Information Technology as a Strategic Resource
University of Fallujah as a Model

Dr.Abdulsalam Ali Hussein Alnoori [1]
Business Administration Department
University of Anbar
Iraq
salamalnoori@yahoo.com

Ahmed dheyauldeen salahaldin [2]
Business Administration Department
University of Anbar
Iraq
a.besiness@yahoo.com

Ahmed idan Jasim [3]
Business Administration Department
University of Anbar
Iraq
ahnuh78@gmail.com

Abstract

The research aim to generate knowledge on the adoption and dissemination of information technology as an organizational culture that has an active role in achieving progress and progress in all fields and adopting an effective strategy to develop technology for the long term through formulating an appropriate and effective strategy. This is achieved by obtaining a set of sample data. The research, which was analyzed and knowledge of the relationships of importance and importance of the dimensions of this strategy which is (technological vision, technological message and technological objectives) The research sample consisted of a group of employees at different organizational levels at the University of Fallujah, Included (50) individuals. The questionnaire was used as a tool for gathering information as well as personal interviews of the sample members to prove the findings of the researchers. The most important findings were that there is interest by the research sample in the IT strategy and work to develop it. The aim of this study is to formulate a strategic vision and build a mission for information technology and work on setting the university's strategic technological objectives. It also appears that there is good interest in the research sample in the strategic vision. This interest because of the great desire and motivation to develop the current technological situation.

Keywords— IT strategy, strategic vision, strategic mission, strategic objectives.

I. INTRODUCTION

The last years witnessed tremendous developments in the fields of information technology. The world exceeded the era of industrialization and reached the age of digital and informatics, and the nations progressed not only by their economic and human resources, but also by high technology that human resources possessed in the field of informatics. It became apparent that this era characterized by globalization and the opening of the borders and boundaries between the countries as well as the ability of institutions to compete and achieve their distinctive capabilities, in addition the pace of development and multitude of its informational applications and uses in deferent fields of life, and also the interest of today's communities to develop vital sectors one of these, is the higher education sector.

In this direction, the university management realized that its survival, growth and prosperity depend on the unique capabilities it possesses, which leads to achieve competitive advantages through advanced technologies and its successful application, and to minimize the stages and follow what the world achieved in the fields of information technology. And openness to vital areas, and adopting unconventional methods in its work. The problem of this study focused on the interests extent of University of Fallujah information grounding ; therefore, the main thrust of this study is to know the level of responses of the department's Managers (Top and middle) at the University of Fallujah. Within the framework of this methodological perception the aim of this study is focused on the verify the default model that explain the relationship between the variables of study and the nature of the effect..

II. THE STUDY METHODOLOGY

A. Study problem

The subject of information technology is one of the modern topics in modern administrative literature, although it dealt with in different fields of intellectual and sciences, this fields needed in present and future of business Organizations, due to the frequent competition and rapid change in information technology in order to response to the requirements of the 21st century. Despite the importance of the subject of information technology, Which took an important place in the minds of researchers and their efforts in recent years, and expanding its horizons around the world, but it is still seem a modern subject, this reason imposed the need for more studies and research, the study of (Powll & Dent-Micellef, 1997: 396) emphasized on the Need for further studies about information technology, (Khafaji,1997:3); reminds the Opinion of (Poole, 1997) in which he called for more attention to higher education in the information age by looking for ways to use it.

Information technology today became one of the most important ways to maximize the competitiveness of contemporary business organizations (Al-Enezi, 2001: 2-3). Al-Enezi (2001) suggests that successful organizations have the duty to attract the human resource that specialized whit information which suitable with amount and kind . also take care of them by provide the intellectual environment interrelated, and takes into account the behavioral aspects of them, to increase confidence between them and achieve the desired benefits of those organizations.

Based on the above, the problem was realized through the exploratory study, which included directing open questions to a sample of managers about the reality of the University of Fallujah, focused on (information technology and its areas of investment, distinctive capabilities and how to maintain it), so this study came to be incentive motivation to go into this Subject, and to direct efforts towards study, research and analysis.

