CHAPTER 15

THE EFFECT OF TEACHERS' PERSONAL BELIEFS AND EMOTIONAL INTELLIGENCE ON QUALITY AND EFFECTIVENESS OF TEACHING

Lefkios Neophytou[i], Mary Koutselini and Leonidas Kyriakides

INTRODUCTION

Contemporary research in the field of teacher effectiveness has been developed in the frameworks of two distinct models: the process-product" model and the "teacher knowledge and beliefs" model (Campbell et al. 2003; 2004). The main assumption underlying the process–product model is that effective teaching behaviour can be accurately described and prescribed. Consequently, these models focus on observable and measurable aspects of teacher-student interactions such as the pacing of instruction, quantity of teacher student interactions, time on task etc (e.g Borich, 2009; Brophy & Good, 1986; Brown & Saks, 1986; Doyle, 1986). Teacher knowledge and beliefs models on the other hand, are concerned with the subjective nature of teaching. Their focal point is what teachers feel and believe in terms of their practice. The emphasis lies on the process of understanding how teachers' life stories shape their instructional profile, how efficient and capable they consider themselves to be in terms of pedagogical skills and content knowledge, what do they believe about effective teaching and how they feel about students (e.g. Byrne, 1983; Fennema & Loef-Franke, 1992; Muijs & Reynolds, 2001; Sutton & Wheatly, 2003).

Each model has had its share in the development of educational policy (Brown et al., 2003; Campbell et al. 2004: Scheerens, 1992). The process product models have been useful in terms of developing teaching while beliefs' models enhanced the understanding of teachers and their practice. From this perspective each model could be considered as complementary to the other. Surprisingly, academic discourse has been consumed in an ongoing debate focusing on segregation rather than synthesizing. Scholars aligned with the process-product model question the methods and consistency of the beliefs approach and doubt its ability to provide coherent conclusions that can be used to improve teaching (Pajares, 1992). On the other hand, the process-product model has been criticized in terms of its regulatory approach and by the fact that such approaches have often been aligned with conservative educational policies and have been used as the vehicle of transforming teachers into objects (Slee & Weiner, 2001; Weiner, 2002).

A. Lauriala et al. (eds.), Navigating in Educational Contexts, 207–224.
© 2011 *Sense Publishers. All rights reserved.*

The academic jury is still trying to decide which approach is best. Despite the usefulness of scientific debates in the evolution of knowledge, a rigorous polemical approach may be disorienting scholars from what might be the most important thing in education: the advancement of learning. Both models can contribute to fulfil this goal. Understanding teachers and their practice is a prerequisite for the development of optimum teaching practices. Based on these premises, the aim of this article is to enhance understanding in effectiveness and quality of instruction through establishing common grounds between the two competing models of educational effectiveness. Methods of the process-product model can provide an objective account of effectiveness. These, supplemented by the approaches of the beliefs' model can help to further illuminate the underlying and unique factors that have an impact on the quality of teaching and teachers' effectiveness.

The *Dynamic Model of Educational Effectiveness* (DMEE) (Kyriakides & Creemers; 2006; 2008) is the starting point in our attempt to join the two competing approaches on teacher effectiveness research. The DMEA is the evolution of the Creemers (1994) model**,** which Teddlie & Reynolds (2000) describe as one of the most influential theoretical constructs in the field. The prime concern within the DMEE is the generation and testing of theories which can explain the various relationships that influence effective instruction. Thus, the DMEE can be considered as a process-product model. However, the DMEE goes beyond the establishment of statistical relationships between variables, providing a way out of the a-theoretical dead-end, a condition that has often been indicated as a major shortage of existing studies in the area of Educational Effectiveness (Creemers, 2002). Effectiveness in the DMEE is approached by examining both the effect that the teacher has on improving student performance along with the quality of his/her instruction.

Many studies used multiple methodologies to examine the main assumptions of the DMEE (De Jong, Westerhof, & Kruiter, 2004; Kyriakides, Campbell, & Gagatsis, 2000; Kyriakides, 2005; Kyriakides & Tsangaridou, 2008) and provided empirical support to the main assumptions of the model. However, a common finding in these studies is that more than 25% of the variance remained unexplained. This might be attributed to the fact that some further variables might have to be included in the DMEE (Kyriakides, 2005). Attempting to find some of these additional variables we shift our interest on the teacher. The teacher is probably the most important factor for success or failure in every educational endeavour. As Goodson (1992, p.3–4) notes, "Teachers are not only formal role incumbents; they are active agents making their own story" and is finally the teachers story that reaches and influences cognitive, emotional and social development of the students. Consequently, we adopt a broader perspective that exceeds the classroom level; in the process of achieving optimal understanding of the teachers' behaviour in the classroom we need to examine additional factors related to teachers' practice. Therefore we examine the role that teachers' emotions and beliefs have on effectiveness.

The teacher is neither a fine-tuned instrument nor a well-oiled machine. Our approach is focused on the teacher as a person whose knowledge, experiences, beliefs and emotions are the things that finally determine the quality of his/ her practice.

Emotions, as Hargreaves (1998) comments, are at the heart of teaching. They comprise its most dynamic qualities. Good teachers are emotional, passionate beings who connect with their students and fill their work and their classes with pleasure, creativity, challenge and joy. What teachers believe and feel determines their effectiveness. Therefore, good teaching is not just a matter of knowing one's subject, being efficient, having the correct competences or learning all the right techniques.

