Management for Educational Innovation: Critical Success Factors and Critical Success Process

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1. Introduction

Current educational processes are developed within a context characterized by change, globalization and interculturality, which necessarily demands an evolution of the existing paradigms. Society is shifting from an industrial perspective, to become a society of knowledge. Educational Institutions constitute an integral part of this society, so they are not immune to these tendencies. Therefore, a change of mentalities and attitudes is imperative, in order to generate changes inside organizational structures, and support the conception of these Institutions as a learning community (Flores and Torres, 2010).

The efficient development of these processes requires that the administrative management of Educational Institutions works in favor (and not against) academic criteria. In this sense, their resources must be invested according to the needs and demands of the academy, with a strategic vision oriented to impact and innovation.

In order to do this, the basic activities of Educational Institutions, as in any other organization (Planning, Organization, Management and Control), must be articulated and

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1 Research developed under the direction of Georgina Méndez and Gabriela Farias, from Instituto Tecnológico de Monterrey.
focused on guaranteeing the compliance of the institution’s mission and growth, allowing it to keep up with other international counterparts. The objective is offering a high-quality education that allows society to be prepared to face development global challenges at multiple levels.

Educational management is a rather young discipline. It dates back from the sixties in the United States; the seventies in the United Kingdom; and the eighties in Latin America. This discipline is under construction, and it articulates theory, politics and pragmatics. Educational management aims at employing general management principles in the specific field of education. In this manner, its object of study is any organization that offers educational services. That is why this discipline is also determined by the development of general management theories, as well as education theories (Casassus, 2000).

Educational management has made significant progresses in its attempt of transferring models and schemes used at the entrepreneurial level, to the educational field; but it has also fallen short in other aspects: the social objectives of education may be blurred, and some difficulties may arise when it comes to efficiently integrate guidelines regarding educational policy, responsibility and social commitment.

This document presents the results of a research conducted in a private higher education institution, located in Bogotá (Colombia), focused particularly on the management and innovation practices developed by one of its faculties. The objective was describing its administrative management practices and their relationship with the educational innovation practices and the use of technology.

For the purposes of this research, innovation is defined as the incorporation of a new element to an existing process, with the objective of improving it. This aspect is important because it indicates that innovation has positive effects. When applying this definition in the education context, it can be inferred that innovation is the incorporation of a novelty to existing educational processes (curricular, pedagogical and administrative), and the aim of this novelty is improving education quality.
The study of the aspects relating the administration of educational institutions was divided into four categories, corresponding to the phases of the administrative process: Planning, Organization, Management and Control. This research allowed the identification of aspects regarding every category, which constitute success or failure factors when it comes to achieve the educational purposes of the innovations applied in the institution.

The following section describes the method used in the research process, and subsequently, the third section presents the obtained results for every defined category. Lastly, the conclusions indicate the contributions made by this research to the study of educational management.

2. Method

This research is framed as an instrumental case study (Stake, 1999) because its finality is to understand the existing relations between innovation processes and their educational management, based on the particular observation of the study unit. The intention is not to generalize the obtained results, but to reach an understanding of the reality that occurs inside this study unit.

According to Hernández, Fernández and Baptista (2003), this is a non-experimental research because the variables are not manipulated. The phenomena, as they are presented in its natural context, are first observed and then analyzed. The purpose was not oriented at provoking a situation, but at observing (without interfering) the existing relationship between educational innovation practices and the performance of the institution’s administrative management.

The design of the research is cross-sectional because it analyzed the state of the variables at a determined moment (second academic semester, 2013) and it does not consider the evolution of these variables through time. The cross-sectional design of this investigation is descriptive, and its purpose is enquiring the incidence and values showed by one or more variables. The procedure consists on assessing one or –generally- more variables in a group of people or objects, and providing a description (Hernández, Fernández and Baptista, 2003).
This research used mixed methods, which means that it applied both qualitative and quantitative methods. According to Creswell and Plano Clark (2011), cited in Valenzuela and Flores (2011, p. 5), an investigation that uses mix methods is focused on the collection, analysis and combination of quantitative and qualitative data in a single study or a series of studies. Its main premise is that the combination of both approaches provides a better comprehension of investigation problems than the use of just one of them.

This investigation design corresponds to a Convergent Parallel Design, which according to Valenzuela and Flores (2011) is defined as a design generated when the researcher simultaneously implements quantitative and qualitative components during the same phase of the research process; when he or she equally prioritizes the methods; and keeps quantitative and qualitative elements apart during the analysis. Subsequently, the researcher combines the results in the final data interpretation.

