

La organización metodológica de la investigación educativa para una tesis doctoral

Methodological organization of educative research for a doctoral thesis

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Resumen: El artículo que se presenta es resultado del proyecto Gestión de capacidades profesionales para la preparación doctoral en la Universidad de Guantánamo. Tiene como objetivo ofrecer algunas recomendaciones para la organización metodológica de la investigación educativa para una tesis doctoral. Entre los métodos aplicados para su elaboración estuvieron el análisis de documentos, la observación participante, el análisis del producto de la actividad, y el criterio de expertos. Se arriba a la conclusión de que las orientaciones metodológicas ofrecidas contribuyen al perfeccionamiento de la labor de tutoría, así como a la concepción de manera integrada de la tesis doctoral por los estudiantes.

Palabras clave: Organización metodológica; Investigación educativa; Tesis doctoral; Universidad de Guantánamo

Abstract: This article socializes the results of a training project about the management of professional skills for writing doctoral thesis, of the University of Guantánamo. Methods such as document analysis, participant observation and analysis of the products of the activity were applied. The main purpose of this paper is to offer some recommendations for the methodological organization of educational research for a doctoral thesis. As conclusions, we can establish that the methodological guidance offered contributed to improve the work of tutoring carried out by lecturers, as well as the quality of the integrated doctoral thesis written by the tutored.

Keywords: Methodological organization; Educational investigation; PhD thesis; University of Guantánamo

Introduction

Cuban universities must face the challenges of social, economic, political, cultural, environmental and scientific technological development of the country and its locality, so they have to orient their potential of intelligence, creativity, innovation and production towards professionals with greater quality, more efficient and effective, that adapt the university processes to the new needs and social demands.

The development of the thesis and, in particular, achieving the scientific degree influence to a great extent in the fulfillment of the strategic objectives of the universities, for that reason the training of doctors becomes one of our priorities. The University of Guantánamo is familiar to this purpose, because the doctoral training is an essential process to enhance the quality of its professional performance in response to such demands.

Regardless of the efforts made, the doctoral training process carried out at the Cuban Higher Education in collaboration with the different authorized centers of the country for the management of this activity, faces difficulties in the application of the methodology of scientific research. For this reason it is necessary to take common teaching positions, as institution coordinating these actions, and the responsibility assumed by the educational center in the territory of Guantánamo. It also specifies the methodological guidelines to be taken into account in each case in order to raise the quality of the doctoral thesis.

With the purpose of training a conception that guides the development of the methodology of research in the doctorate of the universities with which collaboration agreements are maintained in this important activity, based on the exchange and consensus of criteria about the theoretical and methodological bases of educational research and its different stages, a diagnosis was made using the methods of document analysis, participant observation, analysis of the product of the activity and interview to specialists.

The research was carried out at the Guantánamo Doctoral Training School with a population of 15 teachers and 15 aspirants, with 15 thesis workshops, 15 pre-discussion events, 15 discussion acts, and 15 theses presented in each act. Consultation was also carried out on 15 specialists in methodology of scientific research, belonging to different institutions of higher education in the country.

The article includes the regularities of this analysis, which are common but not unique guidelines that will serve as a guide in the methodological preparation of all teachers who in some way affect the training of future doctors.

The theoretical, methodological and organizational positions that follow are complemented by the theoretical and methodological bases of each one of the doctoral programs of the different institutions with which collaboration has been made, and must be taken into account for the analysis, which will help avoid contradictions and personal or sectarian positions.

We conclude that the methodological orientations offered guarantee to a great extent the best orientation and guide for the final report of the educational research in the doctoral thesis taking into account its component parts, corroborated by the analysis of 19 defended theses and consultation with specialists.

Development

Diagnosis of the current situation

The development of this study is based on the theoretical systematization carried out and the knowledge accumulated by the authors of this article as teachers of the Department of General Pedagogical Training, members of the scientific degree committee of the Central Institute of Pedagogical Sciences, professors of Research Methodology in the Doctoral Training School of the University of Guantánamo, as well as our work as consultants, opponents and tutors of diploma discussions, thesis for obtaining the diploma of master and doctor, which made possible the description of the current status of doctoral thesis tutoring and the adjustment of these to the knowledge received by the students who are trained to obtain the scientific degree.

For the study of the current state, the work of the tutor was determined as criteria for the analysis, and the students' conception of the doctoral thesis.

To carry out the study we proceeded to the analysis of the Resolution on the development of the doctorate studies in Cuba, of the National Committee of scientific degrees (2008), the documents prepared by the Commission of scientific degree of the different Cuban training centers, Doctoral Program of the University of Guantánamo (2014), contextualized to the centers corresponding to doctoral students of the territory, in adequate correspondence with them. In addition, 15 theses were analyzed for presentation in workshops, pre-discussion and discussion, as well as the results of the participant observation of 15 doctors in Pedagogical Sciences, full professors, six of them with more than 10 years of having obtained the scientific degree, five with eight years and four with seven years, all with tutoring roles.