Teachers' emotions are an important component of their beliefs about teaching and learning. Beliefs primarily reflect an emotional way of teachers thinking and reacting in terms of effective teaching. (Entwistle et al., 2000). Teachers in their testimonies often equalize good and effective teaching with certain emotional skills and qualities such as patience, caring, compassion, friendliness, warmth and concern (Wilson and Cameron, 1996). Student-centre elements such as classroom climate and positive student-teacher interaction are placed at the centre of teachers' constructions of effective teaching. It is therefore evident that feeling, expressing and regulating emotions is a key component of teachers beliefs and a major determinant in the way teachers teach.

Emotions and rationality are interwoven in the formation of the teachers' personal beliefs and theories. Beliefs and theories are deeply rooted conceptual maps, consisting of arrays of concepts that have been proved to hold true through several tests. The endurance of beliefs in these trials produces an emotional wrapper, which holds all the constituting concepts together. The emotional wrapper makes beliefs even more endurable to change. In order for belief change to occur one should address those components of the beliefs system that are accessible to reason: conceptions. Conceptions are consciously constructed whereas beliefs are emotionally charged (Entwistle et al, 2000; Koutselini, 2009). Therefore addressing conceptions is probably the only way to bypass the resistance placed by the emotional charging of beliefs.

The process of belief change is mediated by a rational, intentional effort. It is an effort to bypass the emotional barrier, or better, to manage it effectively in order to align it with rationality and foster change. In this direction, the epistemological construct of Emotional Intelligence (EI) proves to be very helpful since it is based on the assumption that emotions can be recognised, controlled and regulated in order to achieve various goals. EI is the set of abilities that account for how people's emotional reports vary in their accuracy and explain how more accurate understanding of emotions leads to better problem solving in an individual's emotional life (Goleman, 1998; 1998; Mayer, Salovey& Caruso, 2000a).

This is why we choose emotional intelligence over a general definition of emotions. Emotional intelligence may provide evidence of how through intentional action teachers can recognise and regulate their emotions in order to have a better understanding of the concepts and emotions underlying the personal beliefs that determine their practice and influence the quality and effectiveness of their teaching. The notion of quality is of extreme significance in this endeavour. Despite the fact that numerous studies examined the relation between Educational Effectiveness and Emotional Intelligence (EI), no study so far, investigated what intervenes between these two variables. Studies investigating the relation between EI and effectiveness

(e.g.. Edison, 2002; Iordanoglou, 2007; Newsome, Day, & Catano, 2000; Schutte et al., 1998; Drew, 2006; Van der Zee et al., 2002) seem to neglect quality as the intervening factor for effectiveness. Similarly, a linear relation ignoring quality of teaching is underlying research designs that examined effectiveness and beliefs (Nespor, 1987; Feinman-Nemser & Floden, 1986; Richardson et al, 1991). The basic assumption in our study is that we cannot fully comprehend effectiveness unless we examine what a teacher does in a classroom in order to improve students' aptitude and performance. This signifies the notion of *Quality of teaching* which refers to the factors which are under the direct control of the teacher and have an impact on students' performance (Cambell et.al, 2004)

Hence the specific research question of the study is:

1. To examine if the variables of Emotional Intelligence (trait or ability) and Teachers' Beliefs have an effect on the quality and effectiveness of instruction

METHODOLOGY

Participants

Data was collected in Cyprus during April-June 2007. Participants of the study were 82 teachers of the 5th and 6th grade of public elementary schools in Cyprus. Data on effectiveness and quality of instruction derived from the data bank of a previous research conducted by Kyriakides and Creemers (2008). Consequently the same teachers where approached. Two hundred and eight teachers where approached but only 82 of them agreed to participate. Participants were asked to complete three instruments (EQ-I, MSCEIT, and Teachers' Beliefs questionnaire).

Analysis

Our goal in analyzing the data was to see whether teachers' EI and Teachers' Beliefs (independent variables) have an effect on the Quality and Effectiveness of teaching (dependent variables). *Quality of teaching* refers to the factors that according to contemporary educational research are important traits of good practice. Focusing in the classroom level, quality refers to those factors, which are in direct control of the teacher and have an impact on students' performance. Quality in terms of the DMEE consists of eight factors which describe teacher's instructional role: orientation, structuring, questioning, teaching modelling, applications, management of time, teacher role in making classroom a learning environment, and assessment. Each factor can be measured by taking into account the dimensions of frequency, focus, stage, quality and differentiation[ii]. Data for the Quality of teaching derived from two levels, the Teacher level and the Student level. Data for the teacher level were collected from independent observers conducting multiple classroom observations and completing low and high inference questionnaires based on the DMEE. Data for the student level were collected using student questionnaires. In

these questionnaires students were asked to evaluate their teacher based on the dimensions and factors of the DMEE.

Effectiveness of teaching, is the actual and measurable impact that classrooms factors, such as teaching methods, teacher expectations, classroom organisation and use of classroom resources have on students' performance (Cambell, Kyriakides, Muijs and Robinson, 2004). Data about Effectiveness of teaching were collected through specific tests measuring the teachers' contribution in raising student achievement. Tests (in mathematics) were administered at the beginning and the end of the school year. Each teacher's effectiveness was represented by a single number, which reflects the difference in student achievement between the two tests. Analysis of the Kyriakides and Creemers (2008) data allowed for a parsimonious indicator for each one of these variables. Thus, two numerical values were used for every teacher, one reflecting his/her overall effectiveness and another the overall quality of his/her instruction.

