17%. In teachers' dimension, 76.19% of dissertations are master, 23.81% of them are doctoral, and the leadership dissertations are 35.59%. In students' dimension, 62.5% of dissertations are master, 37.5% of them are doctoral, and the leadership dissertations are 13.56%. In

Table 49.2 Findings on dissertations in terms of dimensions of dissertations

Dimensions	Master		Doctoral		Total	
	<i>n</i>	%	<i>N</i>	%	<i>n</i>	%
Leadership	5	83.33	1	16.67	6	10.17
Teachers	16	76.19	5	23.81	21	35.59
Students	5	62.5	3	37.5	8	13.56
Conceptual	10	83.33	2	16.67	12	20.34
Other	10	83.33	2	16.67	12	20.34
	46	77.97	13	22.03	59	100

Table 49.3 Findings on dissertations in terms of headings and types on leadership dimension

No	Year	Heading	Type
1	2016	The perceptions of administrators of public education centers on lifelong learning competencies in Turkey	Master
2	2014	Administrative problems which public education center administrators experience in the process of lifelong learning	Master
3	2014	Administrators' perception and opinions of lifelong learning institution about lifelong learning	Master
4	2014	The evaluation of the primary and secondary school administrators according to the types of leadership (according to teachers' opinions)	Master
5	2014	The assessment of public education centers for providing lifelong education: Yenışehir Education Center application	Master
6	2011	Evaluation of lifelong learning programs' contribution to the human resources, in terms of professional social development, foreign language development, employment, and recognition of qualifications	Doctoral

conceptual and other dimensions, 83.33% of dissertations are master, 16.67% of them are doctoral, and the leadership dissertations are 20.34%. We can say by looking at these findings that the least number of dissertations on lifelong learning phenomenon is on leadership dimension.

According to Table 49.3, we can say that there are six dissertations on lifelong learning management. It is seen that most of the dissertations on leadership is about public education centers.

According to Table 49.4, we can say that there are 21 dissertations on lifelong learning of teachers. It is seen that most of the dissertations on teachers dimension is about lifelong learning tendencies and perception of teachers from different branches.

According to Table 49.5, we can say that there are eight dissertations on lifelong learning of students. It is seen that most of the dissertations on students dimension is about the relationship between lifelong learning tendencies of students and various variables.

According to Table 49.6, we can say that there are 12 dissertations on conceptual dimension. It is seen that most of the dissertations on this dimension is about the

Table 49.4 Findings on dissertations in terms of headings and types on teacher dimension

No	Year	Heading	Type
1	2016	The assessment of effectiveness of teacher training programs in up-skilling lifelong learning competence	Doctoral
2	2016	The analysis of lifelong learning tendencies of teachers in terms of some variables	Master
3	2016	The study on the lifelong learning competences of the teacher candidates who are interested in sport and who are not interested in sport in terms of different variables	Master
4	2016	Investigating lifelong learning tendencies of classroom teacher candidates	Master
5	2015	Primary subject teachers' individual innovativeness levels and lifelong learning tendencies (within Denizli province)	Master
6	2015	Classroom teachers' views and efficacy perceptions on lifelong learning	Master
7	2015	The relationship of the lifelong learning tendencies of teachers with their self-confidence about their vocational proficiency	Master
8	2015	As a lifelong learning material technology addiction and reflection to the life	Master
9	2015	Factors effecting lifelong learning according to faculty: Anadolu University case	Doctoral
10	2014	Factors effecting lifelong learning inclinations of prospective teachers	Doctoral
11	2014	Investigating lifelong learning tendency of teachers (the example of Diyarbakir)	Master
12	2014	The relationship between the factors affecting teachers' lifelong learning and their perceptions about the support from schools	Master
13	2014	The relationship between primary school teachers' lifelong learning trends and self-efficiencies about the educational technology standards	Master
14	2014	Lifelong learning competencies of prospective English language teachers in comparison with their mentors	Master
15	2014	The evaluation of academic staff about LLP/Erasmus teaching staff mobility program (the example of Turkey Uludağ University and Spain Castilla la Mancha University)	Master
16	2013	Determination of instructors' competencies in online learning	Master
17	2012	Our country's national educational system of lifelong learning in the context of art educators in the professional development opportunities	Master
18	2012	E-mentoring for professional development of information technology teacher candidates	Doctoral
19	2010	E-learning	Master
20	2010	Evaluation of in-service training program that are served to Adana teachers? Computer and internet using course?	Master
21	2006	A study of the effects of models of teacher education and professional development in ELT on practicing and prospective teachers of English at universities	Doctoral

Table 49.5 Findings on dissertations in terms of headings and types on student dimension

No	Year	Heading	Type
1	2016	Investigation of the relationships between lifelong learning and social emotional learning with reference to various variables	Master
2	2016	Lifelong learning key competence levels of postgraduate students at Bartın University	Master
3	2015	The relationship between the lifelong learning tendencies of undergraduate students and their self-efficacy perceptions	Master
4	2015	An investigation of self-directed learning skills of undergraduate students	Doctoral
5	2015	Getting inside the mental lives of students: learned helplessness, problem-solving skills, and lifelong learning tendency in EFL context	Doctoral
6	2011	Increasing the application skills of the students in vocational and technical education: applications of Lifelong EU Learning Programme	Master
7	2009	Investigation of lifelong learning tendency of undergraduate students in terms of some variables	Doctoral
8	2007	Evaluation of the students' lifelong learning behavior change across years by the Turkish version of the learning preference assessment (LPA) questionnaire at Ankara University School of Medicine	Master

Table 49.6 Findings on dissertations in terms of headings and types on conceptual dimension

No	Year	Heading	Type
1	2016	An investigation of the relationship between autonomous learning and lifelong learning	Master
2	2015	Lifelong learning policy making process in Turkey: the Lifelong Learning Coordination Law	Doctoral
3	2014	Examination of open courseware platforms from lifelong learning perspective	Master
4	2012	Participation in the Lifelong Learning/Comenius Program contributes to the education, teaching, and cultural promotion of a country	Master
5	2010	European Union key competencies for lifelong learning: Turkey case	Master
6	2010	Sociological analysis of new trends in vocational education and training (VET) in Turkey	Master
7	2010	European Union lifelong learning and adult education policies	Doctoral
8	2009	The function of continuing education centers in Turkey and some countries	Master
9	2008	Vitalizing knowledge economy: the conceptualization of lifelong learning in turkey after the beginning of the process of the European Union membership	Master
10	2008	The European Union's lifelong learning strategies: searching for lifelong learning approaches included in the Europe Union's official documents	Master
11	2008	Evaluation of PISA 2006 results as an indicator of lifelong learning skills in terms of Turkey	Master
12	2007	Evaluation of the relationship between lifelong learning policies and employment in the European Union and Turkey	Master

Table 49.7 Findings on dissertations in terms of headings and types on other dimensions

No	Year	Heading	Type
1	2016	Women in poverty view and association with the lifelong learning, for example	Master
2	2016	Evaluation of training activities given in prisons in terms of lifelong learning: Zonguldak province as example	Master
3	2015	Evaluation of the literacy campaign Mothers and Daughters are at School	Master
4	2015	Examination of the application in primary schools of the project Let the Schools Be Life in the realm of lifelong learning (example, Konya)	Master
5	2012	Motivational orientations of adult learners for participating the courses of people's education center: a case study of people's education center courses of Muğla City Center	Doctoral
6	2011	The use of strategies in English language and learning course books in the context of lifelong learning	Doctoral
7	2011	Evaluating e-learning environment by using data mining techniques	Master
8	2010	The role of vocational government informal training: ISMEK	Master
9	2010	A radical practice in adult education: popular education in Latin America over the selected examples	Master
10	2008	Perceptions of the education leaders on new vocational training applications – İstanbul	Master
11	2004	Teaching German as a foreign language for adults in terms of the European framework of reference for languages	Master
12	1996	Evaluation of public relation in center for adult education	Master

relationship between lifelong learning and various variables such as autonomous learning, employment, and European Union adult education policies.

According to Table 49.7, we can say that there are 12 dissertations on other dimensions. It is seen that most of the dissertations on this dimension is about evaluating the effects of various concepts in terms of lifelong learning, such as *women in poverty*, training activities given in prisons, *use of strategies in foreign language learning course books*, some projects like “Campaign Mothers and Daughters are at School” and “Project Let the Schools Be Life,” e-learning environments by using data mining techniques, and role of vocational government informal training.

49.3 Discussion and Recommendations

The purpose of the study is to determine tendencies in dissertations on lifelong learning according to years, types, and their scope/focus such as leadership, teachers, students, conceptual, and others in Turkey. This research has been limited by 59 dissertations which were published in YÖK database at that time.

Due to the research results, it is seen that graduate dissertations on lifelong learning in Turkey started in 1996. This can be because 1996 was the “European Lifelong Learning Year” with the decision of the European Parliament and Council of Europe No. 2493/95.

There is no doctoral dissertation in 2005. Theses prepared in 2013, 2008, 2007, 2004, and 1996 were all master dissertations, and all of the theses prepared in 2006 were doctoral dissertations. Fifty-nine dissertations which were published on lifelong learning phenomenon in Turkey are grouped in five dimensions such as leadership ($n = 6$), teachers ($n = 21$), students ($n = 8$), conceptual ($n = 12$), and others ($n = 12$). The least dissertations on lifelong learning phenomenon are on leadership dimension. It is seen that most of the dissertations on leadership is about public education centers.

Most of the dissertations on teachers dimension are about lifelong learning tendencies and perception of teachers from different branches. Dissertations on students dimension are about the relationship between lifelong learning tendencies of students and various variables. Most of the dissertations on conceptual dimension are about the relationship between lifelong learning and various variables such as autonomous learning, employment, and European Union adult education policies.

In addition, most of the dissertations on this dimension are about evaluation of the effects of various concepts in terms of lifelong learning, such as *women in poverty*, training activities given in prisons, *use of strategies in foreign language learning course books*, some projects like “Campaign Mothers and Daughters are at School” and “Project Let the Schools Be Life,” e-learning environments by using data mining techniques, and role of vocational government informal training.

49.4 Future Trends

In the future, articles and other scientific publications can be examined in lifelong learning in Turkey. In addition, comparative researches can be conducted on this subject. In recent years, tendencies in researches on leadership and lifelong learning have been changed, and interdisciplinary studies have been on the increase, but these contributing efforts should be visible in graduate thesis, too.

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Chapter 50

Perception of Violence Against Women in the Construction of Patriarchy



Aylin Görgün-Baran, Birsen Şahin-Kütük, and S. Dicle Maybek

Abstract Violence against women is increasing in the world in general and Turkey in particular. In this study, we investigated whether or not women deserve this violence. The theoretical framework of the research was based on Gilman and Gilmore's theory of patriarchal discourse. Our analyses are based on a total of 300 married women (150 working women – 150 housewives). In this quantitative study, data was collected using the Turkish version of "inventory of beliefs about wife beating" scale. One-way ANOVA results showed that the thought of whether or not women deserve violence had significant differences between low, middle, and high income groups. In addition, the opinion whether or not women deserve violence showed significant differences between education level, employment status, and residential region.

50.1 Introduction

Today, when patriarchal cultural discourse is dominant, it is observed that the violence against women is increasing both in the world and Turkey. This increase is not being prevented and shows that the problem is becoming more complex and complicated. Unfortunately, the practices based on international conventions for the purpose of solving the problem cannot find effectiveness because of the patriarchal pattern or mentality of implementing bodies, and this has brought the issue to the brink of chaos. It is determined in many researches recently conducted that the violence against women is not perceived as a social problem and it is rather perceived as normal by women (TNSA 2008, 196). It is, however, not possible to disregard that violence is a violation of human rights causing social damage. Particularly, physical violence against women is contrary to the human rights and dignity and causes damage to the mental and physical health of women. The point of whether women deserve being beaten is one of the most important matters discussed in

A. Görgün-Baran (✉) · B. Şahin-Kütük · S. D. Maybek
Department of Sociology, Faculty of Literature, Hacettepe University, Ankara, Turkey
e-mail: aylingbaran@gmail.com

television programs made on violence against women in the media. Deserving violence is a freaky behavior which should be questioned and opposed. Because, violence is an intolerable behavior regardless of whether it is caused by women or men. In fact, the expression “deserved violence” is a fundamentally faulty and nonobjective understanding. Violence is an undesirable behavior including an offense. It is also the violation of human rights. In particular, the perception of violence as a normal behavior by some apathetic women is a clear proof of reproduction of patriarchal discourse through women. Because of this reason, it is significant to study the “deserved violence” perception in the scope of physical violence (Görgün-Baran et al. 2015, 6). Physical violence against women is defined as the action for discourage and suppression of women. This action causes death, injury, mutilation, and unsoundness of women and negatively affects the quality of life of women (Başbakanlık Kadının Statüsü ve Sağlığı ile İlgili Gerçekler 2008, 96).

The opinions of women about “wife beating” were examined in terms of deserved violence, and effort was made to determine the differences by correlating this matter with sociodemographic data in the study. The other purposes of the study are to draw attention to physical violence against women, to announce that physical violence against women is a violation of human rights and disturbance of human dignity, and to prevent the violence from being normalized.

50.2 Theories on Patriarchal Discourse

Patriarchy is a concept pointing out the domination of men in general. On the other hand, patriarchy means the most private forms and structures of power relations in its specific circle in terms of historical, social, economic, political, and cultural contexts from a wider point of view (Saraçgil 2005, 11; Mitchell 2006, 58).

Gilman calls attention to the fact that the world centers on men, and culture reflects the stereotypes focused on men in social relations. Gilman, by referring to roles of men and women in historical development process (Dannovan 2001, 96), mentions that men get award as a result of victory over the competitor because of warlike and swanking nature of men, and this behavior brings the characteristic of men to be a man. Consequently, Gilman associates the warlike nature of men with prehistoric ages. According to Gilman (Dannovan 2001, 96–97), “the most fundamental feminine drive is to unite and construct. The most fundamental masculine drive is to throw, scatter and destroy.” These behaviors also present the discrimination in gender roles. Gilman states that men-centered culture wraps up all fields of social life with negative and masculine values. The home environment is defined as despotism in terms of the private sphere, the home belongs to men, and men are responsible to protect the home as the head of family. Women are the properties of men within the family, and it is a common and valid opinion that the basic role of women is to give men a charge. So, men are the dominants of this private sphere. Public sphere is defined as a wider theater of war to compete with other men (Dannovan 2001, 98; Görgün-Baran 2010a; Dermen 2003). Consequently, it seems

that men have the right to commit all negative actions to women considered as “property” by men. Unfortunately, such behaviors are considered as normal, and a culture approving such mislearned abnormal behaviors survives. Althusser (1989) states that this situation is based on consent and approval without using force and constructed during the socialization process of a child. Children learn and use patriarchal discourse included in rituals during the socialization process, and they reproduce this patriarchal discourse as a normal behavior when they become adults. Thereby, patriarchal discourse is ideologically the indirect impact of structure on the subject and exterior to the subject. The dominant values are adopted by subjects by this way in order to ensure subjects integrate and live in harmony with the system. Althusser criticizes this opinion but also defines exteriority as a formation of awareness of individuals (Sancar 1997, 43–45). As pointed out by Bem (1984), the social learning method forms the “mental schema” of an individual who learns patriarchal stereotypes during the socialization process. Learning patriarchal values in terms of gender roles in the society follows this process, and this situation is considered and approved as a normal behavior to constitute hegemony in society.

According to Gilmore (1990, 222–223, Görgün-Baran 2010b, 414), who conceptualizes the matter in this context, three main criteria are noticed in the construction of the identity of masculinity:

1. Make a woman pregnant (reproduction function).
2. Protect the ones subjected to him from dangers (security).
3. Maintain kith and kin (meeting economical needs).

These three areas of responsibility present the validity of hegemony of men. Since these three areas are determined as fertilizing, protection, and maintenance, they dully cause crystallization of stereotypes in the society. Especially, assignment of men as the ones responsible for maintenance of family brings about these adding to the development of work sharing based on gender. Getting pregnant and childbirth, being responsible for caring of baby in compliance with the expectations of society, being excluded from work life and lack of economic independence, and staying at “home” cause women to be suppressed and being dependent on men. Dependency functions as a founding factor of femininity, and the work sharing based on gender in a male-dominant society causes women to be of secondary importance and to stay at home according to the expression of Bourdieu (2009, 21–29). Marriage is defined as a system and a natural target which presents a proper life for women and appreciation of God. It is stressed that women come into the world and as they grow up, they are presented for marriage and the marriage is a respectful maintenance way. Owing to this reason, working outside home means negligence of home by women (Gilman 1986, 56; Kandiyoti 2007, 34). This brings into question the power imbalance of patriarchal structure and the inequalities between men and women. According to both Walby (1990, 173–179) and Connell (1998, 169), such stereotypes reinforce the hegemony of women in private sphere and hegemony of men in the public sphere and cause reproduction of patriarchy by both men and women accepting such norms. Consequently, men can control public sphere and ensure the sustainability of gendered regime in private companies, bureaucracy, and armed forces.

On the other hand, as stated by Sancar (2009), construction of masculinity is not also supported by cultural images but also by institutionalized patriarchal relations. Violence types inherent in culture are perceived as an admirable behavior by both men and women, and this behavior leads to praising of the patriarchal value. As stated by Althusser (1989), the holy family organization is an important instrument for building of this understanding. The exclusion of women from social life, the problems faced within social life, and the humiliation of women, which are defined as psychological/emotional violence rather than physical violence in this context, are considered as a key consequence of patriarchal structure (Gilman 1986, 1993; Lane 1990).

On the other hand, the violence against women is expressed as sex-oriented, and focusing on power and violence is considered as a type of control instrument. Violence against women includes all characteristics of patriarchal structure, and it is not possible to understand it without relating it to patriarchal social structure (Walby 1990, 128). The lack of economic independence/active participation in production and being restricted within borders of the home are considered as a violence factor for women. In this context, it is determined as a result of conducted researches that the lack of economic independence/participation in labor force market is a determinant factor for construction and continuation of violence as will be mentioned in the following section of the article.

It is taken into account in this study that participation in labor force market and the increased education level of some women may cause a differentiation from other women who do not actively participate in production, to the point of objecting difficulties of patriarchal structure. The results of the study, conducted based on the assumption that the “deserved violence” opinion may differ among women due to the working position of women, are presented.

50.3 Researches on Violence Against Women

The research works, conducted on violence against women by their husbands/partners, are mentioned in this section of the study. There are many research works conducted on this subject.

It is determined that approximately 25% of women in the USA have been exposed to physical violence and 7% of women in Canada have been exposed to physical violence during the last 5 years (Başbakanlık Kadının Statüsü ve Sağlığı ile İlgili Gerçekler 2008, 91).

According to the research conducted by Moreno et al. (2005, 1282), 50–90% of women, who participated in the interviews conducted by the World Health Organization in 15 different regions of 10 countries, stated that wife beating is acceptable under certain conditions. It is also determined in this research that 35–76% of women in 13 of these 15 regions had been exposed to physical violence and sexual violence at least one time since they were 15 years old (Cited in Maybek 2009, 59).

The rate of women, who are exposed to physical violence (beating) by their husbands/partners at least one time during their lifetime, is 35% in Turkey in general according to the research conducted by Arat and Altınay (2008, 82). These scholars divide Turkey into two regions as Central Anatolia and Eastern Anatolia Regions. This rate is determined as 40% in Eastern Anatolia Region. The rate of physical violence against women who are divorced or separated from their husbands is 78%. This rate shows the level of physical violence against women. While the rate of being exposed to physical violence is 43% for illiterate women, this rate decreases to 12% for women who completed higher education.

