

Formación doctoral integrada e innovadora *Innovative integrative doctoral training*

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Received: January 7 2019**Accepted:** September 18 2019

Resumen: En el ensayo se puntualizan un conjunto de reflexiones vinculadas a la formación doctoral como proceso determinante para el desarrollo sostenible en Cuba. Se recurre al análisis relacional retrospectivo apoyado en pesquisas de comprobada cientificidad realizadas a modelos de formación doctoral. Se presentan juicios asociados a su necesaria integración con otros procesos universitarios y sociales. Los razonamientos expuestos describen concepciones para consolidarla integración de la formación doctoral y fortalecer la gestión universitaria.

Palabras clave: Formación doctoral; Integración; Procesos; Gestión universitaria

Abstract: The essay specifies a set of reflections linked to doctoral training as a determining process for sustainable development in Cuba. Retrospective relational analysis is used based on proven scientific research carried out on doctoral training models. Judgments associated with their necessary integration with other university and social processes are presented. The arguments presented describe conceptions to consolidate the integration of doctoral training and strengthen university management.

Keywords: Doctoral training; Integration; Processes; University management

Through the relational analysis, concerns, discretions and reasons that strengthen the conceptions of an integrated and innovative doctoral training are shown; being this one of the university processes of high impact on sustainable development. They are presented critically, with the pretext of contributing ideas and solutions sustained in valid and reliable scientific studies of the subject, judgments to incorporate the management philosophy of process integration into the doctoral training.

The considerations presented lead the doctoral training to achieve higher levels of essentiality, flexibility, research quality; sustained these ideas in the optimization of resources, the creation of synergies, the brake of duplication of policies and procedures, the increase of motivation, the reduction of conflicts and the improvement of the satisfaction of the interested parties in the creation and innovation of the scientific results.

Doctoral training is considered by this author as a logical, organized and systematic process sustained on the essentiality, flexibility and commitment to scientific research; it is useful to produce, transfer and apply scientific results associated with specific situations, combination of knowledge, experiences, values, contextual information and expert assessments.

However, is it possible since the doctoral training to combine the policies, concepts and assets available in universities? Is coordination with other processes achieved in the doctoral training through relationships that add value or reinforce the satisfaction of the present and future needs of society and other stakeholders? Is the control to the changes and its constant adaptation to the environment sufficient in the doctoral formation?

The existing references reaffirm that the integration in the process of doctoral training allows capitalizing the effort in terms of competitiveness and productivity; its integration places doctoral training beyond universities and research centers and conditions the understanding of emerging formative models.

In the opinion of this author, the philosophy of integration in doctoral training still reveals gaps necessary to intervene to achieve its requirements - essentiality, flexibility and research-centered; its integration combines the university policies associated with the degree, postgraduate, science and innovation and university extensionism.

With the integration in the doctoral training the conceptions linked to the growth and development of the universities can be grouped from the entrance of the student and in each of its processes, likewise, with its implementation it is possible to direct the performance capacities of the PhD student adjusted to the available assets.

The integration in the doctoral training allows the interrelationships to build a unique management system where the organizational solutions are coherently incorporated, in order to increase the effectiveness, effectiveness and efficiency of the doctoral student; it is an indispensable commitment that recognizes a transversal management in sensitive subjects for the university, its doctoral students and society.

By integrating the processes included in the doctoral training - from the degree to the postgraduate degree - duplicities are avoided and costs associated with the development of the necessary competencies in the thesis and tutoring work are reduced, besides it allows to identify the training activities that add value and not costs and that reinforce the satisfaction of the present and future needs of society and other interested parties.

In the original research, flaws were identified to achieve an integrated doctoral training, with manifestations in the inefficient use of resources, duplication of efforts, problems in access to information, higher research costs, increased of the administrative work.

There are references that describe a fragmented vision of doctoral training, renunciation of the culture of quality and excellence, increased in the response time to demands of the environment, no identification of common objectives, repetitions in information and communication, insufficient participation in innovation projects, inadequacies in the satisfaction of the needs and expectations of society, affectations on the effectiveness of the main processes.

The idea of integrating doctoral training is to incorporate it into the negotiation of all university processes (Figure 1) and manage it in a unique way. The aforementioned integration is understood as a set of processes that must be viewed from a global and balanced perspective to achieve maximum effectiveness and efficiency generation of the doctor of science and satisfaction of stakeholders.

