

Impact of the Implementation of a New Information System in the Management of Higher Education Institutions

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Abstract

Those responsible for management in Higher Education Institutions require real-time Information Systems, which provide reliable and well-presented information, while helping them in this management and in decision-making. The financial information, emanated from these Systems, becomes a basic input, since the financial results of a company now become the most used and relevant reference of the actions of its leaders. In this article, we present the different Modules that are used for university management, Modules that have an Information System in their administrative and financial component —Budgets, Financial Accounting, Treasury, Payroll, Purchases, Inventory, Payments— and, also it describes the most outstanding functionalities of each Module. In order to determine the impact of the implementation of the System in the Corporacion Universitaria del Caribe—CECAR, the metrics of the ISO/IEC 25010 quality model are used, in terms of the achievement of each User, to determine the effectiveness, efficiency, satisfaction, utility and flexibility. The results show the impact of the System on the administrative and financial dynamics of the Institution.

Keywords: university management, Information Systems, decision making, financial execution control, change management

INTRODUCTION

The internationalization of education has resulted in different institutions and universities providing their services throughout the world, revolutionizing access to knowledge and new contexts and challenges of education. This has led the Higher Education Institutions (HEIs) to rethink and change their management and administration forms, in order to survive and compete in the current capitalist world, with new mechanisms of integration of Society-Knowledge.

To address these new challenges, HEIs must improve their decision-making processes, integrating and analyzing all available information to optimize resources, provide a quality service and increase the relevance and permanence of their programs. Therefore, Information Systems should be implemented that provide a wide range of data, with information aimed at students, teachers, researchers, graduates, the community and the administration and management of the institution. The Information System must,

above all, allow to evaluate, analyze and solve different problems, as well as the effects of internal educational actions and on society[1].

Currently, the conception of Information Systems in different organizations has changed, given that today it is used more as a support tool in decision making than as a simple record of historical data. This is indicated by the different hardware and software marketing documents: *"the information Systems are gradually leaving the 'back room' to which they have been relegated and passing to the direct interaction rooms of the executive levels. The information and technology used to support their acquisition, processing, storage, recovery and dissemination have acquired strategic importance in all types of organizations and also in education at all levels of the System, whether public or private, and whether they plan, coordinate and evaluate as if they execute educational actions directly, ceasing to be elements that only had to do with operational and administrative support or that served to comply with the stipulations of a regulation, norm or program"* [1].

Traditional Information Systems

The Information Systems that are normally used in companies in the education sector, have focused on obtaining basic information for contact and monitoring of students and teachers. The information stored has not been analyzed and is, in most cases, backward, disorderly, repeated and not reliable or complete. This is the main shortcoming of current Systems: not providing information for the decision making of an institution.

Information Systems, at the analytical level, have maintained an evolution over time, which has consisted in responding to changes in business dynamics [2]. This is how, initially, for decision-making there were summary reports and ERPs, then answering questions such as "what happened?, why did it happen?, what can happen?, what is happening?, what we want it to happen?" And, in this way, evolving to new analytical tools, datamarts, KPIs, predictions with predictive modeling, dashboard, data governance, real-time analysis, scorecards, decision automation, corporate KPIs, business governance, collaborative processes, globalized services, Global KPIs [3]. Figure 1 shows in detail the evolution, at the analytical level, of the Information Systems.