On the other hand, the rate of women, who are exposed to physical violence in any period of their lives, is determined as 39% as a result of research jointly conducted by T.R. Directorate General on the Status of Women and the Institute of Population Studies of Hacettepe University (2009, 27). The rate of women who are exposed to emotional violence is 44%. Forty-seven percent of women stated that men are responsible for women, 49% of women stated that women should not argue with their husbands, 33% of women stated that men should not do housework, 34% of women stated that women cannot decide how to spend money, 31% of women stated that women cannot reject the sexual intercourse demand of their husbands, and 14% of women stated that men can beat their wives in certain situations in the mentioned research. According to the findings obtained from another research, the rate of women, who expressed that they are exposed to physical violence by their husbands, is 32.5% (Vatandaş 2003, 79). While a minimum half of the illiterate women stated that they were exposed to physical violence at least one time, this rate is 18% for women who graduated from high school or university according to this research. Again, according to the research conducted by DİE. (2000, 137), the rate of men, who beat their wives as a result of quarrel, is 34.04%. 29.59% of women verified this. The rate of beating is 78.9%, and beating is in the second rank among violence types committed by husbands against their wives (verbal violence is in the first rank with the rate of 84%).

On the other hand, 39% of women acknowledge men to beat their wives when women burn the food, respond to their husbands, splash out, neglect the care of children, and reject sexual intercourse (Kadının Statüsü ve Sağlığı ile İlgili Gerçekler 2008, 95) according to another research (TNSA 2003). Again, the following results are achieved as a result of research conducted by TNSA in 2008. 49.9% of under-educated women who did not graduate from primary school, 26.6% of women who graduated from the first level of primary education, 13.85% of women who graduated from the second level of primary education, and 5.3% of women who graduated from high school and the ones with a higher level diploma acknowledge that men (husbands/partners) are right to commit physical violence against women when women burn the food, respond to their husbands, splash out, neglect the care of children, reject sexual intercourse, and also fail to cook for men. This rate is 36.4% among women living in rural regions and 20.9% among women living in urban regions (TNSA 2008, 196–197). According to the results of this research, the opinion that women “do not deserve beating,” as the determinant, is directly correlated with the educational level of women.

It is understood from these researches that the physical violence against women is commonly observed not only in Turkey but also almost in all societies, and women's normalizing and rationalizing violence is effective in the reproduction of violence. This indicates that the social relations are associated with patriarchal structures almost in all cultures.

50.4 Research Method

50.4.1 Population and Sample

Yenimahalle neighborhood of Ankara is the population of the research. A total of 300 women, who are employed and unemployed from high, middle, and low socio-economic levels in Yenimahalle neighborhood of Ankara, were selected by using purposive-sampling method in order to compare different groups in terms of socio-economic level using the data of the research (Table 50.1).

50.4.2 Data Collection and Analysis Techniques

The "beating/whaling" question form that is called "inventory of beliefs about wife beating" consists of 31 questions and developed by Saunders et al. (1987) and was applied to a total of 300 employed and unemployed women. The word "beating" means continuously beating for grieving. There are seven Likert scales from "I agree strongly" to "I strongly disagree" corresponding to expressions. The Cronbach alpha value was found higher than 0.80 as a result of reliability test made for scale, and this value was also found higher than 0.80 in this study.

The research began in December 2008 and was completed in the middle of March 2009. In addition to the "inventory of beliefs about wife beating," the analysis of data, which was collected by means of a questionnaire (face-to-face interviews) including sociodemographic questions about family, was carried out in SPSS. The frequency tables and one-way ANOVA were used to the analysis of data in the study.

Table 50.1 Distribution of sample by regions and employment status

Area of residence	Employment/unemployment	Frequency	Total
Çayyolu	Housewife	29	100
	Employed	71	
Yenimahalle/central	Housewife	44	100
	Employed	56	
Şentepe	Housewife	78	100
	Employed	22	

50.4.3 Hypothesis

Staying at home is the position of women in social life in terms of patriarchal discourse, and this situation also determines the roles of men taking place in public sphere and economic process. According to Gilman, one of the basic roles of men is to ensure the maintenance of the family. This role directly makes men responsible for working and also reinforces the role of women to stay at home. In this context, it is considered that the differences in working life and education level of women may cause a difference among women to struggle with obligations of patriarchal structure and the hypotheses of the study were determined according to this foundation in the scope of the study:

- The opinion whether women deserve violence or not varies according to the employment status of women.
- The opinion whether women deserve violence or not varies according to the education level of women.
- The opinion whether women deserve violence or not varies according to the income level of women.
- The opinion whether women deserve violence or not varies according to the area of residence of women.

50.5 Research Findings

The findings, achieved as a result of analysis of data collected from the 300 women participants in the study, are as follows.

50.5.1 General Sociodemographic Characteristics of Participants

The age, marital status, education level, monthly average income, age of marriage of women, and type of marriage variables were included in sociodemographic characteristics of participants of this study.

When the age distribution of participants is examined, it is seen that, except for age 25 and younger (35.3) group, the rates of other age groups are close to each other and bring together the different age groups. For instance, the age distribution is ranked as the rate of age 56 and older is 23.4%, the rate of ages 36–40 is 16%, the rate of ages 51–55 is 13%, the rate of ages 31–35 is 12.7%, and the rate of ages 26–30 is 11% (Table 50.2).

The most remarkable factor in *marital status* of women, who are the sample of the study, is that the rate of religious marriage is just 0.3%, and the rate of civil and

Table 50.2 Marital status of participants

Marital status	Frequency	Percentage
Civil marriage	72	24.0
Religious marriage	1	0.3
Civil and religious marriage	184	61.3
Divorced	19	6.3
Living separated from her husband	3	1.0
Women whose husbands died	21	7.0
Total	300	100.0

Table 50.3 Education level

Graduation	Frequency	Percentage
Illiterate	5	1.7
Literate	10	3.3
Primary school	74	24.7
Secondary school	30	10.0
High school and equivalent	78	26.0
Vocational high school	21	7.0
University	65	2.7
Postgraduate	12	4.0
Doctorate	5	1.7
Total	300	100.0

religious marriage together is 61.3%, as the highest rate. The rate of women who have just civil marriage is 24%. The high rate of civil and religious marriage together reveals the importance of cultural codes in marriage (Table 50.3).

The rate of illiterate (1.7%) and the rate of literate but not graduated from any school (3.3%) are at the lowest levels in the sampling, and the rate of women who graduated from high school and equivalent is 26%, and this is the highest level in the sampling. This is followed by 24.7% primary school and 21.7% university graduates.

The income distribution of the sample group consisting of 50% employed women is as follows. It is determined that the rate of women who have 500–900 TL of monthly average income is 26.7%, as the highest rate, the rate of women who have 1.000–1.499 TL of monthly average income is 22.7%, and the rate of women who have 1.500–1.999 TL of monthly average income is 10.7%. The rate of women who have 2.000 TL and higher monthly average income is low (Table 50.4).

43.7% of women express themselves as being in middle class, 22.3% of women see themselves as being in upper middle class, 13.7% of women express themselves as being in high class, 11% of women express themselves as being in lower middle class, and 8.7% of women express themselves as being in low class in the scope of the research.

Forty-seven percent of the sampled women got married when they were 18–23 years old, and 27.7% of the sampled women got married when they were

Table 50.4 Monthly average income of participants

Income	Frequency	Percentage
499 TL and lower	19	6.3
500–999 TL	80	26.7
1.000–1.499 TL	68	22.7
1.500–1.999 TL	32	10.7
2.000–2.499 TL	25	8.3
2.500–2.999 TL	22	7.3
3.000–3.499 TL	20	6.7
3.500–3.999 TL	7	2.3
4.000 TL and higher	27	9.0
Total	300	100.0

Table 50.5 Mean and standard deviations of opinions of participants whether women deserve beating or not

	Women do not deserve beating	Women deserve beating
Number	300	300
Mean	5.8388	2.2093
Standard deviation	0.72974	0.79353
Minimum	3.06	1.00
Maximum	7.00	5.60

Seven Likert scale questions (referring to expressions as “I agree strongly” and “I strongly disagree”) were used to measure the opinions of women about violence against women

24–29 years old. Almost 20% of the sampled women got married when they were 14–17 years old. It is remarkable that getting married at young ages are mostly seen in Şentepe quarter where low economic level is observed. The rate of marriage as a result of flirt (46%) and the rate of arranged marriage (42.3%) are close to each other. The rate of arranged marriage made by force is **11%** (Table 50.5).

50.5.2 Discrimination Tests of Opinions of Participants About Violence Against Women According to Sociodemographic Variables

It is determined that the opinions of women regarding whether women deserve violence or not significantly vary according to the low, middle, and high socioeconomic level and the opinion that women do not deserve violence is increasing with high socioeconomic level as a result of one-way ANOVA test (Table 50.6).

It is determined that the opinions that women do not deserve violence and the opinions that women deserve violence significantly vary ($P < 0.01$) due to the employment status of women as a result of the conducted one-way ANOVA analysis.

Table 50.6 Mean, standard deviation, and results of one-way ANOVA analysis of opinions of women about violence according to the employment status

	Housewife		Employed women		F (df)
	Ave.	S.S.	Ave.	S.S.	
Women do not deserve violence	5.5	0.75	6.1	0.52	77.9 (1, 299)* **
Women deserve violence	2.6	0.83	1.8	0.50	102.7 (1, 299) ***

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Table 50.7 One-way ANOVA and discrimination test of opinions of women about violence due to the area of residence

	Çayyolu		Yenimahalle		Şentepe		F (df)
	Ave.	S.S.	Ave.	S.S.	Ave.	S.S.	
Women do not deserve violence	6	0.55	5.8	0.72	5.5	0.80	13.27 (2, 299)* **
Women deserve violence	1.9	0.66	2.1	0.80	2.5	0.80	13.64 (2, 299) ***

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

The mean of the opinion that women do not deserve violence is higher among employed women than housewives (Table 50.7).

It is determined that the opinions that women do not deserve violence and that women deserve violence vary according to the area of residence when the variation of opinions of women about violence according to the area of residence is analyzed using one-way ANOVA. The mean of opinion that women do not deserve violence is higher in Çayyolu neighborhood where the socioeconomic level of people is higher. The mean of the opinion that women deserve violence is decreasing from Şentepe and Yenimahalle, low socioeconomic level, to Çayyolu as supported by the previous findings. In other words, the opinion that “women deserve violence” is increasing in areas of residence where socioeconomic level is low, and the average of the opinion that “women do not deserve violence” is increasing in areas of residence where socioeconomic level is high.

The opinions that women do not deserve violence [$F(df) = 6.67(8), P < 0.001$] and that women deserve violence [$F(df) = 7.72(8), P < 0.001$] also vary due to the income level. It is witnessed that as the income level increases, the mean of the opinion that women do not deserve violence also increases.

It is seen that the opinions of women about violence against women also vary in terms of education level. The opinions that the women do not deserve violence [$F(df) = 18.16(8), P < 0.001$] and that the women deserve violence [$F(df) = 23.97(8), P < 0.001$] also significantly vary according to the education level of women. The opinion that women do not deserve violence significantly varies in women who are illiterate (ave., 4.62; s.s., 1.01) and holding primary school (ave., 5.38; s.s., 0.75), secondary school (ave., 5.5; s.s., 0.58), high school (ave., 6.04; s.s., 0.53), university (ave., 6.23; s.s., 0.47), postgraduate (ave., 6.38; s.s., 0.18), and doctorate (ave., 6.39; s.s., 0.26) degrees. In other words, as the education level increases, the mean of opinion that “women do not deserve violence” increases.

50.5.3 Conclusion and Discussion

Violence has been a problem, that is, among social, economic, and political problems, in almost all periods of history. It is well-known that violent actions are contrary to human rights and dignity and it is a crime that violates human rights regardless of its source and its target. It can be said that violence also causes complex and chaotic results when taking into consideration that violence is experienced all over the world. All types of violence against women are assessed in the frame of human rights in the scope of this study.

While the fertility of women had been blessed and a high status had been granted to women until a certain period of history, the physical power of men has been an indicator of status since the period of sedentism. After sedentism (Neolithic period) the understanding of development of property, protection of property, and continuation of bloodline by bequeathing a son was accepted by the society. Property is perceived as a power indicator and interpreted as the beginning of masculine values (Erbil 2012). As a result, the hierarchical structure in relations between women and men and accordingly sexual discrimination emerged. Physical power enables men to be the owner of property and to give priority to management subjects. Consequently, the male-dominant understanding, patriarchy in other words, had come into play as a process, and it has been dominating sociocultural structure since then. This caused complex relations in the society. According to Özbudun (2007, 30), patriarchy may be observed in suppression types and inequalities among various segments and classes of society and points out that the same situation may also be observed both in the eastern and western regions of the world. The continuation/continuity of violence against women in the world presents both the complexity of the matter and the existence of chaos.

It can be said that the increase of urbanization and the changes in education level and status of women may be effective in decreasing violence against women as a result of researches conducted on this matter. However, the experiences show that the women in high status are also exposed to violence at a substantial rate and the possible impact of change in education and status of women on the decrease of violence is not clearly known yet. The opinion, whether women deserve violence or not, and whether this opinion changes due to the sociodemographic variables or not are studied in this research. The results of analysis of data collected from 300 women who participated in the research conducted in Ankara are as follows.

It is concluded that the opinion whether women deserve being beaten varies with regard to the variables such as education level of women, area of residence, and working life, and the rate of justification of deserved beating decreases in the frame of such variables. This result is a significant finding. This finding indicates that a significant rate of women does not approve the notion of deserved beating. It is also seen that the opinions of women related to violence vary due to the education level of women when the results are considered in detail. In other words, the opinion that women do not deserve violence increases as the level of education increases. The opinion whether women deserve violence or not also varies due to the income level.

It is observed that women possessing high socioeconomic levels think that women do not deserve violence. Particularly, the opinion that the women do not deserve violence increases in Çayyolu, one of the neighborhoods where a higher socioeconomic level is seen. The mean of opinion that women do not deserve violence among housewives is lower than the mean of opinion that women do not deserve violence among women employed in public organizations in terms of working life.

Verbal violence is in the first rank, and beating is in the second rank as the physical violence among the types of violence committed by husbands against women according to the data of DİE (2000). The women, who participated in interviews made by the World Health Organization in 15 different regions of 10 countries, stated that wife beating is acceptable. It is understood that women, who are at low education and socioeconomic level, do not have any income resource, and do not participate in working life, think that "wife beating is acceptable" when these results are compared with the results of this study.

The rate of physical violence against illiterate women is higher than the rate of physical violence against women who graduated from higher education according to the researches of both Arat and Altınay (2008) and Vatandaş (2003). The rate of opinion that women deserve violence is higher among undereducated women than educated women according to the results of 2008 research of TNSA. In brief, the results of these three studies and the results of this study match. The violence against women is common, and women also normalize and rationalize violence and are effective tools in reproduction of violence according to the results of these researches. Nevertheless, high educational level, participation in working life, and having an income are considered as significant factors to overcome the obstacles.

The acceptance of "deserved beating" as an approved behavior by women is associated with the adoption of patriarchal values by individuals since their childhood period and with the learning of patriarchal values within social practice as expressed by both Gilmore and Gilman and Althusser. According to Althusser, both family and school function as an ideological instrument including transfer of patriarchal values in order to raise individuals and cause individuals to approve and give consent to these behaviors.

This is the reason why women, who participated in the research, perceive "deserved beating" in this frame and reconstruct the patriarchal culture. Especially, children may normalize and approve beating if they are exposed to family violence by the immediate social environment (family members), and if these children are also exposed to violence during socialization process, they are likely to do the same to their partners when they are adults if truth be told without making sexual discrimination. That is to say, such conflict relations within family may cause both boys and girls to perceive beating as a normal behavior in the future. Growing up when exposed to family violence may result in normalization and approval of such behavior for both sexes. Accordingly, the approval of such insulting and destructive behavior by women who participated in the research reveals that the patriarchal values are reconstructed through women in society. Of course, these explanations should not be interpreted that all women approve such behaviors. This unequal situation turns into a complex problem and in return making it difficult to be solved.

Therefore, the matter of prevention of violence against women is turning into a chaos. However, the struggle with violence and anger management as a learned behavior are associated with the healthy communication within family relations, nonuse of sexist language by media, and legal regulations.

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Chapter 51

An Assessment System for Monitoring the Academic Development of Students



Recep Gür

Abstract This study aims to develop an assessment system for monitoring the academic development of students. In accordance with this purpose, the study hereby includes the details about a team of specialists who are to develop the assessment system and their tasks in this regard, what kind of taxonomy to use, what should be observed in the item development process, the limitations and advantages of item types, measures to be taken for test security, issues to be considered during the process of receiving feedback with regard to the achievements and failures of students, and finally what kind of evidence to accumulate regarding the validity and reliability of the measurement results. In line with the aforementioned details, thanks to a qualified assessment system for monitoring the academic development of students by way of pursuing a holistic approach to cognitive, emotional, and behavioral skills of students and monitoring their academic and social development throughout their basic schooling years instead of high-stakes tests (university entrance exams, public personnel selection exams, etc.) in which critical decisions are taken within a few hours of time, usually in a single session, it will both ensure the effective use of human capital and make it possible for individuals to be referred to the fields of occupation in which they will be more successful and satisfied in their professional lives.

R. Gür (✉)

Faculty of Education, Department of Educational Sciences, Measurement and Evaluation in Education, Erzincan University, Erzincan, Turkey
e-mail: rgur@erzincan.edu.tr

51.1 Introduction

One of the main educational objectives of most of the countries in the world through the main courses (Turkish Language, Social Sciences, Science, and Mathematics) is to enable students to gain achievements that will lead them to success in daily life and in the future workforce. With this objective in mind, countries allocate a large share of their budget to education. The efficiency of the investments in education is observed with great care. In observing the efficiency of educational investments, the most significant indicator is the success level of students. Identifying student achievement levels and monitoring them over years come out as an important dimension in quality studies (Berberoğlu and Kalender 2005).

According to Haladyna (2002), large-scale assessment generally refers to the assessment that ultimately require high-risk decisions such as selecting, correcting, and improving student learning, reforming curriculum, issuing certificates, and graduating students. Herewith, these tests can also guide classroom evaluations and activities (Zenisky and Sireci 2002). Through large-scale test applications, it provides significant benefits in terms of reaching targets for determining shortcomings of students, teachers, and curriculums and complementing such shortcomings and for increasing motivation and sense of responsibility of students (Thompson et al. 2002).

Through large-scale tests such as Program for International Student Assessment (PISA) and Trends in International Mathematics and Science Study (TIMSS), students are assessed whether they can make an inference about the unknown situations based on what they have learned and if they can implement what they have learned at school (Olson et al. 2008). In other words, large-scale tests are more concerned about the ability of students to use and analyze the data, to establish effective communication, and to settle problems rather than what the students do or fail to do (Organization for Economic Cooperation and Development [OECD] 2012).

An assessment system for monitoring the academic development of students provides the system with the opportunity to discover the strengths and weaknesses of students by monitoring the development of students throughout the basic schooling years within the scope of major courses (Turkish Language, Social Sciences, Science, and Mathematics). This will guide the students to the professions where they can succeed and to take the necessary precautions in areas where improvement is needed.

