

Chapter 1

The Origins of Two Research Projects: LISA and Pro-LEAD

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1.1 Introduction

Although the twenty-first century is still in its first decade, many countries have already seen dramatic shifts in the way schools and education systems are managed compared with education systems at the end of the last century. The precursors for these changes, from a global perspective, are (1) a combination of demographic shifts in societies all over the world (including greater migration and ever-increasing divides in the north-south and east-west dialogues), (2) changes in social and family structures (including greater poverty, single-parent families, and larger numbers of children with no access to primary education), and (3) the use (abuse and misuse) of information and communications technologies, including the increasing use and influence of social networks, mobile phones, and the Internet at large (Murphy, 2012; National Center on Education and the Economy, 2006; Pashiardis, 2004; UNESCO, 2012a, 2012b, 2012c, 2012d). Usually people concentrate on the assessment and evaluation of education systems since this is (most often) the primary objective of education policies. Therefore, one needs to agree on a definition of the concept “education system,” if one is to accept that there is an analogy between education policy and education system assessment, evaluation, and accountability. Education systems can be differentiated based on their scope, dimensions, configuration, distribution of decision-making centers, responsibility allocated to each level of decision-making and decision-making procedures, resources, and their professed and espoused goals and objectives (Ritzer, 2000). Moreover, education systems and practices have been the subject of international investigations in a comparative process and have been

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looking to the foreign example for a number of years now (Ritzer). The cross-national transfer of educational practices was sparked by cross-cultural curiosity, political motives, altruistic interests, economic competition, and worldwide standardized examinations such as the *Trends in International Mathematics and Science Study* (TIMSS) and the Program for International Student Assessment (PISA¹).

Within these turbulent times in the education arena, school leadership has been identified by a number of researchers as a key element in the effectiveness of school organizations (Brauckmann & Pashiardis, 2011; Gronn & Ribbins, 2003; Heck & Moriyama, 2010; Kythreotis, Pashiardis, & Kyriakides, 2010; Lashway, 2003; Marzano, Waters & McNulty, 2005; Pashiardis & Brauckmann, 2008; Robinson, Lloyd, & Rowe, 2008). For instance, some of the abovementioned pieces of research indicate that school principals have a small, but statistically significant, effect on student achievement. Some other studies indicate that this effect is mostly mediated and indirect, whereas some others have even found direct effects between school leadership and student achievement. As a result, various stakeholders have enhanced their expectations from school principals demanding higher academic results and performance standards (Weindling & Dimmock, 2006). In this context it is crucial to attempt to determine the leadership styles that school principals adopt. However, of equal importance is the need to identify the intertwining factors which potentially influence the choice to adopt particular leadership styles by school principals. Therefore, based on these needs two research projects were born: the LISA (Leadership Improvement for Student Achievement) and the Pro-LEAD (Uncovering the Complex Relation Between Principals' Leadership Style and Epistemological Beliefs and its Implications for School Leadership Training). Both had the school leader² at the epicenter of the investigations and both projects used the Pashiardis-Brauckmann Holistic Leadership Framework as the guiding model through which the research was conducted (Fig. 1.1). In Fig. 1.1, we present the main components of the guiding framework. It will be further explored and analyzed later in the book.

The LISA project lasted for 3 years during the period January 2007–December 2009 and was funded by the European Union (EU). The Pro-LEAD project also lasted for 3 years during the period January 2009–December 2011 and was funded by the Cyprus Research Promotion Foundation. An initial description of the two research projects which formulate the focus of this book follows, as more in-depth description of the projects and their goals will be described in the following chapters. At this point, it is important to stress that the Pro-LEAD project was (in a sense partially)

¹PISA is a triennial survey of the knowledge and skills of 15-year-olds. It is the product of collaboration between participating countries and economies through the Organisation for Economic Cooperation and Development (OECD) and draws on leading international expertise to develop valid comparisons across countries and cultures. About 470,000 students from 65 countries making up close to 90 % of the world economy took part in PISA 2009. The focus was on reading but the assessment also included science and mathematics and collected data on student, family, and institutional factors that could help explaining differences in performance.