The first independent variable was the Emotional Intelligence (EI) of the teachers. EI refers to abilities for identifying, processing and managing emotions in both self and others (e.g. Goleman, 1998; Mayer and Salovey, 1997). Due to the fact that supporting scholars have not yet reached to an agreement about a common definition and measurement of the notion, the two dominant models of emotional intelligence were used in the present study. Hence, Emotional intelligence in our study consists of two different variables reflecting the two schools of thought about EI: *EI as mental ability (EIa)* (Mayer and Salovey, 1997) and *EI as mixed trait ability (EIm)* (Bar-On, 1997).

Emotional Intelligence as a mental ability (EIa) can be roughly described by a single overall performance level. At the same time this can be divided into sub areas of *Experiential* and *Strategic* Emotional Intelligence. Experiential EI score assesses a respondent's ability to perceive, respond and manipulate emotional information without necessarily understanding it. On the other hand Strategic EI assesses the ability to understand and manage emotions without necessarily perceiving feelings well or fully experiencing them. These two areas are divided into four branches: *Emotional Perception and Expression, Emotional Facilitation of Thought, Emotional Understanding, Emotional Management.* The former two are connected with Experiential EI while the latter two to the Strategic EI (Salovey, Mayer & Caruso, 2000c).

In our study, Emotional Intelligence as a mental ability *(EIa)* was assessed using the *Mayer Salovey Caruso Emotional Intelligence Test* –Version 2 (MSCEIT-V2). MSCEIT is an ability-based scale providing a single overall performance score along with scores reflecting the two subareas and the four branches of the model. According to the instrument's technical manual, the MSCEIT has a full-scale reliability of .91, with area reliabilities of .90 (experiential) and .80 (strategic) (Mayer, Salovey & Caruso, 2000c). The Greek version of the instrument was used in the present study and was administered to 300 individuals. The examination of Cronbach's alpha index revealed that reliability was very good concerning the total scale of the instrument (0.79) and excellent concerning the scale of Experiential EI (0.9). Reliability was also sufficient for most of the composite (branch) scales of

the instrument (Emotional Perception and Expression (0.87), Emotional Facilitation of Thought (0.59), Emotional Management (0.59)). However, the reliability for the scale of the Strategic EI scale was quite low (0.47). Even lower was the reliability of the scale of Emotional Understanding (0.13).

The second variable reflecting Emotional intelligence in our study was *EI as mixed trait ability (EIm)*. This variable refers to the Bar-On's model of "Emotional-Social Intelligence". According to Bar-On (2005), EI is a cross-section of interrelated emotional and social competencies, skills and facilitators that determine how effectively we understand and express ourselves, understand others and relate with them, and cope with daily demands. Emotional Intelligence according to the Bar-On´s model is accessed using the Bar-On's (1997) Emotional Quotient Inventory (EQ-i). The EQ-i is a self-report measure of emotionally and socially intelligent behaviour. It contains 133 items in the form of short sentences and employs a 5-point response scale with a textual response format ranging from "very seldom or not true of me" (1) to "very often true of me or true of me" (5). The individual's responses render a total EQ score and separate scores on five composite scales (Intrapersonal, Interpersonal, Adaptability, Stress Management and General Mood). In this study we used the Greek Version of EQ-i and tested its' reliability by examining the Cronbach's alpha index in a sample of 270 participants. Reliability was found to be very high concerning the total EQ-i scale (0.94) and very good in all the other composite scales of the instrument: Intrapersonal (0.91), Interpersonal (0.86), Adaptability (0.83), Stress Management (0.75) General Mood (0.77).

The third independent variable of this study was Teachers' Personal Beliefs, which refers to the tacit and often unconsciously held assumptions and attitudes about students, classrooms and the academic material to be taught (Kagan, 1992). Data for Teachers' Beliefs' were collected with a scaled questionnaire consisting of 58 statements derived from a literature review on the topic. The questionnaire consisted of two parts. In the first part of the questionnaire, an array of items examined general aspects of beliefs such as attitudes about contemporary pedagogical approaches, misconceptions about good teaching and teachers' social role. The second part of the questionnaire focused on items dealing with teacher's beliefs about the importance of specific teaching tasks. Thus while the first part referred to beliefs and assumptions in general, the second part was focused on beliefs about specific tasks that teachers undertake in their daily routine such as teaching, assessing, communicating with parents, collaborating with colleagues and carrying out administrative duties.

Items from each part were factor analyzed in order to reach to parsimonious and interpretable factors for further analysis. Several factor solutions were examined and problematic items were eliminated on the basis of statistical criteria (factor loading > .40, loadings to more than one factor with second factor loading >0.3 and difference between the two factors loading > .10, Cronbachs' alpha and Pearson Correlation >0.3). Afterwards items were entered or removed in order to obtain the most interpretable solution. Despite the fact that both parts of the questionnaire resulted into interpretable factor solutions, only factors from the second part were retained into our final model, since multilevel analysis indicated no effect on quality

and effectiveness from the factors of the first part of the questionnaire[iii]. The factor structure that resulted from the factor analysis is presented in table A3 (appendix). Thus, concerning the second part of the questionnaire, varimax orthogonal rotation produced four factors responsible 57% of the variance. Cronbachs' alpha for each factor scale was 0.65, 0.64, 0.65 και 0.55 respectively. The first factor, named as *Immediate Teaching Duties* explained 16% of the variance while the second factor, *Non-teaching duties, was* responsible for 14.5% of the variance. The third factor was named as *Student Assessment Duties* and explained 14% and the forth factor, *Duties of Communication and Collaboration,* explained 11.2% of the variance.

