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The Teaching - Learning Process of Higher Mathematics I in the training of the accountant

Proceso de Enseñanza-Aprendizaje de la Matemática Superior I en la formación del contador

O Processo de Ensino-Aprendizagem da Matemática Superior I na formação do contador

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ABSTRACT
The professionalization of the teaching - learning process of Higher Mathematics I, is an alternative to raise the quality of training of the accounting professional. This article was the result of a study to the professionalization of the teaching-learning process of Higher Mathematics I, in the Bachelor's degree in Accounting and Finance of the University of Pinar del Río, where deficiencies were identified in conceiving the contents and procedures provided by Higher Mathematics I as a tool for solving economic and financial problems, which interferes with the widespread construction of accounting and financial knowledge, from a quantitative analysis, so the objective of this article is to socialize a didactic strategy for the professionalization of the Teaching - L earning Process in the Higher Mathematics I in the Bachelor's degree in Accounting and Finance from the University of Pinar del Río. The methods used, of the theoretical level: logical history, systemic- structural and modeling; empirical level: documentary review and observation; as techniques: interview and survey. As a result, a teaching -learning professionalized process, regulated by the professional problem, is achieved, where the student plays a leading role in acting as an accountant, in a scenario that simulates a real company. The elements of the professionalization of the Teaching - Learning process of Higher Mathematics I in the training of the accountant and Its impact on the performance of professional students and teachers were characterized.

Keywords: teaching-learning; strategy; Mathematics; problem; professionalization.

RESUMEN
La profesionalización del Proceso de Enseñanza-Aprendizaje de la Matemática Superior I constituye una alternativa para elevar la calidad de la formación del profesional de la contabilidad. Este artículo fue resultado de un estudio de la

profesionalización del proceso de enseñanzaaprendizaje de la Matemática Superior I, en la carrera Licenciatura en Contabilidad y Finanzas de la Universidad de Pinar del Río "Hermanos Saíz Montes de Oca", donde se detectaron deficiencias en concebir los contenidos y procedimientos que aporta la Matemática Superior I como herramienta para la solución de problemas económicos y financieros, lo que interfiere en la construcción generalizada del conocimiento contable y financiero, desde un análisis cuantitativo. Por ello, el objetivo del presente artículo es socializar una estrategia didáctica para la profesionalización del Proceso de Enseñanza-Aprendizaje de la Matemática Superior I en la carrera Licenciatura en Contabilidad y Finanzas de la Universidad de Pinar del Río "Hermanos Saíz Montes de Oca". Los métodos empleados, del nivel teórico: el histórico lógico, el sistémico-estructural y la modelación; del nivel empírico: la revisión documental y la observación; como técnicas: la entrevista y la encuesta. Como resultado se logra un Proceso de Enseñanza-Aprendizaje profesionalizado, regulado por el problema profesional, donde el estudiante juega un rol protagónico al fungir como contador, en un escenario que simula una empresa real. Se caracterizaron los elementos de la profesionalización del proceso de enseñanza-aprendizaje de la Matemática Superior I en la formación del contador y su impacto en el desempeño profesional de estudiantes y profesores.

Palabras clave: enseñanza-aprendizaje; estrategia; Matemática; problema; profesionalización.

foi resultado dum estudo da profissionalização do processo de ensino-aprendizagem da Matemática Superior I, na carreira Bacharelado em Contabilidade e Finanças da Universidade de Pinar del Río "Hermanos Saíz Montes de Oca", onde depararam se carências em conceber os conteúdos e procedimentos que oferece a Matemática I como instrumento para a solução de problemas econômicos e financeiros, o que intervém na construção generalizada do conhecimento contável e financeiro, desde um análise quantitativo. É por isso que o objetivo deste artigo é socializar uma estratégia didática para a profissionalização do Processo de Ensino-Aprendizagem da Matemática Superior I na carreira Bacharelado em Contabilidade e Finanças da Universidade de Pinar del Río "Hermanos Saíz Montes de Oca". Os métodos empregados, do nível teórico: histórico-lógico, o sistêmico- estrutural e a modelação; do nível empírico: a revisão documental e a observação; como técnicas: a entrevista e o inquérito. Finalmente, logra se um Processo de Ensino-Aprendizagem profissionalizado, ajustado pelo problema profissional, onde o estudante abrange o desempenho efetivo al agir como contador num panorama que simula uma empresa autêntica. Caracterizaram se os elementos que da profissionalização do processo de ensino-aprendizagem da Matemática Superior I na formação do contador e o seu impelido na atuação profissional de estudantes e professores.