²Throughout this book we use the term school leader as a synonym and substitute for the terms “school principal” and “head teacher” which are both used interchangeably.

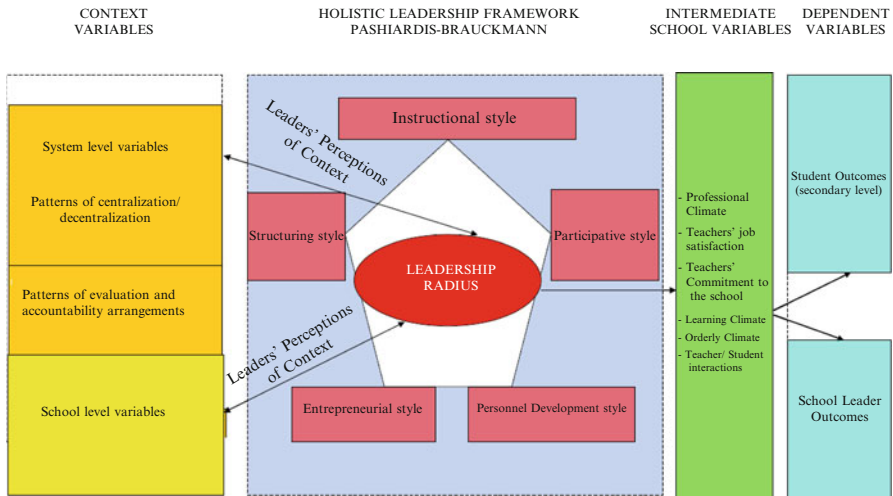


Fig. 1.1 The Pashiardis-Brauckmann Holistic Leadership Framework (initial conceptualization)

“born” out of the LISA project, since our discussions with the participating school principals in the LISA project usually ended by the school leaders emphasizing that many of their actions depended on their beliefs about how teachers and students learn. In sum, school leaders make use of different leadership styles oftentimes based on their own epistemological beliefs about how knowledge is constructed. Therefore, we wanted to examine this aspect as well.

1.2 The LISA Project

With the Leadership Improvement for Student Achievement (LISA) project, we wanted to explore how contextual variables and school leadership, directly or indirectly, affect student achievement at the secondary level of education; in other words, we wanted to know more about how system leaders³ and school leaders can build up successful forms of cohabitation for the benefit of the individual student and how they can create institutional arrangements which represent an offer that can be optimally used by the pedagogical actors (teachers) in order to improve the overall quality of their educational institutions, as well as their educational offerings.

Therefore, the core question of the LISA project is concerned with the role that principals’ leadership styles, behaviors, and practices can play in contributing to

³With the term “system leaders” we mean leaders at the systemic level, such as Ministries of Education, Local Education Authorities, and district level officials.

the improvement and effectiveness of the school, especially educational outcomes such as the basic skills of students examined under the PISA program, against the background of their national school system. The guiding research questions for the project as a whole were:

- How is the role of secondary school principals positioned in the educational system of a particular country?
- How do secondary school principals perceive their role, preferred leadership style, and their effectiveness in enhancing the overall quality of education? (In connection to this question, we also wanted to find out about the teachers' perceptions of their school principal's leadership style and preferred ways of managing the school in order to avoid self-reference bias by the principals.)
- Which intermediary factors and mechanisms operate so that school principals can have an impact on the improvement of academic achievement of their students?

In short, through this project, we wanted to further illuminate the discussion around the *impact that school leaders can have on student achievement because of the many and conflicting results in this particular research area in school leadership*. In the past few years, there is an ever-increasing interest on leadership and its effects on student achievement. However, the results of this kind of research worldwide have been mixed with regard to the importance of school leadership. As previously mentioned, some research shows small, indirect effects of school leaders on student achievement, whereas some other research indicates that there is no such effect.

