TITLUL TEZEI
Teză de doctorat – Rezumat
pentru obținerea titlului științific de doctor la
Universitatea Politehnica Timișoara
în domeniul de doctorat *Inginerie și Management*
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1. Summary of the PhD thesis

This PhD research is associated with organizational learning, which converges and contributes to the development of the learning organization, as well as recent initiatives in the educational area. Such a reconceptualization of the school could determine its development as an organization capable of responding more effectively to uncertain and dynamic external environments; an organization more easily adaptable to the context and socio-economic requirements of the local community of which it is a part (and this is constantly changing); an organization much more resistant to possible shocks/ disruptions/ unexpected external events. That is why, at the international level, the Organization for Economic Cooperation and Development - OECD promotes, in 2017, the reconceptualization of schools as learning organizations (following a model adapted to the specifics of the educational sector) and supports a centralized initiative to implement the concept and model in educational systems.

The economic, political, social and technological realities and mega-trends of the 21st century have had an impact on national educational systems and education in general, therefore also on schools, which have to face increasing pressures from multiple directions - the modification the structure of consumption and its expansion (due to the technological revolution and the decrease in production costs); reduction of production and transport costs and increased mobility of people, goods and services (as a result of the expansion of information technology); the increase in insecurity felt by the population (among the causes are the increased number of attacks and/or terrorist networks, as a result of the mobility of people, but also the increase in the intensity of cyber-bullying and/or cyber-attacks, due to the expansion of digitalization); the decline of the sense of traditional belonging to a certain community, by moving to a more modern culture, in which there are more and more diverse families (single-parent, inter-racial or same-gender) and in which digitization is rapidly connecting spatially located people to a great distance (whether co-workers or sellers and buyers) creating new meanings for jobs. Trends Shaping Education 2019 (OECD, 2019) develops a structured analysis of the realities and mega-trends of the 21st century and proposes directions for action both for the education sector (schools) and for teachers.

In the context of these realities and mega-trends, schools are pressured to learn quickly - to open up to the community, beneficiaries and peers (other schools), to allow exchanges of experiences and/or expertise; to create and support an environment conducive to the professional development of staff; to promote internal collaboration and team learning – all this in order to cope with an ever-changing external environment and to equip students not only with key and specialist competences, but also with the knowledge and skills needed to cope with a uncertain future (in a broad sense, of economic, political, social and technological

transformations of today's global society, and in a narrow sense, of professions that do not yet exist and problems that have not yet been formulated/ appeared).

Therefore, the transformation of schools into "learning organizations" appears as a natural consequence. Although the concept was not new, having been initiated in the business environment and gaining wide recognition in the early 90s with the publication of "The Fifth Discipline: The Art and Practice of the Learning Organization" (Senge, 1990), it becomes necessary and opportune its adoption, contextualized, also by organizations in the educational area.

In Romania, the concept and the model know very few approaches, until 2017 (at the beginning of the doctoral research) only 3 consistent theoretical or applied approaches could be identified, which go beyond the limits of a descriptive approach to the model and the benefits of its implementation: the first, directed toward public administration, an exploratory study on 26 County Councils, on diagnosing the current stage in relation to a learning organization (Giura, 2012); the second, directed toward the business environment, a research of the elements (dimensions) that define a learning organization at the level of pharmaceutical companies - 20 large companies that control approximately 80% of the sales market in Romania and 6 SMEs (Bordeianu, Hapenciuc, Bejinaru and Burciu, 2014); the third and last, directed toward higher education, an analysis of the factors that influence organizational learning at the university level (Guță, 2015).

Therefore, at the national level, there was no attempt to implement - develop the "learning organization" model adapted to organizations providing pre-university educational services. The research gap can be seen here, which refers to the generation of contributions in the development and application of the concept of the "learning organization" at the level of national pre-university education; this reconceptualization will help schools to cope with a constantly changing external environment and facilitate their organizational effectiveness. The implications are also major in the direction of educational managers (principals, school structures coordinators), as the concept involves both the creation of a safe (trustworthy) environment, in which students and all staff (teaching staff, auxiliary staff and non-teaching staff) can express themselves, complete and develop, as well as the opening of schools to the external environment, in order to collect and share valuable experiences and expertise.

