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DECISION SUPPORT IN MANAGING INFORMATION AND KNOWLEDGE IN INSTITUTIONS

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Abstract

Technology advances develop and spread their use in all areas of life, information systems and their technologies develop at a rapid pace and have multiple applications at all levels and activities. Information produced by institutions is considered an "essential" resource for institutions of all kinds.

The emergence of a threat and problems in the success of many applications of information systems in organizations is not the cause of technology, but insufficient attention to ((organizational culture - operations management - training in organizational practices - the quality of information used - information policy and sensitivity)) and in order to face this type of threat Or the problems facing organizations in using technology tools alone without organized management to handle conflicting organizational information.

The reason for these threats and problems may be attributed to the expansion of globalization and the different views of the owners and heads of institutions, and this is a result of their different environments and failure to extract data and manage operations properly. Researchers have recently paid increasing attention to dealing with intractable problems by creating ways to assist decision-makers. There are institutions that pay millions of dollars to develop information technologies (extract, organize, and retrieve) in order to increase production efficiency, but there are still many institutions facing the difficult task of integrating the output of these technologies to improve knowledge exchange and decision-making.

In this study, we focus on implementing an ERP system, which is recommended as a tool to assist decision-makers in enterprises by establishing the concept of a strong technology infrastructure that plays a "critical" role in helping organizations in general collect and analyze data to improve results. The barriers to the successful application of technology and information systems in organizations can be attributed to a narrow understanding of how knowledge management and information systems technology are concerned.

Also, in this study, we will focus on clarifying how knowledge management (KM) is within a large organizational context, and it can be used to examine the overlap and continuous relationships between people, processes, technology systems and the application of knowledge management (KM) in order to gain a comprehensive, integrated and reflexive view and the impact of knowledge management. In information systems for institutions, which leads to improved decision-making and increased production.

Key words: knowledge management, knowledge management systems, information systems, decision support.

1. Introduction

Information systems nowadays play a very important role in improving the performance of enterprises and their increasing competitiveness. Therefore, it is imperative for organizations to decide what are the most important processes and core competencies to be supported by the information system, and which type of information system should be implemented and that matches the requirements of the enterprise. While the latest trends in organizational development have demonstrated the importance of knowledge management, there is no comprehensive definition of knowledge management or knowledge management system. Knowledge management systems are mostly based on existing information systems, and thus it is difficult to determine when the information system becomes a knowledge management system or what kind of features are included in the knowledge management system and not in the information system.

Information is viewed in our present time as a real strategic resource because institutions are subject to strong pressures and live a reality characterized by continuous transformations, which may sometimes be surprising and cannot be confronted with the required speed. These environmental conditions surrounding the institutions are due to a set of factors, including the globalization of markets, Competition pressure, rapid development in technology, and customer requirements that need sufficient balance from research and development programs to respond to them in a better and faster way than competitors. Therefore, institutions wishing to remain in the light of these complex environmental characteristics must strive to anticipate changes through exploratory listening to their surroundings, Which is the essence of strategic vigilance that seeks to avoid potential threats and seize possible opportunities, and in this context, the information system works to provide the appropriate information at the right time so that the vigilance system can benefit from it effectively, and the importance of information systems lies in monitoring the weak signals that are sent by the surroundings that may It predicts sudden changes that managers must prepare for and take the strategic decisions necessary to ensure continuity Their institutions are within a competitive space and rely

on plans and programs that do not only react but rather anticipate and explore, allowing to reduce response time and enhance the perceptual sense [1].

In the contemporary business environment, managers are increasingly realizing that the ability to create (or obtain), preserve, store, protect and disseminate knowledge is critical to obtaining the competitive advantage of an organization. In this context, Knowledge Management (KM) emerged as a system aimed at enabling organizational members to acquire, share and enhance knowledge collectively to achieve business objectives [2] [3]. As such, the discipline defines and sets directions for the application of a dynamic and continuous set of processes and practices related to and embedded knowledge in individuals, such as well as in physical groups and structures [4].

Most knowledge management initiatives involve implementing one or more supporting information systems [5] commonly referred to as knowledge management systems (KMS). KMS is designed and developed to support and enhance the organizational processes of knowledge creation, storage/retrieval, transport, and application. Thus giving the members of the organization the knowledge they need to make their decisions and perform their tasks [3]. The expected benefits of knowledge management systems are usually associated with improvements in flexibility, innovation, and responsiveness, decision-making, and productivity [6].