Specifically, we wanted to provide some answers about the reasons that lead to the production of these conflicting findings in the research literature. It seems that some important conceptual and methodological factors and limitations differentiate the results among the various studies around the world. For instance, there is no unique definition of the concept of a principal's leadership, which is broadly accepted (Hallinger, & Heck, 1996, 1998; Witziers, Bosker, & Krüger, 2003). Second, there is no universal paradigm or theory for examining organizational behavior that is valid in all social or organizational contexts (Hallinger & Heck, 1996, 1998; Pashiardis, Thody, Papanoum, & Johansson, 2003). Third, methodological issues and research design affect the findings of the various studies. For example, the use of longitudinal data permits the examination of the progress of student achievement (Teddlie & Reynolds, 2000). In addition, the presence or absence of either construct validity or generalizability or explicit measures of school performance as a dependent variable may lead to different findings (Hallinger & Heck, 1996, 1998). Moreover, the presence of a third variable between a principal's leadership could lead to different results than the absence of this variable (Hallinger & Heck, 1996, 1998; Witziers et al., 2003). Finally, the use of statistical techniques such as structural equation modeling and multilevel analysis permits the examination of the complex relationships between a principal's leadership and student achievement at various levels in the education arena, such as the system level, the school level, and the classroom level (Teddlie & Reynolds, 2000; Witziers et al., 2003).

Based on the existing literature and the aforementioned limitations and questions, we⁴ embarked into this project on school leadership in order to find out whether it is possible to discern a number of leadership practices and behaviors which are deemed critical for raising student outcomes, either directly or indirectly, in specific governance contexts. These leadership practices and behaviors were used in order to formulate the Pashiardis-Brauckmann Holistic Leadership Framework (Pashiardis & Brauckmann, 2008) which both the LISA project and the Pro-LEAD project employed as their main point of reference. The reason for the creation of our own theoretical framework stems from the assumption that the lack of consistency in findings on school leadership is largely due to the use of varying frameworks and models and the misalignments of such frameworks with measurement of key constructs. Thus, it was decided to devise a common framework which would act as a reference base for the comparative aspect of our project and it would guide the development of valid and reliable instruments. In summary, within this project, leadership is treated as a multilevel construct which may affect school and student variables but is also likely to be influenced by contextual variables, as exhibited in the seven European countries participating in this project, namely, England, Germany (North Rhine-Westphalia), Hungary, Italy, Norway, Slovenia, and the Netherlands.

During the course of the implementation of the LISA project, we realized that school leaders' epistemological beliefs also had an effect on their preferred leadership style. More explicitly, during the interviews with the school leaders in the seven EU countries, we realized that their beliefs of how we learn and how school leaders can help their teachers learn more and grow professionally influenced their leadership style in use. Thus, when the LISA project was almost nearing the end, we decided to seek money from the Cyprus Research Promotion Foundation in order to further examine these epistemological beliefs in a smaller scale including only Cyprus and in order to find out more about these connections using the same theoretical framework and (almost) the same leadership instruments, thus taking the research one step further. In fact, we wanted to find out more about the relationship between leadership styles and our belief systems on how people learn (teachers and students). Our "hypothesis" was that the leadership "style-in-use" is influenced by the leaders' espoused theory on acquisition of knowledge.

1.3 The Pro-LEAD Project

As mentioned in the previous paragraph, we realized that, despite the extensive research attention paid to school leadership and its relationship to context and student achievement, the relationship between school leadership styles and epistemological beliefs has not been explored up to now as most pieces of research focus on the

⁴With the term "we" the whole research team is included, meaning primarily the researchers who guided the project as well as the school principals in the seven EU countries which took part as our coresearchers alongside with the teachers in their schools.

epistemological beliefs of students and teachers. This research has shown that beliefs are related to a wide variety of instructional practices such as problem-solving approaches, teaching methods, use of textbooks, class management, and learning focus (e.g., Chan & Elliot, 2000; Hashweh, 1996; Martens, 1992; Pintrich, 1990). These findings raise the possibility that principals' epistemological worldviews, namely, beliefs about the nature and acquisition of knowledge (Hofer & Pintrich, 1997; Schommer, 1990), have important implications for the leadership styles school leaders adopt. However, and even though a number of studies have proposed direct links between epistemological beliefs and instructional practices, not all studies have provided empirical support for such a link, which further emphasizes the need for more research in the field.