Without doubt there are individual differences among students. Revealing these differences and providing the necessary support for each student to succeed can only be achieved by monitoring the academic development of the students. Besides the abovementioned issues, an assessment system to monitor the academic development of students, which will be carried out in order to monitor the academic, social, and emotional skills of the students throughout the process, will provide information on whether the purpose of educational reforms and investments made over the years is attained.

This assessment system, which will be developed to monitor the academic development of the students, focuses on the concept of “literacy.” The concept of

literacy is defined as “the capacity of students to use their knowledge in everyday life, to make logical inferences, and deducing from what is learned to settle and interpret the problems for various reasons” (OECD 2012). In this way, qualified individuals with critical thinking skills and the ability to analyze, who can reach knowledge and create solutions, can be raised. In the light of the abovementioned considerations, the details about who should be involved in the team, what kind of taxonomy to use, item development process, item types, test security, feedback process, and evidences for the validity and reliability of the measurement results are provided herein below, respectively.

51.1.1 Teamwork

The aforementioned assessment system for monitoring the academic development of students aims to monitor the development of students in many private and public schools in terms of academic, social, educational, and emotional skills within the educational process with regard to the major courses throughout the schooling years. Therefore, the team that will build up this system should involve experts in the fields of Turkish Language, Social Sciences, Mathematics, and Science who will be asked for their knowledge and experiences in item writing and inspection of those items in terms of scientific accuracy, measurement and evaluation specialists, program development specialists to check out the compliance of assessment process with the curriculum, and visual design expert in organizing paper-and-pencil tests.

Teachers should also take part in this team to deliver their opinions in writing questionnaire items with respect to the factors influencing the academic, social, educational, and emotional skills of students and how the teaching occurs in practice, besides item writing. In parallel with similar purposes, Science, Physics, Chemistry, and Biology teachers and field experts should also be involved in this team since science teaching is often provided in different names (e.g., “Science” in the UK or “World” in Greece, “Natural Sciences” in Slovakia, and “Science and Technology” in Turkey) as a single integrated course on the first stage of basic education or primary education (ISCED 1), while in the second stage of basic education (ISCED 2) or lower secondary education, it is divided into minor disciplinary courses of “Physics,” “Chemistry,” and “Biology” (European Information Network on Education [Eurydice] 2011). Furthermore, linguists should also be involved in the team to investigate whether the items are written in an understandable manner and if there is any grammar or spelling mistakes.

Measurement and evaluation specialists in the team that will build up the assessment system for monitoring the academic development of students are expected to fulfill the following tasks:

- Preparing table of specifications in item development process
- Building up table of unit analysis

- Checking the items written by field specialist and teachers and examining them whether they are of the quality to assess the behavior demanded to be measured
- Examining the items whether they are defective or not from technical aspect
- Reviewing the compliance of test and items with the developmental traits of students
- Determining qualified items by analyzing pilot test results
- Developing program, student, home, school, and teacher questionnaires
- Reporting the findings and comments by analyzing the data obtained at the end of the study

The scores of the exams for different years are generally not comparable, because they are usually not on the same scale (Thorndike 1982). In this regard, in order to render test averages for various years comparable through the assessment system for monitoring the academic development of students so that the tests to be developed do not differ from year to year in terms of the qualifications to be assessed and level of difficulty, the following studies should be performed by measurement and evaluation specialists:

- Compatibility of item and learning outcome
- Equating test forms using anchor items between class levels and forms
- Defining the scores on the same scale through the models of item response theory (IRT)

51.1.2 Taxonomy

Beyond what they know, students will succeed as long as they can make use of their knowledge in everyday life situations, and hence in the assessment system, the concept of literacy comes to the forefront for the purpose of raising qualified individuals with critical thinking skills and the ability to analyze, who can reach knowledge and create solutions. Therefore, since PISA also adopts the concept of literacy as the dominant understanding, Bloom's revised taxonomy model (remember, understand, apply, analyze, evaluate, and create), which is included in the "PISA Draft Science Framework" and benefited in the preparation of the framework of PISA and Marzano's (retrieval, comprehension, analysis, and knowledge utilization) and Webb's (recall and reproduction, skills and concepts, strategic thinking, extended thinking) taxonomy, can be used (OECD 2013).

The taxonomy to be created in line with these taxonomies will comprise of the mental activities necessary for reuse of information that students previously have experienced and used, interpreting different situations and establishing links between them, and sorting out varied circumstances, complex contexts, and multi-step problems. This is because it is aimed to measure the ability of students to make multiple inferences and comparisons, to find out the relevant information, to establish connections, and to create solutions when encountering an unfamiliar problem and critical thinking.

Tests should include items from simple to complex structures that require the students to use a variety of skills such as thinking, applying, reasoning, debating, modeling, setting out, and solving problem. Furthermore, differences in age and experiences of students (abstract thinking skills) by their level of basic education should also be considered in the distribution of items according to the cognitive levels.

51.1.3 Item Development Process

In the development process of items which will be used in the assessment system, committees should be established, involving field experts, measurement and assessment specialists, program development specialists, teachers, and linguists (Guide Development Committee for Item Writing, Questionnaire Development Committee, Item Development Committee, Item Review Committee, and Item Analysis Committee), and these committees will carry out their work in cooperation.

Before writing the items, the Guide Development Committee for Item Writing will develop an item-writing guide which includes the details about the total number of articles to be written, the weight of topics, and the scope of field test. Table of specifications, distribution of items in terms of content and cognitive level at various grade levels, and further general information on creating a qualified assessment tool such as “Local Independence: the assumption suggesting that an item should not give any clue about the correct response of another item” are included in this guide. Item-writing guide will also provide necessary information pertaining to the development of required checklists for reviewing the scoring rubrics and items.

The Questionnaire Development Committee will have the relevant groups (school administrators, teachers, students, and parents) write compositions to obtain information about school environment, cultures, and values adopted by the teachers, students, and school administrators; factors affecting the limited use of technology in schools, previous experiences of students, and classroom environment; and factors influencing the academic achievement for the purpose of developing program, school, teacher, and student questionnaires and conduct interviews to this end. The Questionnaire Development Committee will organize workshops and hereby write questionnaire items in line with the interviews conducted and compositions written.

Questionnaire items and achievement test items which are written during the item-writing workshops by the Questionnaire Development Committee and Item-Writing Committee will be examined by the Item Review Committee in terms of such considerations as whether they are consistent with the item-writing guides, how they are prone to scientific accuracy, whether they are of the quality to assess the behavior that is demanded to be assessed, whether they are technically defective, and whether they are written in an understandable manner.

A small group of students at various grade levels of basic education will undergo an implementation performed by the scoring rubrics development committee for the

open-ended items reviewed. Scoring training items will be formed by using the responses of students to make it easy for the open-ended items to be scored. Various scoring training categories will be created for each scoring training items. A scoring code will be assigned to each response of the student, and hereby various scoring categories will be created for scoring training items, and finally it will be ensured that the scoring rubric includes the range of responses by students. Thus, the defined information in the student responses will be combined, and a scoring rubric will be developed, in which each open-ended item is divided into logical categories and described through samples.

The explicitly of scoring rubrics developed for open-ended items as well as whether there is any inconsistency in categories and scoring will be reviewed by the Item Review Committee. As a result of these inspections, a pilot implementation will be carried out with the items that are free of any problem for the test formed. According to the outcomes of pilot implementation, Item Analysis Committee will designate the items considering the following variables (Olson et al. 2008):

- Level of difficulty for each item
- The extent to which items can discriminate low- and high-performing students
- The effectiveness of distracters in multiple-choice items
- Average theta
- Gender-item interaction
- Percentage of student responses for each option (multiple-choice items) or for each score category (open-ended items)
- Point-biserial correlation coefficients for each category of multiple-choice item or open-ended item
- Scoring reliability in constructed items
- Unidimensionality of questionnaire items
- Inspection of their internal consistency

At the end of the pilot implementation, mistakes and deficiencies faced during the implementation process and the data collection tools will be eliminated. The tests consisting of qualified items selected will be put into final form and made ready for the final application.

51.1.4 Item Types

Martinez (1999) emphasizes the fact that different item formats must be used for obtaining valid measurements. Therefore, the tests within the scope of assessment system include items in which students are asked to choose the appropriate answer or solve the problem and create their own responses. It includes multiple-choice items in which students mark one of four or five options according to their grade levels or items that students assess a range of propositions by choosing one of the two responses like “Yes/No” or “I agree/I disagree” and open-ended items in which students are asked to form their own responses either in short or long form. Each

item type has limitations as well as the advantages peculiar to itself. In order to minimize these limitations, various item types are included in the tests.

Open-ended items have lower scoring reliability than multiple-choice items. Since it is not precise whether it is wrong or correct, it is difficult to score them. For this reason, a qualified scoring rubric should be evaluated for improved assessment objectivity. Open-ended items are time consuming for preparing and may not always be eligible in terms of content validity. In multiple-choice items, however, the correct response (stem) is included among the options, which hereby enables the respondents who have failed to acquire the relevant achievement, to find out the correct response by recognizing and recalling out of a group of possibilities. In conclusion, some of the students have the chance to find the correct response without having any knowledge.

Multiple-choice items cannot be used to assess the capability of students to organize and present what they have acquired and explicitly verbalize their responses in conformity with the grammar rules (Anastasi 1961). Moreover, multiple-choice items are limited in questioning higher-order thinking skills of students. While multiple-choice items are appropriate for measuring the ability of students to reuse previously encountered and used information, different cases, and interpretations and the ability to establish links between them, it is not preferable to assess the ability of students to settle various cases, complex contexts, and multistep problems beyond the settlement of routine problems (Nunnally 1964). Thus, the tests should also include the open-ended items in assessing such behaviors as problem solving, creating new and original ideas, using information in new cases, reviewing opinions, analyzing the ideas, etc. besides the multiple-choice items due to their limitations.

Qualified open-ended items do not require memorizing; they are aimed at thinking, interpreting, reasoning, and producing new information. For this reason, open-ended items are more useful to assess the ability of students to settle various cases, complex contexts, and multistep problems beyond the settlement of routine problems (Gronlund and Linn 1990). In this way, different item formats will be utilized in data collection tools in the assessment system, and thereby the limitations of an item type will be eliminated with the advantages of other item types, which enable the students to give different responses (marking one of the options; creating short or long self-responses) and responding items in their own point of view by varying item formats.

51.1.5 Test Security

Instead of all the items in tests and questionnaires aimed for students, some part of the items must be allowed to be published to illustrate the scope of tests in Turkish Language, Social Sciences, Mathematics, and Science and Technology (Physics, Chemistry, Biology) in line with the grade levels of students in basic education and

to inform the public. The remaining items, which are not allowed to be published, should be retained for use in other exams.

An item pool should be established, comprising of items belonging to previous years and qualified items that are designated following the analysis of data obtained in consequence of pilot implementation of draft test forms in Turkish Language, Social Sciences, Mathematics, and Science and Technology (Physics, Chemistry, Biology). Test security will be ensured by developing parallel forms of tests and issuing multiple test booklets so that the items with the same level of difficulty, which serve for the same purpose, are in different test booklets.

51.1.6 Besides Development in Learning of Students Other Factors to Consider in Assessment

It is not enough only to assess the development in learning of students, because academic and social development of students is influenced by various factors such as school and classroom resources, characteristics of the teacher, teaching materials used during the courses, attitudes of students toward courses, and the home environment. For this reason, inspection of the influence of social and educational contents on the success is a guide for increased student success. Thus, information should be gathered through questionnaires as well as achievement tests. In this way, a system will be developed to ensure that the school is accountable (Ladd and Zelli 2002) to all stakeholders (to student, parents, policy makers, etc.) by assessing the success of the students and the school in a holistic way (Linn 2003).

Generally, three components are included in accountability. These components are standards of learning outcome, tests for these standards, and results related to different goal levels. Accountability in education has systematical approach toward practice instead of abstract concept. This systematical approach aims to develop school achievement and determine the extent to which educational organizations can offer qualified education and reach their goals for improved student achievement (Elmore 2013).

In order to monitor the student achievement and improve the education system and provide information for stakeholders of education, the questionnaires will generally include the items with regard to the content and structure of the planned program in courses of Turkish Language, Social Sciences, Mathematics, and Science and Technology (Physics, Chemistry, Biology), preparations and experiences and attitudes of teachers, what is actually taught, teaching approaches that are being used, school and classroom resources, attitudes of students in school, student motivation, and management of self-learning process of students through home resources, and information that will have an effect on the student achievements will be collected. In addition, teacher questionnaires as well as school questionnaires for school administrators will be developed to gather information about classroom activities and assignments. The results of these questionnaires can be used in

conjunction with other variables such as the indicators of teaching quality, which in turn will offer information on the general adequacy of the level of education system and whether there are any developments in the education system.

51.1.7 Feedback Process

There are various uses in literature such as feedback, return of information, response, and knowledge of results. Sadler (1989) defines feedback as the information offered to the individual to fill in the gap between what has been learned and what must have been learned and to make the individual reach the required level of learning over the performance level of individual during the learning process or the success achieved on an assigned task.

Since each student will receive different booklets and different item types, they will not be able to respond all the items; thus a single achievement score will not be estimated in the tests that will be developed. Therefore, by using item-mapping method among the standard setting methods, the competence levels that will estimate the ability of all students will be defined. In this way, feedback will not only be limited to interpretation of results but will be meaningful through interpretation of individual differences in terms of skills and will offer concrete solution proposals that will move the low-performing students forward to the upper levels of competence.

Since the focus of the assessment system to be developed will be on the schools and teachers whether they attach importance to education on the basis of thinking processes rather than a subject-oriented education, assessment will be based on the absolute assessment (Berberoğlu 2009). As far as Anastasi (1961) is concerned, absolute assessment focuses on what students can do in tests rather than how students rank among others. Therefore, identifying competence levels that will estimate the abilities of all students by using item-mapping method among the standard setting methods will give the opportunity to estimate what students can do and what they cannot do.

Item-mapping methods are processes that will assist in determination of minimum expected competence levels when used for the purpose of raising concern about thinking processes. Item-mapping method in education and accordingly the standard setting method lead schools, students, and educational institutions to be concerned about the thinking processes that an average student should acquire (Berberoğlu 2009).

The items will be scaled in accordance with the item response theory (IRT) and degraded by the specialists to the level of competence through item-mapping method in the direction of 50% and 80% possibilities of correct response. During the works of determination of cut point as specified in accordance with the IRT, bounces at the levels of possibility and changes in competences as measured by the items will be paid attention. Each item together with the achievement it measures will be presented for consideration of assessors who will be designated among the

team of experts, and the assessors will be asked to assign them into categories. Ultimately, item maps will be created for the same items according to both IRT and assessor classifications (Berberoğlu 2009).

Herewith the absolute assessment of whether students have achieved the identified competence levels, it will be revealed to what extent students have reached the achievements in the curriculum rather than the position they hold when compared to other students in the class.

51.1.8 Evidence on Validity and Reliability of Measurement Results in the Assessment System

Preparation of items at grade levels in line with the table of specifications and unit analysis tables as well as receiving an expert opinion during the phase of item reviewing provide information on the validity of the tests. The reliability of the measurement results and the assumption of unidimensionality should be checked. Items in the test should be examined through principal component analysis in terms of whether they measure only one dimension or in other words whether they meet the assumption of unidimensionality, and items with a factor load of less than 0.30 should be excluded from the analysis as long as they do not have a conceptual significance for the scope. It will hence give information about construct validity. Construct validity refers to the degree to which a measuring instrument reveals the theoretical structure that is desired to be measured with that instrument (Anastasi 1961).

In order for the determination of reliability, internal consistency estimation should be performed. Cronbach's alpha coefficient will be calculated for the questionnaires in which Likert-type scale is employed in determination of internal consistency. It is expected that a scale will have a Cronbach's alpha coefficient of at least 0.70 in order to have sufficient internal consistency (Erkuş 2003). Kuder-Richardson reliability coefficients are used for the items scored 1–0 in the achievement tests. Interrater consistency coefficients regarding the reliability of graded scoring key used for the scoring of open-ended items should be considered.

51.2 Conclusion

In this study, it is aimed to develop an assessment system for monitoring the academic development of the student, hence offering the opportunity to monitor the development of many students in private and state schools in terms of their academic, social, and emotional skills within the scope of major courses throughout the basic schooling years during the course of education. In addition, discovering the differences in students from the very beginning of basic education and guiding them

toward the areas where they are strong will enable students to be more successful both during and after the university lives.

In the assessment system, the content and structure of the planned program in courses of Turkish Language, Social Sciences, Mathematics, and Science and Technology (Physics, Chemistry, Biology), preparations and experiences and attitudes of teachers, what is actually taught, teaching approaches that are being used, school and classroom resources, attitudes of students in school, student motivation, and management of self-learning process of students through home resources, all of which have an effect on the academic success of students, are examined by way of questionnaires. In this way, it will be possible to reach the information whether the educational resources are distributed equally, which is among the requirements of being a social country and whether each student makes the same use of these resources with the concern of how educational activities should be carried out to improve the quality of education in line with the findings to be obtained regarding the country as a whole. In line with the aforementioned information, it will be possible to reduce the gap among the students through investing more in regions, provinces, and schools which do not equally benefit from the educational resources and have low levels of achievement.

Consequently, thanks to a qualified assessment system for monitoring the academic development of students by way of pursuing a holistic approach to cognitive, emotional, and behavioral skills of students and monitoring their academic and social development throughout their basic schooling years instead of high-stakes tests (university entrance exams, public personnel selection exams, etc.) in which critical decisions are taken within a few hours of time, usually in a single session, it will both ensure the effective use of human capital and make it possible for individuals to be more successful and satisfied in their professional lives. Since it will facilitate the determination of factors, which have an effect on the academic achievements of students, this study will provide an insight into the reforms to be carried out and the policies to be followed for the purpose of developing education system.

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Chapter 52

Views of Teachers on Relationships Between Emotional Intelligence Skills of School Principals and Organizational Commitment of Teachers



Gönül Şayır

Abstract In this study, according to the views of teachers, the relationships between the emotional intelligence skills of school principals and the teachers' organizational commitment were examined. The research is a qualitative study that was conducted descriptively. Research sample of this study consisted of 36 teachers that were selected through maximum diversity sampling, and these teachers were working in 15 secondary schools affiliated to the Ministry of National Education in Tokat province center and Zile district in 2016–2017 academic year. Semi-structured interview form was used in collecting data. In the research, six open-ended questions were directed to teachers about their school managers' emotional intelligence skills and organizational commitment; then collected views were analyzed and the themes and categories were determined by descriptive analysis technique. According to research results, teachers' opinions about organizational commitment were found to be positive and grouped in relation to other teachers, occupational thoughts, views on occupational affairs, and opinions on school. In addition, most teachers stated that school principals use emotional intelligence skills, and this affected organizational commitment positively.

52.1 Introduction

Organization is defined as structures that consisted of people who gathered to realize a specific purpose. Providing the continuity of the organizations is related to the ability of the people and their focus on the work they do, but this is not enough alone. At the same time, it is extremely important that members of the organization are committed to the organization and the work that they do (Bolat and Bolat 2008).

G. Şayır (✉)
Hacettepe University, Ankara, Turkey
e-mail: gonulsayir@gmail.com

In order to maintain the existence of educational organizations where the input and output are human, all stakeholders are in charge. Commitment to organization/school plays a critical role in fulfilling these duties. At this point, the concept of organizational commitment can be defined as members of the organization to possess an intense desire to embody the goals of the organization and to ensure continuity in the organization (Yolaç 2008, 156).

