

### KNOWLEDGE MANAGEMENT PROCESSES AND THEIR ROLE IN ACHIEVING HUMAN RESOURCE MANAGEMENT STRATEGIES "A FIELD STUDY ON THE DIRECTORATE OF EDUCATION OF BABYLON"

### AHMED FADHIL SALMAN AL- AGELE<sup>1</sup> and ROMDHANE KHEMAKHEM<sup>2</sup>

<sup>1</sup> Ph.D. Candidate Department of Management, Faculty of Economics and Management of Sfax (FSEGS), University of Sfax, Tunisia. Email:mustafaaldhab@gmail.com

<sup>2</sup> Professor of higher education, Department of Management, Faculty of Economics and Management of Sfax (FSEGS), MODILS Research Unit, University of Sfax, Tunisia. Email: rm-khemakhem@gmail.com

### Abstract

The study aimed to know the role of knowledge management processes in achieving human resource management strategies in the Directorate of Education of Babylon. The stratified random sample method was used to represent the study population. An exploratory sample of 30 questionnaires was distributed to verify the validity and reliability of the questionnaire. 446 questionnaires were administered to the study population, where 400 questionnaires were obtained, and 46 questionnaires were excluded due to the lack of seriousness of the answer by the respondents due to not answering the questions within the questionnaire, bringing the final number of questionnaires received (400) questionnaires, all valid for statistical analysis, i.e. a recovery rate of 90.3%. The study found that there is a positive correlation between knowledge management processes and human resource management strategies in the Babylon Education Directorate.

Keywords: knowledge management, human resource management

### **1. INTRODUCTION**

In light of the successive and significant changes in the global economic and social reality, the global economy has recently witnessed movements towards a knowledge-based economy. Strategic and major competition by organizations, and the demand for knowledge has become a basic need of human needs and then modern societies, and that effective management of knowledge within the workplace has become decisive for the success of administrative and commercial business.

Knowledge does not come from a vacuum, it is the result of a vital interaction between all components of the knowledge system of human experiences, material capabilities, technology, research and development, and studies. By reaching it with effort and perseverance, as it is a source of strength and influence exercised by those who possess it over those who are ignorant of it.

Knowledge management is one of the intellectual approaches in the field of modern management, which relies on human minds instead of the land factor and the capital factor, in addition to that many organizations have realized the importance of knowledge management and its benefits towards achieving organizational effectiveness, and knowledge management has been widely recognized and practiced in Many organizations all over the world.





DOI 10.17605/OSF.IO/JWHMX

There are significant shifts towards a knowledge-based economy over the past decade, along with extreme competition, short product life cycles, and rapid development in technology, which have prompted organizations to pay more attention to protecting their knowledge assets, and knowledge is now considered one of the most important organizational assets to gain an advantage. Sustainable competitiveness, and as a result of the transition to a knowledge-based economy, knowledge has become the main source of value creation and sustainable competitive advantage, and government institutions and the private sector have shown more interest in organizational knowledge and knowledge management, as they are looking for ways to maximize their knowledge assets in order to stay ahead of competition. Knowledge and information are the real backbone of institutions, and a purposeful and contemporary administrative means to adapt to the requirements of the times, as knowledge is the most important resource in creating wealth and achieving excellence and creativity in light of the intellectual data in which many intellectual concepts such as globalization, privatization, the information and communication revolution, and the expansion of relations have emerged. Benin different human societies. Knowledge management almost does not leave any process or activity in the organization unless it is directly or indirectly linked to it, as information represents the essence of organizational processes and the actual driver of various administrative activities in all humanitarian organizations. He finds the appropriate container for him, which works to publish and present it in an attractive and effective manner that is in line with the requirements of the age and the era of e-learning. Knowledge management processes work sequentially and integrate with each other, as each process depends on the other and integrates with it and supports it. A set of processes for knowledge management has been mentioned in the theoretical literature, and among these processes are identified in knowledge diagnosis, knowledge acquisition, knowledge generation, knowledge storage, knowledge development Knowledge, distribution of knowledge and application of knowledge. As a result of the economic, social and technological changes in developed countries, the concept of personnel management has been replaced by the concept of human resources management. Organizations in developed countries have realized that paying attention to the human element is the way to compete and achieve excellence, and the process of keeping information in records and reports related to the management of traditional personnel costs huge sums. Which made it one of the early candidates or causes for the electronic transformation of data. With the advent of the third millennium, the importance of moving towards the application of knowledge management in all forms of organizations has increased. It is based on the human element and its cognitive capabilities in achieving excellence and creativity. And that knowledge is a force that can be used to learn new things, solve problems, create core competencies, and initiate new situations for both individuals and organizations now and in the future, and that shared knowledge and addressing it over time will serve as a strategic competitive advantage for organizations, and the application of knowledge management processes In human resource management, it focused on improving efficiency rather than increasing effectiveness or creating distinguished competencies, and human resource management contributes to organizational success by providing a sufficient number of qualified employees, and facilitating the effective use of this workforce, and in most cases this is achieved through activities That enhances efficiency and employee motivation, and many reports indicate that knowledge-based