Based on the above, the problem of the study can be diagnosed in the form of questions that are precise, clear and relevant to the subject of the study, which requires answering through the procedures, as below :

First: What is the degree of interest University of Fallujah in the formulation of the strategy (information technology)?

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Second: Are managers at managerial levels different in their perception of the importance of information technology?
Third: Does University of Fallujah have strategies that make it distinctive in the field of information technology?

B. Study Importance

The importance of the study emerge from the following reasons:

- Highlight on the reality using of information technology at the University of Fallujah to diagnose problems and obstacles encountered, and make suggestions and recommendations thereon.
- The importance of the present study emerge from the importance of information technology because it is one of the most important topics that featuring in its modernization at the fields of information systems and strategic planning.
- This study is important, through the results to be reached which will know the extent of the use of information technology and means of its investment and training programs that adapted to access technology which enable university competing counterparts.

C. Study Goals

The study aims to achieve the following:

- Knowing the theoretical concepts related to information technology.
- Diagnosing available intellective models that describe information technology with a focusing on modern and contemporary contributions.
- Knowing the response of managers at the top and middle levels in the University of Fallujah to the strategies of information technology by analyzing their views on the checklist.
- knowing the effectiveness of using the information technology tools at the University of Fallujah.

D. Study Hypotheses

Research hypotheses Is: There is interest from the research sample in the Information Technology strategy divided in to:

- There is interest from the research sample in the Technological vision.
- There is interest from the research sample in the Technological Mission.
- There is interest from the research sample in the Technological objectives.

E. Study of Descriptive Plan

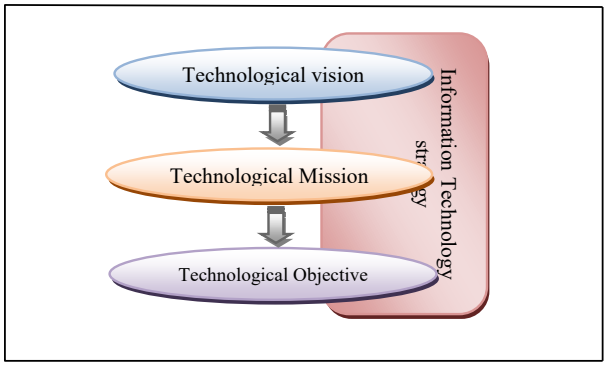

Figure (1): The Descriptive Plan

F. Study Limits

- Human Boundaries: Directors who represent the upper class of the University of Fallujah were depended upon for the purpose of this research.
- The temporal boundaries: The period of the research was from 15/6/2018 to 11/10/2018.

G. Study Tools

The methods of data collection and statistical methods for analysis are:

- Tools of the theoretical framework: was based on the contributions of writers and researchers, which the researcher collected from the sources of scientific references of books, magazines, illustrations, and research.
- Tools of Field Framework: The researcher used a number of tools and methods to collect data, as below:
  - Field visits: The researcher made several visits to the research community and conducted a number of meetings and dialogues with some managers to take their views and get some preliminary data on the subject.
  - The questionnaire: the main and reliable tool in this research for data collection which was designed to cover all the variables of the research model. The Likert scale was adopted; it has a value of between (5), was completely agreed, and grade (1) is not fully agreed.

