

MENDIVE



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Translated from the original in Spanish

Formation of the investigative competence in the s students of the career Degree in Education Foreign Language English

Formación de la competencia investigativa en los estudiantes de la carrera Licenciatura en Educación Lengua Extranjera Inglés

Formação da competência de investigação nos alunos da carreira Bacharelato em Educação Inglês Língua Estrangeira

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ABSTRACT

The current world scenario requires a re-conceptualization of the training process for education professionals. For this reason, emphasis is placed on the

development of competencies that can support adequate professional performance. The investigative competence can constitute an essential tool to detect the problems. This article aims to propose a structural-conceptual description of the investigative competence for its training in the students of the Bachelor's Degree in Foreign Language Education English. Different methods were used, among which are: analysis and synthesis, induction-deduction, documentary analysis on the legal basis that supports the formation of investigative skills in higher education and in the career in particular, observation of students in the defense of diploma and course work, and techniques such as the survey of students and teachers. The results obtained through methodological triangulation, indicate as a more significant assessment that there are training flaws in the research order in the students of the study career and that part of them can be supported by the vague presence of proposals for the structural-conceptual description of the investigative competence, required for the formation of the same in the students of the mentioned career.

Key words: initial training; investigative competence; English Foreign Language.

RESUMEN

El escenario mundial actual requiere de una reconceptualización del proceso de formación de los profesionales de la educación; motivo por el cual se enfatiza en el desarrollo de las competencias, que puedan sustentar un desempeño profesional adecuado. La competencia investigativa puede constituir una herramienta imprescindible para detectar las problemáticas que se originen en el ejercicio de la profesión y contribuir a la solución de las mismas. Este artículo tiene como objetivo proponer una descripción estructural-conceptual de la competencia

investigativa para su formación en los estudiantes de la carrera Licenciatura en Educación Lengua Extranjera Inglés. Se emplearon diferentes métodos, entre los que cuentan: el análisis y síntesis, la inducción-deducción, el análisis documental sobre la base legal que sustenta la formación de competencia investigativa en la Educación Superior y, en la carrera en particular, la observación a estudiantes en el ejercicio de defensa de trabajos de diploma y de curso y técnicas como la encuesta a estudiantes y docentes. Los resultados obtenidos mediante la triangulación metodológica indican como valoración más significativa que existen falencias formativas en el orden investigativo en los estudiantes de la carrera en estudio y que parte de ellas pueden sustentarse en la vaga presencia de propuestas relativas a la descripción estructural-conceptual de la competencia investigativa, requerida para su formación en los estudiantes de la citada carrera.

Palabras clave: formación inicial; competencia investigativa; Lengua Extranjera Inglés.

RESUMO

O actual cenário mundial exige uma reconceptualização do processo de formação dos profissionais da educação; por isso, a ênfase é colocada no desenvolvimento de competências que possam apoiar o desempenho profissional adequado. Este artigo visa propor uma descrição estrutural-conceptual da competência de investigação para a formação dos estudantes do curso de licenciatura em Educação Inglesa. Foram utilizados diferentes métodos, incluindo: análise e síntese, indução-dedução, análise documental sobre a base legal que apoia a formação de competências de investigação no Ensino Superior e, em particular, na carreira, a observação dos estudantes no exercício da defesa do diploma e do trabalho e técnicas como o

inquérito aos estudantes e professores. Os resultados obtidos através da triangulação metodológica indicam como avaliação mais significativa que existem deficiências de formação na ordem da investigação nos estudantes da carreira em estudo e que parte deles pode ser apoiada pela presença vaga de propostas relacionadas com a descrição estrutural-conceptual da competência de investigação, necessária para a sua formação nos estudantes da referida carreira.

Palavras-chave: formação inicial; competência de investigação; língua inglesa estrangeira.