systems help the HR function to deliver higher quality outputs. Various organizations in developed and developing industrialized countries alike face multiple internal and external challenges. At the internal level, there are changes in the composition of human resources, their qualifications, aspirations, aspirations, and problems, and due to the loss resulting from the departure of experienced employees from organizations, employees going to retirement, and diminishing strength. Skilled workforce for research, the existing knowledge of employees is threatened with non-existence, moreover, to ensure sustainable and profitable growth, organizations should, at the present time, be able to benefit from the existing knowledge base and also consider the possibility of expanding it, and all this can only be achieved and grown by integrating knowledge management processes With the management of human resources, and that the application of this integration has an impact on the practices of human and creative capabilities, and producing new knowledge.

### 2. STUDY PROBLEM

The research problem can be formulated through the following main question: What is the role of knowledge management processes in achieving the human resource management strategy?

### **3. RESEARCH OBJECTIVES**

The current research objective is to identify:

- The concept of knowledge management processes and human resource management strategies.
- Statement of the impact of knowledge management processes on human resource management strategies.
- Statement of the correlation between knowledge management processes and human resource management strategies.

### 4. THE CONCEPT OF KNOWLEDGE

The clearest definition of knowledge is what (Yassin, 2007) defines it as knowledge: "a mixture of concepts, ideas, rules, and procedures that guide actions and decisions, in other words, it is information mixed with experience, facts, judgments, and values, which work together as a unique structure that allows individuals to Institutions create new situations and manage change. (Yassin, 2007: 37)

What distinguishes knowledge is the applicability and merging of theoretical information with practical experience and the general system of individuals and institutions, which produces a new ability or gift, which is knowledge. As well as determining who owns this knowledge, whether the owners with their minds, which represents organizational (institutional) knowledge, or available by other means such as databases, files, systems, instructions, and other knowledge that represents explicit knowledge (Pollock, 2001: 53).





(Tawfik, 2004) believes that there are two great traditions related to the theory of knowledge in Western philosophy, where the rational doctrine holds that true knowledge is not the product of sensory experience, but an ideal mental process. According to this perspective, there is previous knowledge that does not need to be justified by sensory experience, and the truth is derived Absolute reasoning based on axioms. On the contrary, the empirical doctrine holds that there is no previous knowledge and that the only source of knowledge is sensory experience. According to this perspective, everything in the world has a sense-perceived existence. Thus, the two main entrances to knowledge differ (the rational doctrine and the empirical doctrine). There is a sharp difference in what constitutes the actual source of knowledge. (Tawfiq, 2004: 96)