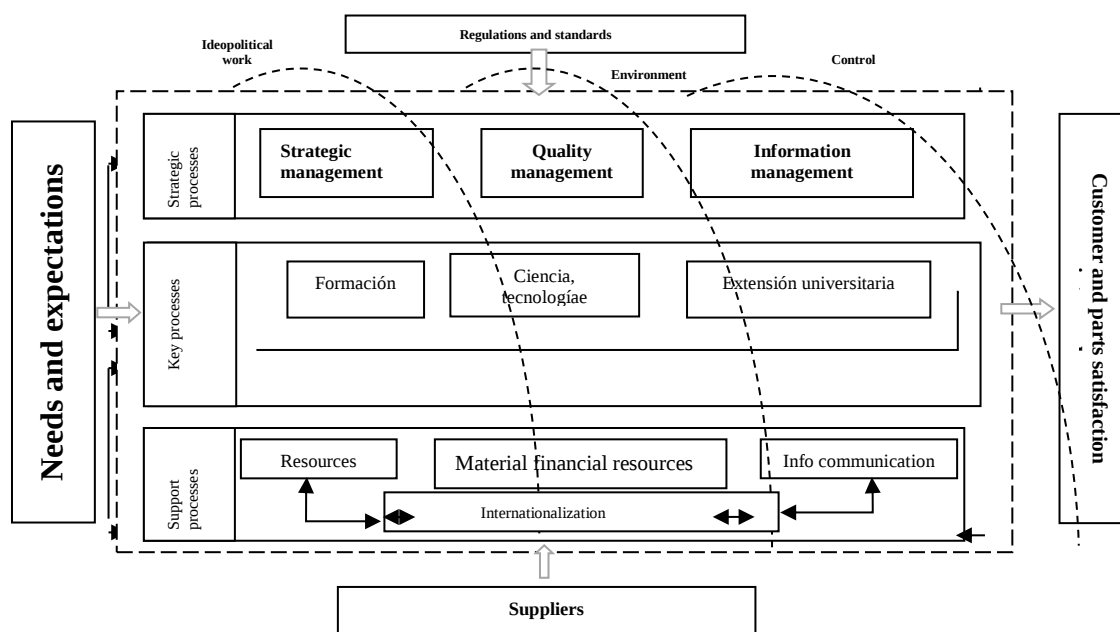


Figure 1: University processes

Integrated doctoral training is one of the guarantees of achieving the attribute of essentiality in programs, this philosophy makes it possible to focus the solution of scientific problems to intersections in a certain area of knowledge. The integration of the doctoral training process to the key processes related to the management of science and technological innovation in the degree and postgraduate degree is necessary for the development of well-structured programs, of breadth and depth in correspondence with the strengths of the university or research center and the needs and demands of the environment.

In the same way, the fusion of the process of doctoral training to the key processes related to the management of science and technological innovation in the degree and postgraduate degree is an

expeditious way to achieve doctoral programs focused on research and in turn a guarantee of robust innovative processes.

The previous conception determines that the doctoral these are the result of research started from the undergraduate or postgraduate level individually or by groups of researchers; accompanied by the development of competencies to investigate, publish and direct groups for new research. Likewise, the subjects worked by the applicants provide solutions to the research lines of the scientific strategy of the institution, territory or nation.

The integration of the doctoral training process is conclusive in the necessary flexibility of the programs, by merging with the processes of university planning and allows the personalization of the program from strategic planning to the individual work plan of the doctoral student.

Likewise, the integration of the doctoral training to the university planning process allows to direct the theoretical - methodological training of the applicant according to the object of the investigation and can shorten the training times, exempting it from cumbersome and sometimes bureaucratic requirements such as the examination of the specialty, it also facilitates more creative and collaborative processes of tutoring work.

Another aspect that leads to reflections and judgments is the impact of the doctoral training philosophy integration to control changes and their constant adaptation to the environment, through changes in their microenvironment and macroenvironment their development directs technological innovation through scientific research that manifests itself more and more dynamic, complex and hostile.

Similarly, the integration of doctoral training involves the implementation of a strategy of change to overcome the gap in science and strengthen relations among universities, companies and the other actors in the environment.

Change management is unavoidable for the integration of doctoral training to other university processes and points to new solutions sustained in learning and the search for new methods and good practices to face the use of time, the effectiveness of resources, the strengthening of inter-organizational relations and satisfaction of interested parties.

Integrated and innovative doctoral training is the way to put scientific work and its results towards organizational improvement; it is the basis to achieve higher levels of productivity, efficiency and quality in production and services, meeting the objectives of the university or research centers.

Integrated and innovative doctoral training is a premise to meet the country's research need and its correspondence with the training of doctors, it is one of the ways to make training programs more flexible without losing scientific rigor and strengthen their strategic role for the scientific development of the Cuba.

For this author, the condition of integrated and innovative in doctoral training is decisive in economic and social development because of the importance of scientific knowledge as a new factor of production; reason that compromises its direction towards the search of changes and flexibility without antecedents that give speed to scientific research and technological innovation.

University processes must have objectives and criteria of measures integrated to support the processes of doctoral training, to achieve scientific results aimed at sustainable economic development; and in turn, the role of the university in satisfying the demands of the environment associated with scientific knowledge is strengthened.

The university structure from its teaching staff, its infrastructure and its undergraduate and postgraduate curriculum should constitute the integration platform between the doctoral training and the priority areas of production and the promotion of new products and services necessary to promote export.

The university must lead the processes of policy formulation that encourage research and that rely on the creation of a system of scientific and technological innovation adapted to the needs of the environment; and others, that admit to create conditions of development and the generation of the necessary incentives to guarantee the professional development of the researchers.

In the doctoral training the interactions among the university and its environment, the promotion of values based on collaboration, integration and innovation that strengthen scientific knowledge as a determinant in sustainable development should be considered.

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