



Information Technology and Intelligent Systems

Zahra Haji Ghodratabadi¹, Mas'oud Iranpour²

¹University of Medical Sciences IT Specialist, Rasanjan, Iran

²University of Medical Sciences Director of Statistics and Information Technology, Rasanjan, Iran

Received: March 26, 2015

Accepted: May 17, 2015

ABSTRACT

An information system is a system for processing, analyzing, and spreading information to achieve a specific goal. Information Technology is the computers and other technologies application to work on information. Here, any types of technology whether any means or techniques are intended. Applying Information Technology in administrative agencies from the manual system to the electronic system and also promoting these systems is one of the important and consecutive stages in offices and organizations.

KEYWORDS: Information Technology, information systems, information process

INTRODUCTION

Information innovation is the set of tools and methods which collect, store, retrieve, process, and distribute data in different forms. Information is the source of humans' knowledge and insight, and Information Technology application is intended to increase the human beings' knowledge and disciplined implementation. In other words, Information Technology is the technique of human thought utilization. Optimized thought utilization is known, repetitive, and non-creative issues consigning to the machine (through the operations automatizing) and humans' thought and skills freedom to explore the unknown.

Communication world

Communication world and information production have been rapidly changing, and their convergence is being seen more than before such that information and data are transferred throughout the world with an incredible speed and available for the users. Information Technology is the computers and other technologies application to work on information. Here, any types of technology whether any means or technique is intended. Generally, working on the Information Technology has been considered mistakenly only with computer technologies, communications, and the relevant products. It should be noted that the term 'technology' is the study of how to use the human made things in achieving the goals and intentions such as services and products offering; this term does not only refer to the human artifacts. If, according to the definition, the information systems are about the data collecting, organizing, storing, retrieving, and spreading, then the information systems are a wider domain of Information Technology, because the Information Technology is about the way of using the technologies in implementing the above-mentioned processes, while information systems are about the nature, issues, and political, economic, technical, and possibility consideration aspects, system designing and managing. If the case is not limited to the information systems, information systems and Information Technology are two different fields. In order to get familiar with the effect of knowledge on development and finally increasing the per capita income for the citizens of a community two countries of South Korea and Ghana are investigated. According to the World Bank's

* **Corresponding Author:** Mas'oud Iranpour, Iran, Rasanjan, University of Medical Sciences Director of Statistics and Information Technology. z.haji@rums.ac.ir

documents, forty years ago, these two countries' per capita incomes were equal, whereas the Koreans' per capita income has gotten six times more than before. In other words, Koreans' citizens have gotten six times richer than Ghanaians or the Ghanaians have gotten six times poorer than Koreans. Based on the implemented investigation, more than fifty percent of the above inequality comes from the Koreans' successful utilization related to learning and using the knowledge. The effective and successful knowledge utilization is the main factor of economic prosperity and success in some Asian countries which is called as the "Economic Miracle."

Three main roles of the Information Technology are:

- 1) Implementing
- 2) Operational
- 3) Competitive.

Implementing role includes the auditing and monitoring activities' automation which requires an efficient context of the Information Technology. Operational role is a developed mode of the implementing role with this distinguishing aspect that includes developing and establishing a context of the Information Technology causing the automation capability of all organization's business processes. Competitive role includes establishing a series of new applied programs of the Information Technology which can be viewed as a competitive advantage in the market environment. Nowadays, the Information Technology's competitive role and basis is more attended. Thus, to utilize the Information Technology as a competitive advantage a strategic planning is required to be able to use it in organization's strategic objectives' realization.

One's business may be small, but the Internet expands their thought horizon. Any services or products being supplied, the Internet will expand the work field and makes the competition with large businesses possible as well as the customers' availability around the world who can shop from the Internet department store's showcases 24 hours a day [1]. The Information Technology is a cross-sectorial subject, i.e. a lot of institutes, organizations, and ministries play roles in the Information Technology (IT) growth, eminence, and application and each role playing is under this condition that a cross-sectorial institute assigns them their tasks. In this way, in a specific plan, the main goal—which is the IT growth according to the infrastructure development and application growth will be provided. Here, as the creator of communications' context, the Ministry of Post, Telegraph, and Telephone will have a more crucial role than others.

