

MINISTRY OF NATIONAL EDUCATION
„ 1 DECEMBER 1918” UNIVERSITY OF ALBA IULIA
FACULTY OF ECONOMIC SCIENCES
THE ACCOUNTING DOCTORAL SCHOOL

PhD THESIS

(Summary)

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**ALBA IULIA
2017**

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**THE IMPROVEMENT POTENTIAL
OF THE INFORMATION – ACCOUNTING SYSTEM IN
PRE-UNIVERSITY INSTITUTIONS IN ROMANIA**

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THE CONTENT OF THE DOCTORAL THESIS ABSTRACT

Key words	3
The content of the doctoral thesis.....	4
Introduction.....	6
Research context.....	6
Objectives and motivation of the scientific research.....	9
Hypotheses of the scientific research.....	10
Methodology of the scientific research.....	11
Structure and organization of the doctoral thesis.....	14
General conclusions, limitations and perspectives of the research.....	19
General conclusions.....	19
Limitations of the research.....	26
Personal contributions.....	27
Synthesis of the proposals.....	29
Perspectives of research in the field.....	30
Bibliography.....	31

Key words

Pre-university education, financing, informational-accounting system, accounting instruments, resources, improvement and performance

CONTENT OF THE DOCTORAL THESIS

INTRODUCTION.....	8
Research context.....	8
Objectives and motivation of the scientific research.....	11
Hypotheses of the scientific research.....	12
Methodology of the scientific research.....	13
Structure and organisation of the doctoral thesis.....	16
Chapter 1: The present situation of pre-university education in Romania.....	21
1.1 Regulation and normalization of pre-university education	22
1.2 Short presentation of the education process.....	37
1.3 Statistical indicators on performance in pre-university education	42
1.4 Preliminary conclusions of the chapter.....	46
Chapter 2: Conceptual delimitation of pre-university education financing.....	48
2.1 Informative valence regarding pre-university educational institutions financing.....	49
2.2 Revenues and expenses budget in pre-university educational institutions	57
2.3 Comparative study between Romanian pre-university education financing and European financing.....	63
2.4 Preliminary conclusions of the chapter.....	75
Chapter 3: Characteristics of accounting, particularly, in pre-university education.....	76
3.1 Accounting information – necessity, role, quality and deficiencies.....	77
3.2 The informational accounting system and the decision-making process.....	86
3.3 Accounting – the main component of economical evidence in pre-university educational institutions	94
3.4 Preliminary conclusions of the chapter.....	98

Chapter 4: Reflection on the importance of accounting instruments in pre-university educational institutions.....	99
4.1 The importance of the informational-accounting system in rendering a real image of resources management in pre-university educational institutions	100
4.2 Accounting instruments used in pre-university educational institutions	106
4.3 Utility of accounting instruments in pre-university educational institutions	116
4.4 Evaluation of the informational-accounting system in pre-university educational institutions.....	121
4.5 Preliminary conclusions of the chapter.....	139
Capitolul 5: Resources, results and solutions for improving the informational-accounting system.....	141
5.1 Results and solutions for the improvement of the informational-accounting system in pre-university educational institutions	142
5.2 Identifying resources which can lead to the improvement of the informational-accounting system.....	147
5.3 Reflection of the performance in pre-university educational institutions	159
5.4 Preliminary conclusions of the chapter	187
General conclusions, limitations and perspectives of the research.....	191
General conclusions.....	192
Limitation of the research.....	200
Personal contributions.....	201
Synthesis of the proposals.....	202
Perspectives of research in the field	204
Bibliography.....	205
Annexes.....	217

INTRODUCTION

In order to resist time, school needs sustainable duration, solid characters and luminous minds, vocation and skills that can assimilate, process, and communicate creatively the omnipresent information¹. As E. Horomnea said, educational institutions, including those of pre-university education, „have an important role to play in creating values that will last in time and contribute to the development of society.” Albert Eistein considered that „it is the school that serves life and develops qualities and capacities that provide value to society’s welfare.”

As a result of the intense development in all fields, pre-university educational institutions face a number of challenges that require changes in the educational act’s quality, in the informational-accounting system or the way of rendering performances. Thus, pre-university educational institutions have to cope with current trends, to improve continuously and to identify opportunities for performance in order to achieve progress.

In the face of the changes imposed by the institutional development at a global level, pre-university educational institutions need to present a particular interest nationwide and face technological change, the fast access to information possibilities and identify tools and ways to improve the activity carried out in the context of sustainable development.

Research context

Malcom believes that „education is our passport for the future, because tomorrow belongs to those who are preparing for it today”. This quote shows the important role of education for each individual. This is done within an institutionalized, legally regulated framework that has to ensure the permanent adequacy of reality and must have an effective functionality, a framework known as the educational system.

The Romanian educational system has been subjected to successive reform measures of structural and functional renewal. The changes focused mainly on the related legislative framework, the curricular offer, the reorganization of the educational units, the completion of the initial and continuous teacher training programs and the generalization of compulsory education for ten years².

¹ E. Horomnea, *Accounting’s Scientific Bases*, Tipo Moldova Publishing House, Iași, 2008, p. 359

² C. Cucuș (coord.), *Psychopedagogy*, Polirom Publishing House, Iași, 2009, p.

It is made up of hierarchically organized institutions governed by a set of principles in whose structure we find the Ministry of National Education, school inspectorates, regionally, and local educational establishments and other educational institutions.

The educational system involves educational steps planned and carried out in specialized institutions, an ongoing effort to train the human being. Within this system there is also the pre-university education that is organized by levels, forms of education, branches and profiles. To carry out these educational approaches, educational institutions, including pre-university education, must have resources. Pre-university educational institutions are financed by the state, local budgets of administrative-territorial units to which they belong or may be financed additionally by the Ministry of National Education, only if they have achieved outstanding results in the field of inclusion or in the field of school performance.