We can examine the determinants of organizational commitment in three groups (Bakan 2011). Personal factors are education status, age, marital status, gender, cultural differences, and personal characteristics (Balay 2000). Organizational factors are career opportunities, role ambiguity, management and management style, organizational awards, organizational culture, organizational trust, organizational integration, participatory decision-making, organizational climate, organizational image, role conflict, leadership style, organizational support, organizational justice, employee welfare, social relations, job values, individual-organization adjustment, education, and orientation (Kamer 2001, 29; Güven 2006, 12–16). Job or task properties are non-organizational activities, autonomy, and specialization (Balay 2000).

Teachers are the indispensable element of the school, which is the most indispensable element of educational organizations. The success of the school is related to the qualifications and implicit commitments of teachers and other educational staff. Celep (2014) examines the teacher's development of commitment in two stages. The first stage are the understanding of teachers' own occupation, acceptance of roles, satisfaction from learning, and acceptance by others. The second stage is reaching job satisfaction and consequently achieving commitment. The important element in reaching teacher commitment is related to school culture, values, and school management style. Management style is an important variable that determines the level of commitment to the organization's goals and values, which shapes the behavior of people during their time in organization (Bakan 2011). Therefore, the way the school is managed has an effect on the organizational commitment of the teachers working at that school (Halis 2010). Celep (2014) determined that school management influenced teachers' organizational commitment levels. One of the factors that influences teachers' organizational commitment is the ability to use the emotional intelligence of school principals who determine the school management's style.

Emotional intelligence, which is one of the variables that affects organizational commitment, "is a sub-form of social intelligence that relates to the ability of a person to observe and feel the feelings of himself and others, to distinguish between them, to use this knowledge in his own thoughts and actions" (Mayer and Salovey 1993). Goleman (2014, 62) provides the conceptualization of emotional intelligence and has the most important works in this regard, he defines emotional intelligence as to be able to move oneself, to regulate the mood, to put oneself in the place of another, to know how to cope during a trouble, to resist not to give up, and continue on the road when there are mishaps. According to Erçetin et al. (2016), emotional

intelligence takes the person to the starting point of their own emotions and thanks to this awareness enables one to understand other individuals in the organization. Besides this, Erçetin et al. (2016) explain that emotional intelligence concept includes empathy, motivation, happiness, optimism, self-confidence, practical perception, interpersonal skills, desire for success, and leadership.

Because emotional intelligence involves the skills necessary for an individual to get along well with other people in their work and personal life, and to be successful and happy, place of emotional intelligence in educational organizations where human relationships are experienced is very sensitive. Because of this, emotional intelligence skills of school principals are important. The network of relationships formed by the manager's efforts to influence the emotions of the employees constitutes the "emotional heart" of organization (Weymes 2003). In this context, in an educational organization that focuses on human relationships, relationship network is important, and the emotional well-being process depends on the school principals. Because managers with high levels of emotional intelligence skills ensure that employees work more effectively, working time is more productive, and employees are willing to pioneer innovations (Dedehayır 2002).

School administrators with high levels of emotional intelligence who are in peace with themselves are able to identify teachers' emotional states, do not hesitate to share their emotions with teachers, can cope with negative feelings about an event or themselves without reflecting their feelings outside, and have high ability to persuade teachers (Öztekin 2006, 40–43). According to the results of Erçetin's (1995) research, school principals try to influence teachers by organizing social activities, taking care of subordinates' personal problems, and trying to be good examples. To sum up, we can say that principals who have the high level of emotional intelligence skills have the ability to understand and direct teachers' feelings and influence.

Considering the fact that educational organizations play a critical role in the development of the country, the proliferation of studies on the organizational commitment of people working in these organizations is important in terms of contributing to the productivity of the organizations. Also, when it is accepted that the person who activates all the components in the organization and that the person who will provide the coordination for the purposes of the organization is the school administrator, we can be said that being able to use their emotional intelligence to be successful can be an important factor.

When literature is examined, although there are lots of researches on the organizational commitment perceptions of teachers in Turkey, we cannot find a qualitative study that provided in-depth analysis on the relationship between emotional intelligence and organizational commitment. It is thought that knowing how teachers' emotional intelligence affects teachers' organizational commitment will make school administrators' job easier and increase school success. According to research results of Erçetin and Eriçok (2016) that analyze school administrators' competencies in publications between 2004 and 2016, emotional competence is an important

variable in the examined publications; this finding demonstrates the importance of this work. For this reason, this study is important in terms of understanding the relationship between school principals' levels of emotional intelligence skills and organizational commitment in the light of teachers' views. In this sense, according to the opinions of teachers who work in secondary schools, the determination of the relationship between the level of emotional intelligence of school principals and the teachers' organizational commitment is the main aim of the research. For this purpose, the following questions were asked in the research:

1. What are the views of teachers on organizational commitment?
2. What are the views of teachers on the emotional intelligence skills of school principals?
3. What are the opinions of the teachers regarding the relationship between the school principals' emotional intelligence skills and organizational commitment?

52.2 Method

52.2.1 Research Design

The research is a qualitative study that has been studied descriptively. This research is descriptive aiming at revealing the relationship between school principals' emotional intelligence skills and teachers' organizational commitment. The data described in descriptive studies are interpreted by the researcher. The main task of the researcher is to show what the truth is like and to add conceptuality to it (Balçı 2010).

52.2.2 Research Sample

In this study, maximum diversity sampling was used for purposeful sampling methods. Research sample of this study was consisted of 36 teachers working in 15 secondary schools affiliated to the Ministry of National Education in Tokat province center and Zile district in 2016–2017 academic year. The demographic characteristics of the teachers in research sample are given in Table 52.1.

According to Table 52.1, research sample was consisted of 18 (50%) female and 18 (50%) male teachers; when the educational status variable is examined, it is clear that 30 (83.3) of the teachers are undergraduate, and 6 (16.7%) of them are graduate; in seniority variable, 14 (38.9%) of the teachers are in 0–10 years, 18 (50%) of them are in 10–20 years, and 4 (11.1) of them are in 20 years and above; in terms of branch variable, 16 (44.5%) of the teachers are verbal field teachers, 12 (33.3%) of them are numerical field teachers, and 8(22.2%) of them are artistic and sports teachers; in

Table 52.1 Demographic characteristics of teachers

Variables	Categories	Frequency (f)	Percent (%)
Sex	Female	18	50
	Male	18	50
Education status	Undergraduate	30	83.3
	Graduate	6	16.7
Seniority	0–10 years	14	38.9
	10–20 years	18	50
	20 years and above	4	11.1
Branch	Numerical field teachers	12	33.3
	Verbal field teachers	16	44.5
	Artistic and sports teachers	8	22.2
Working period in school	0–3 years	12	33.3
	3–7 years	19	52.8
	7 years and above	5	13.9

terms of working period in school, 12 (33.3%) of the teachers are 0–3 years, 19 (52.8%) of them are 3–7 years, and 5 (13.9%) of them are 7 years and above.

52.2.3 Data Collection Tools

In the study, data were collected by semi-structured interview form. This form comes in two parts. The first part contains the personal characteristics of the teachers. In the second part, there are questions about teachers' organizational commitment and the emotional intelligence skills of school principals. In the second part of the form, a total of six-questioned semi-structured interview form were prepared as four questions about organizational commitment, one question about the level of emotional intelligence of school principals and one question to determine the relationship between the two. The questions in the second part are as follows: "How do you define your relationship with other teachers in the school?", "How do you define what you feel towards your profession?", "How do you express your feelings towards your school?", "How do you define what you feel when doing works related to your occupation?", "What do you think about your school principals' use of emotional intelligence skills?", and "How is the effect of your school principals' emotional intelligence to your organizational commitment?" In order to clarify the research questions, they were asked to one Turkish language teacher and one computer technologies teacher working in secondary school, and clarity of questions was tested. In addition, a teaching staff in the university who was intensely involved in qualitative research has examined the questions.

52.2.4 Data Collection

The gathering of data was held in face-to-face meetings in 2016. Interviews were based on volunteerism. Teachers were informed about organizational commitment and emotional intelligence in advance.

52.2.5 Analysis and Interpretation of Data

Descriptive analysis technique was used in the interpretation process of the data. First, the data were transferred to the digital environment and then analyzed using the descriptive analysis method. Descriptive analysis method consists of the stages that create a thematic framework, and it entails recording of data according to the thematic framework and also identifying and analyzing and interpreting the findings (Yıldırım and Şimşek 2013). While the records have been reviewed, the opinions of teachers who gave similar responses to the same question appeared in the same category. The findings of the study were analyzed by taking the questions one by one. Also subthemes were named and determined by the researcher. Participants were coded as T1, T2, T3 ... T35, T36.

52.2.6 Validity and Reliability

In order to increase the reliability of the study, the data obtained from the participating teachers were summarized, and the teachers were provided to confirm their answers. In addition, the diversity of researchers enabled to increase the validity and reliability of the research (Yıldırım and Şimşek 2013), data were collected by two researchers, and, lastly, agreed themes and codes were obtained.

52.3 Findings

As a result of the analysis, the research findings were structured under four headings as views of teachers on organizational commitment, views of teachers about relationships with other teachers at school, views of teachers about the feelings of their profession, views of teachers about the school where the teacher works, and views of teachers about profession-related doings. Evaluations of teachers' emotional intelligence skills by teachers is based on two categories and 17 codes. According to the opinions of teachers, the effect of school managers' emotional intelligence skills on organizational commitment consists of 16 codes to form one category and two subcategories.

52.3.1 Views on Organizational Commitment

Answers to the first question were formed under four headings as views of teachers about relationships with other teachers at school, views of teachers about the feelings of their profession, views of teachers about the school where the teacher works, and views of teachers about profession-related doings.

52.3.2 Views of Teachers About Relationships with Other Teachers at School

Views of teachers about relationships with other teachers at school were collected under two categories and seven codes as formal and informal. The views of the teachers regarding the relation with the other teachers in the school under the “formal” and “informal” categories are given in Table 52.2.

Views on formal relations are stated as follows: “I only meet at school, I don’t talk to many teachers except the teachers who are in my coterie, I don’t talk about my special life, and I talk only about students.” Teachers emphasize the most “I don’t talk many teachers except the teachers who are in my coterie and I talk only about students” codes (f:4). The fact that teachers focused on the “I don’t talk many teachers except the teachers who are in my coterie” code can be a consequence of their personal interests. Besides this, the reason for having “I talk only about students” being the other most repeated code can be that teachers may not trust teachers’ friends.

In relation to the subject, some of the teachers’ views are expressed in their own words as follows:

In the past, I had friends in the business environment in my private life. But one day I saw that my friend used my special memories that I shared. After that day I separate my business life and my private life and I decided not to talk about my private life. (T19)

I find the relationship between teachers in school fake. Everyone is moving in their own interests. When there’s a conflict of interest, s/he can shoot you from behind. So you can talk to other teachers in school about only the situation of students. (T27)

Views on informal relations are stated as follows: my best friends are friends that I work with, our contact with teachers continues outside the school, and I think all my teacher friends at school love each other. Teachers emphasize the most “I think all my teacher friends at school love each other” code (f:24). The fact that teachers focus on this code can be an indicator of a positive cultural in school. Teachers emphasize secondly “our contact with teachers continue outside the school” code (f:21). This may be interpreted as the fact that the relationship between the teachers in that institution is positive and that the relationship is also reflected outside the work, and it is meaningful to spend time together.

Table 52.2 Distribution of participant teachers' views that presented under the "formal" and "informal" categories

Categories	Codes	F
Formal	I only meet at school	3
	I don't talk to many teachers except the teachers whose branch is the same with mine	4
	I don't talk about my special life	2
	I talk only about students	4
Informal	My best friends are friends that I work with	5
	Our contact with teachers continue outside the school	21
	I think all my teacher friends at school love each other	24

In relation to the subject, some of the teachers' views were expressed in their own words as follows:

Each one is like a member from my family. (T8)

When I'm stuck, the first people I call will be from my colleagues. (T23)

I love to spend time with them. I also think that they benefit me on my professional development. In our school, we all like each other. Grouping does not happen at our school. (T35)

52.3.3 Views of Teachers About the Feelings of Their Profession

Views of teachers about the feelings of their profession were collected under two categories as I feel positive and I feel negative and eight codes. The views of the teachers about the feelings of their profession under the "I feel positive" and "I feel negative I" categories are given in Table 52.3.

Views on I feel positive category are stated by teachers as follows: "The best decision in my life was to become a teacher, I proudly say that I am a teacher everywhere, I want to be a teacher that recognized by everyone, and even if I have lots of money, I will continue teaching." Teachers emphasize mostly in codes "The best decision in my life was to become a teacher" (f:19). This can be interpreted as the fact that they love their profession and can provide satisfaction from their profession so that they can be devoted to their profession. The other mostly emphasized code is that even if I have lots of money, I will continue teaching. So, this is an indicator that teachers do not do this job for money.

Table 52.3 Distribution of participant teachers' views that presented under the "I feel positive" and "I feel negative" categories

Categories	Codes	F
I feel positive	The best decision in my life was to become a teacher	19
	I proudly say that I am a teacher everywhere	15
	I want to be a teacher that is recognized by everyone	7
	Even if I have lots of money, I will continue teaching	16
I feel negative	Leave teaching if I have the opportunity	1
	If I had the chance to make undergraduate, I would have chosen another department	3
	I see teaching worthless	1
	I don't want to be a teacher in Turkey	2

In relation to the subject, some of the teachers' views were expressed in their own words as follows:

I believe that one day I will be a teacher that recognized by everyone in Turkey. (T5)

If I come back to the world again, I want to be a teacher again. I cannot imagine making a profession apart from this profession. (T13)

Views on I feel negative category are stated by teachers as follows: "I would leave teaching if I had the opportunity, If I had the chance to select undergraduate programs again, I would have chosen another department, I see teaching worthless, and I don't want to be a teacher in Turkey." Teachers emphasized mostly between these codes: "If I had the chance to select undergraduate programs again, I would have chosen another department" (f:3). This may be a consequence of the teacher's lack of satisfaction.

In relation to the subject, some of the teachers' views are expressed in their own words as follows:

There is the logic of 'Become a teacher if nothing happens' in our country. This makes the profession worthless. (T27)

I actually like teaching. But I do not like the conditions in Turkey. When I see some friends who are abroad, I see that there is a difference between conditions that provided to us and them like mountains. (T36)

52.3.4 Views of Teachers About the School Where the Teacher Works

Views of teachers about the school where the teacher works are collected under two categories as I feel positive feelings and I feel negative feelings and seven codes. The views of the teachers are given in Table 52.4.

Table 52.4 Distribution of participant teachers' views that presented under the "I feed positive feelings" and "I feed negative feelings" categories

Categories	Codes	F
I feed positive feelings	I can say the best among the schools that I work	12
	I do what my school needs for the future	9
	I want to work in this school until I retire	11
	I find the school administration sincere in relation to teachers	24
I feed negative feelings	I want to change the school that I work	4
	I do not think the future of the school is bright and I think it does not interest me	1
	I fulfill my professional responsibilities and	3
	I do not want to meet too much with the school administration	

Views on I feed positive feelings category are stated by teachers as follows: I can say the best among the schools that I work with, I do what my school needs for the future, I want to work in this school until I retire, and I find the school administration sincere in relation to teachers. Teachers emphasize mostly in codes "I find the school administration sincere in relation to teachers" (f:24). This can be interpreted as a positive relationship between the school administration and the teachers, and the teachers are satisfied with the school administration.

In relation to the subject, some of the teachers' views are expressed in their own words as follows:

I am a teacher for 16 years, I have changed 9 schools until now. I can say that this is the best school that I have worked. (T3)

I think that our principal is very humane and understanding. (T30)

Our principal will do his best for us. I believe that s/he will do what you need for a solution if you have a problem. (T33)

Views on I feed negative feelings category are stated by teachers as follows: I want to change the school that I work, I do not think the future of the school is bright and I think it does not interest me, I fulfill my professional responsibilities, and I do not want to meet too much with the school administration. Teachers emphasize mostly in codes "I want to change the school that I work" (f:4). This can be interpreted as the fact that teachers love their profession, but they cannot demonstrate their performance due to management and difficulties in the school.

In relation to the subject, some of the teachers' views are expressed in their own words as follows:

I feel uncomfortable with what the man around the principal is supposed to be superior to ourselves. If they continue like this, I do not see the end of the school very well. (T27)

I'm tired of groupings at school. I want to go to another school for the first opportunity. (T32)

Table 52.5 Distribution of participant teachers' views that presented under the "positive" and "negative" categories

Categories	Codes	F
Positive	I enjoy doing lessons	27
	I also take the time to the development of my students outside the classroom	16
	I think that my profession continues not only in school but also after school	21
	I reserve my students extra time to meet with parents	11
	I pay attention to the entrance and exit times of lessons	8
Negative	I do not want to stand in the school when my course is finished	2
	I think it's absurd to have a lesson plan	2
	I prefer to spend extra time with my family instead of students	1
	I leave class as soon as the bell rang	3
	I think the extra effort for unsuccessful students is unnecessary	1

52.3.5 Views of Teachers About Profession-Related Doings

Views of teachers about profession-related doings are collected under two categories as positive and negative and ten codes. The views of the teachers are given in Table 52.5.

Views on positive category are stated by teachers as follows: I enjoy doing lessons, I also take the time to the development of my students outside the classroom, I think that my profession continues not only in school but also after school, I reserve my students extra time to meet with parents, and I pay attention to the entrance and exit times of lessons. Teachers emphasize mostly in codes "I enjoy doing lessons" (f:27). This can be interpreted as they like their profession and like being together. Teachers emphasize secondly "I think that my profession continues not only in school but also after school." This situation can be interpreted as the fact that teachers do not limit their professions with school only and that they lead and direct their lives in the direction of their profession.

In relation to the subject, some of the teachers' views are expressed in their own words as follows:

Success is not achieved only with the student. The parents need to work. So I try to get together with the parents after school. I can talk to them for hours about their children. (T15)

I am a teacher. This should be reflected not only in school but also in life at the same time. There is no such thing as when the lesson is over, teaching is over. After school, I think on what can I do for the development of students with my professional identity, I'll try to come together with their counterparts. (T18)

Views on negative category are stated by teachers as follows: I do not want to stand in the school when my course is finished, I think it's absurd to have a lesson plan, I prefer to spend extra time with my family instead of students, I leave class as soon as the bell rang, and I think the extra effort for unsuccessful students is unnecessary. Teachers emphasize mostly in codes "I leave class as soon as the bell rang"

(f:3). This situation can be interpreted as teachers give lesson for professional obligation and that they do not sacrifice themselves when this obligation is over.

In relation to the subject, some of the teachers' views are expressed in their own words as follows:

A student has or has not ability in painting class. It is pointless to devote time outside to a non-competent student. (T11)

The school management is constantly looking for a man to do a bit of chore in the teachers' room. So I finished my lesson and I run out of school boundaries. (T19)

52.3.6 Views on Emotional Intelligence Skills of School Principals

Views on emotional intelligence skills of school principals are collected under two categories such as I think they use emotional intelligence skills and I don't think they use emotional intelligence skills and 17 codes. The views of the teachers are given in Table 52.6.