III. THEORETICAL FRAMING OF STUDY

A. Historical development of IT strategy

The function of IT strategic was previously limited to understanding and supporting business strategy. However, it was often the contribution of the IT strategy achieved without understanding the business strategy which defined by the IT managers, so most official IT plans focused on the tactical level and concrete lines of business needs or operation integrated chances instead of emphasize on backing the main strategy of organization (Smith et.al. 2007: 53). At present, there is explicit recognition by senior officials in most organizations that problem with the (recent time) IT strategy is greatly a mistake which happened by those leaders who didn't realize that adopting IT represent commercial business and not a technology for facing challenges (Ross and Weill, 2002: 7). The most important issues facing CEOs recently are the alignment of the strategy Information systems and business strategy. Although the value of IT business and strategic convergence are often treated separately, but most of researchers between them (Henderson and Venkatraman, 1993) and (Prairie1996) believe that failure to realize the implicit value of IT is due to Lack of strategic consensus, so the returns realized from information technology are often considered as a function of strategic alignment and that the absence of such returns and benefits of information technology refers to a certain imbalance between the business and IT strategy (Tallon and Kraemer, 2003: 2).

B. The concept of IT strategy

The IT strategy is a plan consisting of different projects. The main objective is to deploy IT within the organization. IT should be viewed through the business strategy of the organization. So a successful IT strategy helps the organization achieve better solutions for the system and accurate estimates of Resources used for IT investment, and reasonable estimates of everything related to the Information Technology Section of the Organization (Peppard, 2004: 23). Strategic alignment is the measure of the extent to which information technology provides support to the business strategy of the organization. Thus, it shows two basic dimensions: the IT deficit (that is, information technology fails to support the business strategy of the organization) and the exploitation of information technology (The failure of the business strategy in the organization to exploit information technology to the extent possible), and therefore the deficit and failure of the exploitation of information technology as two dimensions represent the figure (2) and describe the bilateral relationship between business and strategy as an IT strategy, so strategic alignment will be ideal when the IT strategy provides full support to the business strategy and when the business strategy plays its role in optimizing exploits to the IT available to it. vice versa, the strategic alignment is weak or non-existent between the IT strategy and the business strategy of the organization. this mean there is no support by Information technology for the business strategy in the organization due to example (lack of sufficient spending on information technology) or lack of optimal exploitation by the business strategy in the organization Information technology available to them, for example, because of the (excessive spending for information technology managers and a lack of understanding of how to exploit the opportunities offered to them by IT) (Tallon and Kraemer, 2003: 2) As shown in Figure (2).

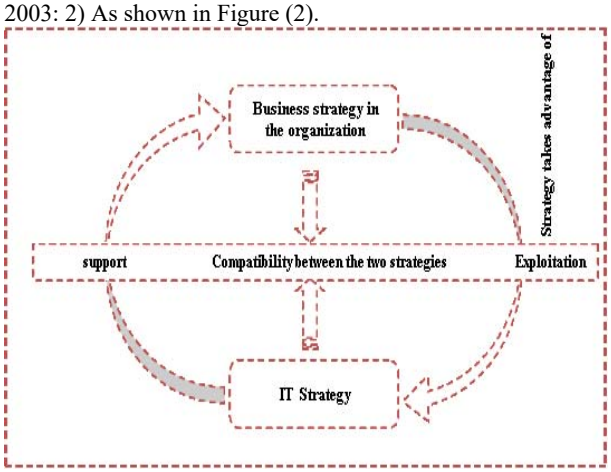

Figure (2): represent compatibility between business strategy and IT strategy in organization.

Source: Tallon, P. and Kraemer, K. (2003)," Investigating the relationship between strategic alignment and IT business value: The discovery of a paradox " (pp. 1-22), In N. Sbhan (Eds.) Creating Value with Information Technology Challenges and Solutions, Hershey, PA: IAED Group Publishing , p.6 .

The main objective of the IT strategy formulation is to increase the efficiency and effectiveness of the organization, reduce or remove obstacles that limit the integration of IT systems in the organization, this include reducing the muchness of information, the overlapping of the information sources and make compatibility. In addition to that, IT strategy provide technical support and maintenance required for current and future systems (Beynon_Davies, 2002: 101). the relationship between business strategies in the organization representing for whom this business will provide? Why this business will provide? Information technology strategy that focuses on how the organization performs its works. in addition to this relationship, information systems that determine the information requirements and how they flow. Information technology cannot be merge only if there was an integrated strategy that meets the demands of the business strategy in the organization and works on the implementation of information systems. In this case, IT will perform its work in the organization and it can be said that the compatibility between the IT strategy and the organization's strategy has been achieved (Gottschalk and Soli-Saether, 2006: 141).