Palavras chave: ensino-aprendizagem; estratégia; Matemática; problema; profissionalização.

RESUMO

A profissionalização do Processo de Ensino- Aprendizagem da Matemática Superior I é uma alternativa para abranger a calidade da formação do profissional da contabilidade. Este artigo

INTRODUCTION

The term professionalization is used in various spheres of society, in educational, productive and service processes (Palacios and Aguilar, 2017, p.435). León and Herrera (2010) are more specific when considering that the involvement of professionalization in education is related to categories as training and education, teaching and learning, training and personality development of students, principals and teachers; in the social, are present in production processes and services. These authors recognize in the literature the diversity of meanings of the term professionalization and find certain regularities in its treatment, which they use to support their classification as a category, process and principle.

In this research, professionalization is assumed as a process , coinciding with the criteria of Horrutinier (2006), Palacio and Aguilar (2017), Breijo (2017) and Cedeño, Escalona and Verdiel (2019); since it enables the design of professional training under certain practices, in school, community and business contexts, which has a continuous nature and is made up of levels. Professionalization as a process contributes to the formation and development of modes of action and a competent professional performance, which is distinguished by its quality.

This study is referred to professionalism of the Process of teaching learning (PEA) of the higher Mathematics I [MS I)] in the formation of the counter, for what it is considered to assume a theoretical positioning relative to the PEA to which it took into account its developer nature . In this regard, works of authors such as Castellanos (2002), Zilberstein (2002), Ballester, Garcia Alvarez, Rodriguez and others (2015), Breijo (2016), Diaz (2016), Abreu,
Barrera, Breijo and Bonilla (2018), amo ng others were consulted.

Authors such as Abreu Alvarado *et al.* (2018), refer to the PEA aims and so contribute to the formation of the personality of the future professional, although the teacher continues leading it to promote learning of different knowledge: knowledge , skills and values; the type of intervention is subject to the paradigm with which it is identified.

Authors such as Zilberstein & Portela (2002) define the PEA as:

> The mediating path for the appropriation of knowledge, skills, habits, relationship norms, behavior and values, bequeathed by humanity, which are expressed in the teaching content, in close link with the rest of the teaching and extra-teaching activities that the students carry out and that encourages the development of thought, the «spiral jump» from a development reached to a potential one (p.17).

This definition is the orientation guide for improving the performance of the future Bachelor of accounting and Finance, the form the way in which the student appropriates the content, enhances the development of logical thinking, is formed for professional life; solve economic and financial problems and acts under the precepts of the accountant's ethics.

The analyzes to the PEA of the MS (I) in the Bachelor's degree in Accounting and

Finance are based on the criteria of Ballester, García, Álvarez, Rodríguez and others (2015), authors of the Universities of Pedagogical Sciences of Cuba, who assume the PEA of Mathematics as a developer, understood as:

> ... That which constitutes a system in which both teaching and learning are subsystems that guarantee the active, creative, reflective, meaningful and motivated appropriation of the content as part of the comprehensive general culture, taking into account current development, with the purpose of continually expanding the boundaries of the potential proximal development zone. This implies affective communication and the development of intentional activities, whose didactic actions generate learning strategies that allow learning to learn Mathematics, as an expression of the constant development of a comprehensive and self - determined per sonality of the student (p.13).

For these authors, the design of the PEA developer of Mathematics dialectically encompasses the didactic components (objective, content, method, means, evaluation, forms of organization) and the relationships between the protagonists (student- teacher-group); these include the subordination and coordination relationships that are established between them.