### 5. HUMAN RESOURCE MANAGEMENT STRATEGY

In view of the radical effects caused by the global changes and trends and their regional and local tributaries in the concepts of the new management, and the resulting great care in human resources as the cornerstone and the most important resource on which the administration relies in achieving its objectives, «This complete conviction has crystallized in the main role of human resources in The following set of foundations that are included in the structure of the new administrative thought », and points of view differed in defining a unified definition of human resource management, and this is a natural and correct matter resulting from the multiplicity of thinkers in this field on the one hand, and their different concepts on the other hand. (Ali Al-Salami, 2001: 44)

(Mansour, 2004) believes that human resources management is that administrative activity represented in setting a planning for the sector, which will ensure the permanent presence of the manpower that the institution needs, and the permanent supply of the required human elements, and this activity is also represented in the development of workers, improving their performance and raising their technical competencies , and scientific and continuity in it, and urging them to participate by their self-loyalty to achieve the objectives of the institution, and includes in all this the provision of benefits and material, moral and moral incentives, to satisfy their individual and collective needs or desires, as human resources today have become the source of competitive advantage for the institution within the framework of the knowledge economy and the function of human resources management from The most important functions responsible for achieving competitiveness and ensuring growth, expansion and creativity (Al-Najjar, 2007: 7)

As (Salem and Salih, 2000) showed that behind the success of every successful institution stands human resources management that is successful in its programs, whether these programs are selecting individuals, training them, evaluating their performance, or through good programs for rewards and incentives. (Salem and Saleh, 2000: 41) From this point of view, human resources management began to shift from being a job concerned with specialized affairs for working individuals, whose job is to provide consultations in this field, to an executive department that has a large and comprehensive role throughout the organization through strategic planning for human resources, as The human resource manager has become





one of the members who are concerned with formulating the human resource management strategy. (Al-Ahmar, 2007: 41)

### 6. STUDY METHODOLOGY

The researcher used the analytical descriptive approach in conducting the study because it is one of the most widely used approaches in the study of social and human phenomena. This role, and then draw conclusions and evaluate them and test hypotheses and then come up with a set of recommendations.

### 7. STUDY POPULATION

The study population consists of all the academic and administrative staff working in the Directorate of Education of Babylon, whose number is (4000) employees with the classification of (2556) academics and (1444) administrative employees (Department of Personnel Affairs in the Directorate (2022). The researcher excluded the working employees In the service departments, due to their lack of direct influence on the subject of the study, as the mechanisms for their appointment were not carried out according to the principles followed in the Human Resources Department, in addition to their low academic qualifications, which impede their understanding of the subject of the study and its main tool, the "questionnaire".

### 8. STUDY SAMPLE

The researcher used the stratified random sample method representing the study population, where an exploratory sample of 30 questionnaires was distributed to verify the validity and stability of the questionnaire. The seriousness of the answer by the respondents due to not answering the questions inside the questionnaire, bringing the final number of questionnaires received (400). All questionnaires are valid for statistical analysis, i.e. a recovery rate of 90.3%.

In his study, the researcher addressed several hypotheses through which he tried to identify knowledge management processes and their role in achieving human resource management strategies. A field study in the Directorate of Education of Babylon. The hypotheses are:

There is a statistically significant relationship between knowledge management processes (knowledge generation, knowledge storage, knowledge distribution, knowledge application) and human resource management strategies (attraction and appointment, performance appraisal, training and development, compensation and incentives) at the level of statistical significance (0.05). Explain this through the following table:



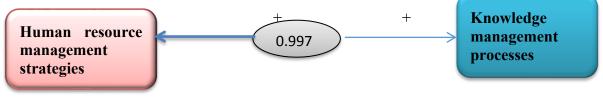


### Table 1: The relationship between knowledge management processes and human resource management strategies

relationship between variabl	Correlation coefficient (Pearson(	significance level
Knowledge management processes,	0.997**	0.000

Source: Prepared by the researcher with reference to the outputs of the statistical analysis

Table (1) shows that the correlation coefficient is equal to (0.997), and that the probability value (Sig.) is equal to (000.0), which is less than the significance level (0.05). This indicates that there is a statistically significant direct relationship between knowledge management processes and human resource management strategies:



## Figure 1: The relationship between knowledge management processes and human resource management strategies

The researcher attributes this to the fact that human resources are the main wealth of nations and organizations. Physical capital and natural resources, despite their importance and necessity, without the efficient, trained and well-prepared human element, will have no value, because people are able to use these resources and harness them in production processes to obtain The human element, with its ability to generate, store, distribute, and apply knowledge in invention, innovation, development, problem-solving, and cooperation with colleagues, can overcome the scarcity of natural resources and expand the productive potential of society, as is the case in Japan. In response to the continuous transformations that human resources management faces, it must pay special attention to the human resource by enhancing its human skills and working to develop them in the light of what is imposed by the requirements of the era of technology and informatics today, especially if these resources are used to produce and manufacture knowledge, as human skills are not fixed. Rather, it is variable according to business needs. These results agreed with the study (Al-Aloul, 2011), where the study concluded that the educational institutions have practical competencies with high experience in their field of work and who can solve the problems they face in their work.





# Table 2: The relationship between knowledge management processes (knowledgegeneration, knowledge storage, knowledge distribution, knowledge application) andhuman resource management strategies

relationship between variable	Correlation coefficient (Pearson(	significa nce level
Generate knowledge,	0.988**	0.000
Stock up on knowledge	0.995**	0.000
Knowledge distribution	0.997**	0.000
Knowledge application human resource management strategies	0.995**	0.000

Source: Prepared by the researcher with reference to the outputs of the statistical analysis

It is clear from Table No. (2): that there is a statistically significant relationship between the axes of knowledge management (knowledge generation, knowledge storage, knowledge distribution, knowledge application and human resource management strategies in the Babylon Education Directorate.

The results of this study agreed with the study (Hayat Al-Ibrahimi, 2018) that there is an impact of generating, storing, distributing and applying knowledge on human resource management strategies, and the study (Samia Merah, 2021) that there is a significant impact of human resource management applications on knowledge management processes.

# Table 3: The relationship between knowledge management processes and humanresource management strategies (attraction and appointment, performance appraisal,<br/>training and development, compensation and incentives)

relationship between variabl	Correlation coefficient (Pearson(	significan ce level	
Recruitment and appointment Knowledge management processes	0.994**	0.000	
Performance evaluation processes Knowledge management	0.999**	0.000	
training and development Knowledge management	0.997**	0.000	
Compensation and incentives Knowledge management processes	0.969**	0.000	

Source: Prepared by the researcher with reference to the outputs of the statistical analysis







It is clear from Table No. (3): that there is a statistically significant relationship between knowledge management processes and human resource management strategies (attraction and appointment, performance appraisal, training and development, compensation and incentives) in the Directorate of Education of Babel

The results of the study agreed with the study (Khaled bin Zayed and Bedi Al-Saeed, 2019), which proved a direct relationship between the application of knowledge management and improving the effectiveness of the human resources function.

2. There is a statistically significant effect between knowledge management processes (knowledge generation, knowledge storage, knowledge distribution, knowledge application) and human resource management strategies (attraction and appointment, performance appraisal, training and development, compensation and incentives) at the level of statistical significance (0.05). Explain this through the following table:

### Table 4: Regression analysis of knowledge management processes and human resource management strategies

Contrast magnification coefficient	sig T	Т	β	sig F	F	R <sup>2</sup>	R	explanatory variable	dependent variable
1.000	0.000	1.640	1.103	0.000	71684.884	0.994	0.997	Knowledge management processes	human resource management strategies

Source: Prepared by the researcher with reference to the outputs of the statistical analysis