2 Data, information, and knowledge

Since data, information, and knowledge play a fundamental role in the information system and the knowledge management system, analysis is one of the most important things that play a fundamental role in the practice and management of operations and the analysis is always in the first place "When any procedure, the terms data, information, and knowledge are often used interchangeably. therefore both data and information fall into the information management system second so that users do not interpret the data except when it is used.

User contexts and the information synthesis process make it difficult for users to determine whether a piece is a data or even knowledge. Although it may only take a Seconds to define what those three words mean, we all agree to switch from data to clear, more useful information for users. Structuring and managing knowledge assets in an organization is crucial for all organizations [7].

Data represent the facts that are generated when operations are executed. They constitute a set of private and objective facts about an event or simply the orderly record of a transaction [8]. The data can be stored in a structured relational database system or in an unstructured document management system and include non-textual information, such as audio and video. Data is collected, stored, compiled, analyzed, and interpreted [9]. The terms data and information are often used synonymously (such as information and knowledge). In practice, managers distinguish between information and data intuitively and describe the information as processed data and information

containing substance and purpose. There are various ways in which meaning can be added to data in order to convert it into information. Data becomes information through condensation and processes, context setting, math, classification, and correction [8]. What qualifies that information is useful is self-judgment. Information moves in both electronic and solid form, through electronic and social networks.

The main link between knowledge and information is likely better expressed in the generally accepted notion that knowledge in a business context is nothing but actionable information. Knowledge is created when information is combined with context and experience. Knowledge is a flexible blend of framed experience and values, contextual information, expert insight, and intuition on the ground that provides an environment and framework for evaluating and integrating new experiences and information.

3 The concept of knowledge management

Both "knowledge" and "knowledge management" are considered vital topics of high and rising importance in the knowledge era in which we live and which have been applied in knowledge management and business. The importance of knowledge management has increased due to the clear importance it has achieved, especially in competitive opportunities. Knowledge ability is seen as an important resource, knowledge management is a way to gain a competitive advantage. Most business organizations today are transforming into knowledge-based institutions, and the most important skills of managers today are the skill of knowledge management [10].

4 Knowledge Management Approach (KM)

The KM approach is the conscious integration of people, processes, and technology involved in the design and implementation of an enterprise's intellectual infrastructure. It includes not only the design and implementation of management information and systems but also the changes needed in the organization of employee behavior and the organization of enterprise policy. This is what employees within an organization can develop the ability to gather information and share what they know, leading to work that improves services and results.

The KM approach can be used to provide educational institutions with a style that focuses their strategies and practices and makes the most of their energies and resources [11]. It also provides a framework that can be used to focus attention on three specific areas — people, processes, and technology, as a way to illuminate the organization and address obstacles related to issues of using and accessing information. These three areas operate as an integral part of ongoing organizational dynamics and institutions need to develop strategies to define how the organization and institutional structures are. Processes can give shape to how people use both technology and information in meeting their information needs. The basis of KM is the process of shaping, supporting, and managing this endeavor through a delicate balance between the interest in

organizational processes, the people who participate in them, and technological investments.

5 Management information systems

Management Information Systems can be defined as information systems that provide information to users with similar needs.

The main objective of management information systems is to provide managers with the information they need to make decisions and solve problems. Management information systems include summary indicators and periodic reports of data resulting from the basic transactions of transaction processing systems [12].

Management information systems are also known as computer-based systems that make information available to users with similar needs, and are produced from data in databases by two types of programs:

1- Written report programs: both periodic and special reports are produced.

- Periodic reports are coded in a programming language and are prepared according to tables.
- Special Reports, also called ad Hoc Reports. They are prepared in response to unexpected needs for information.

2- Mathematical Models:

Information is produced as a result of simulating facility operations, and mathematical models describing facility operations can be written in any programming language. However, the special modeling language makes the job easier and faster. Also, the business environment requires, when the facility interacts with other organizations and parties such as suppliers, to form inter-organizational information systems (IOS), and in this case; Management information systems provide information to IOS members as well as to users of information within the facility.

6 Information systems and their role in institutions

This section provides a brief overview of information systems and the benefits that can be obtained by applying and applying these systems

Information systems are widely used in enterprises. They provide information and thus help improve the organization's process and management. An information system can be defined as a group of components working together. These components include the equipment (or hardware) or instructions (or software) or data stored in the system or people to operate the system, and procedures for people to follow [13].

Because the processing of information can be done using the instruction manual, a broader view of the information systems is also possible. A computerized information system is just one of the information systems.