In this case, quantitative data came from questionnaires filled online by professors, students and administrative staff from the studied faculty. The qualitative information was captured through semi-structured interviews held with people from the academic directive board and administrative staff; from the observation of innovative educational practices; and from the analysis of relevant institutional documents.

The questionnaires were offered online to professors, students and administrative staff of the faculty, thanks to a tool designed by the American company Survey Monkey. The questionnaire was promoted through electronic email, based on the faculty’s data base (this action was previously authorized by the faculty’s Dean). The population was a non-probability sampling.

The sample of voluntary subjects was used in this exercise. Hernández, Fernández and Baptista (2003) describe this kind of sample as fortuitous, because the researcher elaborates conclusions based on the subjects that voluntarily agree to participate in a study. In this case, all the members of the faculty (professors, students and administrative staff) received an invitation to fill the questionnaire, but the study sample was composed only by those who voluntarily answered it: 40 students, 8 professors and 4 members of the administrative staff.
The assessment of every question was based on a Likert scale, in which 1 represents “Strongly agree”; 2, “Agree”; 3, “Indifferent”; 4, “Disagree”; and 5, “Strongly disagree”. Every one of them was organized according to the categories established for this study: Planning, Organization, Management and Control.

A semi-structured interview was used to capture qualitative data. It presented a mixture of structured and non-structured questions used in a flexible manner, which is up to the criteria of the researcher, who may add or modify any question according to what he or she considers as convenient (Valenzuela and Flores, 2011). This interview was held with members of the directive board of the institution (academic and administrative), who used their experience and perceptions to provide valuable information for the analysis and the discussion proposed by this work.

Valenzuela and Flores (2011) point out that observation is another method frequently used in qualitative, as well as in quantitative research. The purpose of this practice is describing events, situations and behavior. Namakforoosh (2005) complements this definition by adding that observing consists on watching a behavior in a natural environment or scenario (where people act freely and normally); in a controlled situation (such as in a laboratory); or simply, through direct observation. This practice can be performed discretely, so that people do not realized that they are being watched, or openly through personal or remote observation.

In the case of this research, two classes that used innovative pedagogical methodologies were discretely observed, without intervening or letting the students know that they were being observed. On the contrary, professors were aware of this situation.

The documents that account for the faculty’s management also constitute a source of information for the investigation. Several documents were consulted (minutes, reports of the Program’s accreditation in 2012, and other institutional documents such as the Statutes and the Development Plan), and they allowed analyzing the institutional context in which the research was conducted.
The quantitative data were analyzed through statistical methods. In this process, the answers of the questionnaires were classified according to the four defined categories. Afterwards, procedures such as descriptive parameters and arithmetic indicators (Valenzuela and Flores, 2011) contributed in the identification of results: coincidences, similitudes and differences in the answers provided by professors, students and administrative staff. These results led to relevant conclusions, in order to find answers for the research question.

The interviews and observations provided qualitative information. They were transcribed and organized according to the defined categories, in order to obtain the results. The analysis of this information was handmade, considering the volume of interviews and observations. As suggested by the methodology proposed by Valenzuela and Flores (2011), data are codified with the objective of structuring themes or categories that allow refining the analysis and eliminating irrelevant information.

Once all this information was compiled, organized and analyzed, a data triangulation was performed. This procedure, according to Valenzuela and Flores (2011) consists on contrasting multiple data sources, diverse researchers, or contending theories. The findings regarding coincidences, similitudes and differences (obtained thanks to different analysis techniques), through the data triangulation, allowed to understand the context of study and to perform an integral analysis of the information.

3. Results

This section presents the aspects identified as key factors and processes for the success of the education management in the studied institution, in order to achieve an efficient implementation of its educational innovation processes. The results of this work are presented according to the defined categories, which account for the four phases of the administrative process: Planning, Organization, Management and Control.

3.1. Results regarding Planning

This phase of the administrative process defines the strategies that guide the development of the institutional activities according to its mission, vision and objectives, and keeping in
mind its human and economic resources in order to establish a future planning at several terms. In this stage, it is important to include and contrast the opinions of persons from every level of the institution, so that the plan is more realistic and adequate to the necessities.