Breijo (2016) is of the view that, in this process, the activity par excellence of the students is learning and of the teacher is teaching, which does not exclude that the roles of both are also enriched in the dynamics of the process, when students teach and teachers learn. The foregoing is reinforced in the PEA of the MS (I), which takes place in a professionalized setting, where the student is the bearer of the knowledge typical of the profession that the teacher suffers from and that can be of great value in professionalization of mathematics.

Another important aspect that is considered in this study are the criteria of Cedeño, Escalona and Verdiel (2019), to conceive the professionalization of the PEA of disciplines and subjects as a way to raise the quality in the preparation of university graduates. This makes it possible to direct the analysis to definitions of professionalization of the PEA of specific subjects. In particular, the professionalization of the PEA of Basic Mathematics in the Physical Culture career is defined as the organization and direction of a system of educational influences, in order to contribute to the preparation of students through a Teaching-Learning Process based on solving mathematical problems with a professional approach , as a way to integrate mathematics with the logic of the profession and derive a favorable link between theory and practice (Ross, Izquierdo and Hernández, 2018, p.1).

In the analysis of the previous definition, valid elements for this research stand out, such as: the link of the contents of science (subject) with the profession, problem solving and the relationship between theory and practice. United these to developers conceptions of the process of teaching and learning and the processed

character of professionalism, including professionalizing components teaching of the PEA of the MS (I) in a scenario of simulated company, constitute essential features in the professionalization of the MS (I) PEA in accountant training.

It is essential to understand the concept and approach of interdisciplinary in the projection of the methodological work, in terms of improving the quality of the Teaching-Learning process between Mathematics and Accounting (Pastrano, Arévalo and Lissabet, 2019); an aspect to take into account to enhance the professionalization of the MS (I) PEA.

In the study on the current state of the PEA of the MS (I) at the University of Pinar de Rio "Hermanos Saiz Montes de Oca", it checks its contextualization with the profession, its limitations in the integration of disciplines, as well as the preparation of the cloister for the professionalization of the process; the desired state requires conceiving the PEA of the MS (I) from the professionalization of its didactic components in a contextualized and interdisciplinary way, from the preparation of the faculty for professionalization and in tune with professional problems. This contradiction generates the following scientific problem: ¿ How to improve the PEA of MS (I) in the Degree in Accounting and Finance career?

Taking into account the aforementioned, the professionalization of the MS (I) PEA is considered a necessity, due to its contribution to the improvement of the modes of action and the professional performance of the accountant. It is why we p propose as an essential goal in this article : socializing a teaching strategy for the professionalization of the process of teaching and learning of Higher mathematics I in the Degree in Accounting and Finance career at the University of Pinar de Rio "Hnos Saíz Montes de Oca".

MATERIAL AND METHOD

The research carried out combines aspects
of qualitative and quantitative research, where qualitative evaluations of the results are carried out with the application of methods of quantitative research; one of the reasons why it is classified as a mixed investigation. It was developed in the Degree in Accounting and Finance career at the University of Pinar del Rio "Hermanos Saiz Montes de Oca". The population was made up of 50 first-year students of the 2018-2019 school year and six teachers who teach MS (I).

This study has its general methodological foundation in the Materialistic Dialectic. General methods of the theoretical and empirical level were used. The theoretical methods applied were historic- logical, which permitted the study of historical trends of the PEA of MS (I), in the international arena and in Cuba and its characteristics and regularities in the UPR; modeling, for the construction of the theoretical - conceptual referential framework of the research and the systemic- structural framework, to conceive the structural components and the dynamic relationships of the object. As procedures of theoretical methods were used for the study of the object, the analysis and synthesis, to distort them in parts and, given the parts, reach the object as a whole; as empirical methods, documentary analysis , to establish and clarify categories or conceptual elements of the PEA of to MS (I) in general and their development particularly in the degree accounting and finance career at the University of Pinar del Rio, which includes the governing documents of the career, including: - Methodological Teaching Work Regulations (RM 210/07 and RM 2/2018), the Professional Model

of the career in Accounting and Finance, the study plans of the career Bachelor in Accounting and Finance, comparative status of the results of the MS (I) in the five years preceding the investigation and the reports of academic results of the subject MS (I) and its program.