Views on I think they use emotional intelligence skills category are stated by teachers as follows: they do not keep sides in school, can motivate teachers, create a trustful environment in school, work in harmony with teachers, behave cold in problems that occur in school, open to different opinions, appreciate teachers often on the issues that they are successful, give importance to teamwork in school, have

Table 52.6 Distribution of participant teachers' views that presented under the "I think they use emotional intelligence skills" and "I don't think they use emotional intelligence skills" categories

Categories	Codes	F
I think they use emotional intelligence skills	Do not keep sides in school	11
	Can motivate teachers	18
	Creates a trustful environment in school	21
	Works in harmony with teachers	24
	Behave cold in problems that occur in school	12
	Open to different opinions	21
	Appreciates teachers often on the issues that they are successful	14
	Gives importance to teamwork in school	7
	Have high level of persuasiveness	26
	Accepts faults	5
	Gets ideas of teachers when she/he decides on topics that interest teachers	18
I don't think they use emotional intelligence skills	Knows how to connect teachers to the school	7
	Reflects teachers' that problems in private life	2
	Takes decisions on every issue alone	3
	Closed to different views	2
	Holds the side between teachers	5
Does not appreciate the success of who have trouble	5	

high level of persuasiveness, accept faults, get ideas of teachers when he/she decides on topics that interest teachers, and know how to connect teachers to the school. Teachers emphasize mostly in codes “Have high level of persuasiveness” (f:26). This can be interpreted as school principals can persuade teachers to make requests, and the teachers have positive emotions to principals. Teachers emphasize secondly “Works in harmony with teachers.” This is a result demonstrating there is no strict border between the school principal and the teachers, and the school climate can be considered positive.

I don’t think they use emotional intelligence skills’ category includes codes such as reflects teachers’ problems in their private life, takes decisions on every issue alone, closed to different views, holds the side between teachers, does not appreciate the success of who have trouble. Teachers emphasize mostly in codes “Holds the side between teachers” and “Does not appreciate the success of who have trouble” (f:5). The fact that views of teachers are concentrated mostly on “holds the side between teachers” code can be interpreted as principal is more intimate with the teachers who are close to him/her; this can cause groupings between teachers. The fact that views of teachers are concentrated mostly on “Does not appreciate the success of who have trouble” code can be interpreted as the principal cannot control his/her own feelings toward the teachers and carries the troubles he/she has with them into the future times, which is not a desirable result.

In relation to the subject, some of the teachers’ views are expressed in their own words as follows:

There’s something really weird about our principal. Whenever we do not want to do something, we find ourselves doing it. (T2)

The manager knows the job. He knows that we all have to find a soft stomach and convince us. (T4)

In terms of emotional intelligence, synonyms are our principal. The man knows how to manage the feelings. (T6)

At every opportunity, he says that he is a teacher. He tells him that he is in charge because someone has to do the duty of the director. Communication is very good with pupils, teachers, staff, and parents. The door of the room is always open to everyone. (T24)

Whatever happens, I will know my principal will be behind me. It gives me confidence. (T25)

52.3.7 Views on Relationship Between Emotional Intelligence Skills of School Principals and Organizational Commitment

Views on relationship between emotional intelligence skills of school principals and organizational commitment are collected under 2 subcategories under positive category as individual and organizational and 16 codes. The views of the teachers are given in Table 52.7.

Table 52.7 Distribution of participant teachers' views that presented under the "individual" and "organizational" categories

Categories	Subcategories	Codes	F
Positive	Individual	I'm happy to come to work	26
		I can think libertarian	12
		My desire to work increases	22
		My performance increases	12
		I adopt school and feel myself belonging to school	7
		I do my job with interest	15
		My socialization increases	24
		I feel like I am important	16
		I work carefree	28
		I enjoy spending time in school	33
	Organizational	The school environment is peaceful	27
		The school has values of love and respect	13
		In-school communication is strong	16
		There is a democratic atmosphere in the school	21
		Unity in school is felt	9
		The success of school increases	35

When Table 52.7 is examined, it is seen that all of the teachers are gathered in the view that the school principals' emotional intelligence skills are positively affecting teachers' organizational commitment. According to the teachers, when the principal used the emotional intelligence skills sufficiently under the "individual" subcategory, teachers stated that principals are individuals who come to work happy, can think libertarian, have high desire to work, have increased performance, feel him- or herself belonging to school, do work with interest, socialized, feel like he/she is important, work carefree, and enjoy spending time in school. Teachers stated under the "organizational" subcategory that school environment is peaceful, school has values of love and respect, in-school communication is strong, there is a democratic atmosphere in the school, unity in school is felt, and success of school increases.

In relation to the subject, some of the teachers' views are expressed in their own words as follows:

Of course, the use of my principal's emotional intelligence strengthens my dependence on school. The fact that she tries to understand me shows that value me, and this makes me love my school more. (T7)

Certainly effects positively. The teacher feels more comfortable and results in improved performance and increased free thinking skills. (T10)

I know that my principal understands and cares me. I do what it takes for the school and the director, not to lose it. As a result, this affects the success of the school. So the high emotional intelligence of my principal increases my commitment to the school and the school's success. (T24)

To be able to control the emotions of my principal clears my head on the question of what kind of principal I encounter today. This, in turn, allows me to be more interested in my profession. Because, the equable manager is the manager who can control his feelings. (T32)

52.4 Discussion, Results, and Recommendations

In this study, it was examined whether the emotional intelligence skills of school principals were influenced by teachers' organizational commitment according to the views of teachers that have been working in secondary school. The results of the study confirm that school principals' emotional intelligence skills seem to have a positive effect on teachers' organizational commitment.

According to the results of the research, organizational commitment is divided into four subcategories. These are relationship with other teachers in the school, feelings toward the profession, feelings toward the school they work, and feelings about work related to their profession. It is also seen that there are opposing views due to different reasons besides positive opinions about teachers' organizational commitment.

In the research, the views on subcategories that constitute organizational commitment are as follows: Teachers who find their relationships with other teachers informal in school emphasize the most "I think all my teacher friends at school love each other," and "our contact with teachers continues outside the school." Teachers who find their relationships with other teachers formal in school emphasize most, "I don't talk to many teachers except the teachers whose branch is the same with mine and I talk only about students," and "I don't talk to many teachers except the teachers whose branch is the same with mine". Teachers who feel positive to their profession emphasize the most, "The best decision in my life was to become a teacher"; teachers who feel negative to their profession emphasize the most, "If I had the chance to make undergraduate, I would have chosen another department." Teachers who feel positive emotions about the school emphasize the most, "I find the school administration sincere in relation to teachers"; teachers who feel negative emotions about the school emphasize the most, "I want to change the school that I work." Teachers who feel positive emotions about doing job-related activities emphasize the most, "I enjoy doing lessons" and "I think that my profession continues not only in school but also after school"; teachers who feel negative emotions about doing job-related activities emphasize the most, "I leave class as soon as the bell rang." When studies are examined, studies that teachers' organizational commitment is moderate (Afacan 2011; Doğan 2015) and high (Babaoğlu and Ertürk 2013) are found. In addition, the findings of studies on organizational commitment reveal that employees with high commitment to their work will be more willing to stay in the organization and that their absenteeism levels will be lower (Keleş 2006) and that poor performance and delays in work will decrease (Balay 2014). According to research findings, it is seen that teachers have two different thoughts, one who thinks that school principals use emotional intelligence skills and one who does not. Teachers who think school principals use emotional intelligence skills emphasize

that most school principals have high level of persuasiveness, work in harmony with teachers, create a trustful environment in school, and are open to different opinions. Teachers who think school principals do not use emotional intelligence skills emphasize that most school principals hold the side between teachers and do not appreciate the success of those who have trouble. When studies are examined, studies show that school administrators use emotional intelligence skills most often (Öztekin 2006; Şayır 2015) and that school administrators have moderate emotional intelligence skills (Kızıl 2014; Doğan 2009; Özmen 2009). Furthermore, when we look at previous researches, there has been a meaningful and positive relationship between emotional intelligence and secure attachment (Görünmez 2006), emotional intelligence positively affects job satisfaction of teachers (Savaş 2012), and organizational citizenship behaviors (Şayır 2015) and school culture (Şayır 2015) seem to increase the level of managerial competence (Yıldırım and Eriçok 2015). These results can be considered in the light of the fact that if emotional competence increases, performance may also increase (Erçetin 2000).

Another result obtained in the research is that according to the opinions of teachers, the use of emotional intelligence skills by school principals affects their relations with other teachers and their feelings toward their profession, the school and the work related activities positively, that is to say, their organizational commitment is also affected positively in individual and organizational sense. Kızıl (2014) found in his study that emotional intelligence is effective on organizational commitment. According to the results of this research, it is stated that there is a low level of positive correlation between teachers' emotional intelligence levels and organizational commitment. Doğan (2009) found that the relationship between classroom teachers' emotional intelligence levels and their organizational commitment was positively related. In another study, it was stated that people who understand their feelings, understand others' feelings, analyze and then interpret those feelings, develop social skills, and have high empathy feelings will be more committed to their organizations (Nikkheslat et al. 2012). Dasborough (2006) concluded that the positive attitudes of the manager to the employees led to a positive attitude of the employees and the positive relationships between the manager and the employees also resulted in more sacrifices of employees to the organizations. When the literature is examined, there are studies that show positively related relationships between emotional intelligence and organizational (Anari 2012; Arslan et al. 2013; Özyer and Alici 2015). These findings support the findings of this study. When different researches are considered, it is seen that the leadership behaviors of the school principals are influential in the high level of teachers' commitment (Atar 2009) and the school principals' practices toward the teachers influence the teachers' commitment (Celep 2014).

As a result, it seems that the teachers' views on using school principals' emotional intelligence skills and organizational commitment are generally positive. These research results are very crucial for the education system's success. According to the results of the research, it may be suggested that seminars should be given to the school principals on the importance of emotional intelligence about the success of the school, and organizing activities will increase trust among the teachers so that the teachers have more organizational commitment, for example, activities such as

organizing a meal that every teacher will attend every month, going to the theater, going to the cinema, etc. In terms of researchers, it is advisable to conduct research on the relationship between teachers' emotional intelligence skills and organizational commitment and to study different variables that are thought to have an effect on organizational commitment.

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Chapter 53

First Grade to Fifth Grade: A Chaos Analysis



Belgin Tura

Abstract Compulsory education 3in Turkey in the academic year 2012–2013 was reorganized to cover 4 years of primary school, 4 years of middle school, and 4 years of high school education. This regulation, which is popularly known as 4 + 4 + 4, has set up primary and secondary schools as independent schools. Through this arrangement, the age of starting primary school has been reduced to 66 months. This is taken as a basis to ensure the attendance of primary school children who are determined as being ready for primary school through written request of the children between the ages of 60 and 66 months and for direct pre-school education for other students who are not ready. As a result of the regulation regarding the age of starting primary school, children in different age groups (60 months/66 months/72 months/84 months) were enrolled in the first grade of primary school and had to be educated in the same class. This situation has caused many public debates. With the 4 + 4 + 4 intermittent education arrangement, the students who graduated from the fourth grade in the primary school and the fifth grade in the secondary school have made a further contribution to this much discussed (both politically and in public) education regulation. The 4 + 4 + 4 interdisciplinary education regulation, which has been publicly discussed in terms of political, social, cultural and economic aspects and which is generally aimed at ideological interpretations, entered the fifth year of education in 2016–2017 and the first students of this regulation have started their education in the fifth grade of secondary school. In this study, we analyze the process involved in the 4 + 4 + 4 intermittent education regulation—first grade to fifth grade. The fifth grade, which is impacted most by the intermittent education regulation, and the enforcer of the regulation, which is the other most affected group, are described in line with the views of branch teachers, and an attempt is made to evaluate the manifestations of problems in the middle school phase.

B. Tura (✉)
Hacettepe University, Ankara, Turkey
e-mail: belgintura@gmail.com

53.1 Introduction

Nations in the twenty-first century are economically developed, politically powerful countries. The development of these countries not only reflects economic wealth and political power, but also manifests itself in superior living standards and quality education opportunities for their citizens. Indeed, the former secretary-general of the United Nations, U'Thant, stated that development is not solely related to the material needs of people, but also to the development and hope of their social conditions (Kaya 1984, 9).

Education is one of the most important conditions for development. Human capital, which is the dynamo of the economy, is the outcome of people who are raised with education. Human capital plays an active role in economic development and contributes to the social and cultural development of the society as educated individuals. For this reason, the education system was established in anticipation of a period in which people gained specific knowledge during certain time periods and developed their views and behaviors in line with the linear order of micro and macro social and economic activities (Töremen 2000, 210).

However, education not only prevents the emergence of poverty by providing development in the developing countries, it can also provide positive effects in increasing the income level of the individuals and training of healthier generations, especially in the growth of the economy with investments made in human capital and other production factors together with human capital, higher wages in a higher labor force and raising the living standards of families (Baş 1997, 137).

Turkey is a dynamic and young country that has experienced a transition from a system based on a rural, traditional, collective, and addictive structure to a system based on an urban, modern, individualistic, and independent structure (Ahioglu-Lindberg 2012, 49). In order to educate qualified human capital to achieve economic development, to increase production, and to ensure a fair distribution of income, to create healthy generations, to protect the natural environment, to develop democracy, to advance technology and sustainability in world markets in developing countries such as Turkey (Baş 2004, 38), it is crucial that the applications of many changes, from increasing the duration of training to the realization of innovative applications in education, are successfully carried out simultaneously and that change processes are managed on a scientific basis and under professional management principles.

The nature of the educational institution, which is a dynamic system, is complicated. Changes in decision making regarding the education system can often create chaotic environments and cause practitioners to find themselves in chaos. As a result of practices carried out in Turkey, especially in the regulation of compulsory education, there are often political and scientific debates being carried out in public, while schools have faced chaotic situations in dealing with problems arising from the regulations. Schools have had to cope by organizing themselves within the chaotic situations that they have experienced in the wake of implementation of sudden change resolutions from outside. Chaos, which has already emerged as an

irregularity, is being reorganized in order to create a new order and to adapt to the new established order (Yeşilorman 2006, 81). Educational institutions that operate between the order and the chaos are still able to survive over time, despite their complex structures, with their adaptability skills.

53.2 Historical Process of Compulsory Education in Turkey

In 1923, when the Republic was proclaimed in Turkey, it was estimated that there were 12 million people living there; there were 10,000 teachers and 350,000 students in 5,000 primary schools in the country, 800 teachers and 6,000 students in 72 secondary schools, and 500 teachers and 1,250 students in 23 high schools (Sakaoğlu 2003, 167).

The first government of the Republic pursued an equal opportunity policy in education and mobilized the community to save itself from ignorance. Item 87 of the first Constitution of the Republic, which was issued on 20 April 1924, stipulates that primary education is compulsory for state children aged 7–14 years and free of charge in state schools. However, the education, which was determined as having to be for 5 years by the law, was continued for only 3 years for a long time due to the impossibilities of providing primary education in village schools (Kaya 1984, 97). Finally, education in village schools with 3 years of education was increased to 5 years with the First National Education Council held in 17–29 July 1939.

Item 50 of the 1961 Constitution and Item 42 of the 1982 Constitution stated that primary education is mandatory for all citizens, girls and boys, and free of charge in public schools.

In accordance with the Basic Law of National Education No. 1739 (Article 22 amended by Law No. 2842 dated 16 June 1983) and Primary Education Law No. 222 (Articles 2 and 3 amended by Law No. 2917 dated 12 October 1983) compulsory primary education age is for 8 years, beginning at the end of September of the year when the child completes his or her fifth year of age, and covers children in the 6- to 13-year age group, ending at the end of the school year.

Provisional item 2 of the National Education Basic Law No. 1739 and Provisional item 9 added to the Primary Education and Education Law No. 222 have been included in compulsory education for only 5 years of elementary school in primary education until the number of secondary schools reached the desired level.

In the 10th National Education Council held on 23–26 June 1981 the recommendation was made to decrease the entry age of basic education from 7 to 6 years and to increase the years of education to 8 years, including compulsory education of 5 years.

In the 12th National Education Council dated 18–22 June 1988, recommendation decisions were made regarding the age of the primary education, which was 72 months but the children who reach school level are also limited to 66 months in terms of age, and the integration of the existing secondary schools into primary education.

In the 15th National Education Council dated 13–17 May 1996, it was decided that pre-school education within the scope of 5–6 years of age should be taken into the scope of primary school, primary education should be applied as continuous 8-year compulsory education, and at the end of the eighth year, a uniform diploma should be given.

Compulsory education has been continuously increased to 8 years with The Law on Primary Education and Education, which came into force on 18 August 1997, The Law on National Education Basic Law, Apprenticeship and Occupational Education Law, Law on the Organization and Duties of the Ministry of National Education, Amendment of Law No. 3418 dated 24 March 1988, Amendment to Law No. 4306 on the Participation in the Education and Training of Some Papers and Procedures.

In the academic year 2012–2013, in accordance with the decisions taken by the 18th National Education Council, the compulsory education period was changed from 8 to 12 years through the Act on the Amendment of the Law on Primary Education and Education Numbered 6287 and Law No. 6287 dated 30 March 2012.

53.3 4+4+4 Educational Arrangements and the Chaotic Situation in the First Class Stage

Compulsory education in Turkey has been intermittently organized covering 4 years of primary school, 4 years of middle school, and 4 years of high school education with Law No. 6287 in the academic year 2012–2013. The first 4 years of education were called primary school, the second 4 years secondary school, and the third 4 years high school. This regulation, which is publicly known as 4+4+4, has organized primary and secondary schools as independent schools, but according to physical conditions it has been possible to establish secondary schools together with primary schools or high schools. According to Law No. 6287, students who have completed primary education are not granted diplomas, and 12 years of compulsory education are required to achieve secondary education diplomas. In the 2011–2012 academic year, students who completed the fourth grade of primary education were separated from the primary school and enrolled in the fifth grade of secondary school. Thus, for the first time for fifth-grade students, secondary school branch teachers entered all courses (MEB 2012).

By this arrangement, the age of starting primary school was reduced to 66 months. This is taken as a basis to ensure the attendance of primary school children who are determined as being ready for primary school by written request of the children between the ages of 60 and 66 months and to direct to pre-school education other students who are not ready (MEB 2012). As a result of the regulation regarding the age of starting primary school, children in different age groups (60 months/66 months/72 months/84 months) were enrolled in the first grade of primary school and had to be educated in the same class. In the academic year 2012–2013, it was reported

that the number of students enrolled in the first grade in primary school reached 2,313,888 with the address-based registration system announced by the Ministry of National Education. However, it is believed that the number of students who are enrolled in this program is actually approximately 1,750,000, excluding those who are postponed to the 2013–2014 academic year.

Publicly, the section of the law dealing with the age of starting schooling, which is the subject of more political discussions, was examined in the literature and the results of this are outlined below.

In a study conducted by Gündüz and Çalışkan (2013) that included 205 students and 17 teachers in order to determine the level of attainment of school age and literacy skills of students aged 60–66, 66–72, 72–84 months, it was found that the 60–66-month-old students have been left behind by students between the ages of 66–72 and 72–84 months; in the evaluation of first literacy skills, it was determined that the literacy skills of the students between 60 and 66 months were lower than those for the students between the ages of 66–72 and 72–84 months.

In the study conducted by Öztürk and Uysal (2013) that included 17 primary school teachers who educate students aged between 60 and 66 months and 72 months, in the literacy learning processes of first-grade students at different ages, it was shown that students aged 60–66 months have difficulty in understanding vocalized spelling and in recognizing the visual expressions of voices. Problems encountered during the reading process in 72-month-old students can be solved with a few repetitions, whereas in 60–66-month-old students, problems take days to be resolved. This situation led to the lengthening of the vocalizing process in reading instruction and distress in the 72-month-old students as a result of this prolonged duration. It was also found that the same problems were experienced in the writing process. It has also emerged that 60–66-month-old students have difficulty in communicating with their teachers.

