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INFORMATION SYSTEM - THE PROJECT ELABORATION

Adelcio Machado dos Santos

PhD in Engineering and Knowledge Management (UFSC). Post-Doctorate in Knowledge Management (UFSC). Professor and Researcher at “Universidade Alto Vale do Rio do Peixe” (Uniarp). Lawyer (OAB/SC, number: 4912), Administrator (CRA/SC number: 21.651) and Journalist (MTE/SC, number: 4155)

Florianópolis (SC) Brazil

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Abstract: This article, based on the importance of information for today's society, has as the theme Information Technology (IT) focused on the educational context, intending to formalize guidelines for the development of an Information System project applicable in a school. IT makes room for a new "era", the era of knowledge and information, breaking with the previous paradigm of gradual and predictable changes. Organizations need to put aside the gradualist view regarding the changes that permeate the world reality and markets, understanding that the new situation is one of rapid and inconstant transformations. Decisions need to be adopted very quickly, in times of fierce competition, since postponing decisions can cause enormous losses due to the squandering of opportunity. Thus, the fate of an organization can be profoundly affected by its technological strategies.

Keywords: Information technology, school.

INTRODUCTION

The high costs incurred in the development and adoption of new technologies and their rapid obsolescence greatly increase the risks involved. The application of IT represents a profound change in the organization of society and the economy, consisting of a global phenomenon, with a high transforming potential of social and economic activities, since the structure and dynamics of these activities will be, to some extent, affected by the available information infrastructure.

Knowing that IT has developed more and more, it is necessary to adapt organizations to new technologies, anticipating their impacts in the organizational context.

Thus, the research problem consists of how to develop an Information System model that can be implemented in a school. In other words, the problem lies in the elaboration of a viable technological model, with a low level of obsolescence, which is based on a coherent

technological decision and which does not cause damage to the progress of educational activities, but on the contrary benefits the entire structure of the school, facilitating the management of school functions. To do so, it will start with proposals related to information systems that were developed for business organizations, adapting a model to the school reality.

GOALS

GENERAL GOAL

To develop an Information System model that can be implemented in a school.

SPECIFIC GOALS

The following specific objectives were established to facilitate the achievement of the general objective of the study:

- Explain the importance of IT application in an organization;
- Point out the impacts of IT in the context of organizations in general;
- Check the importance of strategic planning for the application of IT in an organization;
- Develop an Information System model for a school.

JUSTIFICATION

In a competitive and globalized world, where information becomes an important competitive tool, it is essential to adjust the structure of organizations, regardless of whether or not they have a profitable purpose. Information constitutes precious capital, a structuring factor and a management tool. Based on the new information paradigm, the adoption of information systems is a necessary condition to guarantee the organization's competitiveness and survival. Thus, through the implementation of information systems in the structure of the school, it is possible to

facilitate the circulation of information and the carrying out of the work of professionals working in the area of education, guaranteeing the sustainability of the business.

Thus, the present study is justified, as an Information System model may provide greater integration of the different functions developed in the educational context, providing a broad and integrated communication network, complete and secure data, software integration, among other facilities. With this, the management of business processes within the school will become much more efficient and effective.

In addition, this work is also justified due to its possible contribution to highlight the importance of developing information systems appropriate to the educational reality. Education, in Brazil, is still a field that is very alien to technology and the implementation of Information System models could significantly improve the quality of teaching.

EPISTEMIC FRAMEWORK

Organizations depend on information of different natures to achieve their goals. With regard to applicability in different organizational segments, the information can be classified into:

- institutional level information: it allows the institutional level to observe the variables present in the external and internal environments, in order to monitor and evaluate performance and subsidize high-level planning and decisions;
- intermediate-level information: enables the intermediate environment to observe variables present in the external and internal environments, monitor and evaluate its processes, planning and decision-making at a managerial level;
- operational level information: allows the operational level to carry out its activities and tasks, monitor the geographic space

under its responsibility and support planning and decision-making at the operational level.

For Rezende and Abreu (2003), information is all data worked, useful, treated, with significant value attributed or added to it and with a natural and logical sense for those who use the information. Data is understood as an element of information, a set of letters, numbers or digits, which, taken in isolation, does not convey any knowledge, that is, it does not contain a clear meaning. From the moment that information is “worked on” by people and computational resources, enabling the generation of scenarios, simulations and opportunities, it can be called knowledge.

Davenport and Prusak (1998 apud BEAL, 2004), conceptualize knowledge as a fluid mixture of condensed experience values, contextual information and experienced insight, which provides a structure for the evaluation and incorporation of new experiences and information.

In this sense, IT can be conceptualized as a set of technological and computational resources for the generation and use of information. IT is based on the following components: hardware and its peripheral devices; software and its features; telecommunications systems and data and information management. All these components interact and require the fundamental component that is the human resource, without which IT would not be functional and useful.

For effective IT management, according to Rezende and Abreu (2003), a feasibility analysis is fundamental (costs, measurable and non-measurable benefits, and respective results), also considering the perspectives of economic, financial and political-social reality of the organization with the state of the technologies available in the market.

INTRODUCTION TO INFORMATION SYSTEMS

There are different ways of classifying information systems, and IT professionals tend to categorize them according to the technologies employed: batch processing systems, transactional systems, client-server systems, and Internet-based systems are some of the commonly encountered categories. Another common classification uses the profile of the main group of users as a classification parameter: executive systems, decision support, management systems, tactical systems and systems focused on operations (SORDI, 2003).