Moreover, despite the repeatedly emphasized crucial role that school principals play in the effectiveness of school organizations in numerous aspects, research up to now has not systematically studied how school principals' views about knowledge and learning (epistemological beliefs) might affect their leadership within the school context. Therefore, the question arises about the evidence that we actually have to support a link between the epistemological beliefs of school leaders and their leadership within the school. This question formulated the main objective of the Pro-LEAD project which was to explore the relation between the leadership styles school principals adopt when leading their schools, their epistemological worldviews (i.e., holistic beliefs about the nature and acquisition of knowledge), and their beliefs about the contextual and governance structures in which they operate (i.e., situational governance). We felt that through the undertaking of this piece of research, we would directly respond to enhancing the competences of our society in managing complex situations and challenges substantiated in various forms. In this context, our aim was to improve the leadership potential and offer capacity building to school principals. Narrowing it down to the specific action under which the proposal was submitted and funded (through the Cyprus Research Promotion Foundation), we proposed to use the results of the study in order to (a) understand the training needs of school principals as well as the ways they learn and (b) inform the design of innovative training programs for school principals in primary and secondary education. The rationale guiding our approach was that the in-depth investigation and knowledge of the principals' beliefs and perceptions would provide a significant input into their own learning within the context of professional growth schemes and, in turn, these school leaders would be in a better position to enhance theirs and their teachers' professional growth needs. More specifically, through the Pro-LEAD project we wanted to:

- Identify the leadership styles adopted by school principals in primary and secondary education in Cyprus; in other words, we wanted to validate the Pashiardis-Brauckmann Holistic Leadership Framework in the context of Cyprus, bearing in mind that the framework was already validated in the seven EU countries participating in the LISA project.
- Identify and define the epistemological worldviews of school principals in primary and secondary education.

- Investigate the beliefs of school principals about the contextual and educational governance structures in which they operate in primary and secondary education.
- Explore the possible relations between leadership styles, epistemological worldviews, and beliefs about contextual and educational governance structures of school principals in primary and secondary education.

In sum, through this Pro-LEAD project, we wanted to extend the research already completed through the LISA project, in an effort to systematically examine leadership styles, context, epistemological beliefs, and student achievement by using the same framework (the *Pashiardis-Brauckmann Holistic Leadership Framework*) as the common foundation on which to position these relationships (if any). Evidence in support for this hypothesized link between school leaders' leadership styles and epistemological beliefs is mainly based on the existing recent research on teachers' epistemological beliefs. In the same way it has been demonstrated by recent research that epistemological beliefs influence the practices and behaviors of teachers within the classroom, it can be postulated that it is also likely that epistemological beliefs influence the practices of school leaders in their respective way of "teaching" the teachers of their schools, i.e., how they exercise instructional leadership for instance. This assumption is based on the fact that, in most education systems, school leaders "evolve" from their previous teaching positions within the school system, and therefore, some of these beliefs are already "infused" into their professional practices.

Arredondo and Rucinski (1996), presenting some findings from a study of 126 Chilean educators, attempted to compare, among others, the epistemological beliefs of teachers and school principals. The researchers found no significant differences between the epistemological beliefs of teachers and school principals in their sample. These results provide some of the first empirical evidence indicating that school principals' epistemological beliefs do not differ from teachers' beliefs, thus permitting possible parallels to be drawn from the relevant research on teachers to inform future research attempts on school principals. Furthermore, it can be suggested that the behavioral characteristics that differentiate one school leader's leadership style from another may be in part influenced by the school leader's epistemological beliefs in the same way a teacher's practices may be influenced by his/her beliefs. As Tickle, Brownlee, and Nailon (2005) aptly explain: "In the same way a teacher with more mature epistemological beliefs will behave differently to a teacher with less mature epistemological beliefs, the behavior of leaders will vary depending on the maturity of their epistemological beliefs" (p. 9).