In this paper, we only consider computerized information systems. The information system supports one or more business systems that use information technology to

capture, transmit, store, retrieve, manipulate or display information. A business system is a system in which participants perform their business using stored information, up-to-date information entered by the user, technology, and other resources. The essence of the system The work (and thus the utilization of the information system) is a decision-making process that consists of steps related to time and place and has a beginning and an end, inputs, and outputs. There is a wide range of different information systems that can be categorized by:

- Number of users - individual, workgroup, and inter-enterprise.
- Methods for connecting users to information technology - directly, through a network or over the Internet.
- Supported Business Functions - Accounting, Transaction, and Manufacturing. etc.

An example of this is business process information that is a business process support system information for one or more businesses. The simplest information system supports an activity (for example, inventory systems, payroll systems, etc.), in other cases, information systems support a number of business functions. In these cases the information is transmitted automatically, thus saving time and labor that will be necessary to maintain the integrity of these jobs in the organization.

Information systems provide many advantages to the institution [14]. An example of a major benefit is information systems that not only store and process data, but also produce information, which is the basis for good decision-making. The best available information if the data is properly managed in the information system,

Another benefit is that information system operate at any time of the day or night and process data faster than humans.

7 Knowledge management and its role in the institutions

Recent trends in organizational development have shown the importance of knowledge management, along with that, knowledge management (such as business process re-engineering) is an ideal that can only be achieved with its successful implementation [15]. Knowledge management deals with various areas related to organization, people, motivation, and technology. The aim of knowledge management is to increase the efficiency of activities related to knowledge as well as the benefits gained from it. Transforming knowledge into valuable organizational assets, knowledge into expertise, and experience should be formalized. The knowledge management cycle reflects the corporate life cycle. This dynamic process often begins with finding it and gathering insider knowledge and best practices. The second step is to share and understand those practices so that they can be used. The process of adapting and applying this knowledge and practices includes new situations and presenting them to perform best practices at high levels. Knowledge management is concerned with supporting and improving these processes. These are what we call enablers. This is leadership, culture, technology, and measurement. These aspects of the enterprise environment must address the

infrastructure in order to transfer the business process and develop knowledge management in the enterprise [16].

Knowledge management has become the driving force behind some of the largest and most successful institutions in the world. It is seen as the next evolutionary step that goes beyond "enterprise learning" or "business process reengineering" and even after the "global network". It is meant to integrate them all into a higher level, enterprise-wide framework with new business roles namely responsibilities, reward systems, methods, and tools, because they are effective.

Knowledge management depends not only on information technology but primarily on the social structure of the institution [17]. Real knowledge management is a fundamentally radical and new way of creating, retaining, sharing, and enhancing knowledge about people and organizations.

8Job characteristics and potential knowledge management

As far as knowledge management processes are concerned, it is especially important to consider the extent to which the overall design of a job entails one's need and provision of the opportunity to acquire, transfer and reuse knowledge. Together, these two aspects of the work performed by an individual determine the ability to develop knowledge management activities. We argue, then, that such potentials can influence the relationship between perceived suitability and actual use of information systems in knowledge management processes. Greater potential for knowledge management in a job means that job characteristics imply a greater need to acquire, transfer, and reuse knowledge, or encourage a greater opportunity to acquire, transfer and reuse knowledge, or both. As the potential for knowledge management core to the job increases, with the right tools to engage in such processes, it will become more relevant to overall performance. Thus, a greater amount of knowledge management business potential has a greater impact than TTF on performance. Drawing on expectancy theory [18], we can relate the potential of a knowledge management job with what a person benefits from his appropriate performance. Higher potentials can be viewed as providing an opportunity for greater benefits. The use of information systems in knowledge-related activities should be viewed, then, as a means of facilitating the realization of such benefits. Nevertheless, it is reasonable to expect that the perceived possibility of deriving the expected benefits from the use of a range of systems.

It should increase with the reconciliation of the characteristics of the tasks related to the knowledge and functions provided by these systems. In this way, if a group of systems lacks the necessary functions to allow an individual to meet the knowledge-related needs of his tasks for her, it may be deemed unfeasible to invest an effort (such as time and energy) necessary to use that system to enhance his performance in activities related to knowledge acquisition, transfer, and reuse.

In contrast, if the systems are able to realize the knowledge related to the task requirements, the perceived likelihood of reaping the expected benefits from their use offsets the effort associated with their actual use. In this situation, a person tends to employ systems to know related activities more intensively, when the expected benefits associated with their performance are greater. We propose the following hypothesis:
Knowledge Management Potential (KM-POT) in the job of a person who manages the relationship between Technology-appropriate Task (TTF) and the use of Information Systems in Knowledge Management Operations (IS-KM): The higher the potential for knowledge management (KM-POT), the greater the strength of the effects of a technology Appropriate Tasks (TTF) on the Use of Information Systems in Knowledge Management Operations (IS-KM) A person's need and opportunity to acquire, transfer and reuse knowledge in his work may vary with the specific characteristics of his job. For example, business designs that give individuals the independence to make their own decisions in a variety of situations may provide them with a wider range of opportunities to apply new knowledge. This idea is in line with recent research indicating that job design may be a direct precedent for creativity and innovation, which are related to the ability to generate new knowledge and apply it to the workplace [19].