If the education system is the „form” on a macro-social scale of the way education is provided, the learning process becomes its „content”³. The process of education involves a series of intentional, designed and organized activities carried out in accordance with the rules and teaching principles, using appropriate material and didactic resources. These activities relate to teaching, learning and evaluation. The teaching-learning-evaluation activity, although it is made up of three elements, is viewed in its didactic unit as they intertwine within the joint activity of teachers and pupils, and the final results are, in fact, a result of the three activities⁴.

Data and information that permits knowledge of an entity can be found within the informational system. Information about the activity carried out, the plan and the activity program are provided only through the economic record and within it the primary role lies with the accounting and the informational-accounting system. Accounting ensures the collection and processing of data, as well as the transmission of the necessary financial information in the decision-making process. The link between economic activities and decision-makers is provided by accounting through the quantity and quality of the information provided.

We live in an informational society where information and especially accounting information holds the leading role in any entity, underpinning decisions and influencing results achievement, while at the same time solving the economic and financial management problems. The role of the informational-accounting system and of the

³ Ibidem, p. 22.

⁴ I. Jinga, E. Istrate (coord.), *Pedagogy Textbook*, All Publishing House, Bucharest, 2008, p. 207.

accounting tools in rendering performance in pre-university educational institutions is an important aspect, especially since in the specialized literature there are not enough references to the way of reflecting the performance in these institutions. Thus, the informational-accounting system and the accounting tools constitute the informational basis of the pre-university educational institutions, due to the information provided, information that allows highlighting resources management.

The information provided by the accounting instruments (the patrimonial asset account) is the database for analyzing economic and financial indicators of the performance in the pre-university educational institutions. The Romanian education system has been subjected to successive reform measures of structural and functional renewal. Today, we are witnessing an informational society, in which information has the leading role in any entity, it is the basis of decisions and influences the level of results achievement, while allowing a way to solve the economic and financial management problems.

Lately, it is increasingly manifested the need to modernize the pre-university education in the interest of performance in order to meet the challenges of the field and to face the changes due to globalization. Performance is the leverage needed to achieve the objectives, but also a motivating factor to be better in competition situations.

At present, the major objective of the pre-university educational process on the path to modernization is closely linked to the concept of quality with the desire of approaching the international level. In the direction of performance, pre-university educational institutions need to improve the quality of informational-accounting systems, the way to organize and function.

The improvement of the informational-accounting system in the pre-university educational institutions aims at refining all categories of resources: human, educational, financial and informational. It is an important aspect, especially since there are not enough references in the specialized literature to show how to better the system in these institutions. Thus, the informational-accounting system is the informational basis of the pre-university educational institutions due to the information provided, which allows the analysis of the activity of the pre-university educational institutions, as well as their performance, while also offering a rich informational support underlying the identification of the training potential in this domain.

Objectives and motivation of the scientific research

Taking into account the fact that the scientific research activity aims to „reconcile the ideas resulting from the research”⁵, in the present paper we propose as a general objective identifying the possibilities for improvement of the informational-accounting system in pre-university educational institutions. In order to achieve the chosen general objective, we need to achieve the following operational objectives:

- Presentation of the current situation of the pre-university education in Romania and of the statistical indicators related to performance in this field. This objective is pursued in the first chapter of the paper;

- The second chapter is aimed at describing the way of financing the pre-university educational institutions. We also made a comparative presentation of the Romanian and European financing the pre-university educational institutions;

- The objective set for the third chapter is to highlight the characteristics of accounting for pre-university educational institutions and the relationship between the informational- accounting system and the decision-making process;

- Reproducing the importance of accounting instruments in pre-university education institutions is the objective pursued in chapter four of the paper. We also studied the importance of the informational-accounting system in rendering a true image of how pre-university educational institutions manage resources and evaluate this system;

- Chapter 5 aims at presenting the resources, the results and the solutions that lead to the improvement of the informational-accounting system of the pre-university educational institutions and the way to reflect their performance.

These objectives are pursued during the work and contribute to the achievement of the above-mentioned fundamental objective. Our research is motivated by the need to adapt by improving the informational-accounting system of the pre-university educational institutions to the current requirements of the society.

⁵ I. Cenar, *Methodology of the Scientific Research in Accounting* , “1 December 1918” University’s Publishing House, Alba Iulia, 2010, p. 15.

Hypotheses of the scientific research

The hypotheses of scientific research have the role of adding more information to the definition and delimitating the study object formulated above⁶. Thus, in order to respond to the research objectives, we revealed the following hypotheses, shown in figure no. 1:

Figure no. 1: The hypotheses of the scientific research

General hypothesis: There are improvement possibilities of the informational-accounting system of the pre-university educational institutions

Secondary hypotheses:

- I1:** The informational-accounting system and the accounting instruments from pre-university educational institutions confer information regarding the institution's activity;
- I2:** The information conferred by the information-accounting system provides a real picture of how resources are managed by pre-university educational institutions;
- I3:** The informational-accounting system contributes to performance rendering in pre-university educational institutions;
- I4:** The resources found in the pre-university educational institutions lead to their improvement;
- I5:** Exploiting the possibilities offered by the modern technologies is a solution for the improvement of the informational-accounting system of the pre-university educational institutions;
- I6:** The performance of the pre-university educational institutions is reflected by quality and the achievement of results according to the requirements of the society.

Source: Self handling

In order to accomplish these hypotheses, during the doctoral dissertation we have sought to answer a series of questions, namely:

- What is the legislative framework governing the functioning of pre-university educational institutions and what are the statistical indicators that show performance in pre-university education?
- What are the financing sources of pre-university educational institutions and what is the level of funding for these institutions compared to the European one?
- What are the accounting characteristics of pre-university educational institutions and what is the role of accounting information in the decision-making process?
- What are the accounting instruments used by pre-university educational institutions and how important are these instruments?