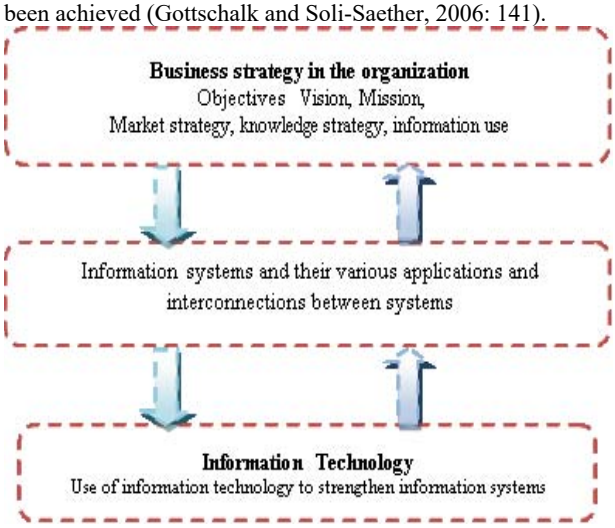

Figure (3) : represent the relation between business strategy and IT strategy in organization by information strategy

Source : Gottschalk, P. and Soli-Saether, H. (2006)," Managing successful IT outsourcing relationships " Hershey, PA: IAED Group Publishing, p.141 .

Information technology (IT / IS) strategy is a combined strategy in the business context, and information systems in the narrow sense are the mainstay of information technology. and elements of an IT / IS strategy are represent business orientation in different sides which represented by, strategy (message, vision, goals, Knowledge management strategy ,and application of managerial knowledge systems, personnel (future human resources competencies), organizing (organization's future, control on IT function, information technology) (IT infrastructure), thus IT / IS term wide range , so it adopts all communication and interdependence in strategy, and any changes in one of its

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components will influence all other elements (Gottschalk and Soli-Saether, 2006: 143).

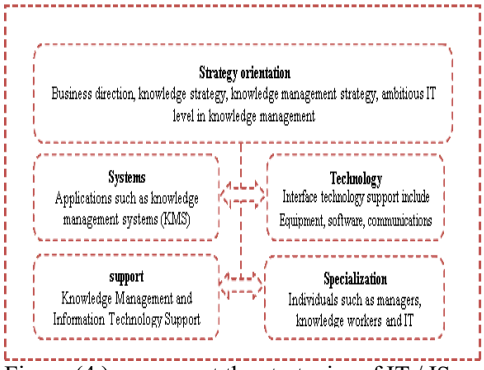


Figure (4) : represent the strategies of IT / IS .

Source: Gottschalk, P. and Soli-Saether, H. (2006)," Managing successful IT outsourcing relationships " Hershey, PA: IAED Group Publishing, p.143.

IV. Description of the Search Variables and Hypothesis Testing

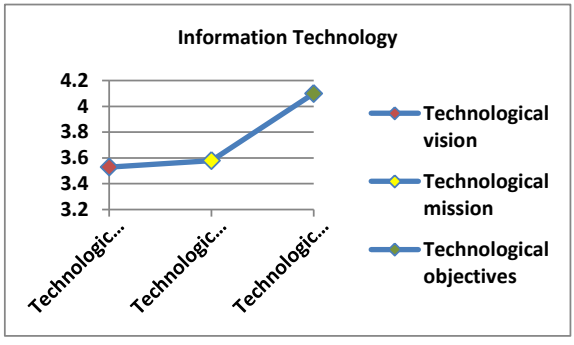
A. Presenting and analyzing the views of the research sample