The management of the studied institution is developed according to a planning process which is strategic and prospective. The strategic planning is defined as the process that evaluates internal weaknesses and strengths, as well as external opportunities and threats, articulating the institutional mission, vision, goals and objectives according to the educational expectations of the community, in order to formulate strategies that satisfy the necessities of the institution and the society.

On the other hand, a prospective planning foresees future scenarios and determines the expected results, by analyzing the environment to minimize risks, optimize resources and define the required strategies to achieve the university’s objectives with a high success probability. The planning process of this institution has been based on a self-evaluation process.

Ramírez (2009) points out that this planning process must start with a diagnosis of the institution. In this sense, the fact that the formulation of this university’s development plan was based on the results of a self-evaluation process is a success factor, because it allows proposing actions oriented to improve weak aspects, supported by the diagnosis of the real institutional situation.

The academic community that participated in the survey concurs on assessing this planning aspect with an average rate between “Agree” and “Indifferent”. According to this, it can be said that institutional planning acts in favor of educational innovation processes, although the tendency towards “Indifferent” shows that some improvements can be made in this sense.

In relation to the planning processes, it was evident that this institution makes efforts in order to strengthen them: the results obtained from self-evaluation exercises are taken into account, allowing the participation of the academic community and dealing with the
necessities and requirements of the current Colombian society. This planning process could support in a more convincing fashion the innovation processes of the university by contributing to construct specific documents related to institutional policies and regulations.

The obtained results reveal weaknesses when it comes to an institutional policy regarding teacher’s training oriented to promoting innovation capacities and their inclusion in curricular programs. As far as innovation planning, the students reveal answers that tend to be close to “Indifferent”.

In sum, it was observed that this university makes an effort to strengthen its planning process, aiming at unifying criteria for its headquarters and secondary offices, with the objective of maintaining a common language. This process allows the participation of different actors and responds to the requirements of the Colombian society.

However, neither the planning document nor the dependencies that participated in the interviews indicate that there is promotion of planning processes regarding educational innovation inside the institution. The university does not have written documents that show a clear or specific regulation in this matter.

3.2. Results regarding Organization

In this phase the previous planning is structured and shaped, this means that responsibilities and functions of the staff members are defined, according to several levels of authority and hierarchy (Ramírez, 2009; Martínez, 2007).

In the studied institution, the professors of the faculty consider that the organizational structure favors the development of innovation projects; the academic community voted for “Agree” in the questions related to the presence of staff specialized in innovation of educational management. The answer was the same regarding the conformation of interdisciplinary work teams, which are considered as open for innovation, for both the planning and the execution of the institution’s development plan. A positive fact is that the institution considers the diversity of the professors’ profile, which is perceived as a pluralistic and participative environment.
The educational community (professors, students and administrative staff) acknowledge the changes inside the academic culture and the management processes, as well as in the flexibility of academic programs, which favors the development of educational innovation processes.

3.3. Results regarding Management

The management must guide the Educational Institutions towards the achievement of mission goals, increasing the quality of the offered education, and responding to the demands of society. The leadership capacity of the directive board defines the compliance of the institution’s objectives and must lead to a satisfactory execution of the Development Plan defined by the university.

In general terms, some considerable differences can be observed regarding the answers provided by professors and administrative staff. The former tend to be “Indifferent” in most of their answers, particularly in the questions related to the incidence of changes inside the directive level on innovation processes and on the presence of experts who help the community to deal with the resistance to change. On the contrary, the administrative staff tends to “Agree” in the questions formulated for this category.

The academic community who participated in the questionnaire and interviews agrees on the existence of a strong leadership inside the directive board and the group of people responsible of the institutional projects. The administration is guided towards an approach related to the management of knowledge and learning.

One of the factors that hinder the consolidation of academic innovation inside the institution has to do with the constant rotation of professors and Deans from the studied faculty. Another factor is the lack of presence of an external and internal group of experts who can contribute to diminish the uncertainties and resistance to changes. This accompaniment can facilitate the promotion of educational innovation.

Another important aspect identified through the research was the transformation of the directive profile, in a way that it involves the actors of the educational process and propels
the shared responsibility towards innovation at every level. This aspect is also perceived as an improvement opportunity in the studied institution.

The obtained results did not evidence that the directive board of this institution facilitates the processes of educational innovation. Even when there is a perception of the strong leadership by the directive board, it is not clear that this ability is focused on the promotion of innovation strategies for the university. This is an important aspect, because, as Murillo (2006) states, a good leader is a change agent who knows how to make the most of the competencies of every member of the educational community, in order to achieve a common goal.