INTRODUCTION

The labor demands of highly qualified personnel have reached unthinkable levels in all fields of science and technology. Therefore, the degree of professional preparation determines the accessibility to the jobs. All of this leads to the justification of the need for the development of a set of competencies that contribute to the fulfillment of its functions and to increase the quality of their job performance. However, no one can speak of the professional performance of a college graduated without having present the formative process of it. It is here where the university is considered a leading element in the progress of society, and its teaching staff as a fundamental pillar in this mission (Ruiz and Aguilar, 2017). Hence, the United Nations Educational, Scientific and Cultural Organization (UNESCO, 2009) recommends that in order to guarantee the quality of higher education it is necessary to: "[...] attract and retain teaching and teaching staff qualified research, talented and committed to their work, as well as

promoting the formation and realization of pedagogical investigations that improve didactic strategies and ensure appropriate professional conditions, in order to guarantee excellence in research and teaching [...]" (p. 4).

Today it is evident that the university, as a training center for competent professionals, is undergoing significant changes that bring new responsibilities and demands to its teachers. Such transformations compel the in-depth study of the subject of competency training, which, although it is not a new topic, it has recognized greater attention in educational research in recent decades.

It coincides with the ideas of Mas (2011) about the urgency in the need for delimitation of necessary competences for university teaching, with view to properly, perform the functions and roles that correspond to them. However, there are still theoretical gaps on their definition and evaluation, in tune with the requirements of the teaching function.

Among the necessary competences to exercise the teaching profession, research is recognized, which is introduced in the educational field as an integral part of the teaching work, since it allows both the teacher and his students to strengthen knowledge and skills and apply them in real situations (Muñoz *et al*, quoted by Paz and Fierro 2015, pag. 178), all of which must be worked from the training process.

The research competition in the formation of the teacher has been studied by many authors, among which include: Cerda (2007), Gonzalez (2017), Ayala and Barrera (2018), Arrieta and Ocon (2018), Ravelo Peña *et to the*. (2019), among others, some of which have agreed to define it as a: "[...] set of knowledge, abilities,

attitudes and skills required to carry out an investigative activity, in which it is necessary a formative process "(Abella and Pachón, as cited in Arrieta and Ocón, 2018, p.132).

Regarding the idea of forming this competence from the first educational levels, Montejo (2016) affirms "investigative competences should be formed at school. Therefore, they should be the object of instruction and the result of school practice. Research activity should be not only a method for activating learning but for the student to appropriate the methods of science and to act in a scientific way [...]" (p.3).

However, reality is far from the ideal set by specialists. The experiences in the educational practice of numerous countries, from which Cuba is not exempt, place greater emphasis on the storage of information than on the development of skills to process them. Moreover, treatment curriculum and methodology, focused on the training of research competence during the undergraduate, still is limited because it should include components that ensure theoretical and practical development to ensure mastery of these. In this sense, the formation of such competence cannot be restricted to the mastery of a set of concepts by the subjects of the training process. It should not be postponed for teaching improvement, the greatest burden in the development of knowledge, skills and values in the research order.

Training of teachers must be, therefore, training of researchers. Accordingly, it is required of the domain of a set of tools (knowledge) in the educational and methodological order to form the essential part of the practice teaching. Moreover, such knowledge should permit in a planned and structured way, the support

of learning aimed at developing research competence.

The teaching functions themselves support the necessity of them to be good researcher; and for that reason they have to prepare, from training early, in the management of complex methods and research techniques that allow them to be inserted into the reality that surrounds them and act as agents of change to the challenges that modern society imposes on them.

From this perspective, Soriano (2004) states that the teaching of these times must: face the changes that occur in the field of science and technology, with a humanistic vision; develop an education that promotes, from the disciplines, an integral conception that generates capacities for interrelation with the changing processes of the international environment. These challenges are, in themselves, more than enough reasons to justify the importance of skills development in Higher Education and, more especially, the formation of research competence, which will provide learners that are in formation necessary tools to make confrontation more viable in a professional way to these challenges.