⁶ D. C. Mihălțan, *Possibilities to increase the relevance of the financial-accounting information in non-profit organisation– doctoral dissertation*, Târgoviște, 2015, p. 11.

- What is the role of the informational-accounting system in reflecting the resources management of educational institutions?
- What are the resources used to improve the pre-university educational system?
- What are the solutions for improving the informational-accounting system in the pre-university educational institutions?
- How can performance be rendered in pre-university educational institutions?

Obtaining answers to these questions will lead us to draw conclusions, to find some proposals that will allow us to contribute in identifying the possibilities of improving the informational-accounting system in the pre-university educational institutions.

Methodology of the scientific research

„Do not try to know everything if yo do not want to ignore everything” (Democrit)

Research can be defined as an activity capable of determining an understanding, an intuition or a sense of knowledge obtained through a diligent perception, and a systematic investigation of a subject in order to validate the researcher’s”⁷. It is a term that „needs a better perception, especially for those who perform activities subordinated to such an aim, formulated and planned primarily in the departments of universities and other research institutions”⁸.

The research activity determines an understanding, a sense or knowledge obtained through a systematic investigation of a subject or theme. In general, research is seen as an active and systematic process to discover, interpret or review facts, events, behaviors or theories, or to make practical applications with such facts, laws or theories⁹. Depending on the chosen field, we can talk about pure research (based on the understanding of phenomena, events, transactions and processes specific to the field); purpose-oriented research/finding solutions to problems, questions, applied research (finding solutions to the application domains) and, of course, practical research.

Research methodology can be assimilated to a structured and coherent system of rules, methods, principles, tools and know - how¹⁰. The scientific knowledge of the facts, the phenomena and the social processes is accomplished with the help of clearly defined

⁷ I. Andone, I. Georgescu, C. Toma, *Research Methodology in Accounting*, Tehnopress Publishing House, Iași, 2011, p. 1.

⁸ Ibidem, p.1.

⁹ A. Pisoschi, E. M. Dobrescu, *Details regarding Research, Development and Improvement*, in Science and Scientometry Policy Magazine 4(1), 2006.

¹⁰ A. L. Ristea, V. I. Franc, *Scientific Research Methods*, Expert Publishing House, Bucharest, 2009, p. 33.

concepts, using rigorous research methods and techniques, verifying hypotheses or pursuing an objective description of social life¹¹. It plays an important role in all institutions, including pre-university education, as well as in society.

Methodology, as a research system, is something that teaches us to use methods, according to the rigors of a methodology appropriate to the subject under consideration¹². It is the know-how through which one can generally achieve a goal in research, in particular and especially. It provides rules, norms, methods, techniques, or practices through which we can get to know how to do and how to apply something we know or have learned, how to walk from a vague idea, from a hypothesis to a solution, generalization or scientific theory¹³. A pertinent methodology allows to accede, record and analyze situations, starting from representations and observations¹⁴.

Accounting is a specific information system due to its multiple valences, including: providing real, comparable, synthetic and analytical information to analyze the various aspects of economic phenomena, communication of information from the place of production to the use of information, amplification of the control function over the economic phenomena, considerable increase of the foresight role, etc.

Not every discovery has a scientific value. It must reveal the scientific truth, be verified and accepted by other researchers, be taken through different methods or techniques, lead to the same results, have a generally valid character, to impose itself as a reality for every specialist from the field of accounting.

The premise from which we began this scientific approach was the need to draw a picture of the functioning, organization and financing of the pre-university educational institutions, to highlight the role of the informational-accounting system in providing information about the activity of pre-university educational institutions and to give a real picture of how they manage their resources, the importance of accounting instruments for these institutions as well as their contribution in reflecting the performance of pre-university educational institutions, but also their way of addressing issues related to evaluation of the informational-accounting system in the pre-university educational institutions, identifying resources and solutions that contribute to the improvement of the

¹¹ S. Chelcea, *Sociological Research Methodology. Quantitative and Qualitative Methods*, Economică Publishing House, Bucharest, 2007, p. 48.

¹² A. L. Ristea, V. I. Franc, *Scientific Research Method*, Expert Publishing House, Bucharest, 2009, p. 33.

¹³ D. Zaiț, A. Spalanzani, *Research in Economy and Management. Epistemological and Methodological*, Economic Publishing House, Bucharest 2006, p. 127.

¹⁴ F. Wacheux, *Qualitative Methods and Management*, Economic Publishing House, Gestion, Paris, 1996, p.18,19

pre-university educational system as well as reflecting the performance in the pre-university educational institutions.

Given the characteristics of the field, the research methodology is standardized, being built on the identification, study and systematization of the specialized literature, the legislation presenting the organization of the pre-university educational institutions, as well as aspects regarding the informational-accounting information, but also a factual documentation of the pre-university educational institutions and the county board of education.

According to this matter our approach falls into the category of fundamental research in the field of accounting, the approach being a deductive one, starting from the presentation of general concepts and theories aiming at their implementation in pre-university educational institutions.

In the present paper there were used research methods such as documentation, comparison, analysis, synthesis in order to accomplish the proposed objectives. Documentation was used to form a global picture of how the financing, and the informational-accounting system operates in the pre-university educational institutions. In order to highlight the value, the validity and the theoretical and practical importance of information, we have turned to statistics.

The other methods (comparison, analysis, synthesis) helped us to interpret the information obtained from the theoretical and practical documentation, but also to make comparisons and analyses between the European situation and the situation existing in Romania regarding the pre-university educational system.

