

## Educational Management with Technology Support

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### Summary

The paper deals with basic aspects of educational management and particularly about educational networks and their impact on quality. It highlights the main aspects that affect educational management in private education in Guayaquil, for which scientific methods were applied. The general scheme of the network is presented and its components and the main actions contemplated are described. The network constitutes an instance of cooperation, articulation, development of actions, orientation, exchange and reciprocal help between educational institutions, within the framework of the actions assumed by Ecuador to raise the quality of educational management and is aimed at optimizing human resources and share knowledge, equipment, infrastructure and educational material with the intensive use of technology. One of its purposes is to create a space to facilitate the exchange and dissemination of experiences in the perspective of a voluntary collaboration of the institutions involved. The proposed network relies on information and communication technologies and especially on the web 2.0 philosophy to facilitate communication between all the actors in the process, which is essential for its effective functioning. In the four and a half years, since the REDEI network was created, satisfactory results have been achieved in the actions of all the groups and as a consequence of the network as a whole.

**Keywords:** educational network, management, technology, quality, knowledge management.

### INTRODUCTION

Every day education management becomes more important to achieve quality, efficiency, effectiveness, equity, and inclusion, according to the conditions of each institution. The relevance and magnitude that educational management has gained in recent years, especially with the use of technology, has stimulated the development of processes that help to guide work and pedagogical and andragogical practices towards compliance with current social demands., that is why it is often said that educational management is one of the fundamental ways to improve education.

An efficient management of education in the XXI century requires that educational institutions, in addition to promoting the use of Information and Communication Technologies (ICT), manage strategic changes in the organization that facilitate the adaptation of this to the educational demands of the 21st century [1]

Taking into account the studies carried out, the current situation of educational management in Ecuador and in particular in the

environment where the proposed network is developed (Guayaquil), the situation presented by the institutions that are part of it, the currents of thought on the role of networks in education and the best practices that are developed internationally, the REDEI network is created to improve the quality of educational management in particular centers in the city of Guayaquil.

Knowledge management must become a practical discipline that helps improve the internal management of organizations. For universities there are two key aspects linked to knowledge management, which in turn are directly interrelated [2]:

- The creation of propitious conditions in the university scenario.
- The formation of knowledge managers for the future, endowed with the appropriate values

The management of educational organizations based on shared leadership, on teamwork, on flexible teaching practices that address the diversity of students, on the evaluation for continuous improvement and participatory planning, which promotes educational innovation, contribute to be established as an Intelligent Organization [3]. The network created has among its missions to promote and improve the use of Information and Communication Technologies (ICT) in the institutional management and educational practices and strengthen knowledge management to achieve greater socialization of knowledge and good practices and this favors the quality of education.

Among the benefits that can be achieved by conducting an efficient management with ICTs are: major socialization of the knowledge, more effectiveness of management, more effective technology monitoring, permanent checking of results in relation to the strategies proposed, improvement of document management, time reduction and more effective decision making.

### MATERIALS AND METHODS

To justify the results and the considerations that are exposed in the article, quantitative and qualitative methods were applied, among which are the Ishikawa technique, the interview and the focus groups. A diagnosis was made to assess the state of the use of social networks and in particular the educational networks with the use of technology in Guayaquil.

This diagnosis was fundamental because it coincides with [4], when they state that it is the process by which an analysis is carried out to look for information that helps determine the current situation of the organization and detect its areas of

improvement. Through the diagnosis, the aim is to focus and evaluate a set of variables that play an important role in understanding, predicting and controlling the behavior of a given phenomenon.

#### a) Application of the focal group

For the application of the focus group technique, 9 specialists were selected in subjects related to the development of educational networks. This technique was applied on 3 occasions, one to identify the main causes in the deficiencies of the educational management in the private education in Guayaquil and in the other occasions to evaluate the contribution of the educational networks and in particular the REDEI network. Among its main results are:

#### Application of the Ishikawa technique

As part of the diagnosis made, this technique was applied to evaluate the main aspects that affect the deficiencies and / or inadequacies of the educational management in private education in Guayaquil. These data were obtained from the realization of the focus group previously, the documentary analysis and the conduct of interviews with seven professors from the institutions that are part of the network. A Ishikawa diagram was drawn up grouping the deficiencies and insufficiencies highlighted in 4 fundamental causal variables:

- Weak preparation of teachers and managers.
- Limited quality control.
- Poor exchange and collaboration between institutions.
- Knowledge socialization.

Two of them are treated as independent variables in the development of the research. All this process showed that there is no methodological support for educational management and that the use of technology is very limited.