The observation allowed us to verify that in the case of tutors:

More than 70% have limitations in the domain of research methodology and pedagogical sciences, in the orientation process to correct the observations and signals made in the workshops for the act of pre-discussion and discussion, as well as in the domain of the strategy that the author defined for the thesis.

Attendance at the thesis seminars, acts of pre-discussion and discussion, and the opinions that are developed on the applicants have an incidence of 60%, while the adjustment of the report to established norms, spelling and scientific writing behave in less of 50%.

It is important to note that not all tutors pay due attention to the review of the research report, the presentations and the responses to the opponents by the applicant, which results in delays in completing the work with the required quality. Hence, the need to keep in mind that "(...) doctoral research requires, in addition to institutional support, pedagogical actions that can be perfected to avoid paths or truncated trajectories" (Colombo, 2014, p.91).

Regarding the preparation of doctoral students, the following difficulties stand out:

80% lack reading skills, and presents uncertainty in the foundation of the theoretical platform.

50% declared to lack independence to answer the opponents' questions, poor quality of responses to the members of the examining board, as well as inadequate use of computing media.

The difficulties analyzed are in full correspondence with what was proposed by Ortiz (2015).

The inadequacies are varied, of different order and magnitude, ranging from the deficient general and scientific cultural preparation of the aspirants, to the weakness of the theoretical and methodological designs, which lacerate the quality of the scientific results that they intend to contribute, as well as the reiteration and schematization of theoretical and practical contributions. These are a reflection in each of the parts of the thesis that is detailed below (p.12)

With regard to the introduction of the reports, 60% show inconsistency between the poles of contradiction and the inadequate relationship between the basic elements of research design; in a 53% bad approach or inadequate grounding of mathematical and statistical methods, incorrect wording of the objective and intention below that achieved in the research. Although the contextualization of the problem behaves at 46, 7%, special attention should be paid to the matter. In theory, 60% of the work presents difficulties in the historical characterization, since it is not always working with stages, periods or moments that allow the verification of the evolution of the object, and when these are not assumed by characteristics of the research, the whole purpose is not achieved. In the same percentage the non-consequence is manifested with the theory that has been assumed.

More than 50% presents difficulties related to the criteria or indicators for the analysis because they do not correspond to the defined object and field, with the drawing of graphs with the EduSol

required quality, with the use of concepts and other theoretical attributes that do not have the sufficient location and foundations of the source and the assumed author, with the assumption of critical theoretical positions, or with the use of the categories used in the pedagogical order.

In the bibliographic consultations carried out, the prevalence of texts from the eastern zone is observed in 40%, and there is absence of texts and theses defended recently in other provinces.

With respect to diagnosis, 60% does not always frame with the clarity required the methodological procedure or the methodology followed for its design. The determination of the variable, dimensions, indicators, parameterization and analysis of the instruments has difficulties in 60%, as well as the argumentation and contextualization in the interpretation of the obtained results. It emphasizes the inadequate design of the instruments and the charts and graphs, as well as the analysis fragmented by instruments without relation in many cases with the determined dimensions and indicators.

In the case of the contribution, the inconsistency between assuming positions on a type of result and the creation of definitions of the same, the difficulties in the formulation of principles and the treatment to the process and not to the product (students) behaved at 60 %, While the lack or excess of methodological indications for its implementation was more than 50%. The inadequate structure of the same and the insufficient graphical representation of all the elements of the contribution were manifested by 40%.

With regard to validation, 60% of the observations made demonstrated poor quality, and in 73%, the interpretation of the results of the expert method is not always explicit. In 40% regarding the type of experiment, ill-defined hypotheses, as well as weak charts and graphs. Besides, a qualitative and quantitative assessment of the feasibility of the method used in the validation was not always performed.

On the conclusions, 60% of the cases are not always generalizing, 46% do not always respond to the research tasks, and 53% do not correspond to the objective, in some cases they are common to other theses. This shows that they suffer from the necessary reflexive character and reflect a reproduction of the partial conclusions.

66% of the recommendations are poorly expressed, and are not according to the orientations of the National Commission of scientific grade.

Regarding the bibliography, it is observed that 53% has difficulties in adjusting to standards, inclusion of literature in other languages, as well as in the establishment of the author's scientific production and at an updated level.

In relation to the annexes, in 60% are excessive and very extensive, lacking the essential, they do not have guiding lines, that is to say, they do not always carry concrete demonstrations through reflective and evaluative analyzes.