No matter how complex a work is, it cannot exhaust all the theoretical-methodological and applicative aspects of the field under discussion, and, as Albert Einstein stated, „the most important thing is not to stop searching and not to stop asking questions, curiosity has its own reason to exist” so our investigative approach can be continued to identify the potential for improving the pre-university educational system, but also other aspects of the research topic.

Structure and organisation of the doctoral dissertation

The plan of a thesis must meet contradictory requirements divided by a heuristic function, a function of communication and argumentation¹⁵. Thus, *The Improvement Potential of the Informational-Accounting System in the Pre-university Educational Institutions in Romania* aims at identifying the possibilities through which the informational-accounting system of the pre-university educational institutions can be improved. For this purpose, the doctoral thesis was structured as follows: an introductory part, five chapters and a part that gives the conclusions, the limits and the perspectives of the research.

The introductory part of the paper presents the context of the research, the objectives, the hypotheses and, of course, the research methodology. The first chapter of the doctoral dissertation is entitled *The present situation of pre-university education in Romania* and presents aspects related to the regulation and normalization of the pre-university education, to the educational process, but also a series of statistical indicators that render the performance of these institutions.

National Education Law no. 1/2011 is the one that governs the entire pre-university education process. Pre-university education has the purpose of forming the human personality and is organized on the following levels: pre-school education, compulsory general education, lower secondary, upper secondary education and short and long-term higher education.

Educational services comprise activities, methods, techniques that solve educational problems with the purpose of achieving the objectives of pre-university educational institutions in order to obtain the expected performance. Thus, teaching - learning - evaluation, managerial, economic - financial, administrative-household activities, as well as a number of other activities are carried out within the pre-university educational system. In order to obtain information about the whole population under study or just about a certain part called sample, the pre-university education institutions resort to statistics. Thus, in this paper the statistics allowed the knowledge of the school population, the graduates, as well as the percentage baccalaureate graduates and national evaluation exams, information we obtained on the basis of the data provided by the National Institute

¹⁵ J.C. Rauveyran, *The Guide of the thesis: from project to sustaining*, Maisonneuve & Larose Publishing House, Paris, 1999, p. 68

of Statistics, as well as from the investigations carried out by us in pre-university educational institutions.

Chapter 2 is called *Conceptual delimitation on pre-university education financing*. This chapter provides information on how these institutions are financed, the revenue and expenses budget, and a comparative study is carried out between the Romanian financing and the European financing of the pre-university education.

In order to realize their educational purpose, pre-university educational institutions need to have resources. Pre-university educational institutions are financed by the state, from the local budgets of the administrative - territorial units to which they belong or may be further financed by the Ministry of National Education. Thus, there are three types of financing for the pre-university educational institutions: basic, complementary and additional financing. These institutions' records of revenue and expenses the budget that allows the estimation of pre-university resources, as well as the way of using them in terms of efficiency. Within this chapter, we considered it appropriate to make a comparison between the European and Romanian level of funding and we have estimated that in Romania education financing faces problems concerning the financial flows directed towards education and the coverage degree of education's financial needs, compared to European countries.

Chapter 3 *Characteristics of accounting, particularly, in pre-university education* shows the importance of information, of the informational-accounting system, as well as of accounting in pre-university educational institutions.

Knowledge of the state, the activity, the plan and the activity program of pre-university educational institutions is possible through information. At present, information and particularly accounting information has a leading role in any institution including pre-university education, underpinning decisions and influencing the level of results achievement. Accounting information makes it possible to learn about the position, performance, results, treasury flows of pre-university educational institutions, by offering information about them to the management of the institution . These information are obtained and transmitted through the informational system and its goal is to provide the information needed to substantiate the management's decisions. This is important for the work carried out by pre-university educational institutions, because their well-being depends on speed, efficiency of decision-making and their correctness.

Chapter 4 *Reflection on the importance of accounting instruments in the pre-university educational institutions* highlights the role of the informational-accounting system and of the accounting instruments in rendering an image on the way of managing the resources of the pre-university educational institutions, presents the accounting instruments used by these institutions, and how to assess the informational - accounting system.

The informational - accounting system and the accounting instruments represent the informational basis of the pre-university educational institutions due to the information provided, information that reveals how resources are managed but also provides data necessary for the analysis of the activity of the pre-university educational institutions, thus also their performance.

The existence of the informational-accounting system and its components (accounting, statistics and operative bookkeeping) in the pre-university educational institutions is justified by the need to provide data on the action and the actions taken by them, to ensure a correct management of educational phenomena and processes. Information on the way in which pre-university educational institutions work, their financial position and performance during a financial year are provided by financial statements or other financial-accounting documents.

Like any other public institutions, pre-university educational establishments prepare a balance sheet, result statement, cash flow statement, changes in asset / equity structure, accounting policies and explanatory notes. In order to obtain information on earnings realised and payments, pre-university educational institutions draw up a budget execution account. Also, pre-university educational institutions prepare accounting records and supporting documents such as receipts, invoices, payment orders, cash registers or check balances, etc.

For the efficiency of a financial-accounting information system in the pre-university educational institutions, it must fulfill a number of requirements: to process and generate information, to satisfy the informational requirements of the interested users, to provide the possibility of improvement according to the informational needs of the pre-university educational institution, to facilitate access to data and information to those who need it, as well as to ensure the connection with the environment. Thus, our proposal would be the implementation of a database to provide information on the degree of graduates insertion in pre-university studies, with and without the baccalaureate exam promotion, on the labor market, the proportion in which pre-university graduates follow

university studies because from our research there is no such database, adding to Forexbug a monitoring tool of the professional path for the pre-university educational system graduates. Also, the execution of some statistical national surveys, that allow for establishing correlations between the financing and the success rate of the students in pre-university education can contribute to the improvement of the informational-accounting system of the pre-university educational institutions. In order to assess the capacity of these institutions to use resources and obtain results, it is necessary to emphasize the quality of the information provided by the informational-accounting system and the use of modern technologies in line with the European ones this can be an important step in reducing the workload and providing information promptly.