When particularizing the importance of training of research competence in students of the Bachelor of Education Foreign Language English, it is pertinent to say that the management of knowledge, skills and values that make that competence, have a positive effect on the formative process of which they are a part. In addition, they may, once graduated:

- Systematically examine their own practice
- Explore problems incorporating methods and concepts
- Participate in meeting spaces for different pedagogical practices

- Work as a team to link their own policies.

The development of the competition research will allow students of the Bachelor of Foreign Language Education career in English possess a set of knowledge that permit them to discover the particularities of their specialty, while they build their own knowledge. On the other hand, they enrich their didactic-pedagogical practice; discover new methods, approaches and / or techniques that can favor the teaching of the foreign language.

The study of the formation of competitive research in education and the peculiarities of the same for the career under analysis allowed us to detect a marked failure in the formation of research competence and theoretical - practical budgets for training. For all the aforementioned, it is pertinent to say that the present article pursues, as a fundamental objective, to propose a structural-conceptual description of the investigative competence for its training in the students of the Bachelor's Degree in Foreign Language Education English.

MATERIALS AND METHODS

To carry out this study it was selected as a sample, intentionally, to 33 students (100 %) belonging to 4th to 5th year of the Bachelor of Education Foreign Language English of the University of Camagüey "Ignacio Agramonte Loynaz". The selection criterion was centered in that they were in the process of preparing its work courses and diplomas as well that have completed the basic training cycle of the subject Research Methodology. The 20 teachers

who make up the degree were also included in this sample.

The research, in general, was based on different methods, including those of the theoretical level such as: analysis and synthesis, induction-deduction, which allowed the interpretation of information and the arrival of theoretical and empirical conclusions, and of the empirical level as: the documentary analysis of the legal base (Professional Models, plans of Study D, programs, methodological work plans, among others), which supports the formation of the research competence in Higher Education and in the career in particular.

The survey applied to the students and teachers made it possible to obtain fundamental information for diagnosis of the current state of the problem. The observation to the students in the exercise of defense of the diploma work and the course as well as a presentation of their research works in the Students Scientific Conference allowed to note the achievements and difficulties in the research area. For its part, the methodological triangulation technique revealed the coincidence or dispersion of the information from the data obtained.

RESULTS

In the normative documents of the English Foreign Language Education career, the competences required for the student's training are not defined, only those related to communication are mentioned, as a fundamental basis to work. The analysis of key documents underpinning the educational process poses a scattered look at the term research, which makes little

systemic see how their treatment. For example, it manifests itself as a teaching function, ability of students and teachers, dimension of the teaching process, field of teaching action. It was also appreciated that there is no conceptual structural description of any of the competencies that must support the training of this professional in training, and in particular investigative competencies.

Triangulation of the results obtained by the observations made to discussion of diploma work and course as well as the survey of teachers and students, allowed to appreciate that, in general, the students know and apply some techniques and research methods and they present their results appropriately. However, they present difficulties when carrying out the research design, developing research instruments according to the selected methodology, diagnosing the problems of the profession and communicating the scientific results by preparing articles.

The teachers recognized that they do not know the ways to bring research closer to carrying out activities that promote the exploration of educational reality. There was also agreement between teachers and students about the lack of preparation they possess regarding the skills, values and knowledge required to solve problems in the educational environment through proposals or transfers. They record that, from a theoretical point of view, there are different methods and techniques to investigate and, from practice, they only see applied research in coursework and diploma work (in the case of students) and in master's and PhD in that of teachers.

The review of different accredited sources on the subject of the formation of investigative competence, among which are the works of Montejo (2016), Parra, Colunga, &

Carvajal (2016), González (2017); Ayala and Barrera (2018), Arrieta and Ocón (2018), Ravelo Peña *et al.* (2019), allowed to detect the theoretical deficiencies on proposals of a conceptual structure of the same. This structure should serve as the basis for its treatment in the premises of the initial training of teachers of foreign languages with an English profile.