9 Proposed framework

The proposed system in Figure (1) has been implemented as a model for efficient decision-making in implementing the ERP scheme and making use of the information systems stored in the enterprise and the systems and data that are newly entered.
It is hoped that the framework improves the implementation of the current methods of revitalizing the enterprise resource scheme process. The framework combines the advantages of dynamic systems DS with the enterprise process model and trying to eliminate the negatives in legacy systems.

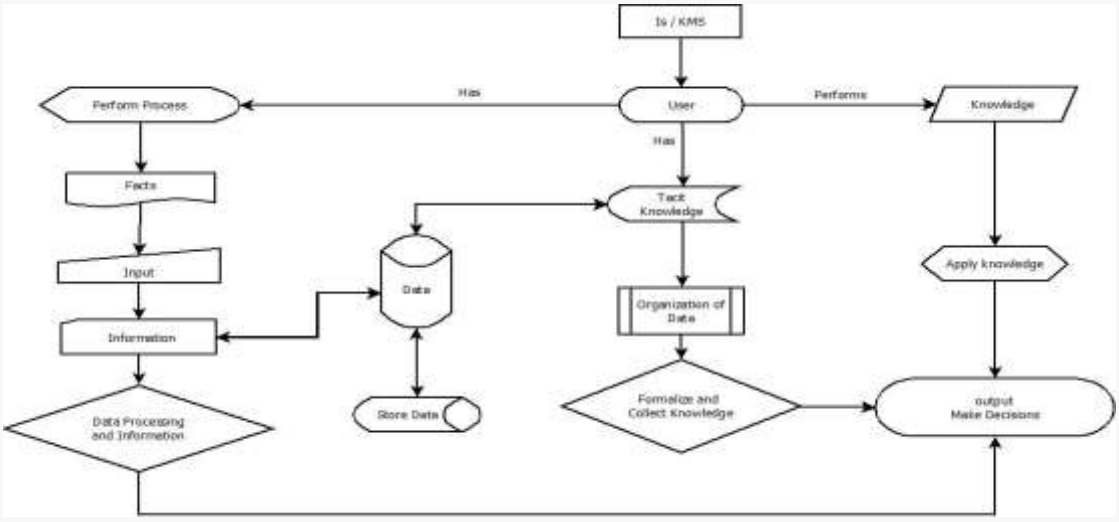

Figure 1 suggested a framework

Figure 1 describes business processes. Squares with rounded corners shaded indicate external operations performed by the users themselves (Is / Kms); The other funds are the system operations that are carried out through a computerized system, whether it is an information system or a knowledge management system that is not concerned only with the specific processes of knowledge management (creation, recognition, formalization, collection, organization, transfer and finally the application of knowledge). However, it is necessary to emphasize that the internal processes of the knowledge management system (processes 4, 5, and 6) use the general information system processes (1, 2, and 3). Thus, during the performance of the knowledge management system operations, the clear knowledge turns into some type of data or information that can be stored and processed by the information system. This confirms that the knowledge management system is always supported by an information system.

During the analysis of the information and knowledge management systems, objectives and opportunities (or benefits) and distinct problems from both systems were identified. One of the primary goals of both systems is to support a single business process, decision making. In this process, only the information system provides better information, while the knowledge management system provides an intelligent decision based on best practices, organizational knowledge, and experience at the present time very crucial for organizations facing increasing environment complexity and dynamics.

10 results

The institutions' taking into account the information resource and its good management in terms of renewing it and making it into consideration avoids falling into the trap of outdated information that may confuse the decision-maker and provide him with false ideas and impressions that may affect the and institution performance in general. Therefore, information systems have a responsibility to provide accurate and appropriate information outputs that enjoy Reliability and Credibility.

Information systems are the most important strategic asset for small and medium-sized enterprises. By providing high-quality information that is available, it helps them to improve their productivity and the efficiency of their operations at the right time, which requires that these institutions have the infrastructure to make the process of collecting, processing and disseminating information It is done in the best way and in the best of terms, by allocating material and human resources that support the function of the information system.