In this context, the research topic aims to answer the question: *Is it necessary and opportune, in Romania, to reconceptualize schools as learning organizations, in order to contribute to an organizational growth (including from a performance perspective), but also to an increase in resilience in relation to unexpected external events?*

To answer this question, the following operational objectives of the research theme were defined:

• **OP1** Bibliographic analysis and synthesis to create an overview of knowledge and learning in relation to organizations, the concept of the learning organization and the school as a learning organization

• **OP2** Carrying out theoretical and applied research on the efficiency of the pre-university system in Romania

• **OP3** Carrying out theoretical and applied research regarding the opportunity to implement the model promoted by the Organization for Economic Cooperation and Development – OECD in the case of the school as a learning organization, in Romania

• **OP 4** Carrying out theoretical research on the feasibility of implementing in Romania, without cultural adaptations, the model promoted by the Organization for Economic Cooperation and Development in the case of the school as a learning organization.

Accordingly, the overall objective of the research theme is to generate contributions to the knowledge and practice of developing and applying the concept of the "learning organization" at national level.

The interest in this research topic is closely related to the pressure exerted on school

organizations to increase the quality and equity of the educational services offered, as factors that increase the efficiency of education, starting from the fact that the best performing education systems at the level of OECD countries are those that combines quality and equity (OECD, 2012); quality, from the point of view of a series of factors that are associated with learning and that produce positive effects on learning outcomes (factors such as: a school environment/climate that supports and stimulates learning; organizational leadership; effective learning strategies; policies to attract, support and maintain/retain teachers with outstanding results; connecting with the indirect beneficiaries of educational services – parents and local communities); and equity from the point of view of a correct approach to the school population, so that characteristics of gender, ethnicity, religion, belonging to disadvantaged socio-economic environments, disabilities, do not negatively influence learning results.

In Romania, school organizations are faced with multiple challenges, including successfully coping with the ever-increasing pressures of society, in relation to expected results and learning efficiency, with standardized test results becoming, at a certain point, the main performance indicator; accountability to society (community) and funder (local council) became increasingly important, schools competing with each other for resources. A reality of Romanian schools is the decrease in basic skills (in reading, mathematics, science), reflected in the results of students in the national examinations for the 8th grade and the baccalaureate, as well as in the international PISA examinations.

Given that both the duration of schooling and the efficiency of education (from the perspective of the return on human capital) are strongly and stably correlated with the economic growth of a country (Barro and Lee, 2015; Psacharopoulos and Patrinos, 2018; Hanushek and Woessmann, 2012), it follows that, at the national level, interventions to increase educational efficiency are necessary; and this desired can also be achieved through a reconceptualization of school as "learning organizations".

The approach followed to achieve the overall objective and the operational objectives is presented in Figure 1. A thorough study of bibliographic resources and applied studies regarding knowledge, learning, blocking or favoring factors of organizational learning and development in the ideological direction of a learning organization was carried out. These theoretical researches substantiated the terminological and conceptual framework for the development of theoretical and applied researches to establish the necessity and opportunity of redefining / reconceptualizing the school in Romania as a learning organization, using the model promoted by the OECD.

Chapter 1, *"Introduction"*, describes the research topic, its motivation and scientific and practical importance, the challenges of school organizations under the economic, political, social and technological realities and mega-trends of the 21st century; also, the research gap is defined. It includes the research objectives and a brief overview description of each chapter of the thesis, thus demonstrating how the proposed and implemented approach led to the achievement of the objective (and implicitly of the operational objectives).

Chapter 2, entitled *"Bibliographic research on knowledge and learning in relation to organizations"* provides an overview of knowledge and learning in relation to organizations, emphasizing the link with management – knowledge management, organizational management - and creates a scientific, terminological and conceptual foundation for carrying out theoretical-applicative researches.