In order to find out the effect between knowledge management processes and human resource management strategies, a regression model was used, in which the variable of knowledge management processes was considered an explanatory variable for the variable of human resource management strategies as a dependent variable. The results of the regression model showed that the regression model is significant through the value of (F) of (71684.884) in terms of (0.000) smaller than the level of significance (0.05). The results explain that the explanatory variable is explained by the value of (R2) amounting to (0.994), and the value of beta, which illustrates the effect between knowledge management processes and human resource management strategies, came with a value of (1.103) with statistical significance. Where this can be concluded through the value of (T) and the significance associated with it, and this means that the knowledge management processes increased by (1.640) units, the level of human resource management strategies increased, as the table shows the results of the linear multiplicity test, the result revealed that the variance inflation factor for the model was (1.000), which is less than (3), which indicates that there is no linear multiplicity problem between the model variables. We can also write the regression equation as follows:

Human resource management strategy = constant (0.686) + knowledge management processes (1.640) + prediction error.





# Table 5: Regression analysis of knowledge management processes (knowledge generation, knowledge storage, knowledge distribution, knowledge application) and human resource management strategies

Contrast magnification coefficient	sig T	Т	β	sig F	F	R <sup>2</sup>	R	explanatory variable	dependent variable
0.009	0.799	-0.254	-0.063	0.000	20841.577	0.995	0.998	Generate knowledge	human resource
0.005	0.000	5.190	1.083					Stock up on knowledge	management strategies
0.001	0.000	5.845	1.980					Knowledge distribution	
0.002	0.109	1.606	0.650					Knowledge application	

Source: Prepared by the researcher with reference to the outputs of the statistical analysis

In order to find out the effect between knowledge management processes (knowledge generation, knowledge storage, knowledge distribution, knowledge application) and human resource management strategies, a regression model was used, in which the variables of knowledge storage and distribution of knowledge were considered explanatory variables for the variable of human resource management strategies as a dependent variable, with the exclusion of all From generating knowledge and applying knowledge because they are not statistically significant. The results of the regression model showed that the regression model is significant through the value of (F) amounting to (20841.577) in terms of (0.000) smaller than the level of significance (0.05). The results explain that the explanatory variables are explained by the value of (R2) of (0.995), and the beta value, which illustrates the effect between knowledge storage, knowledge distribution, and human resource management strategies, came with a value of (1.083), (1.980) with statistical significance, as this can be concluded through the value of (T) and the significance associated with it, and this means that The processes of storing and distributing knowledge increased by (5.190) and (5.845) units, respectively. The level of human resource management strategies increased as the table shows the results of the linear multiplicity test. The result revealed that the variance inflation factor of the model was (0.005), (0.001), respectively, which is smaller than (3) which indicates that there is no linearity problem between the model variables. We can also write the regression equation as follows:

Human resource management strategy = constant (0.727) + knowledge storage (1.083) + knowledge distribution (1.980) + prediction error.

The researcher attributes this to the fact that the processes of storing and distributing knowledge are among the basic administrative processes of the organization, as the volume of information coming to this directorate needs to be archived and stored through special systems that are easily accessible, and then work on applying this information in an appropriate manner, and administrative positions can follow These two processes are carried out systematically, which in turn help to strengthen human resource management strategies in the work of the Directorate



of Education of Babylon. On the other hand, we find that the processes of generating and applying knowledge are among the processes that can be limited to decision-makers, or to employees only, which in the absence of motivation to create and generate new ideas and work to implement them remain trapped in their owners without investing them in developing performance in educational services. The results of this study agreed with the study (Fatima Al-Zahraa Wahid and Ahlam Al-Amrawi) that there is a positive impact relationship of the knowledge management variable on the human resource management variable.

### CONCLUSION

ISSN 1533-9211

With the increase in digital transformation, the shift in marketing, accounting, and human resources management jobs increased recently. In front of these transformations, a qualitative leap was recorded at the beginning of the current century, and it moved from managing personnel affairs to developing intellectual capital. This is why this job is considered the main tool within the organization as it is responsible for how to obtain The qualified resource must develop and motivate it to be more creative and generous. Therefore, institutions apply the knowledge management project at the level of human resources management to preserve, transform and develop knowledge. It requires a good evaluation system that allows all members of the organization to be taken into account in order to facilitate the decision-making process. Knowledge management is an open window on the intellectual capital of the institution so that it not only allows access to information, but also allows users to exchange views and experiences of the flow of latent and explicit information through the use of techniques and encouragement of learning processes, which makes knowledge management a specific and decisive factor in order to value and develop intellectual capital in the knowledge economy.