Chapter 5 is intituled *Resources, results and solutions for improving the informational-accounting system in the pre-university educational institutions* and presents the resources that lead to the improvement of this system, the results and solutions for improving the informational-accounting system in pre-university education, but also performance rendering in these institutions.

In order to develop the activity and achieve the expected results, the pre-university educational institutions use human, financial, educational and informational resources. Human resources are those resources capable of producing and reproducing the other resources at the disposal of educational institutions and comprise the non-teaching, auxiliary staff and students. In order to be functional, the pre-university educational system needs financial resources, which take the form of account availability, cash desk, credits, etc. which the pre-university educational institution has, but also educational resources that represent materials used for learning, teaching, research or other educational purposes. Knowledge of the state of pre-university educational institutions is only possible through information resources that are represented by licenses, software, methodologies, technologies, etc. Also, a lot of information about educational institutions and others, can be obtained with the help of the internet. Taking into account the global changes, the pre-university Romanian education system needs to change its mission, vision, educational offer, introduce a performance appraisal and reward system, adapt its curricula, textbooks, curricula and curriculum with the European ones, to focus on creative learning, but also to establish a connection between pre-university education institutions and the economic, administrative and cultural environment, or a range of partnerships and international educational exchanges.

Also, the change from information system to accounting system should aim at reorganizing the school network, connecting to information technologies, as well as making institutional investments. Thus, appealing to open educational resources and using programs such as TGTESt, Test Expert Manager, TexLink, E-Manager School Plus can be a starting point for improving the educational attainment of pre-university educational institutions and, implicitly, the performance and their informational-accounting system.

We cannot talk about change and performance in the educational system without considering the quality, which leads to obtain outstanding results regarding educational services. Performance of pre-university educational institutions is about quality tracking, teamwork, technology use, management of change, tracking results and improving skills. Thus, performance indicators of this system are results obtained and according to the students', parents' and society's expectations, realization of educational projects. Making a SWOT analysis can increase performance of pre-university educational institutions as it offers opportunity to develop strengths and capitalize on opportunities. Therefore, in order for a pre-university educational institution to be performing, its activity must be based on its quality.

The last chapter of the paper presents the conclusions that the research led us to, its limits and perspectives. This chapter presents the results obtained from our research, our own contribution to the paper, as well as our proposals regarding identifying possibilities for improving informational-accounting system in the pre-university educational institutions.

Through this work, we hope to bring more insight into pre-university educational institutions and to help identify ways in which these institutions can improve their informational-accounting system.

General conclusions, limitations and research perspectives

General conclusions

Following the theoretical and practical research of the theme we have chosen and taking into account the objectives set, we reached to series of conclusions.

The first objective was to know the way to regulate and normalize the pre-university education in Romania and the statistical indicators referring to performance in this field. In order to achieve this objective we have investigated and obtained information from legislation and from pre-university educational institutions about the way to bring under regulation and the structure of the pre-university educational system, of the educational system and the indicators that reflect these institutions' performance.

Romanian pre-university educational system aims at forming human personalities and assuming values necessary for personal fulfilment and development of the entrepreneurial spirit. This system is part of the social system and includes a number of educational institutions, state and private, hierarchically organized, with a normative and a specific legal framework. This system includes pre-university educational institutions, which consists of preschool education (small group, middle group and large group), general compulsory education (comprising ten classes), lower secondary education (grades IX - XII / XIII).

Pre-university educational institutions are part of a distinct system whose management is provided by the managing board (based on the size of the institution, seven members for secondary schools, nine members of which four are represented by the teaching staff or thirteen members of which six are teachers), principal/, deputy manager / deputy / deputies. They aim to provide quality educational services, services that include a range of activities, methods and techniques used to achieve the objectives. Thus, the learning or educational process is a part of the teaching system that consists of teaching, learning and assessment activities that ensure training and learning for students using appropriate material and teaching resources. Teaching, learning and evaluation activities are carried out in an institutionalized setting under the guidance of a teacher. To obtain information on the results of the activity of the pre-university educational institutions, it is necessary to use statistics and techniques that assist in obtaining results and evidence of the population taken into consideration, as well as to determine trends of evolution of the

phenomena. Thus, through statistics, we identified that the school population was 3642.6 thousand children, pupils, students and trainees in 2015-2016 school year, which represents 72.2% of the population with school age and of these, 47% is represented by pupils in primary and secondary education and 18.5% are students in high school.

Regarding the teaching staff, it registered 237,4 thousand people in 2015 – 2016 school year. Also, according to statistical studies, most students chose to follow courses from technological branches and 66.8% graduated the baccalaureate exam in 2015-2016 school year. After studying the current situation of the school population through statistical techniques, we found that the number of pupils at pre-school and secondary levels was decreasing, while in highschool we found a growth and the primary cycle maintained its indicator.

The second objective was to describe the way of financing the pre-university education and to compare the Romanian financing with the European funding.

In order to carry out the activity, pre-university educational institutions need money and the operation through which these means are provided is called budget financing. Thus, three types of funding are used for financing pre-university educational institutions: basic, complementary and additional depending on the budget from which the funding is made. Basic funding is the one that assures the performance of the pre-university educational process and is ensured within the standard cost per pupil of the state budget, calculated for each level of education, profile, or specialization.

