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Original Research Paper

Education

# CURRICULAR ASSESSMENT OF DOCTORAL PROGRAMS

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**ABSTRACT** The research was carried out with a quantitative approach with the purpose of evaluating doctoral programs based on factors that favor or hinder the training of researchers, the training culture that prevails in the field of education, the humanities and the exact sciences to identify the differences in the training processes and propose curricular changes. Coordinators of doctoral programs, students and doctors from 30 doctoral programs from the state of Chihuahua, Mexico participated. A questionnaire was applied to students and doctors with .89 confidence. It was found that doctoral programs in education lack the infrastructure to carry out experiments and generate greater knowledge in the field, they also do not have interinstitutional links with universities inside and outside the country, universities are required to create student exchange networks and PhD stays.

**KEYWORDS** : doctoral programs, research, training, evaluation.

## Introduction

In the last two centuries, the integration of research into the tasks developed by the university is explained by scientific, technological and educational advances. The scientistic thinking that becomes one of the ideological supports of the modern era, the institutionalization of this thought as a form of human knowledge legitimated socially and politically, the industrial revolution that unfolds towards the great technological transformations of the 19th and 20th centuries, and the permanent impulse of higher education as an engine of social and economic development, are some of the historical factors that, by acting together, give rise to research becoming one of the pillars of the university.

In recent years there have been advances in doctoral programs in the state of Chihuahua, at least in quantitative terms. The number of doctorate programs taught in this state of northern Mexico and the number of students at this educational level have been increasing. However, it is necessary to analyze these quantitative advances in a much broader and deeper framework, which, beyond the figures and statistics, makes it possible to launch questions and answers about the particularities of the functioning of these programs.

Despite the encouraging data, weaknesses are identified in the training of researchers that takes place in the doctoral programs in Mexico. Training is an action of interformation (Ortíz, 2010), which requires the recognition and action of others through which self-construction and shared meaning processes can be generated. The training of those who build knowledge and develop applied science has not been a line of research of great interest, especially in the field of education.

However, it is currently appreciated that the interest in conducting research in education is constantly increasing, increasing the number of people entering a postgraduate program with the intention of training as researchers, which leads to a growing number of research conferences. the production has expanded considerably. A sample of this growth is the National Research Congress organized by the Mexican Council of Educational Research since 1981, in which national and foreign researchers participate every two years. From this congress arise documents that are published and give account of the priority issues in education.

The training of researchers is a nodal in the study of the different phenomena of science and technology since it involves complex processes through which subjects are prepared to generate knowledge in some discipline. This training involves a series of actions that stimulate the transformation of the people involved as students and doctors in terms of their ability to investigate, analyze information, interpret data and communicate findings orally and in writing.

However, the training of researchers is very diverse, according to disciplines, institutions and fields of research. In order to identify the factors that favor or hinder the training processes of new researchers, this research was carried out using the survey technique and was complemented by a semi-structured interview with doctors and students from 3 doctoral programs in exact sciences that are recognized as quality programs by the National Council of Science and Technology and 4 doctorate in education that have not yet been recognized, the 7 are offered in the State of Chihuahua, Mexico. The individual, social, contextual dimensions, infrastructure and support resources in the research were analyzed.

In trying to understand the training of researchers presented the following questions:

What factors favor or hinder the training of researchers in the entity? In what way? What differences are observed in the training culture of researchers in education, social sciences and exact sciences?

It was based on the hypothesis: There are personal, social, institutional and cultural elements that impact the training of researchers. There are important differences in the culture of training of researchers in the field of education, in social sciences and exact sciences in doctoral programs.

The doctorate programs in the entity are governed by external evaluation criteria carried out by CONACYT (National Council of Science and Technology) who grants recognition to these according to the established criteria. However, there are programs that without being evaluated by this body have social recognition. With this research it is intended that the evaluation be carried out internally in the programs and that the involved actors participate directly and in their real conditions.

## Theoretical fundament

Scientific research since the first decade of the twentieth century

has been the protagonist of many advances in different aspects of human life. In the last two decades has undergone changes in perspectives and paradigms that guide their findings towards the solution of real problems, it recognizes research as an economic resource and a political asset for the exercise of power and especially the collective participation of organized researchers in networks and work teams that are interested in making contributions that impact the life of the human being in general.

However, in Mexico, a low number of research teams is still identified, disproportion between the real needs and the capacity for scientific response, as well as the lack of definition of policies that guide scientific development and the absence of mechanisms that link research with the most urgent needs of the population (Sánchez and Espinoza, 2005).

***The training of researchers***

The training refers to a problem that refers to the acquisition of knowledge and skills, to the assumption of a set of values (Díaz Barriga, 1990: 58), as well as access to culture in its broadest sense and historical reconstruction. that man can do according to Hegel, formation is a reencounter of man with culture and only man has the possibility of reconstructing human history.