In a study conducted by Aykaç et al. (2014) that included 102 primary school teachers, it was found that the students who started school early had more problems with adjustment compared to the others, and also that they were bored from staying in the class for a long time, and showed attention deficiencies in their classes due to an insufficient level of readiness. It was determined that the targeted achievements in the classes could not be trained in the foreseen period and that students aged 60–66 months had an increase in school attendance and in school accidents.

In the study conducted by Boz and Yıldırım (2014) with 301 first-class teachers, it was determined that students aged 60–66 months had more problems in adaptation and preparation studies and in the acquisition of basic skills than the students who were aged between 66 and 72 months. In addition, it has been determined that students aged 60–66 months have difficulty in listening, obeying class and school rules, attending to lessons, and participating in class activities; students aged 66–72 had moderate problems, and students above 72 months of age having almost no problems.

Although the Ministry of National Education planned an adaptation program with a 14-week game content in order to ensure that the problems arising from the registration of the 60-month-old students in the first grade of the primary school in

the 2012–2013 academic year, the first adaptation programs could not be implemented effectively due to the fact that the physical requirements were not available for these students, the books sent by the MEB (Ministry of National Education) did not conform to the developmental level of the children, the classes had a wide range of ages from 60 to 84 months, and the teachers were inadequate.

53.4 Discussions with Regard to Fifth Grade Being Transferred to the Secondary School

With the 4+4+4 intermittent education arrangement, the students who graduated from the fourth grade in primary school and the fifth grade in secondary school have made a further contribution to the education regulation, which is very much discussed politically in public. The transfer of the fifth grade to the secondary school and the teachers entering the classes have been the subject of scientific research as well as of public debates, and the situation has been evaluated from different aspects. A field study on this topic has been carried out, the results of which are explained below.

Demir et al. (2013) conducted a survey aimed at identifying the problems experienced by branch teachers entering class in the fifth grade that included eight branch teachers, and found that the curriculum is above the student's level, some subjects are abstract, the subject content is excessive, there is no logical flow as such, the classes are crowded, and the readiness level of the students is insufficient.

Aybek and Aslan (2015) conducted a study with 36 branch teachers and found that fifth-grade students and their parents' level of readiness for secondary school were not adequate, the curriculum was above the student level, the classes were crowded, and because branch teachers who take pedagogical education to educate students are in an abstract transaction period, they have difficulties educating the fifth-grade students who are in a concrete transaction period.

Özenç et al. (2016) found that fifth-grade students were not interested in the courses, exhibited primary school behaviors, had a lengthy adaptation period to secondary school, and showed insufficient readiness. In addition, the teachers who participated in the research stated that the fifth-grade students experienced a transitional period in the first semester, that this process exceeded one period, and in the second period the situation had almost returned to normal.

In order to determine the opinions of the school administrators regarding the application of 4+4+4, Memişoğlu and İsmetoğlu (2013) in research of school administrators of 17 schools and of Sağır (2015) in research conducted with 14 school administrators showed that the compulsory education period in Turkey is 4+4+4 rather than 5+3+4 to ensure that the fifth grade stays in the primary school level, is more appropriately carried out in that direction than was realized.

The 4+4+4 interdisciplinary education regulation, which is discussed in terms of political, social, cultural, and economic aspects in public and which is generally aimed at ideological interpretation, entered the fifth year of the education system in the year 2016–2017 and the first students of this regulation (60–66, 66–72, 72–84 months) have started their education in the fifth grade of secondary school. In this study, the fifth grade, which is most influenced by intermittent education regulations, and the enforcer of the regulation, which is the other most affected group, were described in line with the views of the branch teachers, and an attempt was made to evaluate the manifestation of problems in the middle school phase.

53.5 Purpose of the Research

The purpose of the study was to determine the problems experienced in the arena of the branch teachers entering into courses in the fifth grade transferred from elementary school to middle school with the 4+4+4 intermittent education regulation and to develop recommendations. Secondary problems that were looked for in this research are as follows:

1. What are the opinions of the branch teachers who entered the fifth-grade courses regarding the fifth-grade curriculum?
2. What are the opinions of the branch teachers who entered the fifth-grade courses about the readiness level of the students?
3. What are the opinions of the branch teachers who entered the fifth-grade courses regarding their interest and participation in the class and in the classroom activities?
4. What are the opinions of the branch teachers who entered the fifth-grade courses on students' adhering to class rules and preventing unwanted behavior in the class?
5. What are the opinions of the branch teachers who entered the fifth-grade courses about communication of students with their families?

53.6 Method

This study was conducted according to a case-study method of a qualitative research method in the light of the aim and secondary investigations of the research. The case study is intended to collect comprehensive, systematic, and in-depth information on a situation. The case study involves editing the data according to specific cases for in-depth study and comparison. The case-study approach in qualitative analysis represents an analysis process; it is a particular way of collecting, organizing, and analyzing

Table 53.1 Participant information

Nickname	Branch	Service time
		Year
T 1	Science and technology	18
T 2	Science and technology	13
T 3	Turkish	13
T 4	Turkish	12
T 5	Mathematics	11
T 6	Social sciences	10
T 7	Turkish	10
T 8	Science and technology	7
T 9	Mathematics	7
T 10	Social sciences	6
T 11	Mathematics	5
T 12	Social sciences	5

data. The analysis process creates a product. Thus, the state study can indicate both the analysis process and the product that the analysis produces (Patton 2014, 447).

53.6.1 *Participants*

The study was carried out with 12 branch teachers who were working in a secondary school in the province of Ankara and taking classes in the fifth grade. Three of the teachers who participated in the research are Turkish; three of them are Social Studies Teachers, three of them are Mathematics Teachers, and three of them are Science and Technology Teachers. All of the participants volunteered to participate in the research, so the sample was spontaneously formed. It is preferable to work with a small group to conduct a more in-depth research. However, it was noted that the teachers who participate in the research should have at least 5 years of service in order to analyze the processes better. In the framework of research ethics, participants were given study names from T1 to T12. Information on participants is given in Table 53.1.

53.6.2 *Collection of Data*

The research was conducted with the participation of 12 branch teachers who have been working in a secondary school in Ankara. Structured interview forms were administered to the teachers with five subject headings. The answers given by the participants during the face-to-face interviews were recorded in writing by the researcher. Participants were asked to confirm in writing that the information recorded was their own.

53.6.3 Analysis and Interpretation of the Data

The information obtained from the teachers was rewritten in a Microsoft Word program and transferred to a digital medium and the descriptive analysis was applied to the data. The frequency values are determined taking into consideration the frequency of repetition of the data. The frequency values calculated in the meaning of the data were utilized. Direct citations were given in the study to ensure the clarity of the participant teachers' opinions.

53.7 Findings and Comments

Research were structured under the five main headings; fifth-grade curriculum, readiness levels of fifth-grade students, participation status of fifth-grade students to courses and in-class activities, ability of fifth-grade students to comply with class rules, and communication and collaboration with fifth-grade students' families. The findings from the study are discussed below.

53.7.1 Evaluation of the Fifth-Grade Curriculum

A teaching program is composed of the structuring of knowledge, skills, attitudes, and behaviors that are expected to educate students in line with the objectives of the curriculum of course groups in a planned way. A curriculum based on in-school experience carries a document that covers lessons taught at school (Demirel 2011, 11). In the study, evaluation of the fifth-grade curriculum by the participating teachers was discussed and interpreted in the context of acquisitions that are the basic items that formed the program, activities, methods and techniques, textbooks, and measurement and evaluation techniques.

The teachers who participated in the research evaluated the fifth-grade curriculum primarily in terms of student achievements. Six of the participants find the fifth-grade student acquisitions repeats of their fourth-grade acquisitions. Teacher T7 said that "*The content of the fifth-grade Turkish course is almost the same as the elementary school level. It is a period when there is no language information, just a sense. For this reason, we do not expect much from the student*". While Turkish teachers said that the same acquisitions were repeated in different topics, Social Studies teachers stated that the number of acquisitions are too many and that it is difficult to educate them. Teachers T1 and T8 stated that acquisitions were inadequate to direct students to research and inquiry.

Teachers of Turkish and Social Sciences have pointed out that some subjects are very abstract and fifth-grade students are in a concrete period with regard to their ages and this situation is of concern for both teachers and students. Teachers T1, T5,

and T9 stated that some activities were above the student level. Teacher T9, especially in the course of mathematics, stated that the activities were well above the student level and said that “students have difficulty in making sense of activities and they cannot even comment”. Teachers T2, T3, T9, and T10 stated that they experienced problems in providing material for some activities. As an example of this problem, teacher T3 said, “*Because some listening texts can only be listened to via EBA, if the internet connection is not available, the text cannot be listened to so the course becomes impossible to process.*” Science and Technology teachers found that activities were also inadequate to improve students’ research skills and scientific process skills, while at the same time the activities were also challenging for students in terms of fine motor skills. In particular, they said that students have difficulty in activities like cutting, pasting, and measuring.

Seven of the participants who evaluated the methods and techniques stated that it is difficult to implement some of the methods recommended by the MEB in crowded classes. T1 explained difficulties that are experienced in crowded classes as “*the preferred method and techniques can be convenient for classrooms that have at most 20 students, but sometimes I cannot apply the techniques in a fifth-grade classroom that has 40 students. There are students from every level, as well as mainstreaming students.*” Besides the presence of crowded classrooms, six of the teachers who participated in the research stated that it is difficult to implement some of the methods and techniques proposed by the MEB in terms of time and cost. Teacher T6 noted that some of the recommended methods and techniques due to problems caused by time, cost and technology were not used always for these reasons. “*The methods and techniques are appropriate, but the application is not always possible. Technology cannot be used at all schools. Smart board applications cannot be applied to all schools. The museum visits, environmental visits, library visits cannot always be carried out because of financial difficulties. Our course is 3 hours and the curriculum is too busy.*”

Science and technology teachers who evaluate textbooks expressed that science and technology textbooks are scattered in approach and they think that it might be difficult for the student to follow the subject in terms of subject matter logic. Mathematics teachers point out that some of the problems in the books are difficult for the students and they are too abstract for fifth-grade students who are in a concrete period. Turkish teachers also stated that some texts in the book contain abstract expressions and are above student level. T8 and T9 indicated that the questionnaires in the books at the end of the subject were insufficient and did not provide valid feedback for the students.

All of the teachers who participated in the survey regarding the measurement and evaluation practices stated that students have difficulties in expressing the open-ended evaluation questions. Students who are educated with test techniques from primary school usually seem to experience difficulties in open-ended examinations based on interpretation and reasoning. Teacher T9 expressed the opposite situation with regard to the application of the test technique in the central examinations of the MEB, and the evaluation of open-ended questions in the schools: “*It is very strange*

Table 53.2 Teachers' views on the fifth-grade curriculum

	<i>N</i>
Student outcomes	
Repeat fourthh grade outcomes	6
The same outcomes are constantly repeating	3
The number of outcomes are too much	3
Inadequate in directing students to research and inquiry	2
Activities	
Some subjects are very abstract	6
Some activities remain above student level	3
There is a problem to provide material for some activities	4
Inadequate to develop students' research skills	3
Insufficient to improve students' scientific process skills	3
Difficult for students in terms of fine motor skills	3
Methods and techniques	
Some methods are difficult to implement in crowded classes	7
Some methods are difficult to implement in terms of time and cost	6
Course books	
The contents are scattered	3
Some problems are abstract and difficult for students	3
Some texts are over the students' level and contain abstract expression	3
Evaluation questions at the end of the units are insufficient	2

Table 53.3 Teachers' suggestions for the fifth-grade curriculum

	<i>N</i>
Topics should be more associated with daily life	6
Curriculum should be researched and inquiry based	3
Textbooks must rearranged	3
Texts taught in Turkish lessons should be abbreviated	3
Subjects should be reduced	3
Some of the intensive curriculum in the sixth grade must be moved to fifth grade	3

that MEB evaluate the students completely with a test at the end of the 4 + 4 part of the 4 + 4 + 4 system but open-ended questions are taken in the textbooks". Teachers also stated that more attention should be given to monitoring students' development and evaluating performance during the teaching process.

The issues that teachers involved in the research are asked to change or develop for the fifth-grade curriculum are listed in Table 53.2. According to this, six of the teachers think that fifth-grade subjects should be more related to daily life. Subjects that can be related to everyday life are more specific, can be learned more easily by the students, and they are applied in life easily (Table 53.3).

Science and technology teachers have pointed out the textbooks that they describe as “scattered” should be rearranged in a more logical way and the topics should be based on more research and inquiry. While Turkish teachers said that some studies suffered because of abstract and shortened text contents, Social Sciences teachers expressed their desire to reduce the intensive curriculum. Teacher T6 said that with regard to the Social Sciences Course “*I think that Ataturk’s principles and revolutions course are heavy for fifth grade. They cannot really do abstract thinking. Revolutions can be given in relation to daily life, but they have difficulty in understanding the principles. For this reason, Ataturkism issues should be given in seventh and eighth grades. In addition, 3 units about Turkey were given to one after another. The same subjects are given again in the sixth grade. I think that these subjects should be gathered in a single unit and the curriculum lightened accordingly*”. Turkish teachers, who think that the fifth-grade curriculum repeats the fourth grade in general, have proposed that some of the intensive curriculum in the sixth grade should be moved to the fifth-grade curriculum.

53.7.2 Assessment of Readiness Levels of Fifth-Grade Students

The level of readiness is shown in the attitude and preliminary knowledge that the student has about the subject before he or she starts learning. If the level of readiness of the student is not adequate, it is not possible for qualified learning to take place (Table 53.4).

According to T8, who is one of the evaluative teachers of the readiness levels of the fifth-grade students, the readiness levels of the fifth-grade students that teaches are sufficient. Teachers T4 and T7 stated that the readiness levels of students differ from class to class and that the level of readiness is inadequate, especially in classrooms where the students started primary school younger than others, and the other participating teachers expressed that the level of readiness of the students is insufficient.

Table 53.4 Teachers’ opinions about the readiness level of the fifth-grade students

	<i>N</i>
Levels of readiness are sufficient	1
Levels of readiness vary by class	2
Levels of readiness are insufficient	9
Because:	
Students are very small, they are in a game period	8
Abstract thinking skills have not developed yet	2
They have not completed their 4th class outcomes yet	2

Table 53.5 Teachers' suggestions for fifth-grade students with insufficient readiness

	<i>N</i>
One-on-one learning opportunities must be provided	4
Peer learning should be carried out	1
Cooperation should be carried out with the parents of the students	2
Visual materials should be used dominantly	2
Teaching should be done with games	2
Process evaluations should be carried out instead of exams	1
Class sizes must be reduced	1
Topics must be reduced	1
Topics should be embodied	1
Level classes should be created	1
Students should start school 1 or 2 weeks earlier	1

Eight of the teachers who participated in the research have shown that the ages of the students are very young and they are in a “game” age, which is the reason for the inadequate level of readiness of the students. Teacher T5 said on the subject of the age levels of students being too low: “*They are small, very small and they have lots of responsibilities, homework, courses, they do not have any time to play games*”. T9 and T10 said that their abstract thinking skills were not developed because of their ages. T9 said on the readiness level of students: “*Children are still inadequate in terms of their age, emotional and devotional level, they are still children, the fifth grade has become a transition bridge only, a lost year in the form of $4 + 1 + 3$* ”. T11 and T7 have seen that the fourth-grade acquisitions as a condition of the situation have not been completed adequately (Table 53.5).

Teachers T3, T8, T9, and T12 who participated in the research said with regard to the students who had insufficient readiness levels studies should be undertaken with students one-on-one and missing information about the past should be completed. Teacher T12 sees peer learning as a supporting factor for individual studies. T7 and T9 stated that they should communicate with the parents of the students who are not ready for the lessons. T2 and T11 said that they think that behaviors arising from their ages can be adjusted by using more visual materials in the lessons and by teaching the lessons and roleplaying the topics. Teacher T8 commented that students who are not ready can intervene in the teaching process and contribute more to the completion of the deficiencies by evaluating the students' progress in the teaching process rather than using classical assessment tools. T1 expressed the fact that the lack of students with a sufficient level of readiness can be addressed by spending more time with the students by reducing class availability, T6 explained this as spending more time on activities by reducing issues, T10 said on the subject that spending more time on activities by embodying abstract subjects and facilitating learning is useful. While T4 said that level classes can be created and a program that reinforces the shortcomings of students with insufficient readiness can be applied, T6 said that if fifth-grade students start school 1 or 2 weeks earlier, special studies can be provided to address the lack of information.

53.7.3 *Evaluation of Participation Status of Fifth-Grade Students in Courses and In-Class Activities*

The teacher is responsible for creating conditions for effective learning in the classroom, that is, to form a healthy classroom atmosphere and to establish a normative structure. The teacher carries out the learning activity for the student with the materials he/she has prepared in accordance with the plan prepared in the light of the teaching objectives (Demirel 2011, 184). The interest and attitude of the students towards the lesson are related to the interest and attitude of the teacher towards the students (Table 53.6).

The teachers who participated in the research valued the attitudes of the fifth-grade students towards the courses. According to this, seven teachers stated that they liked their lessons and seven teachers said that their students are interested in their lessons. Teacher T1 said that the students liked and tried to learn the lesson, while T2 said that the students were excited and curious about the lesson and students are interested in the lessons. Teachers T9 and T11 said that the students, especially those with low mathematical achievement in primary school, are prejudiced against mathematics lessons, and that despite trying to address this prejudice over time, they continue to hold a negative attitude towards mathematics, which is generally an abstract subject (Table 53.7).

All of the teachers who participated in the research said that the fifth-grade students were willing to participate in class activities and when they read and understand the activities well, they were able to perform their tasks correctly. While teachers T3, T4, T5, and T11 said that students can fulfill their assigned tasks on time in class, T7 said that students only perform their assigned tasks on time in their favorite activities, and that they behave very lethargically in activities that are difficult or unattractive to them. T1, T6, T9, T10, and T12 said that they cannot fulfill their duties in class in time, whereas teachers T2 and T8 said that students do not carry out their duties only in group activities and that they don't have any problems with time in other activities.

Table 53.6 Teacher opinions of fifth-grade students' attitudes towards the lessons

	<i>N</i>
I think they like my lesson	7
Students are interested in the course	7
They are trying to learn the lesson	1
Students are excited and curious about the lesson	1
Students are prejudiced against the course	2

Table 53.7 Teacher opinions about fifth-grade students' fulfillment of the tasks in classroom activities

	<i>N</i>
They can fulfill their assigned duties on time in class	4
They can only fulfill their assigned tasks on time in their favorite activities	1
They cannot fulfill the tasks assigned to them on time in group-based activities	2
They can fulfill their assigned duties on time in class	5
Because:	
It takes time to organize group work	2
They have difficulties in understanding the activity guidelines	2
They work very slowly and are disorganized	1
They are very slow with handwriting	2
Lesson hours are insufficient	2

Table 53.8 Teacher opinions on raising of interest and participation in classroom activities for fifth-grade students

	<i>N</i>
Activities should be enriched with audio and visual items	4
Activities should be done according to their interests	3
Guidelines should be explained in a simplified way	3
Positive reinforcements should be used at the end of the activities	4

As reasons for not being able to train the tasks given in class activities in time, teachers T2 and T8 indicated that the students could not organize quickly within the group and they lost a lot of time in task sharing. T1 and T2 stated that the process of understanding the rules of activities by students is time-consuming but the effectiveness is accelerated by understanding the guidelines. T1 also complained about the slow and diffuse work of the students in the activities. Science and Technology teachers who participated in the research seem to have trouble with the duration of the activities. Teachers T6 and T9 said that they lost time because the students were very slow with handwriting, whereas teachers T10 and T12 stated that they had time problems due to the fact that the activities were excessive and the lesson hours were insufficient (Table 53.8).