It was conducted a group interview with teachers of the MS (I) in the Bachelor career in Accounting and Finance at the University of Pinar del Rio "Hermanos Saiz Montes de Oca" and an observation guide was applied to class s of MS (I) with the group under investigation, to verify through direct and systematic perception the current state of the PEA under investigation and the teacher's performance. A survey to 50 students in that group was applied in order to analyze the manifestations of the object from its perception and an educational test to verify the current state of knowledge and the skills developed by students in MS (I). Finally, the experimental method in the form of pre experiment with so - called case study was applied; the mathematical statistical methods allowed processing the results of the applied instruments. The criteria of experts led to the theoretical assessment of the didactic strategy. It was used, in addition, the methodological triangulation technique to search and find points of agreement and discrepancies in the results of applied instruments.

To evaluate the performance of PEA of the MS (I) in the career, an operational definition of the variable and its dimensions, enabling ru m measurement was made; these were identified according to the context in which the investigation is carried out and at the author's discretion. Its definitions are:

The Teaching-Learning Process of Higher Mathematics I is defined as the developer path that allows the learning of the content system of the MS (I) subject in relation to the profession, from the systemic organization of the professionalized didactic components and performance Professor's professional in achieving the integral development of the personality of the future accountant.

The dimensions are: Learning of the system of contents of MS (I), in relation to the profession and the professional performance of teachers. The first learning of the content system of the MS (I) in relation to the profession is understood as the activity that the student develops to appropriate the contents of the MS (I) as a subject of study, from their motivations to the resolution of professional problems in correspondence with the accountant's code of ethics in business contexts; the second dimension (profess ional performance of teachers) understood as professional practice, starting from the professional model and the diagnostic-forecast of learning, and includes overcoming of the teacher, the interdisciplinary and the modeling of the PEA the MS (I) from its components according to the professionalization, which enhance the organization of the work of students in teaching learning activities.

Once applied s instruments and evaluative criteria, according to the results of compliance indicators and variables, the strengths and weaknesses were determined for the professionalization of the PEA of the MS (I) in the Bachelor career in Accounting and Finance the University of Pinar del Rio "Hermanos Saíz Montes de Oca".

RESULTS

For the development of the strategy for the professionalization of the MS (I) PEA, the criteria of prestigious authors were taken into account: Valle Lima (2007), Capote (2013) among others, who have referred to the term strategy since the pedagogical plane. These authors agree that the strategy is related to the planning, organization, execution and control, in a sequenced manner, of actions to modify a previously diagnosed reality, so that the proposed educational purposes can be achieved.

In the research, the definition of strategy given by Valle Lima (2007) is assumed, by conceiving it as a set of sequential and interrelated actions that, starting from an initial state (given by the diagnosis), allow directing the step to an ideal state as a consequence of planning.

The strategy is structured around the following logic:

Introduction

This strategy is based on enhancing the PEA of the MS (I) from the professionalism of their educational components in the career Degree in Accounting and Finances in University of Pinar del Rio "Hermanos Saiz Montes de Oca", to contribute to the improvement of the professional performance of students and teachers.

The proposed strategy and the specific strategic actions is based on defining principles: simulated university-enterprise relation, contextual and procedural nature; it is the task teaching developer as the fundamental unit of the PEA of the MS (I) in Bachelor in Accounting and Finance Career at the University of Pinar del Rio "Hermanos Saiz Montes de Oca" and professionals problem solving as a regulatory element in the simulated company.

II. Diagnosis for the implementation of the strategy

At this stage of the investigation, the diagnosis is aimed at identifying the existing strengths, weaknesses, threats and opportunities to implement the strategy. For this purpose, measurement instruments were applied, which were based on the development of sessions of group approaches with the pedagogical collective and with students, exchanges of scientific-professional and methodological experiences were also promoted at the career level, as well as the documentary analysis.