The result of this diagnosis reflects the convenience of creating an organic grouping of educational institutions that promotes the exchange of information, the use of ICT, the management of knowledge, the realization of joint activities, that promote

spaces for collective reflection, that generalize good practices, saving material and financial resources, among other aspects, which will contribute to increase collaboration and the socialization of knowledge and as a consequence to improve educational management and thus achieve a more efficient operation of institutions, better use of resources and consequently achieve institutional growth. One way to achieve this is with the creation of a network to improve the quality of educational management in particular centers in the city of Guayaquil.

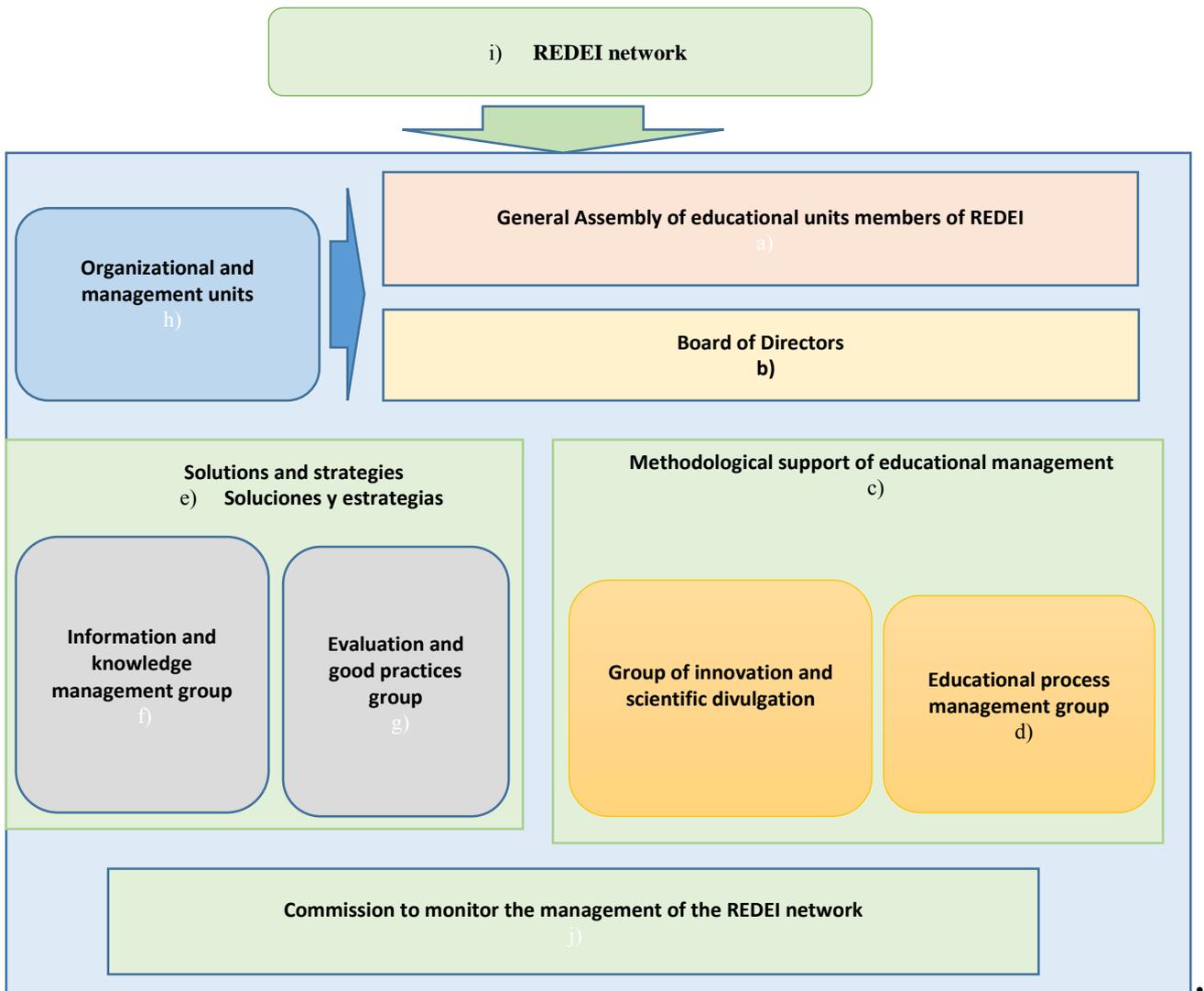
## RESULTS AND DISCUSSION

The REDEI educational network is a group of Educational Institutions that includes early and maternal stimulation, up to the third and fourth level university education, in order to obtain competitive advantages of an economy of scale, as well as to be able to count on an adequate ideas interchange academic experiences and administrative, to establish, unify, standardize and validate procedures, methodologies, curricula and other organizational, pedagogical and andragogic processes within the education system, tending to continuously improve educational management, educational offers and to provide students with quality education.