In terms of increasing interest and participation in grade 5 students', teachers T1, T2, T8, and T9 suggest enriching the activities with visual and auditory materials, teachers T7, T10, and T12 suggest focusing on activities that appeal to students' interests, teachers T1, T2, and T8 nicknames suggest explaining the directions in a simplified way for students to understand, teachers T3, T6, T11 and T12 suggest that students should be motivated using positive reinforcements at the end of the activity.

53.7.4 *Evaluation of the Ability of Fifth-Grade Students to Comply with Class Rules*

The success of teaching activities can be achieved through regular planning of the activities as well as better management of the class, in other words by obeying the rules and also by clearly specifying the classroom functioning. Teachers are able to avoid disciplinary events that may arise by using effective classroom management (Demirel 2011, 187) (Table 53.9).

Teachers who participated in the research were asked about their views on compliance with the class rules of fifth-grade students. Five of the teachers said that the students usually do not obey classroom rules, six of them said that they had serious problems in complying with the rules in the first semester but they stated that after the second semester students' internalization of the rules and rule violations started to decrease, and at the end of the term, rule violations were no longer a serious problem. Teacher T4 has stated that students usually follow class rules and do not have any problems with rule violations.

Teachers who participate in the research were asked what the undesirable behaviors exhibited by the students in the classroom were. Ten of the teachers complained about students who did not listen to their friends, who spoke and talked without permission during the lesson. Not listening to each other caused a lot of noise during the lesson and prevented the effectiveness of the course. Six of the teachers said that the students were constantly complaining about each other and that these complaints turned into espionage over time. Teachers T1, T2, T5, and T7 said that especially at the beginning of the lessons, students gathered around the teacher's desk and started talking without permission. Teacher T1 expressed the following complaint regarding this subject: *"When the lesson begins, during the first 15 minutes they are always gathered at the teacher's desk, complaining about each other, or correcting clothes that are scattered in the air. Talking without permission, not listening to the speaker, and so on. It is going on for a long time. I do not have enough*

Table 53.9 Opinions of teachers about the ability of fifth-grade students to adhere to class rules

	<i>N</i>
The first semester of the school they do not generally obey the classroom rules, but the second semester, classroom rule violations are reduced	6
They do not obey the classroom rules generally	5
They obey the classroom rules generally	1
Student behaviors that cause rule violations:	
Talk without permission	10
Do not listen, talking friends	10
Complain constantly about friends	6
Gathering around the teacher's desk without permission	4
Wander aimlessly in the classroom during lessons	4
Constantly request permission to go to the toilet	3
Bring toys to classroom	1

Table 53.10 Suggestions for preventing misbehaviors in classroom

	<i>N</i>
Classroom rules should be defined to students	6
Results of noncompliance rules should be discussed with students and sanctions should be jointly determined	6
Students who meet the rules must be rewarded	6
Attracting banners, pictures, texts etc. that propound the class rules should be prepared together with the students and should be attached to class panels	2
All teachers should give the same reactions to rule violations	2
There should be cooperation with and from parents	3

time to address these behaviors, so I have put on a bit of a sullen and strict image at the beginning of the year to the fifth-grade students". Teachers T3, T9, T10, and T12 indicated that the students walked around the classroom without intention during the lesson, while teachers T2, T6, and T12 stated that students wanted to go to the toilet continuously during the lesson. Teacher T2 mentioned that the students brought toys to school. It is possible to evaluate the unwanted student behaviors identified by the participating teachers as a sign of the fact that these students are still in an age of play and are tired of the lessons (Table 53.10).

Six of the participating teachers were asked to recommend how to determine the rules together with the students; six of them recommended determining the penalties together with the students by discussing with the students the results that would occur through noncompliance with the rules, and six of them recommended giving various reinforcements to the students who obey the rules. Teachers T1 and T2 said that they prepare posters, pictures, and texts describing the rules of the classroom and attached them to classroom panels. Teachers T5 and T6 have always expressed the same reaction to the unwanted student behaviors they encountered in their lessons and stated that their attitudes are consistent, so unwanted student behaviors are removed sooner. Teachers T5, T6, and T9 indicated that they could receive support from the parents of the students in order to ensure compliance with classroom rules and behavior by drawing attention to communication and cooperation with the parents.

53.7.5 Evaluation of Communication and Collaboration with Fifth-Grade Students' Families

A close communication and cooperation with the parents of the students who are the most important stakeholders of the school system as well as the teaching activities and teachers, and as well as the school success of the student can be considered as a very important factor. It recognizes the families of the students for whom teachers are obliged to provide education and serves as a facilitating catalyst for the solution

Table 53.11 Opinions of teachers about the communication of fifth-grade students with their family

	<i>N</i>
I have close communication with the parents	2
I do not have a close contact with the family except the families of students that I guide	8
I do not have close contact with the parents	2
Because:	
Classes are very crowded	5
The parents do not communicate with us	3

Table 53.12 Opinions of teachers on the status of fifth-grade students' families' participation in school meetings

	<i>N</i>
They are generally involved in school meetings	6
They attend but their participation is below the expected level	6
Because:	
Families of students who are problematic or low achievers do not participate	6
The families are disinterested	4
Working parents cannot come	3
Some students do not inform their parents about the meeting	1

of possible problems as well as the student's success in establishing close communication and cooperation within the education and training process (Table 53.11).

Eight of the teachers who participated in the survey said that they did not have a close communication with the families of the students whose are not in their class. Teachers T2 and T10 who did not have classroom guidance teacher positions stated that they were not in close communication with students' parents. Only teachers T3 and T4 stated that they had close communication with their students' parents.

Five of the teachers declared that they did not have close communication with each student's parents and they could not communicate closely with their family because of the large number of classroom members, but they stated that they only know the families of students with whom they carry out guidance responsibility and regularly communicate with them. Teachers T1, T7, and T12 said they are always ready to meet with their parents, but families do not communicate with them when their families are not a major problem. Teacher T10 complained about the indifference of the parents, "because most parents do not know the ways of the school" (Table 53.12).

Participating teachers were asked about the general participation of the students' parents in the school meetings. Six of the teachers indicated that parents attended the parents' meetings, while the other six indicated that this participation was below the expected level.

Table 53.13 Opinions of teachers on developing communication and cooperation with fifth-grade students

	<i>N</i>
Informed regularly in writing or verbally about the students' situation and development	5
The telephone chain should be set up between the parents	2
Home visits should be arranged	4
Invitations should be issued exclusively to the parents	1
Activities like picnics, tea, cinema etc. should be regulated	4

When asked about the reasons for not participating in the school meetings, six teachers said that the families of students with problems or low achievement levels did not want to participate in school meetings. T12 said “No one wants to hear that your child is unsuccessful,” and so families were disturbed by the failures of or complaints about their children, and therefore they did not attend the meeting. Teachers T2, T6, T10, and T12 said they found the parents irrelevant, while teachers T6, T9, and T10 indicated that participation in school meetings was low in working parents' families. Teacher T10 said that in the interviews with the parents, some students, especially those of the failed students, were found to hide the meeting date. According to the practice in the school, invitations are sent to families for class meetings, while information about general school meetings is given to the students verbally and their families are requested to be informed (Table 53.13).

The teachers who participated were consulted about what they could do to improve the communication and cooperation with the students' families. Five of the teachers stated that regularly informing parents about the general situation and development of the students in writing or verbally would improve communication with their parents and increase their cooperation. Teachers T2, T4, T7, and T10 said that home visits can be arranged from time to time to increase communication with the parents. T4, T5, T6, and T10 said that activities like picnics, tea, and movie screening can be organized for families at certain times in the school so parents spent more time in school. Teachers T4 and T6 have stated that by establishing a telephone chain among the families of the students of the class, rapid communication can be provided. Teacher T1 stated that meeting invitations can be made to be special to students and parents so that they can feel special.

53.8 Results and Recommendations

The research was structured under five main headings: fifth-grade curriculum, readiness levels of fifth-grade students, participation status of fifth-grade students to courses and in-class activities, condition of fifth-grade students to comply with class rules, and communication and collaboration with fifth-grade students' families. The findings from the study are discussed below. The study was carried out with 12

branch teachers who are working in a secondary school in the province of Ankara and taking classes in the fifth grade. Three of the teachers who participated in the research are Turkish, three of them are Social Studies Teachers, three of them are Mathematics Teachers, and three of them are Science and Technology Teachers. The results of the research are given below.

While the fifth-grade curriculum is generally appropriate for the level of the students, it is seen that the problem of teaching abstract concepts still continues in the curriculum. The structuring of secondary school branch teachers' pedagogical formations to provide training to students in the abstract process leads to difficulties in training the students in the concrete period. Moreover, it was tried to lower the lessons to the student's level, the fact that the level of the students in the Turkish language course remained at the level of the fourth grade made the lessons boring according to the teachers. In Science and Technology, there was a view that it was difficult for the students to follow the subjects because of the disordered approach to the subjects. In addition, when teachers were worried about teaching the whole curriculum due to the intensity of topics in the curriculum, it is possible that students with low readiness levels were missed. The curriculum cannot be conducted effectively and efficiently in crowded classrooms in terms of research results.

When the views of the teachers who participated in the research on development of the fifth-grade students' curriculum are evaluated, in brief they considered it necessary that the curriculum should be made suitable for concrete learning. One of the noteworthy recommendations was the regulation of the subject matter to shorten the development of critical thinking skills.

The teachers who participated in the research evaluated the readiness level of the fifth-grade students as inadequate. The reason for this is that their ages are so low and they are still in the age of play, so consequently abstract thinking skills have not been developed yet.

Alternative recommendations were offered about students who did not possess adequate readiness levels by teachers like the use of teaching methods and techniques appropriate to their age level, such as process evaluation, individual learning, peer learning, teaching with play, use of visual materials, cooperation with the parents, reduction and specification of course topics, reduction of class presence, starting school weeks earlier.

The teachers who participated in the research generally evaluated the attitude of the students towards the lessons as positive. Students are willing to participate in class activities and can fulfill their duties correctly although they have time problems. Among the reasons why they cannot finish their work on time are that they cannot organize quickly in group work, they work sporadically and slowly, and they have difficulty in understanding the directives.

Teachers suggested that to enhance the interest and participation of the fifth-grade students in the classroom activities, the activities should be enriched with visual and auditory elements, activities should be organized for the interests of the students, with simple explanations of the activity guidelines and positive reinforcements. Teachers who participated in the research generally stated that they had problems with students in terms of classroom rules. Teachers taking into account

the experience of the past 4 years of regulation also noted that especially during the first period, there was a problem with classroom rules, but this decreased in the second period. It is expected that the students who started primary school at the age of 60, 66, and 72 months and who are now studying in the fifth class will have a similar process and the problems of compliance with the rules in the second period will decrease.

Unwanted behaviors of students in class were determined, such as to talking without permission, not listening to friends, complaining about their friends, gathering around the teacher's desk, wandering around during class, asking for permission to go to the toilet continuously. In order to prevent undesirable behaviors of students in the classroom, the teachers have to summarize recommendations such as raising awareness of students on rules, rewarding positive behaviors, and cooperating with parents.

Teachers often stated that they were not in close communication with the parents of students outside the classes they were teaching. The reason for this situation was that the classes are crowded and their families are irrelevant. However, a very small proportion of the families appeared to be involved in the educational process of the child, and the other families only participated in the invited meeting held at the school or did not communicate with school at all.

In relation to the participation of parents in the meetings held at the school it was generally concluded that they attended but there remained lower than expected participation. The reason why parents did not attend the meeting was that the parents of the students who have problems or who are unsuccessful did not want to attend the meeting, the families were disinterested, or the working parents were unable to come. In order to increase the communication and cooperation with the parents of the students, the teachers recommended reaching parents through various organized activities.

Children aged 60–66, 66–72, and 72–84 months who started elementary school in the academic year 2012–2013 became middle school fifth-grade students in the 2016–2017 academic year. Even though it was attempted to remove the problems experienced in the first grade the work of the MEB on the curriculum, the developmental characteristics of these children due to their age levels meant that they encounter secondary school teachers who do not have the pedagogical foundation to deal with these traits and have focused on student preparation for central exams such as OKS, SBS, and TEOG, a situations that has brought about the problems.

Based on the results of the research, the following recommendations were developed:

1. This research should be repeated on a wider sample.
2. Secondary school branch teachers should be trained by field specialists on the development and learning characteristics of fifth-grade students in line with their needs.
3. Awareness-raising activities should be carried out by families and teachers through seminars and various social activities in terms of collaboration with family members.

4. Coordination with the school counselor, class advisor, classroom primary school teacher and parents should be carried out in order to solve the living adjustment problems.

As it is not possible to determine the dynamics of the policy-setting stage of the 4+4+4 education regulation it does not seem possible to say in advance by researchers what the future projection of this regulation will be. It is about combining points, a metaphor used by the businessman and computer designer Steve Jobs in his famous speech at Stanford University. Only the dots can be joined backwards. It is not possible to combine them forward.

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Chapter 54

Fuzzy Logic-Based Operational Research Techniques in Educational Administration: A Content Analysis



Zeliha Yaykiran

Abstract In this study, fuzzy logic-based mathematical decision-making published papers in educational administration, published books, and other related accessible resources between years 1960 and 2016 and related books or resources were evaluated. In other words, a content analysis of papers was achieved. To do this, published articles were investigated and studied based on their content. An analysis of the techniques that were used in the field and publishing years of the papers were concentrated upon.

54.1 Introduction

Today operational research is one of the popular scientific decision-making instruments used by almost every sort of organization. The history of operational research starts with British Military that used the technique at the end of the 1930s as a result of German air force mobilization. Indeed, the starting point of operational research based on Archimedes' studies, which consist of a collection of empirical data, as well as analysis of the data handling calculation, through using the outcomes in equipment construction, and expressing a novel technique opposing the Roman encirclement to Syracuse in 213 B.C. So, Archimedes' studies are accepted as the starting point of operational research, and hence he could be considered as the first operational analyst in academic literature. On the other hand, the development of operational research as an academic discipline in both academic and business environments starts after the Second World War (Ozturk 2013). As the developments continued, many investigations in operational research were carried out by well-known researchers and used in a variety of fields during that time.

Improvement of a discipline is crucial to maintain a *sustainable development*. To this end, growth of a discipline could be maintained with a comprehensive content

Z. Yaykiran (✉)
Hacettepe University, Ankara, Turkey
e-mail: zyaykiran@gmail.com

analysis, which is beneficial for following the trends and latest understandings in the field. For this purpose, content analysis is used as the research technique in this article. This article aims to provide a perception to the published articles of fuzzy logic-based mathematical decision-making techniques in educational administration. As a matter of fact, significant data can only be achieved exclusively by a comprehensive analysis of data; also, healthy decisions can only be grounded on this attentive practice of analysis and investigation.

Apparently, the complex difficulties of organizational education systems are correlated with describing objectives, stating involvement and production correlations, analyzing accomplishments frequently as long-term experiences, managing numerous objectives, describing those objectives in an *operational research form*, and involving randomly determined characteristics of educational procedures (Houghton and Gear 1975).

Making decisions is not a solution for complexity. Although it is one part of the solution process, it is not the only part of the solution process. There are several options existing, and the options concern the degree of formality used to address complexity. The closest solution could be found with intuitively informal attitudes. The next one is with formal decision models, which can be used to capture as much of the complexity as possible. Anyhow, the task of gathering and engaging the available data is a hard task, because it requires management of all positive and negative aspects as well as understanding the complexities for each alternative model (Keeney 1982).

The fuzzy logic approach that was presented by Zadeh in 1965 lets researchers to model system thoughts, based on their linguistic descriptions. More specifically, the natural language is used to direct the necessary data and the amount of IF/THEN uncertain procedures are simplified with the usage of verbal factors inside of their syntax. Fuzzy logic administers change material from verbal to a contextual mathematical form, which is the main advantage of fuzziness. The principles of the linguistic factors can be separated into some categories, rather than belonging and not belonging; the principles can be a component to a clear value, confirming the fundamental standard of fuzzy logic underpinning the statement “everything is a matter of degree” (Kosko 1994: 18).

Fuzzy logic has taken place in a variety of different research fields, mainly in education. Previous research related to fuzzy logic involves in the usage of fuzzy inquiry in the social disciplines (Bossel et al. 1976). Besides that, the latest research contains the study of Fourali (1994, 1997) who analyzed the relation between fuzzy logic and the scholastic accomplishment measurement. Fourali (1997) also considered fuzzy logic as a quite significant tool in the social sciences for a scientist as she/he may discover more applicable tools for her/his area of inquiry. To figure out a resolution to generalization difficulty in educational investigation alongside the use of related social disciplines, Bassey (2001) used the idea of fuzzy logic in oversimplification, via offering the awareness of *fuzzy generalization*. A discussion provided by Bassey (2001) regarding “fuzzy predictions” that could be a great tool to connect researchers and users and at the same time improving *an accumulative approximation* constitutes a formation of an educational model.

An increasing number of so many complex educational difficulties faced by administrators also involve various numbers of answers. This makes the situation challenging—if not complicated—in terms of selecting proper answers spontaneously.

Additionally, the educational administrator very often confronts prediction problems. He/she must have some reasonable data to answer questions such as estimating the change of a population in the area over the next 10 years, figuring out the needs of physical plant areas of facilities in the future, or purchasing new equipment so that future needs of the students can be met.

The possible solutions are multiple for every *complex problem*, but there are commonly a small number of solutions that offer meaningful criteria for an efficient solution. The proper solution will present the most efficient plan, and this will predict an ideal way to be followed. Intuition does not provide an adequate solution for some problems. Hoban (2002) recommends a professional learning system, which builds upon a module based on Marion's (1999) *complexity theory*. He accepts a perception that although *reality is defined as static and one-dimensional, indeed it is dynamic*.

Two things are needed to solve all educational administration problems relatively easily. Those are principle's ability to make decisions and the instruments obtained beyond intuition and feeling to implement the decisions. Furthermore, three related topics have main viewpoint such as:

- Cognition is situated in particular physical and social contexts.
- Cognition is social in nature.
- Cognition is distributed across the individual, other persons, and tools (Putnam and Borko 2002).

Theoretical paradigms mentioned above support the following perspective as a mental or a placed perception on education can be applied relying on “what works.” Moreover, theories should be used with consideration of linking the best suitable one to a specific objective or they should be arranged with an objective to create the “shape” and the “ground” of the educational progress (Cobb 1994).

Likewise, some others advocate that educational systems should be seen through multiple perceptions, and they are not specified to one theoretical perception (Claxton 1996; Putnam and Borko 1997; Merriam and Caffarella 1999).

Hoban (2002) with his “system thinking” approach links multiple perspectives to a compatible “learning system.” The mentioned approach highlights interactions between the essentials in an “educational system.” As a continuation, it shows up, when systems' individual, public, and circumstantial settings cooperate to develop each other in a system where collaboration is formed via the settings' common encouragement. So, the perceptions mentioned above underline the main ideas of current educational perspectives and emphasize the interaction among them.