In order to cover the capital expenses, social expenses and other expenses related to the educational process, pre-university educational institutions receive funds from the local budgets of the administrative-territorial units and amounts deducted from added tax value, a process known as complementary financing. These two types of financing are realised on the basis of a contract concluded between the principal of the pre-university education unit and the mayor of the locality/the mayor of the sector in whose territory the educational unit is located. If the pre-university educational institutions achieve outstanding results in the field of school performance and social inclusion, they are funded additionally by the Ministry of National Education, which may be funded by local or county councils. The other funds of the pre-university educational institutions are represented by their own revenues (specific activities, donations, sponsorships) or by the external funds allocated by the Ministry of National Education.

These revenues of pre-university educational institutions, as well as their expenses, are found in a document, which is called a budget of revenues and expenses, a budget

which increases with the funds received. This document is based on legal regulations, the organization chart of the institution, sources of income, consumption of raw materials and material and performs a number of functions: forecasting, controlling and ensuring budgetary balance. The revenues and expenses budget is drawn up annually by pre-university educational institutions and the surpluses resulting from budget execution are carried over to the following year or used to cover other institutional expenditures.

The level of funding provided to Romanian pre-university education institutions fails to exceed the 4,52% of GDP threshold, although 6% of GDP allocated for education is foreseen in the legislation. With this percentage, Romania is in the queue of education funding, unlike Sweden which allocates 7% of GDP for education, followed by Finland and Belgium, the Romanian state spends on education three times less than the average in Europe. The problems encountered in financing the Romanian pre-university education are found in the financial flows directed towards education and the coverage degree of educational financing. They are also caused by inability of financial mechanisms to meet educational needs and services, lack of new funding mechanisms, but also impossibility to harmonize the funding of Romanian education to the international standards.

A change in financing pre-university educational institutions is aimed at guiding the financing to the individual, diversification of the educational offer, oriented to quality, but also a better management and administration of these institutions. In order to achieve results and incomes to allow as many children as possible the right to education for the reduction of school drop-out, long-term financial support is needed by introducing educational vouchers or school checks. Also, a change in pre-university education can be achieved by increasing the government's interest in providing a better education for citizens and by involving companies in pre-university education funding.

The third objective is to highlight characteristics of accounting in pre-university educational institutions and the relationship between the informational-accounting system and the decision - making process.

Information is important to be used in order to get acquainted with the issues related to pre-university educational institutions. For these institutions, the accounting information is of particular importance, because through it, we are able to identify aspects related to the position, performance and cash flows of pre-university educational institutions. Accounting information also allows the calculation of some indicators referring to all economic and financial transactions which were achieved, allowing a development of viable forecasts and accomplishing the proposed objectives. The activity

displayed by the pre-university educational institutions is appreciated through the accounting information, which provides its administrators with data regarding the economic and financial situation of the institution and about the resources management, data which is necessary in the decision-making process. This category of information uses means which are specific to accounting and contributes to acquiring knowledge about the pre-university educational system because it fulfills three functions: control, forecasting and evaluation. A particular category of information is related to the future path of the pre-university educational graduates, which unfortunately are not found in pre-university educational institutions or inspectorates. The data thus obtained are collected, processed and disseminated by means of an information system that conveys them to the management system for the purpose of adopting a decision.

The content and characteristics of information within the informational-accounting system should allow the adoption of the best decisions by pre-university educational institutions. These information are found in the financial statements of the pre-university educational institutions and contribute to the decision-making process because they are characterized by relevance, certainty, credibility, they are neutral, ensuring global and analytical knowledge of the elements within an organizational structure. The information provided by the informational-accounting system contributes to the substantiation of optimal decisions necessary for the efficient conduct of the activity, information that corresponds to the qualitative requirements imposed by the decisional system of the pre-university educational institutions. The economic evidence is used to help with the elaboration of a plan and a program of activity, to ensure the integrity of the patrimony and to characterize the activity of the pre-university educational institutions.

Knowledge of the issues related to the assets held by the pre-university educational institutions, the results obtained, as well as the information regarding the financial position and performance of these institutions is possible through accounting. Accounting is designed so that users could make the most of the information, possibly by observing pre-university educational institutions and its activities, using a specific language and means. In order to identify the criteria for qualitative filtering of information, it is necessary to approach the most efficient communication channels (on-line via the Internet, by press or on documents) with maximum impact on the recipients.

The fourth objective was to render the importance of accounting tools in pre-university educational institutions and to highlight the importance of the informational-accounting system in depicting a true image of the way to manage the resources of these

institutions. Also, within this chapter, we were looking at the evaluation of the informational - accounting system in pre-university educational institutions. This objective was to verify some hypotheses: *the informational accounting system and the accounting instruments used in pre-university education provide information about their activity, information offered by the informational-accounting system reveals a real picture of the resources management in pre-university educational institutions and the informational-accounting system contributes to performance rendering in pre- university educational institutions.*

Aspects regarding resources management in pre-university educational institutions, but also their position and performance, are found in the financial statements, which are official documents that present the situation of the patrimony administration of the pre-university educational institutions. Information used in the informational - accounting system in pre-university educational institutions have to meet the general quality criteria: intelligibility, relevance, credibility and comparability.

In order to be effective, the information-accounting system in educational institutions should facilitate access to data and information, ensure the connection with the external environment, meet the institution's information needs and allow users to assess their ability to produce good results in the field. Taking into account the important role of the informational-accounting system and the accounting tools in pre-university educational institutions, we proposed to emphasize the quality of the information provided by them in assessing the capacity of these institutions to use the resources and achieve results.

The informational-accounting system in pre-university education has to have complex accounting records and inventory according to the legislation in force, which are specific for the institution, thus they contain a series of modules such as: budget accounting, human resources, fixed assets, cash register, treasury, budget, or financial reporting. For the operational, technical and administrative management of the activities for the pre-university educational system, the IEISR - the Integrated Education Information System in Romania is used, and Edusal program is used for the personnel expenses. Records of budget operations and budget execution or home budgeting can be kept through the Indeco program and on-line reporting of financial statements and information can be done through the Forexebug program.