REDEI has among its main purposes to promote reflection, systematization, exchange and dissemination of innovative educational experiences in the country, the intensive use of technology, thus contributing to institutional growth. The model of the REDEI educational network is composed of seven institutions of initial, basic and baccalaureate education and three of higher education. A vital axis of the network is the systematic adaptation of educational management with the use of ICT associated to the reality of the socio-cultural environment and develop their actions in the educational dimensions that are required in this work (for example, local development issues).

The REDEI educational network is based on pedagogical and technological principles such as:

- The linking of education with life, the social environment and work in the process of education and personality formation.
- The intensive use of technology



**Figure 1.** Basic structure of the REDEI network

The unit of the instructive and the educational in the teaching-learning process.

- The unity of the affective and the cognitive in the process of personality formation.
- The unity between activity, communication and personality.

The whole design of educative network is aimed at the socialization of knowledge, the collaboration between institutions and the intensive use of ICT and thus be able to improve the quality of educational management provided by private institutions.

**Structure of the REDEI network**

Based on the diagnosis made and taking elements from social networks, information networks, library networks and information units, information and educational information,

knowledge networks and educational management networks, among others, a territorial red that incorporates concepts from [5] who stated:

"The proximity to the territory and the social commitment of socio-educational agents must have a new tendency in school, in socio-educational work and in the development of the community" (p. 5).

The REDEI network is based on a basic structure which is represented in figure 1. It is flexible, so it can be modified if the conditions of the user of the groups, the board of directors or the general assembly of members of the network want. It also includes the general functions of REDEI, as well as those of each one of the groups that comprise it and of the Commission for monitoring the management.

From the formulation and implementation of solutions and strategies to strengthen the socialization of knowledge, the intensive use of ICT and collaboration between institutions, favoring the use of people's knowledge, as well as that

generated by the activity of the organization (effectiveness), the information and knowledge management groups and the evaluation of good practices are dealt with. Knowledge management is the process of managing knowledge to identify, locate, acquire and use existing knowledge resources and discover new opportunities. In this process, the socialization of knowledge is essential to make this valuable resource reach all those who need it.

The administrative and management units are occupied by saving financial and material resources (efficiency).

The main general functions of the REDEI network are presented below:

- a) Ensure compliance with the principles and premises established for the network.
- b) Increase the use of technology in the management process.
- c) Promote reflection, the socialization of knowledge and collaboration between institutions.
- d) Establish the policies that promote and guide the application of research in the education system, as well as the dissemination of scientific results.
- e) To manage joint research projects, identify opportunities to investigate, systematize experiences and strengthen alliances at the regional level.
- f) Ensure that the member institutions of the network comply what is established in national, regional and local educational policies.
- g) Manage, organize and implement the educational resource center that contributes to the knowledge socialization. In this process of socialization of knowledge, the user becomes the protagonist thanks to the change of technological paradigm, since with the development of the Web, in particular Web 2.0, users are given the role of creator and content evaluator, facilitating and promoting their socialization.

This ease of interaction between users who generate content and valuing applications and services to those who find previously unknown functions, can be useful for the educational management of institutions. For this it is essential that knowledge is generated the more collaboratively better, with the contribution of all the agents involved.

Assuming transformations in higher education to respond to the demands of the knowledge society means, beyond the acquisition of technology and the offer of programs, cultural changes to meet demands critically, which requires intensifying training programs, updating and improving the university professor and developing policies to increase the population's access to the resources provided in the ICT era [6].

## CONCLUSIONS

The diagnosis made based on the study of the theoretical foundations of construction and educational networks and their functioning and the evaluation of national and international best practices served as the basis for proposing a comprehensive and integrative education management network to raise the quality of educational management in private education, within the general education system of the city of Guayaquil.

The proposed network relies on ICT and especially on the web 2.0 philosophy to facilitate communication among all actors in the process, which is essential for its effective functioning.

In the four and a half years since the REDEI network was created, satisfactory results have been achieved in the actions of all the groups and as a consequence of the network as a whole.

The definition of the basic structure and functions of each element that makes up the REDEI network facilitates the work of monitoring and continuous improvement of its functioning and therefore is a guarantee of the improvement that occurs in educational management.

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