Multilevel analysis was not only performed about the Beliefs' Questionnaire. All the factors that emerged from all the instruments (Beliefs Questionnaire, EQ-i and MSCEIT) were entered into a final model to test the relationship among the variables of our study. Final analysis was executed using the MLWin (Rasbash et al., 2002) multilevel analysis software. Diagram 1 presents the effect that our independent variables have on Quality and Effectiveness of Teaching.

According to Diagram 1, only 4 factors appear to have statistically significant effect on Quality of Teaching. Two of these factors derived from EQ-i (Adaptability and General Mood) and two from the Questionnaire on Teachers' Beliefs (Direct Teaching Duties & Student Assessment). None of the MSCEIT factors appeared to have a statistically significant impact on Quality and Effectiveness of Teaching. Adaptability has the stronger effect on Quality (0.21) hence explaining 4% of its variance. General Mood also appeared to have a statistically significant effect on Quality (0.05), which is however very low in comparison with Adaptability. Observing the factors that emerged for the Beliefs' Questionnaire (Direct Teaching Duties & Student Assessment) we can see that each one of them is responsible for 1% of the variance in Quality of Teaching. Finally we can observe that none of the factors has a direct effect on Effectiveness. However we may see indirect effects, mediated by Quality.

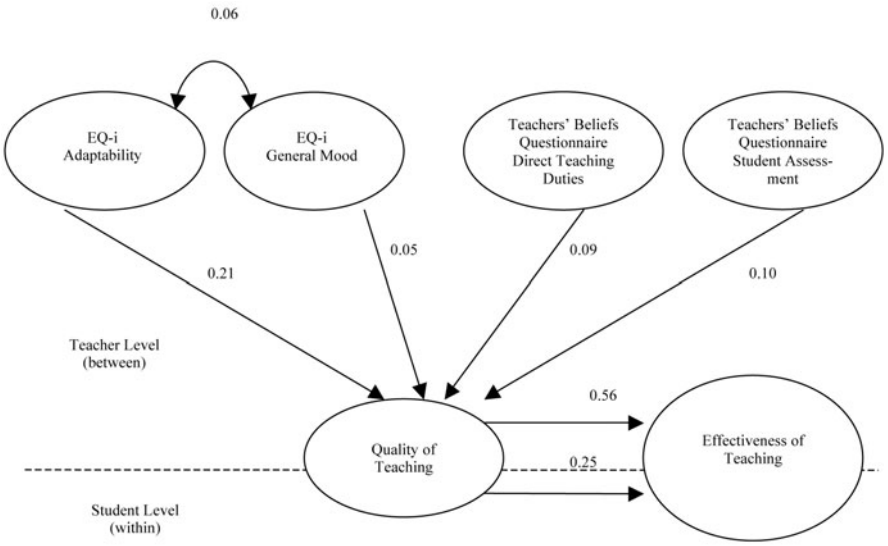

Diagram 1: The final model. Observed correlations between Emotional Intelligence (Trait and Ability), Teachers Personal Beliefs and Theories and their effect on Quality and Effectiveness of Instruction at the Student and Teacher Level.

DISCUSSION

The aim of this study was to examine if the variables of Emotional Intelligence (trait or ability) and Teachers' Beliefs have an effect on the Quality and Effectiveness of instruction.

We begin by discussing the effect that teachers' beliefs have on teaching. Our results brought to surface specific nested presumptions that teachers share. These presumptions were the result of the factor analysis of the first part of the Beliefs' questionnaire and had to do with beliefs and attitudes about contemporary pedagogical approaches, misconceptions about good teaching, teachers' social role and teacher centred instruction. The existence of presumptions, according to Boulgaris (2003) may hinder any attempt for change and block innovations (Pajares, 1992) thus resulting into enforcing conservative approaches, minimize flexibility and cause indecisiveness. The indication of these factors associated with presumptions may be interesting, it was not however associated with the Quality and Effectiveness of Teaching as defined in the DMEE. This finding indicates the existence of a gap that distinguishes theory and practice. Various studies have pointed out this divide (i.e Duffy and Anderson, 1984; Kinzer, 1988; Koutselini & Persianis, 2000; Poulson et al, 2001; Readence, Konopak and Wilson, 1991). As Koutselini (2008) points out, the relationship between beliefs and practice is complex and appears to be dialectical rather than unilateral: in that practice does

not always follow directly from beliefs. Although there may be some congruence between practice and beliefs, the relationship is not so strong. There is a consequent potential for conflict both internally within the corpus of beliefs held, and externally with the reality of teaching, of schools and of the education system within which teachers operate (Duffy and Anderson, 1984; Poulson et al, 2001). So, while teachers may be able to articulate their beliefs outside the classroom, their actual practices are often governed by the nature of teaching and classroom life and the constraints, which these impose (Poulson et al, 2001).

However, a significant effect was observed when it came to beliefs associated with the importance of specific teaching duties. Our results indicate that the factors *Direct Teaching Duties* and *Student Evaluation tasks* have a statistically significant and direct impact on Quality of Teaching (and Indirect on Effectiveness). These two factors are those that are directly related to the teaching duties at the classroom level. This finding indicates that teachers' beliefs have an effect on the Quality and Effectiveness of instruction when they are associated with the actual teaching duties that a teacher can control. A teacher's beliefs about the importance *of Direct-Immediate Teaching Duties* and *Student Evaluation* are something that the teacher can directly apply in his/her practice. This kind of beliefs escapes the notion of tacit and implicit since it is directly connected with a teacher's everyday routine. In this context, the notion of beliefs can become a clear guide for practice. The importance of beliefs in terms of duties performed in everyday teaching is further enforced by the fact that the other two of the factors that emerged from the factor analysis of second part of the questionnaire (*Non teaching duties,* and *Duties of Communication and Collaboration)* were left out of the model. It is therefore evident that teachers´ beliefs about duties that are not directly related to teaching (administrative, collaborative etc) have no statistically significant effect on the Quality and Effectiveness of instruction. Hence, the classroom level appears to be the most significant level in terms of understanding the instructional process. This finding is in line with many other research findings (i.e. Creemers,1994; Teddlie & Reynolds, 2000) stressing the classroom level as a perquisite for understanding influences on all other levels. Summarizing the findings in terms of beliefs and their effect on teaching we can conclude that only beliefs associated with teachers' everyday practice are those having an effect on quality and effectiveness of instruction.