Chapter 3, entitled *"Bibliographic research on the concepts of the learning organization and the school as a learning organization"*, carries out a bibliographic analysis and synthesis on the general concept and model of the learning organization, as well as the adaptations developed in the educational area - the model and the concept of school as a learning organization. This chapter captures the evolution of the level of interest in relation to the general learning organization model, but also the direct or indirect steps already initiated, at the

regional/state level, and directed towards the reconceptualization of the school as a learning organization. It ends with the identification of an updated model already adapted to educational realities, the one promoted by the OECD, around which implementation at the national level is proposed.
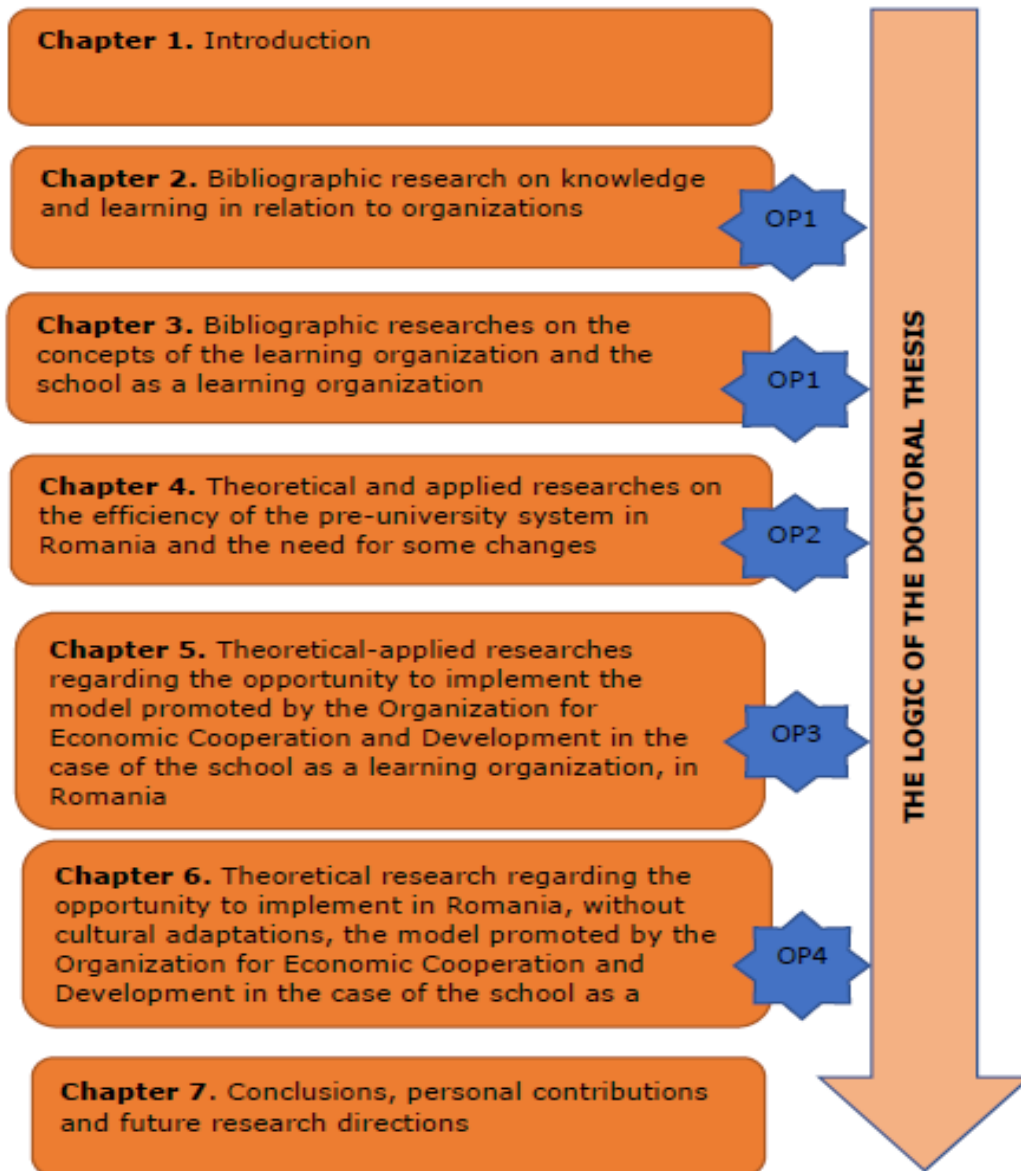
Chapter 1. Introduction