The most important results can be summarized as follows:

1- Information systems play an essential role in any type of enterprise, regardless of its size and nature of its activity, and this is due to its contribution to the work of institutions, support for decision-making, an increase of enterprise productivity, and support for competitive advantage strategies.

2- As a result of the diversity, multiplicity of interests, specializations, and levels in the institution, there are different types of systems that provide the information that the institution needs, and achieve integration between them, and some of them serve knowledge.
3- The main objective of knowledge management in Institutions is to provide conditions for creating, storing, disseminating, and efficient use of organized knowledge necessary to ensure a competitive advantage for the Institutions in the changing business environment.
4- Information systems that succeed in providing integrated information about important competitive variables, and the impact of these variables on the Institutions, the industry, and the market, will provide executives with opportunities to form a vision to understand the Institutions problems, the sources of threats, and the potentials of current and expected business opportunities.
5- Both information systems and knowledge management contribute to reducing costs through computerizing daily tasks, the advantages of computer applications, which can be reflected in saving time and reducing the effort spent, performing tasks at a lower cost, helping to analyze problems, and increasing employee productivity.
6- Information systems have a vital role in achieving quality requirements, as well as achieving customer satisfaction, and the efficiency and effectiveness of current quality practices can be increased by best management of employee knowledge, by focusing on knowledge repositories of the organization's operations, and on sharing the tacit knowledge of employees.
7- The roles and activities of information systems enable an understanding of the requirements of creativity while saving the time of executives devoted to supporting creativity, and the knowledge that individuals carry is a tool for generating creativity thanks to individual innovations, their knowledge, skills, and abilities.
8- There is the main point, which is the convergence of the ratios of males and females in assuming upper and middle management positions, and this constitutes a social shift in the assumption of women in managerial positions. This is thanks to the decision support systems associated with computerized information management.
9- Although the institutions use advanced technology and information systems; However, the provision of programs that have analytical and mathematical capabilities that help the decision-maker to solve various problems is still below the required standard, which affects their work, and thus; On the competitive position of the enterprise.

11 Conclusions

Companies around the world are facing increasing competition in the knowledge economy. To be competitive and successful, it is imperative for companies to renew enterprise information systems such as ERP and integrate management knowledge.

Information systems and management in the next generation of ERP with knowledge management will be more responsive to changes in the global business environment.

Organizations have two types of important assets: physical and cognitive assets managed by ERP systems and KM respectively. Implementation of both ERP and KM is highly desirable. From a corporate point of view, ERP and KM systems must be integrated to gain competitive advantages. Due to the fact that the objectives and characteristics of ERP and KM differ from one another, co-integration is a complex process.

The paper addresses information and knowledge systems. Enterprise management systems, and tries to define the boundaries between both systems. The main conclusions drawn from the analysis of the proposed system are summarized below.

Data, information, and knowledge are fundamentally different and play different roles in both information systems and knowledge management, whereas in practice these terms are often used interchangeably and knowledge is used as a synonym for information. As a result, knowledge management systems are often considered information systems under another name Usually, the knowledge of the organization is already present within the institutions. Most of the clear knowledge is handled by a number of incompatible information systems that can serve as a job-sharing platform for the knowledge management system. Whatever there is, there is a shift in the organizations' perspective in applying knowledge in management systems. Emphasis is now placed on the explicit side of knowledge management rather than the combination and integration of its implicit side.

Knowledge management is a structured and detailed approach to managing knowledge-related processes. It represents an opportunity to obtain additional benefits from within the organization in computers, databases, and networks by integrating them into knowledge management support.

Knowledge management systems:

- It became a powerful metaphor or vision for developing a new breed of information systems.
- Organize and make available important technical know-how anywhere and whenever needed.
- Requires initiative by technical managers in managing systemic knowledge in order for it to be used efficiently and effectively.
- It is operated on the basis of information (at the enterprise level) and communication infrastructure. Techniques by themselves do not constitute a knowledge management system, but rather one of the enablers, and they are very important and useful as enablers for implementing a knowledge management approach.
- Although the institutions provide the organizational climate that is compatible with the requirements for the success of the information function, this alone is not

sufficient to upgrade the position of the latter in the institution. The failure to provide expertise and human competencies of technicians and specialists in addition to not allocating an independent department for this job that has the necessary financial and material resources would That it diminishes the effectiveness of the information system even if there is a desire to do so, in addition to insufficient awareness of the need to invest in intellectual capital and subject the actors of the information system to training and training courses in order to develop their skills in institutions and the extent of their control over information sources of various kinds, and this can be explained by the lack of financial resources. And the material allocated to the information management system is an obstacle to the performance of its activities as required.

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