Another result of the research is the structuring of the investigative competence contextualized to the Bachelor's Degree in Foreign Language English, for its pedagogical treatment:

1. Identification of investigative competence: includes the detection of professional problems related to pedagogy and linguistics, related to the professional performance of the future teacher. Part of the relationship of knowledge, skills and values that are expressed systemically in the research activity to transform reality; consider collaborative work, social responsibility and ethical commitment.

2. The procedural axes of the competition in question are specified:

a) Design a pedagogical investigation with a transforming character: it includes the integration of the necessary knowledge for planning the investigation, which materializes in the elaboration of the design. It is the basis for understanding the relationship that is established between the theoretical assumptions that are assumed for the research, methodology and practical experiences that support the need for intervention. All this leads to the formation of a comprehensive conception of the idea of research in the student. It is based on the conscious choice of the most appropriate perspective for the research it undertakes.

b) Analyze information through the use of methodological resources of educational research: It refers to the use of the necessary procedures for the careful and responsible processing of information. It includes the selection and application of methods, techniques and instruments for data collection, its processing and interpretation according to the assumed epistemological references, the methodological approach and the nature of the data collected. It involves mastering the triangulation of methods, sources and data, as well as the use of statistical processors and computer tools (software) for data processing.

c) Professional teaching-research projection: it implies the planning and implementation of tasks conducive to solving problems inherent to the profession, providing solutions according to the context, from a transformative perspective. It includes the implementation of proposals and alternative routes for the evaluation and transformation of the identified problem.

d) Generalizing the results of the pedagogical research: It includes alternatives to communicate, disseminate and transpose the results of research teaching in other contexts. It covers communication to third parties and the application to other professional situations and contexts depending on the nature and scope of the problem investigated. It involves mastering the language of the profession, the deployment of communication skills that promote the socialization of information, the application of knowledge acquired during research and the exposition of the qualities developed, with an emphasis on the disposition for research, responsibility, autonomy, cognitive independence and a transformative attitude.

Because all the research work carried out by students during their undergraduate preparation is carried out in the English language, the four axes are based on the use of this language. Reciprocal relationships of mutual benefit and dependency are established between these procedural axes, as illustrated below.

Procedural axis: design a pedagogical research with a transformer character, it contains the actions that support the research teaching, while providing structural and organizational basis for implementation, with influence on the other procedural axes and, in turn, feeds of the appropriate adaptations that must be made throughout the execution of the investigation, depending on the resolution of the problem posed. It plays a leading and directing role in the investigation, which is not without corrections during the process.

The procedural axis: to analyze information through the use of methodological resources of pedagogical research, provides the comprehensive management of the information obtained in the research, which then allows adjusting the design, executing professional tasks and generalizing the research results; in turn, it is the result of the planning carried out in the design, it is generalized according to the requirements used and it is modified with the execution of various professional tasks.

Procession axis: Professional research teaching projection, involves actions aimed at the solution of the problem of research, from its design, implementation and evaluation of quality; it allows, in turn, to adjust design elements during the course of the investigation. It is the result of the analysis of the information and induces reflection on it.

The last of the identified axes: generalizing the results of pedagogical research: contains the alternatives for communicating, disseminating and transposing the results of pedagogical research to other contexts. For this purpose, constant feedback is required with the actions described in the previous axes. Power the evaluation of the quality of the planned tasks.

It involves the promotion of corrections for planning and implementation including to reevaluate elements of the diagnosis and research design. It socializes and transposes through generalization, which in turn confirms the validity, relevance and effectiveness of the proposal made.

When generalizing the results of educational research, it is possible to transpose the same professional situations and new contexts of action, which allows new valuations on design, information processing and proposed solutions; in turn, this process is the result of the planning carried out in the design, the analysis of the information, and the execution of professional tasks. It is decisive in the process that the communication of research results is encouraged, through the publication of scientific articles. For this, mastery of the English language is vital.

3. The following indicators are described in performance contained in each procedural axis:

a) Design a pedagogical investigation with a transforming character.

- Choose a theoretical and methodological position that supports the structure, planning and implementation of research, with views to the transformation of the identified problem.