We now continue by examining the relation between Emotional Intelligence and Quality/Effectiveness of Teaching. Results indicated that only one of the two models of EI, namely *EI as mixed/ trait ability (EIm)* has an impact on Quality/ Effectiveness. The fact that only one of the two models of EI has proved to have an effect on Quality does not come as a surprise due to the fact that the two models, despite their common name, still are distinct entities (i.e. Bracket and Mayer, 2003; O' Sullivan M., 2007; Petrides & Furnham, 2001). The effect of EIt on Quality / Effectiveness of teaching is not however attributed to the total construct. It is rather the outcome of two of its dimensions: Adaptability and General Mood. Adaptability appears to have the stronger effect on Quality (0.21) hence explaining 4% of its variance. This finding is again more or less expected, especially when one considers the environments in which teachers work. Classrooms are not just buildings;

they are arenas of social interaction. Thus, being flexible and adaptable is a prerequisite for effective teaching nowadays more than ever, when differentiation of instruction is considered as an essential part of professional ethics. A flexible teacher is more likely to respond better in the demands placed by the contemporary mixed ability classrooms and therefore be more effective. On the other hand, General Mood according to Bar-On (1997) consists of two specific abilities: Happiness and Optimism. These abilities are associated with a general feeling of cheerfulness and enthusiasm. Therefore a teacher mastering the skills associated with General Mood would be more likely to create a colourful and joyful classroom culture that could be beneficial in terms of advancing students' learning. Considering however the magnitude of the influence that General Mood has on Quality and Effectiveness of teaching, one must not barge into ambitious claims overestimating its' importance.

Our results point out that EI and teacher's beliefs have an effect on the Quality and Effectiveness of teaching. However, it is important to examine the nature of the effect. As our analysis reveals, all the factors included in our final model have a direct impact on Quality and an indirect impact on Effectiveness. Any effect on Effectiveness is therefore mediated by Quality. This finding is of extreme importance when we examine the relation between EI, Beliefs and Quality/Effectiveness of teaching. The definition of effectiveness adopted by many studies in education is usually narrow, matching effectiveness with the outcome of students' performance (i.e. Edison, 2002; Duffy and Anderson, 1984; Duffy and Ball,1986; Jaeger, 2002; Nespor; 1987; Parker et al.,2004; Schutte et al., 1998; Swart, 1996). This approach may provide information that can guide educational and social policy on the macro level. However, little information can be derived that can be used at the micro level and provide teachers with information on how to teach better. The key finding in our research is that the impact of EI on effectives is indirect. Hence Quality appears to be a factor that needs to be considered when trying to associate EI, teachers' beliefs and teaching. Quality is the indicator of how well a teacher is able to consider and put into practice all those things that contemporary research has indicated as important for student learning (Cambell, Kyriakides, Muijs and Robinson, 2004). Effectiveness may be reflected by a final mark indicating the difference in students' performance before and after an intervention. This final mark is not however a unilateral factor. Equalizing effectiveness solely with students' performance in tests encapsulates the danger of neglecting many other important factors. We do not suggest that all these factors can actually be found or controlled. However, focusing on the notion of quality we are able to discriminate among controllable and non-controllable effectiveness factors. Thus, the endeavour of improving education can become focused and efficient. Acknowledging quality, in both research and intervention designs, can inform how teachers can improve their practice. In this way effectiveness becomes tangible, manageable and improvable.

CONCLUSION

Joining the process-product and the beliefs models facilitates understanding of both the processes and the agents of teaching. Having a concrete knowledge on both these factors, the product of teaching -which is none else than learning – can certainly improve. The venture of improving teaching should probably begin with a comprehension of the teacher. Insights about teachers' beliefs, attitudes and emotions are of a paramount importance. However, these insights need not to be consumed into an endless theoretical endeavour. If research on teachers' beliefs wants to be aligned with effectiveness it should be focused on what teachers think about the tasks performed in their everyday practice. Similarly, emotions and emotional intelligence abilities come into play when they are connected with the challenges of the classrooms' social environment. Effective teaching calls for flexible, happy and optimistic individuals. Apparently research on effectiveness needs to seek answers and device methods that would help teachers feel happy in their career choices. In addition, research should provide an array of techniques that would make teachers more emotionally competent into handling frustrating conditions.

Prescription and regulation of teachers behaviour is not however an option. The future is unpredictable and therefore impossible to prepare for any precise set of conditions. So, what can teacher educators do? Many years ago, the prominent American philosopher John Dewey, addressing the issue of preparation for the future made a simple but striking argument: "To prepare him for the future life means to give him command of himself" (Dewey, 1929, p. 293). Dewey was of course referring to the child; his suggestions are nevertheless applicable to the teacher as well. Teachers would be more effective if they are able to understand their own practice, explain and challenge their beliefs and become affiliated with their emotions. An alliance between the process-product and beliefs models is apparently much better than a mere competition.