Finally there are limitations in the edition: spelling, writing and scientific style.

- As can be observed, in general, there are insufficiencies both in the process of tutoring by lecturers and in the preparation of the tutored, which affects the success of the doctoral training process. This requires a new look on the part of everyone who has to do with training at this level of education, in order to materialize the aspirations of the University of Guantánamo with the required quality.

Proposal of Solutions

- Educational research is conceived as a probable way of solving concrete problems related to the country's social practice and professional pedagogical practice. The development of investigative skills should be directed towards raising the quality of education and preparing masters and doctors in training for the development of cognitive independence and the direction of investigative tasks.
- Educational research "constitutes a dialectical process of construction of the multidisciplinary scientific knowledge about the educational reality as a complex object of the Education and Pedagogical Sciences system in order to understand it and transform it into a specific socio-historical context" (Central Institute of Sciences Pedagogical, 2010, page 4)
- The educational reality is conceived as an object of study of the Education Sciences, it constitutes an integral part of the social reality, considering factors both objective and closely related. It includes phenomena, processes, agents, personalities, institutions, factors, functions and forms of influence that establish complex relationships to enhance the quality of education. It also contains ideas, theories, conceptions, attitudes, values, representations and ways of behavior and its nature is properly educational.

- The object of study of educational research is precisely education, the complex and multifactorial character of this social process makes possible to explain the fundamental characteristics of educational research.
- The study of social phenomena that are systems open to the environment (school - family relationship - community - society in general) becomes possible.
- It must have a complex dialectical logical character.
- It must be flexible in the solution of scientific problems and their hierarchy.
- Each school group has its own characteristics, the events that happen do not show stable quantitative parameters.
- The researcher is part of the social and educational system that he studies.
- It results in new knowledge that, when applied in practice, carries the creative transformation of education, which is reflected in the enhancement of quality. Hence, research is both process and result. (ICCP, 2010, pp. 5-6)

The following are some methodological orientations for each of the parts that make up a thesis, based on studies carried out by different authors, among them Bunge (1972), Eco, (1989), Hernández (2005), García and Rodríguez (2005), Valle (2012) and Matos (2016).

I- Introduction

- It must be expressed plainly and backed up in science to solve certain dissatisfaction existing in the educational reality, affecting the fulfillment of social demands. It requires theoretical and practical procedures.
- It can be determined by direct means (observation), or indirect (review of documents, recommendations of other theses, study of scientific literature, and consultation of specialists or others of a scientific nature). It will never be determined by a decree.
- It must be formulated in terms that characterize the deficiencies or dissatisfactions detected in reality and not the causes that give rise to them. They are descriptive in nature.
- The source or the procedures that allowed the formulation of the specific problem situations must be expressed.
- The practical reality must coincide with the research and not artificially create the latter.

Development of the thesis:

II- Chapter I

- The philosophical position adopted, the aspects assumed from the theories of reference, the categorical system used (from the analysis of the proposals of previous authors), the positions of the aspirant (through the exercise of scientific criticism) and methodological procedures with the main actions leading to the decision taken, duly argued.
- The construction of the theoretical framework should reveal the consultation of diverse bibliographical sources, from the geographical point of view as well as historical, variety of languages and types of sources. It will take into account the current level of these sources and the presence of the bibliography of the country of the author and the institution that executes the program.
- It should reflect the author's ethics and honesty by citing ideas from other authors and criticizing them, and assuming theoretical positions.

The theoretical framework can be composed of:

- The history of the object that investigates from a dialectical-materialist philosophical position.
- A chronological study of the emergence and evolution of the field of action in the object of study, determining its most significant features.
- Reflect, from a personal position, the problems solved in whole or in part, and specify what aspects remain to be resolved in their object of study.
- Identify and understand the causes of the current shortcomings, resume the successes, avoid recurring mistakes and project new actions to regulate the future.
- Apply the historical-logical method and other methods used as data sources: documentary analysis, testimony, biographical studies, and life histories, among others.
- The application of the historical-logical method presupposes using historical-comparative and historical-descriptive procedures.

For the conception of the theoretical referents:

Taking into account Valle (2012), when he states that "the theoretical framework is assumed as the basis of the research and includes: analysis of the historical-logical development of the research object, its development trends, the categorical framework and its foundations "(p 27), the following aspects are recommended:

- Systematize and deepen the logical development that the scientific knowledge already established by the educational sciences has had regarding the studied object.