All understandings mentioned above lead us to focus on the relationship between educational administration and fuzzy logic-based mathematical decision-making. Consequently, we could find a way to improve decisions for better educational organizations. In that sense, the purpose of the study is to research published papers

in the field of fuzzy logic-based operational decision-making techniques in educational administration. The specific points addressed in this study are:

1. “Determination of the key concepts used in the published articles in the Field of Fuzzy Logic-Based Mathematical Decision-Making Techniques in Educational Administration”
2. “Determination of the techniques used in the published articles in the Field of Fuzzy Logic-Based Mathematical Decision-Making Techniques in Educational Administration”

54.2 Content Analysis

54.2.1 Key Concepts in Literature

54.2.1.1 Decision-Making

An administrator covers many things in an educational system such as managerial, developmental, organizational, interconnecting, inspiring, directing, and assessing decisions. All these are different but interconnected. The decision to decide on these items is a big deal for the managers (Semerci 2000). However, no action can be taken without a decision. For this reason, she/he is interested in decision-making as well as a management theory. In fact, the decision is the heart of the administration (Kaya 1991).

Decision-making is the process of determining the sanction to be applied to solve a problem and arriving at a result by analyzing and comparing the information about the event or problem. The decision is for the future. Since the future is not known exactly, the individual who makes the decision carries a risk (Taymaz 1989). Decision-making is an institutionalized and collective process used to make all kinds of changes in an organization.

Habenicht et al. (2009) mention the multi-criteria decision-making model consisting of various elements in the following subsections such as decision variables, alternatives, criteria, outcomes, preferences, and decision, relying on the nature of the decision problem.

Moreover, accurate decision-making is neither well understood nor practiced by many educational administrators. This failure makes it difficult for the school to fulfill its tasks effectively, slows down the development, and gives the school administrator and teachers a sense of alienation. If the decision-making process is well understood and well practiced, these people feel “the power and efficiency,” which are among the distinctive features of the innovators themselves (Yılmaz 1999, 211). The life of an organization depends on the accuracy of the decisions taken. The ability of the administrator to make correct and productive decisions requires, above all, the knowledge of decision models and stages (Bursalıoğlu 1987, 122). Every organization should make accurate decisions so as to be effective. Decisions in an

organization can be made in different ways, for example, by the leader, group, groups influencing the organization from the outside, and others. It is important for the success of the organization how the decision is taken and by whom (Aydın 1994, 127). Decision-making is a mental process in which any work comes before an action is taken. No organizational action can be made without a decision (Kaya 1991, 94). In order to make accurate decisions as an administrator and manager, data should be gathered and analyzed neatly.

54.2.2 Data-Driven Analysis

Data-driven analysis is significant for school administration. Data analysis in the school context needs not to be complicated, and a lot of useful data are already gathered in the normal course of school operation. Recent research indicates the ability to successfully use data is an increasingly critical factor in carrying out effective educational reforms and sustaining support for public schools.

With the consideration of educational quality, educational organizations are collecting rising quantities of data by evaluating so many issues such as programs, training, and courses. The gathered essential considerations define education quality, so educational organizations can better react to student needs. Knowledge invention from data is a time consuming procedure, so the educational administrators moves back and forward between being the manager of the educational organization and a specialist who reasons mathematical models.

54.2.3 Techniques Used in Literature

54.2.3.1 Linear Programming

A problem solving method that is helpful in circumstances where one quantity must be optimized and the other quantities must stay in certain limits is called linear programming. A sample is given by Ontjes (1972) as linear programming offers the opportunity for school administrators to test the effect of various policy decisions concerning the assignment of students. Another example of linear programming is to determine the total instructional time consumed in every diverse instruction style, so the usefulness of instruction is enlarged in an optimum fashion available for teachers, and services remain within certain limits. A comprehensive presentation can function as a tool for formulations and solution McKenna (1980).

The primary procedure in finding a solution to a problem with linear programming is to present the problem in mathematical symbols. The following procedure is stated by Smythe and Johnson (1966) as identifying manageable factors that distress the problematic target. The following step is to select the degree of effectiveness to some standard, which can be accurately assessed then, to request the mathemati-

cal symbolization of the object function. Moreover, identifying the limitations and lastly entailing mathematical symbolization of the limitations on the controllable variables are necessary (Smythe and Johnson 1966).

Linear programming, as the name suggests, addresses the relationships between inputs into a system and the outputs from that system, which may be depicted graphically through straight-line relationships (Young 1973). Providing a realistic base for decision-making is the main *benefit of practicing linear programming operational research method*. If the decisions are strengthened by data, they become more valid and more reliable. The fundamental theorem of linear programming basically says that the optimal solution to a linear programming is in one of the corners of the region of all feasible solutions (Sottinen 2009). The administrator is forced by linear programming to recognize variables so that he can power over with associated limitations and can study the interrelationships between them. McKenna (1980) states that linear programming is employed through problem formulation, solution, and interpretation.

The output from the problem will not be correct or useful, if the data that goes into a linear programming difficulty is neither acceptable nor illustrative of the actual daily difficulties. Linear programming does not actually make decisions; on the contrary, it only aids in decision-making. Sanders et al. (1978) also state that linear programming provides confirmation and support decisions; however it cannot replace an administrator who is eventually responsible for determining progressions of achievement.

54.2.3.2 Heuristics

In a heuristic modeling approach that is built on clear characteristics of program growth such as the interior subtleties of tutors' and teachers' specialized learning, climate and planning are clarified and professional learning is mathematically assessed (Gravani and John 2005).

That is, toward improving educators' professional attitudes, a specialized learning organization was projected by Hoban (2002) which relies on a model that comes after complexity theory (Marion 1999). Then, he accepted that realism is neither motionless nor simple-minded, but it is dynamic. Hoban (2002)'s outline combines teacher-learning conditions as individual, societal, and circumstantial settings to interconnect an organization.

According to Geraldine et al. (2013), five steps can be applied in research-based heuristics. Those are:

- Identifying specific goals
- Understanding research as an instrument rooted in a design methodology
- Choosing appropriate material
- Addressing limitations
- Aligning the assessment to goals

Although various types of heuristics exist, there are specifically three known types of heuristics which are mentioned and listed as below:

- Availability heuristics
- Representativeness heuristic
- Base rate heuristics

Heuristics actually forces the administrators in a specific way by assisting and showing what to do in certain circumstances. In order to implement a heuristic, it should first offer better outcomes than the following best heuristic.

The optimistic externalities come from the production of efficient heuristics, which set up the cost of public education. It would be fair to state that inadequate encouraging structure and administrative environment of numerous educational organizations lead people to support unproductive or out-of-date heuristics which will not develop decision-making and may actually decrease the well-being of persons who embrace them.

Data Mining

Because teaching is directly related to student learning and educational achievement, it is certainly a unique significant profession that exists (Hanushek and Rivkin 2010). A basic obligation to practice data mining examples in encouraging institute's managerial assessments is the perspective of understandability, that is, one should be able to comprehend the way of a model achieving an exact assessment. On behalf of better assistance to the institute's managers in making accurate evaluations, an easygoing understandable model is preferred. This model gives an awareness of the dynamics that are very essential to the learners (Baesens et al. 2011). Dejaeger et al. (2011) also distinguish and relate data mining methods, which can be beneficial for the planned administration of all scholastic organization.

An efficient tool, provided by this approach, can be experienced by the school administrators to improve identification of the students' necessities. Data mining can be used to discover the standard for the educational development (Hamalainen et al. 2004) or learner performance (Tang and McCalla 2002) and similarly to assess and also to develop computer-based educational organizations (Zaiiane and Luo 2001) through investigating beneficial learning information from learning portfolios (Chen et al. 2000).

Dejaeger et al. (2011) put forward further statements saying that data mining practices can be beneficial to construct a valuable and new perspective on issues related with learner fulfillment to show the management of educational organizations. The viewpoints on dynamics correlated with learner fulfillment are built by data mining techniques in the management of educational organizations. The figure below is gathered from the article of Romero C and Ventura S (2006) (Fig. 54.1).

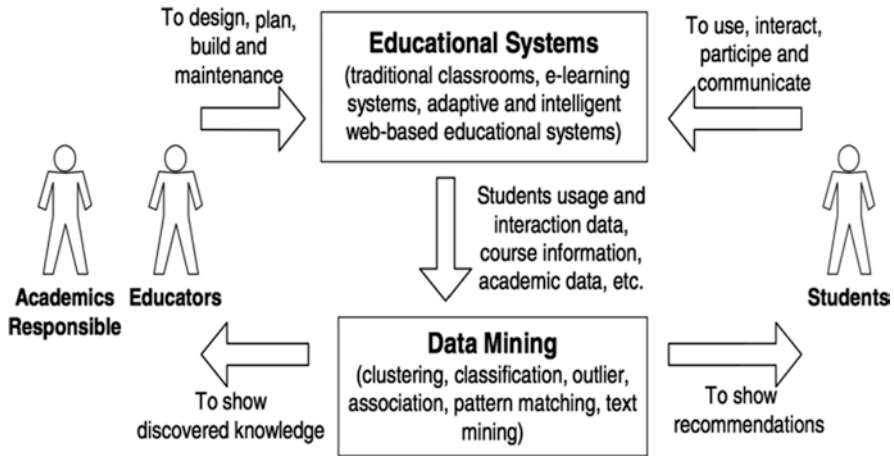


Fig. 54.1 The cycle of applying data mining in educational systems (Romero and Ventura 2006)

Statistics

Creighton (2000) states that school leaders can obtain needed assistance from statistical analysis in their daily decision-making. Education practitioners make use of any gathered essential data coming from actual laboratories such as attendance and dropout rates, instructional program assessment, institution entry rates, and so on. So, it is important to note that descriptive statistics explains (standard deviation, median, means, range, modes, and percentile ranks), and illative measurements work with example statistics to diagnose limitations and to examine theory evaluations.

Information investigation does not need to contain multifaceted measurements. Especially, information investigation in institutions consists of:

- The information gathering process
- Using gathered data for the determination of learning and teaching improvements (Creighton 2000)

A principal needs to develop his or her own ability to analyze a problem, evaluate a program, make decisions based on data, and prepare final reports. The statistics mentioned above focus on best ways to work with technological developments for better school leadership and better decision-making. Principals and teachers must be provided with the skills and experiences necessary to use data analysis for school improvement with special attention given to increasing student achievement.

According to James McNamara (1996), applied educational statistics should be taught being a closer discipline to the administrator and teacher preparation programs, and traditional mathematical theories should be refrained from. Since the relevant existence of statistics moves toward a more practical way for educators, technological tools and a wide selection of computer software programs can assist

administrators. In social sciences the computer programs mentioned here allow the educator to analyze comprehensive data. The reason of inadequate data usage in schools is discussed by Holcomb (1999) also explaining difficulties in educator, administrator engagement with statistics.

PERT (A Planning and Analysis Tool)

Planning, Evaluation, and Review Technique in Analysis used especially in multiple stage projects PERT is one of the most effective ways to organize essential data. This method is useful mainly for planning and analyzing stages of a project or activation series that are independently placed regarding certain goals. In other words, PERT is a network system that typically requires identification of objectives as a first step in the project (Cook 1967).

Usage area of PERT can be listed as scheduling, organizing, and coordinating tasks in a project since it is known as a project management tool. It also facilitates decision-making and reduces both the period and necessary costs to fulfill a task (Stefan 2007).

The PERT technique can be applied to almost any project where logical planning is required (Cook 1966). The formation of a PERT chart analytically explains critical predecessor actions and interrelated topics. When the chart is completed, the estimation of the necessary time for each action can be written on the chart; and it is significant to analyze it to identify time manipulations and to maintain activity progression. The scheduling of each activity, can take place in the project, is based on the completed time analysis. Moreover, using a PERT method becomes a great assistance for administrators regarding complexity of the project completion on time, also in terms of its effectiveness and success.

In the case of any uncertainty existing in general management, as Wiest and Levy (1969) highlight, the advantages of PERT usage are numerous. If the exact time for project completion is not clear, the time estimation process becomes more valuable with the help of planning, evaluation, and review techniques.

Cook L (1967) describes a project as “an organization unit dedicated to the attainment of a goal generally the successful completion of a development product on time, within budget, and in conformance with predetermined performance specifications.”

According to Chan (2007), what makes PERT useful is the following information provided from the usage of it as:

- Mission achievement period estimation
- Likelihood of achievement beforehand at indicated time
- The analytical pathway of actions that straight influence the achievement time
- The actions that have inattentive time that can provide incomes to serious pathway actions
- Action beginning and finishing dates

In addition to the advantages of PERT, Sanders et al. (1978) mentioned usage areas of PERT in educational administration as follows:

- Preparation of budget
- Procedure analysis for the materials and supplies purchasing
- Planning an applicable analysis of administrative organization
- Organizing and monitoring a scholastic requirements investigation
- Questioning the scheduling processes
- Design curriculum assessment
- Investigating broadcasting arrangement
- Preparation and studying maintenance procedures

The projects mentioned above consist of numerous actions depending on complex timetables that lead their completion and interconnections. Without PERT, an administrator may lose time in developing schemes for organizing and applying projects with many actions.

Queueing Theory

One of the most important studies of applied probability, where a degree of uncertainty exists, is named as queueing theory. What determines the theory is the interactions of facilities that arise in every situation with the behavior of its users (Ramalhoto 1990). The result of this congestion, where a queue occurs, is often predictable, whereas more severe system problems related to scheduling, staffing, or material allocation can take place in other situations (Chan 2007).

In order to increase achievement, identification of some methods is required also to figure out noninstructional time used in educational organization. These include help request of the instructor, transition from one activity to another, or taking and returning instructional materials. Such actions seize as approximately 25 % of the instructional time (Anderson 1984; Graden et al. 1984; Karweit 1984).

Burns (1984) discovered that, on the average elementary school day, only 75 % of school time is essentially spent in the classroom and 37 % of that time is spent on noninstructional happenings. Observations proved that major achievements in learning time would come from saving lost minutes because of waiting, interruptions, or classroom transitions, which play an utmost role to increase student achievement (Karweit and Slavin 1981). Relatedly, Rossmiller (1983) also estimated the quantity of time that the regular student spends on task throughout a school year is nearly 364 h.

Using a queueing problem and queueing theory positively can offer a systematic approach in the form of a framework for waiting. It is also proved by many disciplines outside of the education field that queueing theory can be chosen as a research method to analyze wait and congestion problems, which involves transitions from one activity to another or from material acquisition. Queueing theory can provide solutions to such problems that may also be solved by possible approaches such as staffing, scheduling, resource allocation, instructional methods, etc. (Huyvaert 1987).

Simulation

A highlighted alternative instrument for queueing theory is entitled as simulation which is a fundamental component of modeling curriculum regarding students' comprehension and also reminding the complexity of numerous queueing arrangements existing within some actual life circumstances (Chan 2007).

Blake (1979) describes simulation as the formation of a quantitative reasoning system model and the empirical management of the model on a digital computer. Simulation organizes rational restraints that are essential in quantitative reasoning and gives more flexibility in creation of system models (Gordon 1969).

That is to say, simulation is generally used to formulate and operate the representation of a problem as an operational research technique. Such technique can translate the problem condition into an operational model. The meaning of "model" in this framework is a representative of a real-world situation that is more understandable and more manipulative than the real-world situation (Sanders et al. 1978). Furthermore, a mathematical equation can be a model for real situations; and logical steps set may be a model of a decision-making; an administrator can value and test the amount of distinctive explanations to a difficulty on the sample regardless of risking required time and money that would be spent if these solutions were attempted out in the actual world assessment setting.

Since the operational research techniques are interrelated, PERT, linear programming, and queueing theory are expressed as *specified categories of simulation*. For instance:

- PERT analyzes the construction of diagrammatic project model.
- Linear programming models a problem situation with mathematical equations.
- Queueing theory uses arithmetic standard of difficulty settings wherever there are consumers anticipating to use a service.

Additionally, simulations have become progressively common in professional education programs (Boulos et al. 2007; Faria 2001; Hallinger et al. 2010; Hallinger and McCary 1990; Lean et al. 2006; Scherpereel 2005; Salas et al. 2009).

Supporters have claimed that an education system based on simulation is attentively associated with numerous significant aims of education in the businesses. For instance, development of skills in higher-order thinking and consideration, increasing complex applied skills in decision-making and teamwork, and learning to use experience as an instrument for problem resolving are among these (Hallinger and McCary 1990; Gary and Wood 2011; Salas et al. 2009; Steadman et al. 2006; Scherpereel 2005). Generally simulation is preferred to be used in the analysis of a problem situation looking into its mechanisms and placement of the mechanisms into a basic system that represents the situation.

Simulation can be used to engage factors for school age children such as birth rate, economic growth, geographic distributions, age variety, and so on. Primarily, simulation is developed for education administrators in North America especially for countries as the Netherlands, China, Thailand, and Korea; since then it has been modified on behalf of several cultural and linguistic situations (Hallinger and Kantamara 2001).

Lastly, simulations involve applicants in a complex comprehensive problem-solving procedure, which test applicants to operate official and speechless information in the improvement of a solution (Showanasai et al. 2013).

Optimization Methods

Possible problems that educational administrators face are listed as follows:

- The salary adjustment
- Maximization of the quality of teaching
- Maintaining a racially balanced schools
- Development of individualized instruction

While the topics above work with extensively diverse problems, allocating and assigning resources are their common concerns. Furthermore, the issues presented above also have another common characteristic, that is, their concerns related with making some quantity as small or large as possible (minimizing or maximizing). For instance, the maximum salary in the first issue, the maximum quality of teaching in the second, the minimum distance students' mobilization in the third, and, lastly, the maximum possible benefit in the instruction are to be mentioned here. Issues highlighted are being worried about the allocation and assignment of resource analysis, which is linked to actions carried out either to maximize or to minimize some certain outcomes. The problems inherent in maximization or minimization of outcomes are called as optimization problems (Sanders et al. 1978).

Sanders et al. (1978) actually present the list below which contains some issues to be optimized in educational administration such as:

- Learner accomplishment
- Educator preparation
- Period for teaching
- Accessibility of resources
- Application of services
- Availability of activities additional to curriculum
- Nutritive significance of provided institute lunches
- Attention to equipment and supplies bills
- Transportation period
- Dropout rates
- Classroom dimensions

All of the points on these catalogues seem to be at least probable implications of optimization.

54.3 Conclusion

In this study accessible published papers and articles between 1960 and 2016 were analyzed. The main focus of the papers was the fuzzy logic-based operational research techniques especially in the field of educational administration. During the content analysis, several issues are addressed. Those are key concepts of the topic like decision-making and data-driven analysis, and the techniques of operational research used in educational administration are listed as linear programming, heuristics, data mining, statistics, PERT, queue systems, simulation, and optimization. The research papers and articles were gathered from university library databases, available online resources, and a few milestone books related to field. The research's priority is to focus onto the latest studies in fuzzy logic-based operational research techniques in educational administration. The conclusion can be drawn as, the fuzzy logic and operational research studies have been remarkably popular with the establishment of educational administration as a field. The reason for the fact can be stated as, operational research techniques are quite reliable tools to clarify fuzzy situations that may occur within the framework of educational administrators' responsibilities and daily routines. Therefore, as expected, the frequency of the studies in the field is increasing with the support of educational practitioners. In the end, all mentioned studies share a common goal, which is to support and enhance student learning and student academic achievements.

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