Moreover, of equal interest is the exploration of the relation between school principals' leadership styles and epistemological worldviews in conjunction with their beliefs about the contextual and governance structures in which school principals operate. Even though a great deal of attention has been given to school principals' leadership styles and even though there is evidence that epistemological beliefs are affected by the context in which teachers and students operate, little attention has been given to the effects of contextual and educational governance structures on school leaders' perceptions, beliefs, and practices. It is likely that contextual and educational governance structures as interpreted by school leaders and the

epistemological beliefs held by school leaders influence the leadership styles adopted in their work. Patterns of centralization or decentralization as well as evaluation and accountability arrangements set the backdrop for each school leader to lead. Ignoring the existence of contextual and governance issues is in effect to examine school leadership and the epistemological beliefs of school leaders in a vacuum instead of in the particular conditions in which they are expressed.

In order to achieve the research aims for both projects, a mixed methods approach was used whereby quantitative questionnaire data were combined with qualitative data collection. The methodology for both projects is described in detail in Chap. 3 of this book. As mentioned previously, both projects had the Pashiardis-Brauckmann Holistic Leadership Framework as their guiding theoretical framework. Thus, an initial short description of the framework is warranted, even though the conceptualization and development of the framework will be explored and discussed (in detail) in Chap. 2 of this book.

1.4 Initial Presentation of the Pashiardis-Brauckmann Holistic Leadership Framework

The large number of models and theories proposed concerning school leadership indicates the deep and constant academic and public interest in the subject. However, these various models and theories lack in consistency. To counter this inconsistency, Pashiardis and Brauckmann (Brauckmann & Pashiardis, 2011; Pashiardis & Brauckmann, 2008) devised a common framework in which leadership is treated as a multilevel construct which may affect school and student variables but is also likely to be influenced by contextual variables. Based on the existing literature on school leadership, Pashiardis and Brauckmann discerned a number of leadership practices and behaviors deemed critical for raising student outcomes, either directly or indirectly. These practices, actions, and behaviors were clustered around five domains or leadership styles (Instructional, Structuring, Participative, Entrepreneurial, and Personnel Development). Thus, instead of adopting a single measure for leadership, Pashiardis and Brauckmann proposed a multidimensional construct to examine the effects of each separate style on school processes and outcomes.

Furthermore, the Pashiardis-Brauckmann Holistic Leadership Framework (Pashiardis & Brauckmann, 2008) depicts the education system as a unity where levels of governance and levels of responsibilities at the system, school, and classroom level are (not only loosely) coupled in a systematic way, and therefore, the different levels are interacting with each other (without assuming natural causalities). More specifically, the framework includes the institutions that are part of the educational decision-making and delivery systems, the constituencies that interact with these institutions, and the ways the parts of the system relate to one another. "Policies, laws, regulations, and informal practices are part of this framework and are reflected, one way or another, in the behaviors of all involved" (Brewer & Smith, 2007, p. 1).

The interpretations of rules, which are meant to guide individual actions, have to be adjusted and adapted to other and different environments. Therefore, this constant interplay between context and a leader's perception of it provides a major thrust for these projects in order to create the right "leadership cocktail mix" (as we refer to it later), through which to operate.

The context, as we define it, is divided into two main levels: (1) system-level variables which include *patterns of centralization and decentralization* as well as *patterns of evaluation and accountability arrangements* in each individual country and (2) school-level variables which consist of variables pertaining to the characteristics of the school as well as demographic information about the students and teachers. With regard to system-level variables, the *patterns of centralization and decentralization* encompass sub-variables such as the devolution of decision-making authority, organizational capacity and support systems, network-type cooperation, and privatization-parental choice. The *patterns of evaluation and accountability arrangements* entail the sub-variables of accountability type, evaluative capacity/support systems, evaluation culture, alternative regulatory mechanisms, and the role of school leadership in the evaluation process.

The *school-level variables* include items relating to the school type, size and location, the composition of the student body, the school resources, the student-teacher ratio, as well as characteristics of school leaders. Contrary to the system variables, those school-level variables represent the more stable contextual factors and, in any case, they are "givens," meaning that the school leader cannot really change them or act on them, except (probably) in the long term.