The results made it possible to identify the strengths, weaknesses, threats and opportunities in the context:

Strengths

- Adequate scientific level of the subject program.
- Commitment of the group of teachers to the training of a competent professional.
- The aspirations and commitments of students to become professionals.

Weaknesses

- The educational practice of the MS (I) highlights the instructive aspect of the training, placing a marked emphasis on the MS (I) contents to the detriment of the accounting and financial work, which limits the comprehensive training of the student.
- Poor relationships of MS (I) teachers with other disciplines

and teachers based on professionalization.

- Limitations in teachers in achieving the modeling of the PEA and its components based on professionalization.
- The methodological guidelines of the MS (I) programs do not specify how to carry out the theory-practice relationship in the subject Professional practice of the accountant I, which is part of the Main Integrative Discipline.
- Poor use by MS (I) teachers of the problem approach in the process.
- Non- recognition of the MS (I) subject as a professional problem-solving tool by students, providing demotivation for it.
- Insufficient mastery of skills such as: identify, classify, calculate, simplify and solve, among others.

Opportunities

- Recognition of the need for preparation in didactics of mathematics, as well as key invariants of accounting, for work in the simulated company.
- National and local policies that promote the implementation of this strategy.
- For the Ministry of Higher Education, the Ministry of Economy and Planning, the Ministry of Finance and Prices, the National Association of Economists and Accountants of Cuba (ANEC) and the country's management, training for accounting and finances professionals constitutes a priority, with professional logical reasoning skills provided by the MS (I), which enable efficient management of accounting and financial processes in entities and contribute to updating the Cuban Economic Model.
- Advice from the Center for Higher Education Science Studies.

Threats

- Continuous use of a traditional methodology and limitation in didactic preparation.
- Preoccupation by continuous changes and the development of proposals that do not lead to the welfare of students.

III. General objective of the didactic strategy

Enhance the PEA of MS (I) through the professionalization of its members teaching in the Bachelor career in Accounting and Finance at the University of Pinar del Rio "Hermanos Saiz Montes de Oca", through targeted strategic actions, of way that contributes to professional performance of students and teachers.

IV. Specific strategic actions

First strategic action: Training of the pedagogical group.

The training of the pedagogical group starts from recognizing the potentialities of the professionalization of the PEA of the MS (I) in the simulated enterprise, which enables the motivation and appropriation of the contents of the MS (I) by the students. The professional performance of teachers is assumed as a model for students to learn to interact professionally in solving problems, applying resources provided by the MS (I) in a professionalized setting. This enables the creation of didactic spaces for interdisciplinary exchange in the year group.

Specific objective: To train the pedagogical group for efficient management of the PEA of the MS (I) in the career Degree in Accounting and Finance at the University of Pinar del Rio "Hermanos Saiz Montes de Oca" .

Operations:

- Identification of individual weaknesses in the PEA of the MS (I) of teachers in the career Degree in Accounting and Finance at the University of Pinar del Rio "Hermanos Saiz Montes de Oca".
- Socialization of the theoretical-practical bases of the training program.
- Definition of each didactic component in a systemic way.
- Design of the media system to be used in the simulated company.
- Formulation of methodological guidelines for work in the simulated company.
- Evaluation of the effectiveness of the training program for MS (I) teachers, based on the results achieved by the students.

The **indicators** that make it possible to measure this specific strategic action are:

- Preparedness of professor MS (I), with views to put into practice didactics strategy, for the career Degree in Accounting and Finance at the University of Pinar del Rio "Hermanos Saiz Montes de Oca".
- Level of satisfaction of teachers with the proposed training program.
- Evaluation of the performance of teachers in the simulated company.
- Level of assimilation of the content of MS (I) in relation to the profession in the simulated company by the students.

Second specific strategic action: Improvement of the PEA of the MS (I) in the career, through the redesign of the educational syllabus in the Degree in Accounting and Finance career.

Specific objective: To improve MS (I) program in the Degree in Accounting and Finance career.