The data of the questionnaire and analysis of the sample's responses will be presented and analyzed in terms of Information technology Dimensions (Technological vision, Technological mission, Technological objectives), and the range of the category was calculated according to the equation (highest value - lowest value / highest value) i.e. (5-1 / 5 = 0.80), and then the range of category (0.80) is added to the lowest value or subtracted from the highest value; thus the categories from (1.81- 2.60) is weak, (2.61-3.40) around the middle, (3.41- 4.20) high, (4.20-5) is very high, which means that there are five categories (15/5 = 3). Consequently, the following computations will be explained to which categories they belong as in the following to Table (1) shows the mean, standard deviation, and coefficient of variance of the variable of Information technology and its dimensions. It reflects an average of (3.72), indicating a high level and Higher than the standard mean. This was confirmed by the low harmony in the responses of the sample, (0.76), which was confirmed by the coefficient of variance (20.46%). Below is a presentation of the views of the research sample on each dimension of Information Technology as shown in Table (1):

- Technological vision: The mean of this variable is (3.53), which is a high one. This is a sign of the interest of Search Community in Technological vision are good. The general standard deviation is (0.71). This indicates a good homogeneity in the answers to this dimension. This is confirmed by the coefficient of variance, which reached (20.11%).
- Technological Mission: The computational mean of this variable (3.55) is a high mean. This is a sign of high interest by the Search Community in Technological mission, which is somewhat high. The general standard deviation is (0.77). This indicates a good homogeneity in the answers in this dimension. This is confirmed by the coefficient of variance, which reached (21.69%).
- Technological objectives: The mean of this variable is (4.10) which is very high. This is a sign of the very good interest of Search Community in Technological objectives, which is somewhat very good. The general standard deviation is (0.80). This indicates a high homogeneity in the answers to this dimension. This is confirmed by the coefficient of variance, which reached (19.60%).

Table (1): Mean, S.D and C.V for Information Technology N=50

The dimension	Q	Mean	S.D	C.V%
Technological vision	1	3.17	0.63	%19.87
	2	3.53	0.72	%20.39
	3	3.05	0.77	%25.24
	4	4.10	0.68	%16.58
	5	3.84	0.75	%19.53
Total		3.53	0.71	%20.11
Technological mission	6	3.53	0.76	%21.52
	7	4.01	0.81	%20.19
	8	3.42	0.84	%24.56
	9	3.33	0.75	%22.52
	10	3.49	0.69	%19.77
Total		3.55	0.77	%21.69
Technological objectives	**11**	4.21	0.85	%20.19
	12	4.00	0.78	%19.5
	13	4.29	0.81	%18.88
	14	3.96	0.73	%18.43
	15	4.04	0.82	%20.29
Total		4.10	0.80	%19.60
Total Summation		3.72	0.76	%20.46



Conclusion

The result which could be shown from tables present that colleges has been marked in special property or more, all of them indicate to the role of the university administration in technological vision, technological mission and technological objectives, instilling the spirit of innovation and excellence with the departments at colleges that was led to be characterized by including them in the following:

A. This study taken up IT strategy which became one of the most important ways to maximize the competitiveness of contemporary business

organizations in addition to the role of this strategy to enhance the ability of organization to survival . also this study declare that , there is an interest by the study samples with IT strategy and work to improve it and formulate a strategic vision in order to formulate mission for IT and work to establish strategic technology objectives .

B. This study , also , shown that there is an attention with the technology goals more than other dimensions, this work as a tools to enhance the ability of university to develop a technology strategy, where as this strategy play a clear role to develop the current situation of the university , and all this will reflects on formulated the strategic (vision , mission , objective)

C. The study recommended to invest IT strategy more than before , and work to support it, and availing from it to enhance the ways of technical situation in university , in consider this strategy represent effective tools for successful the work in order to enable the university to exploit available and effective sources which increase making a future changes to support formulating a future technology vision for the university . the study also , recommended to enter a new ideas which can implementing a successful formulating to the vision of university for increasing its ability to face and overcome the difficult will facing the university .

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