Chapter 2. Bibliographic research on knowledge and learning in relation to organizations — OP1

Chapter 3. Bibliographic researches on the concepts of the learning organization and the school as a learning organization — OP1

Chapter 4. Theoretical and applied researches on the efficiency of the pre-university system in Romania and the need for some changes — OP2

Chapter 5. Theoretical-applied researches regarding the opportunity to implement the model promoted by the Organization for Economic Cooperation and Development in the case of the school as a learning organization, in Romania — OP3

Chapter 6. Theoretical research regarding the opportunity to implement in Romania, without cultural adaptations, the model promoted by the Organization for Economic Cooperation and Development in the case of the school as a — OP4

Chapter 7. Conclusions, personal contributions and future research directions

THE LOGIC OF THE DOCTORAL THESIS

Fig. 1 The logical structure of the doctoral thesis

Chapter 4, with the title *"Theoretical and applied research on the efficiency of the pre-university system in Romania and the need for some changes"*, carries out the investigation of the efficiency of the pre-university education system in Romania and the need for some changes, an investigation based on students' results in the PISA tests and the efficiency indexes, calculated annually by ARACIP for each school belonging to pre-university education.

The results of the investigation carried out based on the two mentioned directions allowed the formulation of the answer to the question: How has the pre-university educational system evolved, from an efficiency perspective?

Chapter 5, *"Theoretical-applied research regarding the opportunity to implement the*

model promoted by the Organization for Economic Cooperation and Development in the case of the school as a learning organization, in Romania", analyzes the opportunity to implement at national level the model of the school as a learning organization promoted by the OECD, through three researches:

• A theoretical research of the model promoted by the OECD, based on: the 7 dimensions/directions of action and the 49 underlying characteristics/key elements of the model promoted by the OECD; the 43 performance indicators and the 450 descriptors used at national level in order to establish the quality of educational services provided by pre-university school organizations (Government Decision no. 1534/2008 on the approval of Reference Standards and performance indicators for the evaluation and quality assurance in pre-university education); the national regulations in force (legislative-normative context) regarding the continuing professional training of teaching staff;

• Experimental research regarding the national state of affairs regarding the adoption of the model promoted by the OECD, but based on the indicators and the results of the external and internal evaluation (self-evaluation), on a sample of 238 schools, in relation to the performance indicators (including descriptors) provided for in the Decision Government no. 1534/2008;

• Experimental research regarding the identification of the types of school organizations that demonstrate a high level of incidence of the characteristics of the learning organization model, carried out on the basis of the results of external and internal evaluation (self-evaluation) on a sample of 471 schools, in relation to performance indicators (including descriptors) provided for in Government Decision no. 1534/2008.

The results of the investigations made it possible to formulate the answer to the question: *Is there a foundation at national level for the model promoted by the OECD so that implementation can be achieved more easily?*

Also, within this chapter, the necessary and appropriate starting point for the implementation of the model (promoted by OECD) of school as a learning organization, in Romania, was identified.

Chapter 6, entitled *"Theoretical research regarding the opportunity to implement in Romania, without cultural adaptations, the model promoted by the Organization for Economic Cooperation and Development in the case of the school as a learning organization"*, analyzes the feasibility of implementing the school model as a learning organization promoted by the OECD, in the national cultural context, through the cultural dimensions and characteristics of the Hofstede model lens. Juxtaposing the two models, the cultural dimensions that interfere with the model promoted by the OECD and the poles favorable to its development are identified; and a qualitative analysis is carried out in relation to the possibility of implementing each of the 7 proposed action directions/dimensions, considering the national cultural profile measured through the international study conducted by Hofstede, Hofstede & Minkov (2010), as well as the national cultural profile at the level of pre-university education, measured through the national study conducted by Iosifescu et. al (2013).

The results of the investigations made it possible to formulate the answer to the question: *Is the model promoted by the OECD suitable for the Romanian cultural context?*

Finally, chapter 7, called *"Conclusions, personal contributions and future research directions"*, presents the methodological balance of the doctoral researches, emphasizes personal contributions in the field of qualitative and quantitative research regarding the development and application of the concept of the "learning organization" at the national level and provides an overview of future research directions which could follow the results of the doctoral program.