Using modern technologies is an advantage of the informational-accounting system in pre-university educational institutions because it facilitates the reduction of the working time by automatically processing information, remote communication of financial -

accounting information, expanding storage methods, flexibility in use, but also fast access to information, so we propose the use of modern technologies in line with the European ones. The financial-accounting system in pre-university educational institutions is evaluated in terms of maintaining record integrity, ensuring access to records that meet the institution's needs, and accuracy of the recorded information. It also has to ensure compliance with the accounting rules regarding recording in accounting, information used by management or other types of users, compliance with the in force regulations, data security, documents for every accounting record, and safely storage of data.

Taking into account the fact that nationally there is no evidence regarding the results of the informational-accounting system and the accounting instruments evaluation, I proposed to carry out such an analysis in order to show their role in the pre-university educational institutions.

The last objective that was proposed is to present the resources, results and solutions that lead to the improvement of the informational - accounting system in the pre-university educational institutions and the way their performance is reflected. In this last chapter, we intend to verify a series of hypotheses.

The resources found in the pre-university educational institutions lead to their improvement.

The resources through which the pre-university educational institutions operate, are: human, financial, educational and informational resources. Human resources are urgently needed to carry out the work of these institutions and are represented by the teaching staff, the auxiliary staff and the non-teaching staff. Although these resources are necessary for all the activities, a pre-university educational institution cannot function unless it has the financial resources to cover the salary expenses, weightings, allowances and other monetary wages, ongoing training expenses and staff evaluation, expenses on the regular internal student assessment, material and service expenses, and current maintenance costs.

Given that the purpose of the pre-university education is to offer quality educational services and to achieve good results, it is necessary for each institution to benefit from educational resources (courses, manuals, portfolios, didactic films, artistic documentaries, photos, maps). The newest educational resources are „the open educational resources” that allow fast and inexpensive access to educational materials. The resource found in any institution is the informational resource that has the role to inform and forecast in education and the fast and easy access to information is provided by the Internet.

Concerning the global requirements and the extent to which changes in society are taking place, educational institutions need to adapt to new trends and seek to achieve the best results, so we considered that some improvements should be made in order to allocate financial resources to provide access to Internet in all pre-university educational institutions in the country, free training programs for the human resource and acquiring the necessary educational systems based on open educational resources that allow quick and cheap access to a multitude of information and facilitate the work of the teaching staff.

Also, the curricula, the textbooks, the plane framework and the national curricula need to be adapted to the European ones and the creative learning should be emphasized.

Exploiting the opportunities offered by modern technologies is a solution for improving the informational-accounting system of the pre-university educational institutions.

Changes identified in the current economic and social context require that pre-university educational institutions continually improve their quality of education, mission and vision, their educational offer, and organizational structure. Thus, we have proposed implementing programs such as: E – manager school plus, TGTEST (Turbo Docimological Test Generator) and Test Expert Manager, TexLink. The first program deals with laying out planning documents, short-term and medium-term working tools related to three areas: institutional development, educational effectiveness and quality management, and help increasing the quality of education and improve strategical management. TGTEST and Test Expert Manager have an important role in educational activity because they grant a good management and use of items and tests, but also a performance analysis in line with the proposed teaching objectives. The last program suggested by us offers the possibility of quick and efficient connection to training and information resources.

The performance of pre-university educational institutions is reflected by quality and good results in the field.

All institutions aim to achieve performance in the field, but this performance is viewed differently according to the purpose and the specificity of the activity. In public institutions, performance analysis based on the documents drawn up can only be done through the result account, but this analysis is not sufficient to determine whether a pre-university educational institution is efficient given that it is pursuing quality educational services. Thus, a proposal would be to take into account quality indicators such as: the insertion degree on the labor market, the extent to which graduates follow higher education, and in which areas, because our studies have shown that there is not an evidence

kept by any pre-university educational institution. The performance of pre-university educational institutions is reflected by the results obtained and they depend to a great extent on the quality of the educational process, which is why we suggested the implementation of study programs in accordance with the European standards that could lead to the increase of quality and performance, as well as obtaining better results in the educational field.

Research limitations

Practical reality in the field of pre-university educational institutions imposed limitations on this research. Thus, the conclusions and the results we reached were due to these limitations but also to the complexity of the field chosen for the study.

The first impediment to this approach was the specialized literature and the legislation in the field, since they do not contain enough references in terms of how to manage the activity of the pre-university educational institutions or the role of the accounting instruments and of the pre-university informational-accounting system.

Also, we are still struck by accountants' reluctance in providing information on the financing of pre-university educational institutions, how to manage the activity, the informational-accounting system, the tools and programs used in these institutions' activity. Thus, the systems and programs used in pre-university educational institutions are not sufficiently known and they are not adapted to the European ones. Another important category of information concerns the link between funding and the future evolution of pre-university educational graduates, but unfortunately these data are not of public knowledge not even in the county.

The issue of human, educational, financial, informational resources cannot be sufficiently known because there are not enough references to this. Educational resources are not endorsed by European standards and modern technologies that could lead to a reduction in workload for teachers and ease of learning for pupils. Also, the allocated financial resources prove to be inadequate in terms of improving the teaching staff or purchasing programs and systems that will facilitate and improve the activity at these institutions.

The analysis of the performance of pre-university educational institutions was done through the result account, but we found that this is not sufficient to reflect the performance of these institutions. Thus, we presented performance in pre-university educational institutions by referring to quality and to the results obtained at the national and baccalaureate exams, results that should be extended at national and even European level.