With regard to *school leadership*, the framework entails five styles that school principals are likely to employ in their work: (1) Instructional Style, (2) Structuring Style, (3) Participative Style, (4) Entrepreneurial Style, and (5) Personnel Development Style (Brauckmann & Pashiardis, 2011; Pashiardis, 2012; Pashiardis & Brauckmann, 2008). Each leadership style consists of specific behaviors or practices which are likely to be exhibited by school principals.

The *Instructional Style* has a strong focus on the improvement of the quality of teaching and learning. Specifically, it entails the practices of defining and enabling the achievement of the instructional objectives, setting high expectations, monitoring and evaluating students and teachers, and stimulating instructional innovation. The *Structuring Style* concerns the aspects of providing direction and coordination to the school unit and includes clarifying the vision and mission of the school, establishing and following clear rules, dividing tasks-responsibilities among staff, enabling restructuring and taking risks, as well as managing facilities in an effective manner. Furthermore, the *Participative Style* is conceptualized as adopting an inclusive and more distributed approach to formal and informal decision-making, fostering staff cooperation, brokering and mediating conflicting situations, and promoting staff commitment. Next, the *Entrepreneurial Style* comprises the practices of involving the parents and other external actors in the school processes, acquiring resources for the school's smooth operation, building coalitions with external agents, as well as engaging in a marketing approach to leadership. Finally, according to Pashiardis and Brauckmann (2008) effective school leaders are likely to employ

a *Personnel Development Style* in their leadership practices and behaviors. This style involves the effective teacher recruitment, the assessment of their personal and professional needs, the provision of training opportunities to them, the enhancement of their self-efficacy, as well as the provision of recognition and rewards for their exemplary performance.

Further, school leaders are suggested to affect final school outcomes through a set of intermediate school variables. These variables, which operate at the school level, are hypothesized to be influenced by the foregoing leadership styles and in turn to affect school outcomes. They are proposed to mediate the impact of leadership styles on student as well as leader outcomes. The intermediate school variables consist of the professional, learning and orderly climate, personal achievement orientations, evaluation and feedback practices, teachers' job satisfaction and commitment to the school, teacher-student interactions, students' opportunity to learn, explicit teaching strategies, and parental involvement. Finally, the framework presents in detail dependent variables which entail both student and school leader outcomes.

With regard to student outcomes, the intended focus within the framework is on *achievement in basic competences* as well as *attitudes towards lifelong learning and citizenship* (i.e., achievement towards EU goals and student citizenship characteristics). Then, as a by-product of the LISA research project, we were interested in the participating school leaders' impact which is deemed to emanate from their involvement in the project as action researchers. In particular, the focus lies on the enhancement of the leaders' self-concept, the enhancement of their research capability, as well as their gain in knowledge and awareness of various leadership models and action research.

Thus, the formulated Pashiardis-Brauckmann Holistic Leadership Framework consists of leadership as well as context, intermediate, and (dependent) outcome variables. Our aim was that an educational system could be depicted in such a holistic way in order to clearly indicate the interconnectedness of all governance actors within the educational system(s) which could be subsumed under institutionalized teaching and learning opportunities and processes.

In conclusion, it is worth stressing the fact that, even though the Pashiardis-Brauckmann Holistic Leadership Framework is depicted linearly, the relationships among the various components are certainly not linear. On the contrary, the Framework represents a complex and dynamic web of relationships which are highly interconnected and interrelated forward and backwards as well as upwards and downwards and should, therefore, be explored in multilevel ways. Thus, it should be stressed that in a book dealing with educational systems and aspects of school leadership, it is not easy to examine all possible relationships. Therefore, even though the scope of both research projects (the LISA and the Pro-LEAD) was much broader, the focus of this book is narrower in that it primarily explores aspects of school leadership in conjunction to other related variables such as school climate and epistemological beliefs variables. Thus, this book revolves mainly around the school leaders' radius, as it relates to the intervening variables of school climate, as well as the school leaders' beliefs about knowledge acquisition. The next chapter will explain in more detail the (already mentioned) major components of the heuristic theoretical framework.

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