The didactic redesign of the program MS (I) in the Bachelor career in Accounting and Finance has its basis in the professionalization of the PEA, which has in the developer teaching task its fundamental cell, the professional problem contextualized as a regulator of the process the simulated company scenario and responds to the requirements of the Professional Model, which will help to improve the professional performance of students and teachers.

Operations

- Identifying the need to professionalize the PEA of MS (I), from the direct relationship with the professional problems, as a way of introduction, assimilation and application of the contents into a professionalized scenario, different from the traditional courtly, to raise motivation for the subject and contribute to the professional performance of the subjects who lead the process.
- Identification of the invariants of the content that allow the establishment of relationships between the concepts, relationships and procedures of the MS (I) with other subjects that follow it from the Economic- Mathematical Met hods discipline and others from the base curriculum and professional training , for their

treatment in the simulated company.
- Identification of professionalized methods, means and forms that allow the appropriation of content, the construction of socially contextualized meanings and meanings and promote individual and group reflection on the effectiveness of the strategies used for learning in the simulated company.
- Identification of the different forms and techniques of evaluation from the individual and the collective and, consequently, the development of the teaching task as a fundamental cell of the process, thus achieving the leveling of the students through a systematic diagnosis-prognosis .
- Design of the MS (I) program for the Bachelor's degree in Accounting and Finance.
- Evaluation of the application of the program and its effectiveness in the training of future Graduates in Accounting and Finance.

The **indicators** that make it possible to measure this specific strategic action are:

- Level of mastery of procedures for the apprehension of the contents of the MS (I), depending on the profession in the simulated company.
- Level of motivation for the use of methods, means and forms in the search for theoretical and methodological knowledge (concepts, relationships and procedures) of the MS (I), in relation to Accounting and Finance in the simulated company.
- Level of mobilization of experiences and personal affective resources in the resolution of professional problems with the practical application of concepts, relationships and procedures of the MS (I) in the simulated company.

Third specific strategic action: Improvement of the PEA of the MS (I) through an exercise manual used by students and teachers as one lift that contains definitions of basic economic concepts for the teaching of the MS (I) in the simulated company and problems that typify the science (Higher Mathematics I) -profession (Accountability) relationship in a professionalized setting (Simulated Company).

Specific objective: To give a working tool that serves as a reference for students and teachers of the Degree in Accounting and Finance, for the formulation and treatment professional problems from Higher Mathematics I in the simulated company, this will contribute to its professional performance

Operations

- Identification of the invariants of the content of the MS (I) subject by didactic unit and their relationships with concepts and procedures of other subjects of the academic year, to model the professional problems to be solved in the simulated company.
- Design of the exercise manual.
- Evaluation of the application of the exercise manual and its effectiveness in the training of future Accounting and Finance Graduates.

The **indicators** that make it possible to measure this specific strategic action are:

- Level of motivation with the use of the exercise manual, by students and teachers.
- Evaluation of the application of the exercise manual and its effectiveness in the training of future Accounting and Finance Graduates.

V. Evaluation of the strategy

The evaluation constitutes a systemic and systematic process where, based on the results of the application of each of the specific strategic actions, the effectiveness and efficiency of the general strategy is evaluated, in relation to the achievement of the general objective, allowing including, assessing changes or modifications in the proposals.

For this, the achievement of the objectives set for each of the specific strategic actions will be taken into account, depending on the improvement of the process under study, attending to the stages identified and based on the professionalization of the PEA of the MS (I) Degree in Accounting and Finance career at the University of Pinar del Rio "Hermanos Saiz Montes de Oca", which will contribute to the achievement of correct modes of action and professional performance of students and teachers.

Specific objective. Evaluate the effectiveness of the teaching strategy in the University of Pinar del Rio "Hermanos Saiz Montes de Oca".

The evaluation of the strategy for the professionalization of the PEA of the MS (I) in the Bachelor career in Accounting and Finance at the University of Pinar del Rio "Hermanos Saiz Montes de Oca", leads to monitor the evolution of the process and results in the application of specific strategic actions.

It is evaluated in a systematic, partial and final way.