Office automation

Today, the IT application is observed in most of the life aspects. Using the computerized systems to perform a series of office tasks such as word processing, accounting, communications circulation, etc., is called office automation which has been designed with the new technologies and has these characteristics: availability (Web base nature), integration, management and remote monitoring, user friendly and appropriate interface, upgrade feature, and using the advanced programming languages.

Digital signature

Signature means writing the first name, the last name (or both), and/or drawing a specific symbol which shows the symbol owner's entity below the deeds and normal or official documents which ensure the transaction, commitment, agreement, testimonial, and so forth. Electronic signature has created a great change in relations and interactions; using the electronic signature and certification, the electronic texts' authenticity can be investigated and documents can be pursued. That is, although the sent messages through the Internet have not been legally valid, using the electronic certification gets legal. Certification is an electronic signed

deed which is issued by a center of electronic certification issuance for an individual or an organization. The owner of this certification can be identified and available through this certification's information. Value production is better for performance through these properties as specifying what the organization's employees know, their skills, partners and even the competitors' knowledge. Knowledge management is conveying the correct knowledge to the intended people at the intended time for decision making and better performance [2]. Knowledge is not only acquired through the organization employees' skills and information, but through its environment factors (market, competitors, industrial process, customers, products, methods, and procedures). In a knowledge-based economy environment, creation, quality, speed, and knowledge transferring are among the important and vital factors, and the intellectual capitals have become the important and vital criteria for the company's economic value. Nowadays, in most of the organizations, the management priority has changed from the financial and sources' management to the knowledge management [3].

For the first time, in 1986, Mowshowitz used the term 'Virtual Organization'. Afterwards, other authors offered various terms to explain this new form of network organizations such as virtual company, virtual work place, etc. In the literature of virtual organizations the virtuality has been defined as the organization's capability to coordinate the basic competitive advantages through designing the business processes having the added value and controlling the internal and external fields which bring superiority, and as a result higher value acquiring in the market [4]. There are generally three types of different definitions to express the virtual organization concept [5]:

- 1- Some of the virtual companies are basically called electronic organizations.
- 2- Virtual organizations are known the organizational structures which have joined together based on the mutual cooperation and in order to share the abilities, skills, knowledge, and their sources, or to provide specific items and services, or exploiting a specific opportunity. This approach emphasizes the temporary nature of the virtual organization which has been established for a market situation and then will be closed.
- 3- A combination of the above-mentioned definitions which the electronic organization concept and temporary network are used individually or instead of each other [6].

The organization's ability to participate in the virtual organization depends on a lot of internal and external factors such as organization technology, its structure and strategy, the organization management processes, its employees' skills, and the organizational culture. Generally, to change toward the virtual organization the organization's IT and communications need to be in a good level and the knowledge management activities in the organization should be implemented to create the strategic unity.

Total understanding of the organization can be generally called the organizational culture which this understanding is called the virtual culture [7].

Conclusions

In the modern world, the intelligent systems are the most important ones regarding all of the tasks' automation. The digital world has made all of the organizations electronic and all of them are responsible for familiarizing themselves with the digital world to update themselves and even progress for not being left behind. All information is transferred through the intelligent systems. Today's world has become virtualized.

REFERENCES

- 1) www.tebyan.net
- 2) Riebere V.(2001). Assessing Knowledge management initiative Successes as a Function of Organizational Culture. The school of engineering and applied science of the George Washington University.
- 3) Amrit A. (2002). The knowledge Management Toolkit. Prentice Hall USA.
- 4) Malhotra, Y. (2000).Knowledge management and Virtual Organization, Idea group Publishing, USA.
- 5) Burn J, Ash C, (2000).Knowledge Management Strategies for Virtual
- 6) Kalher, K. (2002).The virtual corporation organizational concepts and implications. Department of organization and learning school of business , university of Vienna
- 7) Burn J, Ash C, (2000).Knowledge Management Strategies for Virtual Organizations, 13(1).