The research carried out within the doctoral program was valued by publishing a total of 17 scientific papers, in journals and volumes of international events from home and abroad, indexed in international databases, as follows: 1 scientific article published in an ISI indexed

journal , 4 scientific papers published in the volumes of scientific events (Proceedings) indexed Web of Science-WoS (ISI) Proceedings, 6 scientific articles published in BDI indexed journals, 5 articles published in BDI indexed proceedings volumes and 1 article published in a volume of an international scientific event (Proceedings) from abroad. All articles were published within the doctoral program, 2017 – 2023.

2. The conclusions and results of theoretical and applied researches

As a result of the researches carried out, a review is presented below, which demonstrates their usefulness in the adapted implementation of the model promoted by the OECD (usefulness related to the national situation - decreasing educational efficiency, analyzed from through the PISA results and the efficiency index used by ARACIP, the national cultural profile and that of the pre-university educational system).

Review of theoretical researches and their results (chapters 5 and 6):

- In Romania, the general framework for quality assurance in pre-university education is structured on different principles from those of the general learning organization model. However, between the dimensions and characteristics of the school model as a learning organization promoted by the OECD, on the one hand, and the performance indicators and national descriptors included in GD no. 1534/2008, on the other hand, some theoretical correlations could be established.

Based on these correlations, it was later possible to identify the state of affairs at the level of the pre-university educational system in Romania, in relation to the model of school as a learning organization promoted by the OECD, through first experimental research. And then, through second experimental research, it was possible to identify the types of organizations from which the implementation should start.

- Between the dimensions and characteristics of the model of school as a learning organization promoted by the OECD, on the one hand, and the dimensions of Hofstede's cultural model, on the other hand, some theoretical correlations could be established; the cultural dimensions that interfere with the model promoted by the OECD and the poles favorable to its creation and development were identified.

Review of applied researches and their results (chapters 4, 5 and 6):

- In terms of relative efficiency, the longitudinal comparison (from 2006 to 2018) of PISA assessment results, in each domain, shows that student performance is on a downward curve. Moreover, all Romania's results, in all the evaluation cycles carried out and, in all fields, are below the OECD average, the evolution of these differences closely following the evolution of the results.

- Regarding the efficiency of pre-university level schools, the developed analysis showed that for 64.7% of a total of 2,956 schools in the pre-university education segment, the organizational efficiency index (used in Romania since 2012) was decreased in 2017, by at least 5%, compared to the one calculated in 2014. And in a hierarchy according to the share of organizations whose efficiency decreased (from the total analyzed category, and by statistical inference, from the total category at national level), the first are special education schools, followed by mainstream high schools and gymnasiums.

- The evolution (increase/decrease) of education expenses for the period 2007 – 2019 correlates accordingly with an evolution (increase/decrease) in pre-university education funding; and this, in turn, generates changes in the value of the organizational efficiency index (defined as the ratio between results and resources) in 2017, compared to 2014. However, the decrease in education expenses (and therefore the decrease in basic and complementary funding) it is to a small extent associated with decreased efficiency - only in about 8.8% of cases. Therefore, the pressure exerted by the decrease in financial resources is real, but the direct effects of these controlled inputs are less extensive than

estimated.

- Regarding the analysis of the minimum incidence levels of those key characteristics (of the model promoted by the OECD) identified as being correlated with descriptors from GD no. 1534/2008, the following resulted (reported to 238 school organizations): on the total sample, the minimum level of incidence varies between 47.90% and 89.91%; for the urban area, the minimum level of incidence varies between 32.35% and 49.58%, and for the rural area, it varies between 14.71% and 41.17%; for all indicators, the minimum level of incidence in the urban area exceeds that in the rural area, and the differences between urban and rural areas (the gap) vary between 7.57 percentage points and 18.48 percentage points.

Therefore, the state of affairs at the national level shows that the implementation of the model can be achieved (has a foundation), as long as some key features are visible (could be identified), without it being promoted at the national level and without implementation prescriptions.