Also according to Rezende and Abreu (2003), an IS can be defined in several ways, and it is worth highlighting two concepts here. In the first place, an IS can be constituted as a report of certain systems or departmental units, delivered and circulated within the organization, for the use of the components and the organization itself. In this sense, the IS is a report of different processes to facilitate the management of the company, that is, a set of procedures and norms of the organization, establishing a formal structure.

A second definition of the IS, starts from the fact that it consists of a group of screens and reports, commonly generated in the Information Technology Unit that has most of the data processing resources and manages the company's information technology and its resources, generating useful and timely information for users. From this perspective, the IS is a set of software, hardware, human resources and respective procedures that precede and follow the software, involving the input, processing, output and feedback of information.

THE IMPACT OF IT ON THE ORGANIZATION

According to Rezende and Abreu (2003)

an efficient IS can have a great impact on the corporate strategy and the success of the company. This impact can benefit the organization, customers and/or users, and any individual or group that interacts with IS.

Among the benefits that organizations seek to obtain through IS are: support for fruitful decision-making; added value to the product (goods and services); better service and competitive advantages; better quality products; business opportunity and increased profitability; more information security; improvement of systems, efficiency, efficacy, effectiveness, productivity; reduced workload; reduction of costs and waste; control of operations, among others (REZENDE E ABREU, 2003).

In the understanding of Graeml (2003) ten intermediary business processes can be pointed out in which most of the impacts provided by IT affect, as means to achieve organizational objectives, namely: organizational efficiency, organizational effectiveness, coordination between companies, relationship with suppliers, customer relationships, competitive dynamics, marketing support, product and service improvement, production savings, and business innovations.

The installation of an information system, for Rowley (2000), basically has four objectives: 1) to enable the control of a greater volume of work, as a result of a global increase in the amount of documents or dimensions of the organization; 2) achieve greater efficiency, as computer-stored records can be more accurate and accessible, as the workflow is more systematic; 3) offer new services or additional products, facilitating the reorganization and selection of records to produce different outputs; 4) allow the sharing of records with other organizations or branches, favoring the process of cooperation and decentralization.

IT STRATEGIC PLANNING

Rezende (2002) observes that IS and IT planning is the process of identifying computer-based applications to support the organization in executing its business plan and achieving its organizational objectives. IS planning is a resource used to assist business strategic planning, identifying IS opportunities to support business businesses, developing information architectures based on user needs and developing IS action plans over the long term. deadline.

The implementation of an Information System requires advance planning on the part of the organization, which normally includes: a) background information about the institution; b) details about the resources to be provided by a computerized system; c) details of the environment in which the system will operate; d) e) system implementation schedule; f) information regarding any special limitations, such as the schedule issues; g) information regarding expressions contained in the contract or its form (ROWLEY, 2000).

In this sense, Beal (2004) ensures that the strategic management of an IS can be divided into stages that traditionally make up any administrative process:

- Planning: the organization develops a corporate strategy and information and IT strategies articulated among themselves, planning information objectives and goals for a given period and defining the means to achieve them.
- Execution: the information and IT strategies constitute the main reference for the entire information management process of the information systems, infrastructure and IT and the skills of the IT team.
- Assessment and corrective action: the organization makes use of assessment systems to analyze the performance of IT

information strategies, checking whether the actions are being carried out, whether they bring a positive result and whether they remain appropriate to the context. The identified problems need to be submitted to analysis so that the best solutions can be elaborated and implemented.

The process of planning the implementation of an IS must be initiated through a diagnosis of the situation regarding corporate information and available information systems, argues Beal (2004). In this diagnosis it is worth investigating:

- whether the available information and systems are sufficient to help achieve the organizational mission and objectives;
- what are the gaps in existing information, in relation to the competition;
- what are the information dysfunctions (duplication of data, inconsistency of information coming from different sources);
- what are the opportunities for improvement, that is, areas, processes or activities that can be improved by providing information;
- what are the informational heritage protection mechanisms to be implemented and/or improved.

In short, IT strategic planning is a process of organizing and executing planned changes, developing, training and installing resources defined for systems, for technologies and for users and managers (REZENDE, 2002).

METHODOLOGY

Every research starts from the identification of a problem, becoming important to the search for a solution for it. Therefore, it is essential to follow certain methodological procedures that help to develop and expand knowledge about the subject in question,

which in this case includes the development of an Information System model aimed at school application. Andrade (1991, p.111) defines methodology as “a set of methods or paths that are followed in the search for knowledge”.

The methodology adopted for carrying out this study is based on research or literature review. The bibliographic research to be carried out aims at building a model suitable for the school reality, based on the study of other proposals aimed at business organizations. According to Rauen (1999), the bibliographic review comprises the survey of the bibliography related to the subject in question, whose purpose is to base the research as a whole.

According to Gil (1994) the bibliographical research is the one developed from already elaborated material. The bibliographic

study method consists of theoretical study, which is carried out with the aim of obtaining knowledge from already published information. In this way, this type of research involves the examination of human productions recorded in books, articles and other official documents in order to carry out a survey and analysis of what has already been produced on a certain subject.

Lakatos (1992) also adds that the bibliographical study allows not only the resolution of problems already known in the scientific environment, but also the exploration of new areas, where the problems have not yet been fully clarified. Thus, the present study is not limited only to the recapitulation of the concepts contained in the researched bibliographical sources, as it intends to offer some additional contribution to the subject in question.

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