3.4. Results regarding Control

Control has been defined as the administrative function that verifies the compliance of actions with the plans, and with the success related to the goals proposed by the institution. In this aspect, the academic community “Strongly agrees” with the idea that the university develops quality control systems, although they tend to be “Indifferent” when determining the impact of the implemented strategies.

The existence of quality control systems that verify the state and use of information technologies in the classroom is assessed between “Agree” and “Indifferent”, which points out that these systems are oriented towards administrative efficiency in a strict sense, but without considering other systems that verify the achievement of academic goals due to the implementation of educational innovations. The strengthening of the physical and technological infrastructure of this institution has been identified by the academic community as a key factor that generates interaction scenarios between its members, which can also contribute to the improvement of the teaching-learning processes inside the institution.

In general terms, the answers provided by the university community show a tendency to “Agree” with the existence of link units, assessment and following-up of the impact of innovations in the student’s academic training. However, the institutional documents and
interviews did not show any evidence of the actual presence of such mechanisms in the university. The same occurs in the case of the affirmative answers about the promotion of transformation in regulations in order to guarantee bigger impacts with the innovation project (which is practically non-existent as a university project, at least explicitly).

4. Conclusions

This investigation identified some aspects inside the management of the studied university that support its educational innovation processes and others that constitute improvement opportunities, because they tend to block the adequate development of those processes. The following are the most relevant conclusions identified in the analyzed institution:

1. Regarding the management of this educational institution: there is a political will inside the directive board that would allow the generation and diffusion of general educational innovation processes, as well as an adequate organizational structure. However, the organization chart has several decision-making levels, which tend to blur the communication processes and the effectiveness of the introduction of innovational changes in some educational activities.

2. The before-mentioned political will inside the directive spheres of the university is perceived, but it is not materialized in policies, plans or institutional regulation projects that would allow determining objectives, strategies, goals, financing, incentives and terms for the incorporation of educational innovation processes in the institution.

3. In relation to the planning processes, the institution makes significant efforts to strengthen them. The start point is composed by the results obtained in self-evaluation exercises that promote the participation of all members of the university academic community, and respond to the necessities and requirements of the current Colombian society. This planning process could support the innovation processes inside the university in a more consistent way, only if this initiative could be specified in policy documents and institutional regulations.

4. The organizational structure of this university is complex and does not have a national management model. However, it functions by following the route map defined by the
institutional Development Plan. The university has specialized staff regarding knowledge management but there are communication issues and power conflicts that represent an obstacle not only for the management efficiency, but also, for the effectiveness in the development of innovation strategies in the educational field, and its display inside and outside the institution.

5. In order to strengthen the innovation processes of the academic institution, it is necessary to imagine and structure its administration in a flexible manner, so that its performance can be suitable to the specific academic requirements of every education activity developed in the institution. The particularities of every program and discipline must be taken into account, without ignoring their normative and organizational parameters, but in general terms, the administration of the institution must work in favor of the academia and not vice versa.

6. The academic community who participated in this research acknowledges the leadership of the directive board. Nevertheless, there are no evidences in the institutional documents that indicate that this leadership is focused on the promotion of educational innovative activities.

7. Regarding the Control administrative phase, the academic community points out that the institution has quality control systems, but they are focused on the control of administrative processes oriented to efficiency in a strict administrative and economic sense. There is no evidence that the university performs control or follow-up to the evolution of the teaching-learning processes, less to the impact of the inclusion of educational innovations in the training process.

8. The university performs innovation processes but these are not easily displayed or visualized inside or outside the institution. This situation could be improved by creating explicit policies and regulations regarding innovation. The university has physical and human infrastructure, which is strong and develops teaching, research and extension activities that clearly contribute to the progress of higher education in the country.
9. Professors have a big portion of the responsibility when it comes to the incorporation of innovative methods in their teaching-learning experiences. However, in this institution, there was no evidence indicating that training programs for professors are specifically oriented to educational innovation processes at a pedagogical or technological level. The professor must be trained and motivated in order to promote the educational innovation inside the classrooms.

10. The physical and technological infrastructure of the institution must be strengthened with the objective of generating interaction scenarios between the members of the academic community. This can contribute to an improvement of the teaching-learning processes inside the institution.
References

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