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An Educational Management Information System to Support Institutional Planning at the University of Colima

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Abstract

This research work present an Education Management Information System designed for the Department of Institutional Planning and Development at the University of Colima, this system allows the gathering of relevant information related to the institutional management indicators with a suitable interface to its users in order to simplify and reduce the time needed for management the University information. Usability testing of our system showed high user satisfaction.

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1. Introduction

Educational planning, which is responsible for establishing the goals and objectives of education, had growth rapidly in Latin America. This is because in the early 90's started the interest in the systematization of indicators that encourage decision making, this information is gathered from an Education Management Information System (EMIS).

There are evidences that the education planning allows a solid structure to expedite the establishment of goals and priorities, facilitates the creation of guidelines for the expansion of the educational system and prevents the neglect or misuse of resources (International Institute for Educational Planning, 2010).

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The work presented in this paper aims to develop an EMIS called e-Planea, which will perform the gathering of relevant information related to the institutional management indicators at the University of Colima.

2. Background

Efforts to optimize the quality of data and available information to improve the educational system and support decision-making have occurred for a long time. The EMIS began with the rise of systems programming in the 80's with projects in many countries to compute the annual school census and other administrative routines (Cassidy, 2005).

An EMIS has as a function to collect and analyze management indicators related to the education sector, and aims to support the processes of strategic planning, resource assignation, monitoring, policy formulation and decision making in Institutions of Higher Education (IHE). (International Institute for Educational Planning, 2010).

Currently, the University of Colima also makes the collection of information relevant to the indicators of educational management.

To accomplish this, the University of Colima uses the annual reports as one of its instruments for data collecting and monitoring, this for high schools, colleges, research centers and departments that constitutes it.

This process is performed by the Department of Institutional Planning and Development (DGPDI for its acronym in Spanish) through the distribution between dependencies of files in word processor format to be filled with the required information and then the collection of such files is done through e-mail, which are analyzed manually to formalize the information.

Organize all these files and keep them updated is a big problem. Is a must to take proper coordination between the planning advisors (who are employees of the DGPDI) and the various dependencies and schools (both higher and middle level) with which the University has.

After gathering all this information a review must be conducted in order to make decisions to guide the educational planning. This step is very complex and time consuming due to the enormous amount of data collected in multiple files, which usually have several versions.

Carry out the processes of data collection, management and analysis is becoming a complex task to perform, because is a not systematized process, so it becomes an open problem within our institution. This situation is optimal for the development of an EMIS.

The development of an EMIS will benefit the DGPDI, allowing information visualization quickly and organized, because this department is responsible for the educational planning process of our University.

3. Related work

The EMIS have been widely used in Latin America (eg Colombia, Chile and Mexico) of which have been experiences of successes and failures. Here are some of these cases (Cassidy, 2005).

Colombia (1999 - 2003) The use of information technology enabled them to bring significant financial savings and open 240,000 places in schools, of which 120,000 were the result of efficiency, and did not require hiring more teachers.

Also the website of Mexico City provides geographic information, but it is not easy to use, besides that the help and information are very limited.

Chile in the 80s developed a system that facilitates the presentation and analysis of results allowed the comparison between schools in the municipalities. Provides detailed reports to compare the performance between schools within the community, region or nation. It is also possible to compare schools based on