REFERENCES

Bar-On, R. (1997). *The Emotional Quotient Inventory (EQ-i): Technical manual*. Toronto, Canada: Multi-Health Systems, Inc.

Bar-On, R. (2005). The Bar-On model of emotional-social intelligence. In P. Fernández-Berrocal & N. Extremera (Guest Eds.), Emotional Intelligence[Special Issue]. *Psicothema, 17*, 13–25.

Boulgaris (2003, November). *Questionnaire of teachers personal theory*. Paper presented at the AULA conference of the School of Philosophy, University of Athens,: Athens, Greece. (in greek)

Borich, G.D. (2010). *Observation Skills for Effective Teaching.*(6th ed.).Allyn & Bacon.

Bracket, M.A., & Mayer, J.D. (2003). Convergent, discriminant and incremental validity of competing model of measures of emotional intelligence. *Personality and Social Psychology Bulletin, 29*(9), 1–12.

Brophy, J., & Good, T. L. (1986). Teacher Behaviour and Student Achievement. In M. C. Wittrock (Ed.), *Handbook of Research on Teaching* (pp. 328–375). New York: MacMillan.

Brown, B. W., & Saks, D.H. (1986). Measuring the effects of instructional time on students learning: evidence from the beginning teacher evaluation study. *American Journal of Education , 94*. 480–500.

Brown, M, Askew, M, Millett A., & Rhodes V. (2003) The key role of educational research in the development and evaluation of the National Numeracy Strategy. *British Journal of Educational Research, 29*(5), 655–672.

Byrne, C.J. (1983). *Teacher knowledge and teacher effectiveness: A literature review.* Paper presented at the annual meeting of the North-western educational Research Association, Ellenville, NY.

Campbell, R.J., Kyriakides, L., Muijs, R.D., & Robinson, W. (2003). Differential teacher effectiveness: towards a model for research and teacher appraisal. *Oxford Review of Education, 29* (3), 347–362.

Campbell, R.J., Kyriakides, L., Muijs, R.D., & Robinson, W. (2004). Effective teaching and values: someimplications for research and teacher appraisal. *Oxford Review of Education, 30*(4), 451–465.

Creemers, B.P.M. (1994). *The effective classroom*. London: Cassell.

Creemers, B.P.M. (2002). From School Effectiveness and School Improvement to Effective School Improvement: Background, Theoretical Analysis, and Outline of the Empirical Study. *Educational Research and Evaluation, 8*(4), 343–362.

De Jong, R., Westerhof, K. J., & Kruiter, J. H. (2004). Empirical evidence of a comprehensive model of school effectiveness: a multilevel study in Mathematics in the first year of junior general education in the Netherlands. *School effectiveness and school improvement, 15,* 3 – 31.

Dewey, J. (1929). My pedagogical creed. *Journal of the National Education Association, 18*(9), 291–295.

Doyle, W. (1986). Classroom organization and management. In M. C. Wittrock (Ed.), *Handbook of research on teaching* (pp. 392 – 431). New York: Macmillan.

Drew, L. Todd. (2006).The relationship between emotional intelligence and student teacher performance. (Doctoral Dissertation, University of Nebraska-Lincoln). *Dissertation Abstracts International, 67*(10). (UMI No 3240048).

Duffy, G., & Anderson, L. (1984). *Conceptions of Reading: Final Report.* Research series No. 111. East Lansing, Mich.: Michigan State University, Institute for Research on Teaching.

Duffy, G., & Ball, D. (1986). Instructional decision making and reading teacher effectiveness. In: Hoffman, J. (Ed), *Effective Teaching of Reading: Research and Practice.* Newark, Del.: IRA, 163–60.

Edison, B.R. (2002). Emotional intelligence as a mediating variable in Astin's I-E-O model of higher education. (Doctoral Dissertation, The College of William and Mary in Virginia, 2002).*Dissertation Abstracts International, 63*(08), 2808A. (UMI No. 3063256).

Entwistle, N., Skinner, D., Entwistle, D., & Orr, S. (2000). 'Conceptions and Beliefs About "Good Teaching": an integration of contrasting research areas'. *Higher Education Research & Development, 19*(1), 5–26.

Feinman-Nemser, S., & Floden, R.E. (1986). The cultures of teaching, in: M. C. Wittrock (Ed.) *Third Handbook of Research on Teaching,* (pp. 505–526). New York: Macmillan.

Fennema, E., & Loef-Franke, M. (1992).Teachers´knowledge and its imact. In D. A Grous (ed.), *Handbook of Research in Mathematics Teaching and Learning*. New York: McMillan.

Goleman, D. (1995). *Emotional intelligence. Why it can matter more than IQ.* New York: Bantam Books

Goleman, D. (1998). *Working with emotional intelligence*. New York: Bantam.

Goodson, I. F. (1992). Studying teachers' lives: An emergent field of inquiry. In I.F.

Goodson (Ed.), *Studying teachers' lives* (pp. 1–17). London: Routledge.

Hargreaves, A. (1998). The emotional practice of teaching. *Teaching and Teacher Education, 14* (8), 835–854.

Iordanoglou, D.(2007). The teacher as leader. The relationship between Emotional intelligence and leadership effectiveness, commitment and satisfaction. *Journal of Leadership Studies, 1*(3), 57–66.

Jaeger, A. 1. (2002). *Job competencies and the curriculum: An inquiry into emotional intelligence in graduate professional education.* Raleigh, NC: North Carolina State University. (ERIC Document Reproduction Services No. ED 465 341)

Kinzer, C.K. (1988). Instructional frameworks and instructional choices: comparisons between preservice and inservice teachers. *Journal of Reading Behavior, 20*(4), 357–77.