- Describe the object as a system: its components, internal and external relationships, structure and functioning. The significance of the field of action must be revealed as one of the essential subsystems of the object of study.
- State the critical position of the candidate, in which the philosophical position of each of the authors consulted is valued.
- Select, characterize or define the system of concepts, categories, principles, laws and theories assumed, those that support or were taken into account as references to explain the operation of the object as a system from all the points of view required: Philosophical, Sociological, Psychological, Pedagogical, among others. This does not imply fragmentation of the analysis for each of these sciences.
- Demonstrate the scientific character of the theoretical positions assumed and stated by the rigor, precision and accuracy with which they are posed, valued and argued in order to reveal the importance and possibilities of achieving the research objective. It is important to clearly distinguish ideas from those of other authors, taking care of citations and paraphrases. In the case of personal constructions, it has a high methodological value to express the procedures that allowed them to be obtained.
- Maintain ethics by critically evaluating school practice, theoretical contributions and what is officially regulated, without losing the perspective that each of the steps taken by other people in the evolution of the process under study has contributed to the fact that today conditions going one step further. Properly refer and evaluate each of the published ideas. Their obsolescence can be criticized in the current conditions, and they recognize the merit that it had in the moment and place in which they were divulged.
- If citations are used, the essential idea or definition given by the author must be transcribed verbatim and refer to it according to the chosen standard.
- To avoid ambiguities, use the Dictionary of the Royal Academy of the Spanish Language and specialized dictionaries (philosophical, sociological, pedagogical, and psychological).
- The need to take into account: the philosophical position of the authors consulted, the date of publication of the source, as well as the historical moment in which each reference was made and the use of literature in a foreign language.

Chapter II:

III- Exploration of reality

- Although starting from the identification of the problematic situation, there is a moment for deepening, after realizing the first theoretical studies that approximate the researcher to the characterization of the desired state and to the knowledge of the possible causes of the problems identified.
- Study, dependent and independent variables are determined
- The study variable should be operating in dimensions and indicators with their parameters, which should express the main qualities of the object and guide the types of techniques, instruments and procedures for data collection, registration, organization and interpretation.
- Indicators used at this stage may or may not correspond with employees to study the background of the object.
- The instruments to be used must have the required degree of reliability from the use of a pilot for adjustment. Its design must take into account the assumed indicators.
- A variant for the construction of this chapter is used to communicate the results of the diagnostic study exclusively.
- To achieve the objectivity of exploration, it cannot be lost sight of the fact that "the diagnosis takes on much more complex dimensions because it is a question of investigating such difficult problems as those related to the formation of the personality of the students or to the stages of professional development of the Teachers "(Valle, 2012, page 44).

Chapter III:

IV. Construction of thesis contribution

- It is recognized as results in the regulations of the Ministry of Higher Education: a scientific contribution to the branch of knowledge in question, or a social contribution. They can be theoretical, practical with proven social impact, or both.
- For their correct determination, the candidate will have prior knowledge of the possible typical results or ways of leaving them (model, strategy, program, theoretical and methodological conception, system, methodology, among others) of their characteristics, components, relationships and structure.

- The adoption of one or another way of expressing the result must be consciously and duly justified based on the results of the diagnosis, the theoretical referents assumed and the objectives and scope of the research.
- Prior to the presentation of the result, the theoretical foundations of the result (definitions that have not yet been exposed because they are intrinsic to the result), and the characteristics, principles, relationships or other attribute that differentiate it from any other similar nature and confer identity.
- During the process of obtaining the result, it is advisable to use the criterion of experts for the degree of improvement and scientific endowment that it confers, being able to have the opinions and suggestions emanated from this procedure during the obtaining of the result.
- The detailed presentation of the result presupposes the exhaustive analysis of the relations between its components and other theoretical interpretations. This is fundamental in the determination of the contribution to the theory, in the case of the doctoral thesis.

IV. Validation

- Among the diverse ways of validation of results that are recognized are the criterion of expert, the criterion of user, and the different modalities of introduction in practice, differentiated among them by the graduation of rigor in the control of the variables. These last procedures will have the proper name of the authors that are assumed for reference.
- It can be accepted that the result is validated by the expert criterion method, complemented by some other of the verification routes. In the case of the doctorate, it is necessary to use some modality of intervention in the practice, complemented with another or other forms of validation. They may include data triangles.

Conclusions

The main difficulties affecting the quality of the preparation of the doctoral thesis are fundamentally due to the non-compliance in all cases of the true functions that must be fulfilled by the tutor; this is evidenced in theoretical orientations that are offered without sufficient practical demonstration. As well, there are insufficient dialectical relations that must be achieved between each of the parts that make up the research report.

The aspirants do not always put into practice the integration of all the knowledge received through the subjects studied, and suffer from the independence necessary for the search of knowledge.

The methodological orientations offered contribute to raising the quality of the investigative process by enabling a better awareness of aspirants of the content of the different parts of the thesis, as well as the dialectical relations that must be established between them in order to achieve the appropriation of investigative resources that allow the argumentation of the new proposal that it presents.

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