- Systematic evaluation occurs in each activity in which teachers and students participate, taking into account its objectives.
- The partial evaluation is carried out from attending to the stages in which the didactic strategy is structured. Students, teachers of the year group involved in the simulated company, teachers of professional practice for accountants, teachers of the Main Integrative Discipline participate in it.
- The final evaluation is carried out at the end of the semester and the same social actors participate, with the intention of characterizing the evaluation process.

In order to check the theoretical validity of the didactic strategy, the two-round expert evaluation method was used. 32 experts consulted which generally express the teaching strategy is very suitable and contribute to promote the improvement of the process of teaching and learning of higher mathematics I, by professionalizing their educational components.

As part of the implementation in practice of the strategy, the experimental method was applied by pre experiment teaching in the selected group in the sample, to which the specific strategic actions were applied, envisaged in the strategy as measuring a pedagogical test and the instruments applied in the initial diagnosis, to make the comparison between these states before and after implementing
the professionalization strategy.

In comparison it was significant the result of the favorable change in favor of

the results achieved in the strategy resulting also in a positive assessment of the dimensions used to measure the variable under investigation and, therefore, of the variable.

It was achieved, with the application of s specific strategic actions in pedagogical practice, using fully the strengths, using better the opportunities and mitigating the impact of threats and weaknesses, strengthen the process of teaching and learning of Higher mathematics I in the career Degree in Accounting and Finance from the University of Pinar del Rio "Hermanos Saiz Montes de Oca", through its professionalization.

The results obtained in the investigative process ensure that the professionalization of the PEA of the MS (I) in the simulated company contributes to the strengthening of the early formation of the thinking of the accounting professional, from the relationship established between the logic of science and the logic of the profession.

DISCUSSION

In the related theoretical analyzed for the professionalism of the process of teaching and learning of higher mathematics I, it is evidenced the roll of contextualization, interdisciplinary, problem solving and professionalism of the teacher as distinctive elements to professionalize this process in the Economic Sciences. It should be noted that these aspects, so parceled, regardless of their integration, on the one hand and on the other the non - professionalism of all the components of the process, give the fret with Teaching-Learning process where the professional orientation MS (I) is treated in an improvised way and where opportunities for professional spaces for this purpose are wasted.

The PEA of the MS (I) in the training of the accountant is enhanced, from the professionalization of its didactic components in the Simulated Company, and it guides the Higher Mathematics I according to the profession in an organized and planned way, visualizing Higher Mathematics I as a tool in solving economic and financial problems.

The strategy was elaborated on the basis of a categorical system that includes the professionalization of all the didactic components, it conceives the economic and financial problems as regulators of the PEA of the MS (I) in a professionalized scenario defined as Simulated Company; the strategy ordered, structured and govern the principles of the Universidad- simulated Company relationship, the contextual character and the principle of the procedural nature of the PEA of the MS (I) in the formation of the counter, not designed aspects in acting conception of the PEA .Its practical contribution is conceived in its application in teaching practice, through their strategic actions.

In the theoretical position on the PEA assumed in the research in the university context as a developer process, its implication in the integral development of the personality, a creative and professionalized performance of its participants with the capacity for innovation, is exposed, in function of the discovery and solving problems in the labor and social context of their performance. This process will not be limited only to communication between teacher and professional training. The activity of the students should be

oriented to teamwork, to the context for action, socialization and cooperation in professional settings, which enables a conscious and meaningful assimilation for the contents of the subject.

The PEA of the MS (I) from the professionalization of its didactic components in the Bachelor's degree in Accounting and Finance, becomes the developer, creative and innovative way in a professionalized setting for learning the content system of Higher Mathematics I, through the professional performance of the teacher, through the systemic organization of its professionalized didactic components so that the future accountant develops adequate modes of action in their professional performance.

The PEA of the MS (I) with the professionalization of its didactic components in the training of the accountant in the Simulated Company, shows higher results with the application of the didactic strategy, through its strategic actions, which was found in the motivation of the students upon receiving the MS (I) linked to the profession and the satisfaction of teachers in the training and acceptance of the exercise manual as a means in the development of the MS (I) PEA.

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