The term formation is related to that of culture and refers to the human way of shaping the dispositions and capacities of man. The process of forming a person implies the development of their potential, which will be made available to other people in the daily social relationship and in the different areas in which they live or work; in this case, their research skills due to the high impact on the generation and application of knowledge to favor social development. (Díaz Barriga and Rigo, 2000: 87)

Training for research has to do, then, with access to the culture of knowledge production in a given discipline. Training for research is conceptualized by Moreno Bayardo (2003: 52) as a process involving diverse practices and actors, in which the intervention of trainers as human mediators is concreted in an academic task consisting in promoting and facilitating, preferably in a systematized way (not necessarily in school), access to knowledge, the development of skills, habits and attitudes, and the internalization of values, which demands the realization of the practice called research, understood this one, in agreement with De Ipola and Castells (1975: 41), as a whole set of production processes of knowledge unified by a common conceptual field, organized and regulated by a system of norms and inscribed in a set of material institutional apparatuses.

**The method**

The research was carried out with a quantitative approach based on an exploratory design based on the application of a survey to students and professors of 7 doctoral programs (4 for education and 3 for exact sciences) in the State of Chihuahua, Mexico. The information was supplemented with an interview with the teachers.

The questionnaire applied was closed questions with a reliability index of .89. It was made up of 60 questions distributed in 5 variables such as: personal characteristics of the students entering the doctorate, institutional conditions, characteristics of the professors who train the researchers, training process and accompaniment of the students, linkage and inter-institutional support.

The information was analyzed from a descriptive process and later information of the variables was crossed to identify differences in the formation processes of the programs studied and the information was extended with the results of the interviews.

**Results**

Factors that favor or hinder the training of researchers in the entity.

_The little experience of the professors who are part of the academy of research doctors since their doctoral training is recent. Only 20% of the doctors have more than 10 years of having graduated from a doctoral program. Only 75% of the professors who have the doctorate degree and work in the doctorate remain active in the research and disseminate their findings, and participate in research teams.

_The doctoral programs in education that are offered in the entity are new. In addition, only 5% of doctoral programs are for education. Due to the above, there is very little experience in research in the field.

_Students who enter the doctoral programs need to develop their communication skills orally and in writing, in addition to the mastery of a second and third language.

_A factor that affects the training process is the time that is dedicated to doctoral studies because the educational authorities do not offer support to teachers in service to carry out their studies and must share time with their working hours, so that They devote little time to research.

Factors that favor training processes in doctoral programs.

_ Students who enter the exact sciences programs with quality recognition have enough time to do research because the requirement is that they do not have work. Students who enter the doctoral programs in education cannot leave their work to devote full time to research.

_Tutorials correspond to the accompaniment of doctors to doctoral students in order to promote experiences in research and dissemination. These activities are considered central in the training of researchers since they work individually according to the training needs of the students.

_A factor that has a decisive impact on the development of doctoral programs is the participation of management personnel in the organization and monitoring of the training process. The staff of the institutions in which the programs have recognition and financial support to develop doctoral programs, the implementation process is taken care of so that the quality with which it is carried out does not diminish. However, the institutions in which doctorates are offered in education are the teachers themselves who coordinate the development of the program and do not pay enough attention so that the activities are developed in the best way. In addition, the little importance given to research in the field of education is reflected in the neglect of them by those who administer higher education.

***Culture that prevails in the training processes of researchers in the state of Chihuahua.***

When talking about training culture, it refers to the training practices of researchers that prevail in the institutions of higher education where they are offered, to the ways in which they are organized, as well as to the follow-up given to their improvement.

English is not the domain of 100% of students, so access to scientific culture and knowledge of the most specialized subject is limited. The culture of the students in northern Mexico is to use the language to understand a song or a movie, but not to read texts, especially those of a scientific nature. For both teachers and students, it is highly conflictive to access information in other languages even when there are free translation programs available in search engines.

20% of teachers do not carry out research, so it is important that they be included in state or institutional research projects to integrate students in connection with social development institutions. There is no institutional research culture in which academic and institutional life is analyzed and projects are carried out that impact not only the institution in which it arises but the area of influence that is greater.

Solo work prevails in doctoral programs, students with their objects of study isolated from the research lines developed by teachers. The investigations are carried out individually. Institutions isolated from others, so that the possibilities of development are very few. Only the doctoral programs of exact sciences have links with other national or international doctoral programs. PhD programs in education work in isolation. The culture of isolation and individualization prevails and significantly affects the training of researchers.

## Conclusions

The training process for researchers in the entity is diverse, for this it influences the way in which tutorials are developed, the institutional support for knowledge dissemination and the improvement of programs with the exchange of experiences between teachers and students. of doctoral programs.

The training of the researchers will be oriented towards the needs of study in the entity that tends to the educational, business and social development, that is to say that it attends to the different aspects of the development of the entity.

Mentoring or accompaniment in doctoral programs must be systematized and respond to the training needs of students, as well as the characteristics and skills needed to generate new knowledge.

The process of training researchers acquires specific character according to the institutional policies to the characteristics and interests of research of the professors and to the abilities of the students to investigate as well as to the interests but also to the characteristics and needs of a society that requires of generation and application of knowledge to favor its development so that decision makers should be closer to those who coordinate research in universities and who attend social programs to generate social programs with monitoring and systematization of information.

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