Regarding this aspect we were also struck with the lack of indicators on quality and performance in the field of pre-university education.

In order to identify the possibilities for improving the informational-accounting system of the pre-university educational institutions, we should benefit from more information on the way in which the activity, the management of the resources, the systems and the tools are used in this respect. That is the only way we can identify the problems that lie within these institutions and we could propose new possibilities for improvement.

Personal contributions

Even though we have not exhausted the knowledge regarding the potential for improvement of the informational-accounting system in the pre-university educational institutions, through this work we have shown our contribution in identifying ways through which this system could be improved in order to be more effective. Thus, the first step consisted in reviewing the specialized literature and the legislation in the field in order to obtain information on the situation and the structure of the pre-university educational system, the way of financing, the management of the activity through the informational-accounting system and the accounting instruments, how performance is reflected at this level.

Regarding the structure and the legislation in the field we have contributed by presenting the specific aspects related to the Romanian pre-university educational system. The revision of the specialized literature and of the normative framework resulted in establishing their limitations on the management of the activity of the pre-university educational institutions and we proposed ensuring a transparency concerning the provision of information regarding the way of financing, of the informational-accounting system, the tools and programs used, as well as their adaptation to the European ones.

We also proposed the implementation of a monitoring tool for the professional path of the graduates of pre-university education, the existence of a database containing information on the degree of insertion in the labor market, the number of pre-university graduates who follow a university or who are unemployed, realizing statistical correlations nationwide between the financing and the pupils' success rate.

The information provided by the informational-accounting system is very important in knowing the issues related to the activity of the pre-university educational institutions or to the obtained results, which is why we considered it necessary to propose a national record of the activity management in pre-university educational institutions and the provision of qualitative information by the informational-accounting system on how to obtain the results. As a result of the current European changes, we have proposed that pre-university educational institutions resort to modern technologies, realize more financial investments in improving human resources, make use of open educational resources, adapt programs and manuals to European ones.

For this purpose, we proposed using programs such as TG Test, Expert Test Manager, E- Manager Plus School or TexLink.

The purpose of pre-university educational institutions is to educate students and provide them with quality educational services that match their expectations, parents' and society's, hence we proposed keeping such records. Performance in the field is the goal of any institution. In pre-university education this could be improved, in our opinion, by implementing programs according to European standards, emphasizing the importance of quality in the work of these institutions. In order to reflect this aspect, I proposed a performance and quality analysis in pre-university education based on the SWOT analysis, which aims to eliminate weaknesses and develop the strengths and capitalize on opportunities.

The main aspects of this research were exploited by ten studies published in specialized journals indexed in international databases and in international conferences. Personal contributions are found throughout the paper in the form of proposals and opinions formulated.

Synthesis of the proposals

The emphasis on the need for information in the pre-university educational system as well as making it more efficient in order to achieve better results and obtain performance, led us to the following proposals:

- Managing the activity of pre-university educational institutions needs to be known nationwide. There should also be an evidence of the insertion of pupils on the labor market as well as of those with higher education, a tool for monitoring this path should be implemented, and there should be a statistical record nationwide showing the link between financing and the evolution in the future of the students in pre-university education;

- Enhance the quality of information provided by the informational-accounting system regarding their capacity to use resources and achieve results;

- Making use of modern technologies in line with the European ones;

- An analysis model regarding the role of informational-accounting system and the accounting tools in the pre-university education would bring additional knowledge regarding their importance in pre-university educational institutions;

- Free training for the teaching staff by allocating financial resources, using open educational resources, adapting programs to the European ones, development of exchanges and international partnerships;

- Implementing programs such as: Tg Test, Text Expert Manager, E-Manager School Plus, TExLink, which facilitate the activity in pre-university educational institutions and helps them to obtain performances;

- The managing approach of the activity in pre-university educational institutions should be highlighted nationwide and the indicators on the future evolution of pupils calculated: insertion on the labor market or the extent to which they are attending licence, masters or doctoral studies. It could also be a record of the extent to which the educational services provided by pre-university educational institutions meet students', parents' and society's expectations;

- In terms of performance in pre-university education, the implementation of study programs according to the European standards (emphasizing the practical/applicative part rather than theoretical, a faster access to information which is strictly related to the field of study), but also the emphasis on quality (reflected mainly by results) in the work of these institutions can lead to a significant improvement in the activity and results of pre-university educational institutions.

These proposals, we believe, contribute in making the activity of the pre-university educational institutions more efficient, improving the informational-accounting system and achieving better results in the field. We need to admit, however, that we have not identified all the possibilities of improving the information system - accounting in the Romanian pre-university education.

Perspectives of research in the field

As a result of the research in the field and of the findings made during the whole work, we are able to propose new research directions such as:

- To carry out studies regarding a nationwide highlighting of activity management in pre-university-educational institutions, the necessity to implement a database and a tool for monitoring the future evolution of the graduates of pre-university education, the calculation of some indicators to identify the influence of funding on school achievement;

- Evaluation of the pre-university educational institutions' capacity in resource management and the capacity for obtaining results by looking at the quality of the information provided by the informational-accounting system and the accounting instruments;

- To carry out studies on the introduction of modern technologies in pre-university educational institutions, to use open educational resources in line with the European standards and programs, as well as other investments that can be made in this field;

- Performing research to identify the extent to which educational services meet the expectations of students, parents and society;

- Identifying other programs that lead to a better management of the activity and results of pre-university educational institutions;

- Conducting studies highlighting the role of quality in rendering performance in pre-university education.

Through this work, we have sought to identify opportunities for improving the informational-accounting system in pre-university educational institutions in Romania and we hope that our approach will be a reference for future research in this field because each research can be seen „as a ring of an endless chain, a ring linked to the previous one and connected to the next one”(Constantin G. Giurăscu).

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