- Regarding the analysis of the types of school organizations that, without intentionally implementing the model promoted by the OECD, demonstrate some key characteristics of learning organizations, the following resulted (reported on 471 school organizations, out of which: 56 high schools, theoretical branch; 65 high schools, technological branch; 228 lower secondary schools): between 2 categories of school organizations – high schools and lower secondary schools – the one that demonstrates a higher incidence level (of some underlying characteristics/key elements of the model promoted by the OECD) is the category of high school organizations; between 2 categories of high school level organizations - the theoretical branch and the technological branch - the one that demonstrates a higher incidence level (of some underlying characteristics/key elements of the model promoted by the OECD) is the category of high school organizations, the theoretical branch.

Therefore, the starting point from where the implementation should begin (the intersection between necessity and opportunity) is represented by high school level organizations, the theoretical branch.

- Regarding the adoption of the model promoted by the OECD in a national cultural context, a confrontation of the theory with the concrete situation was carried out, from the point of view of cultural dimensions, that is a confrontation of the qualitative analysis results, with the national cultural profile identified/ measured through the international study conducted by Hofstede, Hofstede & Minkov (2010), as well as with the national cultural profile at the level of pre-university education, measured through the national study conducted by Iosifescu et. al (2013).

3. The original contributions of the research

Within the doctoral program, the researches on the bibliographic reference, the theoretical and the applied ones were distinguished by the following personal contributions:

Personal contributions in the field of research on the bibliographic references (reflected by the content of Chapters 2 and 3)
- Mapping the level of interest on the concept and learning organization model (via Google Trends, Google Scholar, Mendeley and ScienceDirect) of people who inform themselves and carry out informal research, as well as of professionals and researchers (Chapter 3.1).
- Inventory of the learning organization models - both classic and contemporary - and carrying out a transversal analysis of them, from the point of view of various

characteristics/ specific components (Chapter 3.1).
- Premier in bibliographic analysis and synthesis to define the concept of "school as a learning organization" (Chapter 3.2):
  a) Inventory of the school as learning organization models - both classic and contemporary - and the reasoning behind the decision to implement the model adapted to the educational context proposed by Kools & Stoll and promoted by the OECD;
  b) Inventory of the barriers to implementation, as well as of the direct or indirect approaches already initiated at the international level in the direction of reconceptualizing the school as a learning organization, especially those that go beyond the level of a single school organization, being at the regional/state level.

Personal contributions in terms of theoretical and applied researches (reflected by the content of Chapters 4, 5 and 6)
- Investigating the efficiency of the Romanian pre-university system and identifying some needs for change; investigation carried out based on students' results in PISA tests and the efficiency indexes, calculated annually by ARACIP for each school in pre-university education (Chapter 4).
- Investigating the opportunity to implement the model promoted by the OECD in the case of school as a learning organization, in Romania; applied investigations carried out on a sample of 238 schools, and then on a sample of 471 schools, based on the results of the external evaluation in relation to the performance indicators (including the descriptors) provided for in Government Decision no. 1534/2008 (Chapter 5).
- Investigating the opportunity to implement, without modifications, the model of school as a learning organization promoted by the OECD, in a national cultural context; qualitative analysis in relation to the possibility of implementing each of the 7 proposed action directions/dimensions in the national cultural context (Chapter 6).

4. Research limits

The doctoral thesis is based on applied researches carried out starting stating from the results of the external and internal evaluation (self-evaluation) of a number of 471 school organizations in pre-university education, in relation to 43 performance indicators (including descriptors) for assessment and quality assurance in pre-university education (provided in GD no. 1534/2008).

A first limitation, a practical one, is defined by the sampling of the 238 school organizations, respectively of the 471 school organizations analyzed in Chapter 5 - the distribution, by school types and by areas of residence, does not reflect the situation at national level, their list being generated by the County School Inspectorates (due to the fact that they have never gone through a periodical external evaluation process). Therefore, it is appreciated that the results must be treated with caution, as they may vary in the situation of a representative sampling (from a quantitative and qualitative point of view), which faithfully reflects the situation at national level, by school types and by areas of residence.

A second limitation, a methodological one, is determined by the fact that the analysis in relation to the establishment of the incidence level of the key characteristics specific to the model promoted by the OECD was carried out indirectly, through the results obtained by school organizations in periodic external evaluation.

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