Koutselini, M. (2008). Participatory teacher development at schools. *Action Research, 6*(1), 29–48.

Koutselini, M. (2009). Teachers´ perceptions, beliefs and theories of effective teaching. *Curriculum and Instruction,* Athens: Greek Letters. (in Greek)

Koutselini, M., & Persianis, P. (2000) Theory practice Divide in Teacher Education and the Role of the Traditional Values. *Teaching in Higher Education*, *5*(4), 501–520.

Kyriakides, L. (2005). Extending the Comprehensive Model of Educational Effectiveness by an Empirical Investigation. *School Effectiveness and School Improvement, 16*(2)*,* 103–152.

Kyriakides, L., & Creemers, B.P.M. (2006). Testing the dynamic model of educational effectiveness: Teacher effects on cognitive and affective outcomes*. Paper presented at the 87th Annual Meeting of the American Educational Research Association*. Chicago, USA.

Kyriakides, L. & Creemers, B.P.M. (2008). Using a multidimensional approach to measure the impact of classroom-level factors upon student achievement: a study testing the validity of the dynamic model. *School Effectiveness and School Improvement, 19*(2), 183–205.

Kyriakides, L., & Tsangaridou, N. (2008). Towards the Development of Generic and Differentiated Models of Educational Effectiveness: A Study on School and Teacher Effectiveness in Physical Education. *British Educational Research Journal, 34*(6), 807–838.

Kyriakides, L., Campbell, R.J., & Gagatsis, A. (2000). The significance of the classroom effect in primary schools: An application of Creemers comprehensive model of educational effectiveness. *School Effectiveness and School Improvement, 11*(4), 501–529.

Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P.Salovey & D. Sluyter (Eds.), *Emotional development and emotional intelligence: Educational implications*. New York: Basic Books.

Mayer J., Salovey P., & Caruso D. (2000a). Emotional intelligence as Zeitgeist, as personality, and as a mental ability. In R. Bar-On & Parker (Eds.), *The handbook of emotional intelligence*. San Francisco: Jossey-Bass.

Mayer J., Salovey P., & Caruso D. (2000b). Models of emotional intelligence. In R.J. Sternberg (Ed.), *Handbook of Human Intelligence*. (pp.396–420). New York: Cambridge University Press.

Mayer J., Salovey P., & Caruso D. (2000c). *Mayer , Salovey , Caruso Emotional Intelligence Test (MSCEIT).User's manual*. MHS

Muijs, D., & Reynolds, D. (2001). *Effective Teaching: evidence and practice.* London: Sage.

Nespor, J. (1987). The role of beliefs in the practice of teaching. *Journal of Curriculum Studies, 19*(4), 317–328.

Newsome, S., Day, A. L., & Catano, V. M. (2000). Assessing the predictive validity of emotional intelligence. *Personality and Individual Differences, 29*, 1005–1016.

O' Sullivan M. (2007). Trolling for trout, trawling for tuna. The methodological morass in measuring emotional intelligence. . In G. Matthews, M. Zeidner, & R. Roberts (Eds), *The science of emotional intelligence* (pp. 258–287). New York: Oxford University Press.

Pajares, F. (1992). Teachers beliefs and educational research: Cleaning up a messy construct. *Review of Educational Research, 62*, 307–332.

Parker J.D.A., Summerfeldt L. J, Hogan M. J., Sarah A., & Majeski S.A. (2004). Emotional intelligence and academic success: examining the transition from high school to university. *Personality and Individual Differences, 36,* 163–172

Petrides, K. V., & Furnham, A. (2001). Trait emotional intelligence: Psychometric invstigation with reference to established trait taxonomies. *European Journal of Personality, 15*, 425–448.

Poulson, L., Avramidis, E., Fox, R., Medwell, J., & Wray, D. (2001). The theoretical beliefs of effective teachers of literacy in primary schools: an exploratory study of orientations to reading and writing. *Research papers in Education, 16*(3), 271–292.

Readence,J.E., Konopak, B.C., & Wilson, E.K. (1991). An examination of content teachers' beliefs and instructional choices and their actual planning and practices. *Paper presented at Annual Meeting of National Reading Conference, Palm Springs, Calif., USA, December.*

Richardson, V., Anders, P., Tidwell,D., & Lloyd,C. (1991). The relationship between teachers' beliefs and practices in reading comprehension instruction. *American Educational Research Journal, 28*(3), 559–86.

Rasbash, J., Browne, W., Goldstein, H., Yang, M., Plewis, I., Healy, M., Woodhouse, G., Draper,D., Langford, I., & Lewis, T. (2002). *A users' guide to MLwiN*. London: University of London,Institute of Education.

Scheerens, J. (1992). *Effective Schooling: Research, Theory and Practice*. London: Cassell.

Schutte, N., Malouff, J., Hall, L., Haggerty, D., Cooper, J., Golden, C., & Dornheim, L. (1998). Development and validation of a measure of emotional intelligence. *Personality and Individual Differences, 25*, 167–177

Slee, R., & Weiner, G. (2001). Education reform and reconstructions as a challenge to research genres: reconsidering school effectiveness research and inclusive schooling. *School Effectiveness and School Improvement, 12* (1). 83–97.

Sutton, R., & Wheatly, K. (2003). Teachers' Emotions and Teaching: A Review of the Literature and Directions for Future Research. *Educational Psychology Review, 15*(4)*,* 327–358.