- Prepare an integrative research design, which corresponds to the objectives to be achieved.
 - Plan investigative tasks according to professional problems identified in the results of the diagnosis made.
 - Manages information that allows in-depth knowledge of the causes of the problem.
 - Implements teaching- investigative tasks with adherence to ethical standards, values and attitudes associated with the profession.
 - It supports the social and scientific relevance of the research problem and its connotation as a contextualized profession problem.
 - Evaluates the quality of the professional tasks carried out by verifying the transformations achieved, through the application of means proposed for these purposes.
 - b) Analyze information using methodological resources for pedagogical research.
 - d) Generalize the results of the pedagogical research.
 - Identify population and sample to work in the research.
 - Writes the report of the finished investigation with command of the language of the profession.
 - Choice and / or made the application of methods, techniques and instruments to obtain the required information.
 - Communicate the results obtained to third parties, through various channels (presentations, videos, articles, debate forums, among others) that contemplate the use of information and communication technologies.
 - Apply the methods, techniques and instruments, in accordance with the ethical standards of the profession and the use of clear and effective communication.
 - Transpose the results of the research carried out and the knowledge acquired during it, to new professional situations and contexts, according to the possibilities.
 - Supervise to the data obtained according to their nature.
 - Make inferences regarding the processed information.
 - Employ elementary statistical methods and tools (software) for processing quantitative and qualitative data.
 - It uses methodological triangulation to obtain the results and their interpretation.
 - c) Professional teaching-research projection.
- For the evaluation of the training of the competence in the students of the degree course in Education Foreign Language English, several instruments must be developed, among which the evaluation scales stand out. Each of these must contain the measurement of the procedural axes and their respective performance indicators. For this, teachers can elaborate their own scales or they can take as reference those of other authors who have worked on the subject, if they bear in mind their contextualization.

Another variant, which occurs very frequently in today's world, is the evaluation of this competence, through the design and implementation of research projects.

DISCUSSION

The results obtained in the application of the exposed methods, as well as the deepening in the search of bibliographies on the subject demonstrate the importance and need to deepen it. The formation of investigative competences constitutes a neural topic in contemporary pedagogical science. Therefore, the support of the need to train these skills in students of the Bachelor in Foreign Language Education English is an example to search the improvement of the current Cuban education.

The foundations of the conceptual apparatus on which the formation of investigative competencies is built is constituted by the notion of training; category on which shares ideas Horruitiner (2006), who defines it as the substantive process carried out in universities, aimed at preparing integrally to the student in a particular college career and includes, both studies undergraduate like graduate students.

It is the interest of this article to focus only on the initial formation of the English Foreign Language Education career. In this way, initial training appears as the favorable period during which future teachers of foreign languages can obtain all the knowledge, skills and necessary values for the formation of the competences required to practice the profession. Authors like Tobón (2014) offer definitions such as:

Complex processes that people put into action-acting - creating, solving problems and activities (of everyday life and the labor-professional context), contributing to the construction and transformation of reality, for which they integrate the know to be (self-motivation, initiative and collaborative work with others), knowing (observing, explaining, understanding and analyzing) and knowing (performance based on procedures and strategies), taking into account the specific requirements of the environment, personal needs and processes of uncertainty, with intellectual autonomy, critical awareness, creativity and a spirit of challenge, assuming the consequences of acts and seeking human well-being. (p.66)

Among the generic competences, the investigative ones stand out, because they are necessary for the exercise of the profession by a wide spectrum of professionals. The work of several authors was reviewed, such as Cerda (2007); Tobón (2014); Parra, Colunga, & Carvajal (2016); González (2017); Ayala and Barrera (2018), among others, of which the review was obtained as synthesis the complex nature of the formation of skills in general and in particular the research. Descriptions of its structure, evaluation and alternatives for pedagogical implementation are marked as flaws.