Swart, A. (1996). *The relationship between well being and academic performance.* Unpublished master thesis, University of Pretoria, South Africa

Teddlie, C., & Reynolds, D. (Eds.). (2000). *The international handbook on school effectiveness research.* New York: Falmer.

Van der Zee, K., Thijs, M., & Schakel, L. (2002). The relationship of emotional intelligence with academic intelligence and the Big Five. *European Journal of Personality, 16*, 103–125.

Weiner, B. (2000). Intrapersonal and interpersonal theories of motivation from an attributional perspective. *Educational Psychoogy Review, 12*(1), 1–14.

Wilson, S., & Cameron, R. (1996). 'Student teacher Perceptions of Effective Teaching: a developmental perspective'. *Journal of Education for Teaching,* 22(2), 181–195.

NOTES

[i] Corresponding author.

[ii] For a detailed explanation see tables A1 & A2 (appendix) and Kyriakides and Creemers (2008)

[iii] See diagram 1

APPENDIX

Table A1: The five cross level dimensions according to the Kyriakides and Creemers (Creemers & Kyriakides, 2006· Kyriakides & Creemers, 2006;2008) Dynamic Model of Educational Effectiveness (DMEE).

Dimension	Description
Frequency	*Frequency* refers to the quantity that an activity associated with an effectiveness factor is present in a system, school or classroom while the *focus* dimension refers to the specificity of the activities and also addresses the purpose for which an activity takes place.
Stage	*Stage* examines the phase of the instructional process at which various activities they take place. It is expected that the factors need to take place over a long period of time to ensure that they have a continuous direct or indirect effect on student learning.
Focus	*Focus* refers to the specificity of the activities and also addresses the purpose for which an activity takes place.
Quality	*Quality* refers to the properties of the specific factor itself, as these are discussed in the literature and at the same time, makes clear and guarantees that teachers are expected to make use of the information gathered from assessment in order to meet their student needs.
Differentiation	*Differentiation* refers to the extent to which activities associated with a factor are implemented in the same way for all the subjects involved with it.

Table A2: The eight factors describing teacher's instructional role-quality of teaching according to the Kyriakides and Creemers (Creemers & Kyriakides, 2006· Kyriakides & Creemers, 2006;2008), Dynamic Model of Educational Effectiveness (DMEE).

Orientation	*Orientation* refers to teacher behavior in providing the objectives for which a specific task or lesson or series of lessons take(s) place and/or challenging students to identify the reason for which an activity takes place in the lesson.
Structuring	*Structuring* refers to the various ways teachers structure their lessons: e.g. by beginning with overviews and/or review of objectives, by outlining the content to be covered and signaling transitions between lesson parts, by calling attention to main ideas; and by reviewing main ideas at the end.
Questioning techniques	*Questioning techniques* examine how effective teachers ask a lot of questions and attempt to involve students in class discussion. This is boosted by considering the optimal question difficulty and its variation depending on the context as well as by mixing product and process questions (more process questions).
Teaching Modeling	*Teaching Modeling* has to do with how teachers help pupils to use strategies and/or develop their own strategies which can help them solve different types of problems and help them organize their own learning (e.g., self-regulation, active learning).
Application	*Application* refers to the extend that teachers provide needed practice and application opportunities for immediate exercise of topics taught during the lesson.
The *classroom as a learning environment*	The *classroom as a learning environment* concentrates on measuring teacher contribution in creating a learning environment in his/her classroom and five elements of classroom as a learning environment are taken into account: teacher-student interaction, student-student interaction, students' treatment by the teacher, competition between students, and classroom disorder.
Management of Time	The factor *Management of Time* focuses on how teachers organize and manage the classroom environment as an efficient learning environment and thereby to maximize engagement rates.
Teacher Evaluation	*Teacher Evaluation* examines how information gathered from assessment can be used in order to enable teachers to identify their students' needs as well as to evaluate their own practice.

Table A3: Rotated component matrix: Factor loadings, eigenvalues and percentages for the four factors that emerged for the second part of the questionnaire on Teachers' Beliefs (Beliefs about the importance of specific tasks associated with the teaching profession)

Questionnaire Items	*F1*	*F2*	*F3*	*F4*	h^2
39. Planning and preparing lessons is a very important aspect of the teaching profession.	,701	-,076	,066	,164	,529
40. Differentiated teaching is a very important aspect of the teaching profession	,679	,076	,231	,100	,531
41.Supportive individualized instruction is a very important aspect of the teaching profession	,653	,347	,198	-,111	,599
42. Attending to discipline problems is a very important aspect of the teaching profession.	,621	,100	-,006	,242	,455
48. Attending staff meetings is a very important aspect of the teaching profession	,020	,844	,037	,144	,735
47.Extra curricular activities is a very important aspect of the teaching profession	-,002	,663	-,014	,263	,510
49. Attending training seminars is a very important aspect of the teaching profession	,255	,658	,144	,008	,519
43. Formative assessment is a very important aspect of the teaching profession	,116	,060	,838	,029	,720
44. Summative assessment is a very important aspect of the teaching profession	,310	-,080	,777	,037	,707
46. Grading student work is a very important aspect of the teaching profession	-,003	,182	,598	,183	,424
51. Working with colleagues is a very important aspect of the teaching profession	,080	,078	,049	,855	,745

52. Communication with parents is a very important aspect of the teaching profession	,358	,143	,084	,616	,535
50. Administrative duties are a very important aspect of the teaching profession	,091	,315	,192	,500	,395
Eigenvalue	2,08	1,89	1,82	1,59	
Percent %	16,03	14,59	14,07	12,25	
Cumulative Percent %	16,03	30,62	44,69	56,94	