The diversity of criteria in terms of their name as investigative competences or as investigative competence can also be signified. The authors of this work assume it as the second variant (singular). From this perspective, he agrees with Cerda (2007), when considering that the investigative competence includes a set of competencies necessary for adequate performance in the scientific field and in Higher Education. Among these necessary competencies for the formation of investigative competence,

some can be considered as communicative, argumentative, interpretive, and problem solving, among others.

In another order, For Parra, Colunga & Carvajal (2016) research competence can be seen as "overall competence, which in its complex character and inclusive qualifies as dynamic axis and systematizing another set of competencies that form, whose formation requires a conscious and responsible interdisciplinary approach" (p. 480).

It is also valid to affirm that this macro view of investigative competence permeates the justification of the need for its theoretical and practical division into its formation. Is that, to organize the training process of the powers in question should be discriminated on the criteria for the composition of the macro competencies, and then focus on those that are less worked in the educational context that is area of interest. In the case of the authors of this article, it will be the English Foreign Language Education career, and the criteria addressed are based on generalizations of ideas about investigative skills.

A theoretical and empiric study was carried out, where it was analyzed a group of documents constituting the legal basis of the training process and research training of students and teachers of the Career Education Foreign Language English, including: model of the professional, study plan D of the career, programs of disciplines and subjects. The review of such documents allowed obtaining valuable information on the treatment of the formation of investigative competence in the career. It is connoted that among the primary functions of teachers are research and improvement, which is made up of tasks aimed at the critical

analysis of their work and educational reality, the problematization and reconstruction of theory and educational practice in the different contexts of performance of the education professional. It means the application of the scientific method in their daily work as part of the continuous improvement of their work.

Another important number of activities are projected through "The systematic evaluation of the results of their work, the projection of solutions and constant improvement of their educational work and, on the other hand, the need for professional self-improvement, through educational research, methodological work and overcoming" (Ministry of Higher Education, 2016, p.4).

On the other hand, the educator of this specialty has among its spheres of action different types of educational institutions, as well as the fields of action are integrated by teaching, orientation and educational research, for which they must prepare through assimilation of the different disciplines and subjects of the study plan.

As one of the most important professional pedagogical skills to be developed by these education professionals is to "investigate based on the solution of the professional problems identified in the pedagogical process and particularly in the teaching-learning process of the (s) foreign language (s)" (Ministry of Higher Education, 2016, p.6).

Investigative competences, recognized in the pedagogical theory, is not described in these governing documents, as they focus the training process from training and skills development, within which there are the investigative. This stance, in the curricular order, contrasts with the global training trends focused on

the integration of knowledge, skills and values as the basic structure of skills training. In a very particular way, from the investigative competence as generic competence.

At the same time, study plan D was analyzed to verify through which subjects or other ways contribute to the formation of investigative skills. However, it is the opinion of the authors of this article that the time dedicated to the Research Methodology subject and the completion of the course and diploma assignments is not sufficient for the formation of a competency; an adequate development of the investigative ability as a component of it is not achieved either.

As a complementary part of the study presented, techniques such as interviewing teachers and students of the career in question were implemented, as well as several teaching-research activities related to the defense of diploma and course work. Such techniques and instruments yielded interesting results that correspond to the general theoretical appreciations analyzed by the authors of this article.

In general, the evaluations carried out on the results of the analysis of documents of the degree under study and the works of the aforementioned authors, allowed the authors of this article to make the proposal of the structuring of competence that was described in the results section. It is valid to clarify that the works of Tobón (2014) and Parra, Colunga & Carvajal (2016) were very useful in this process, which were particularly important to support the details that are provided on each element of the conceptual structure of competition. Likewise, the problems that came to light in the application of

empirical techniques and methods were taken into account.

Finally, it is valid to recognize that investigative competence constitutes a tool of great value for the professional practice of teachers and, therefore, it must be or object of training from the undergraduate level, which requires permanent and organized work. This should take into account its conceptual structure, which allows to measure the degree of acquisition and development of each knowledge, skill and value that is part of it and that are expressed as a whole in the professional practice of teachers in training.

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