### RESULTS

To highlight the role of knowledge management processes in activating human resource management strategies. In the first chapter, we have dealt with theoretical concepts related to knowledge management, and we have explained the role of the importance of the latter in the success of educational institutions, the reason that necessitates their integration into the knowledge-based economy, the latter which is considered capital The real thing that the institution must invest in by attracting the best competencies and human resources and investing in them and developing them to achieve excellence, and this is through establishing and implementing a knowledge management project that affects all functions, especially the human resources function, which we discussed in the second chapter, by highlighting the extent of the contribution of knowledge management In activating the management of human resources and the changes that took place, whether structural changes represented in the infrastructure of human resources management, which are based on modern technologies, which helped to change the way of exercising its basic functions when it shifted from human resource management to electronic human resource management, or fundamental changes that transformed resource management Then we tried to find out the reality of the impact of knowledge management on human resource management in the Directorate of Education of Babylon, and we used the questionnaire and statistical methods to analyze it based on the





program (SPSS-26) and we concluded a set of results, including those related to the theoretical and practical aspects, which we summarize as follows :

### Theoretical results

- Knowledge management is one of the relatively recent fields, and it is one of the fields that have not matured in its integrated form yet and it is still in the stage of self-discovery.
- The orientation of the modern institution, especially educational institutions, towards the application of the knowledge management approach provides it with new capabilities and distinct capabilities, and provides it with wide capabilities of information technology and information management, and provides it with an accurate and effective system for planning, implementing and controlling the various functional operations, and supports the philosophy and directions of senior management, and affects the behavior of Individuals in the organization and their capabilities, abilities and attitudes.
- Knowledge management constitutes an integrated management method for various institutions, as it is the result of the strategic objectives of all the activities of the institution.
- Human resources have no continuous meaning if they are not developed in a way that allows them to respond to the various changes that occur at the level of the environment, especially in light of the rapid transformations that the world is witnessing and the degree of their complexity and instability.
- The Directorate of Education of Babel seeks to achieve a set of objectives that aim in their entirety to achieve the best services for employees.
- We sought that the personnel of the Directorate of Education in Babylon pay great attention to its human resources, and this is due to its awareness of the importance of the human element and the return that it can achieve if it proceeds in an effective manner, as it seeks to provide an appropriate and appropriate work environment.

### **Practical results**

- The use of some Internet technologies by the Directorate of Education of Babel, but they are not well implemented;
- Both Condor and Geant use advertising and electronic recruitment, by registering the job applicant with his information on a page for the institution on the Internet;
- The existence of a positive correlation between knowledge management processes and human resources management strategies in the Directorate of Education of Babel;
- There is a positive impact of knowledge management processes on human resource management strategies in the Directorate of Education of Babel;





### RECOMMENDATIONS

Through the conclusions reached, we can make a number of recommendations as follows:

- The obligation of awareness and belief of the senior management in the Directorate of Education of Babylon in the subject of knowledge management and commitment to sponsoring it and providing all means and means for its implementation is considered one of the important matters that ensure the continuation of work in knowledge management.
- The need for the institute to adopt knowledge management as it is an advanced management method that has proven its efficiency and effectiveness instead of the traditional methods of management in order to reach the increase in performance and improve the performance of individuals at all levels of activity in the Directorate of Education of Babel.
- The Directorate of Education of Babylon should value its knowledge represented in the information and experiences inherent in its competencies and human resources, as it is among the most important sources and foundations for the development of the system.
- The Directorate of Education of Babylon must adopt the knowledge level as a basis for dividing jobs, define a method of knowledge management to take advantage of its advantages and benefits, and provide benefits and incentives as tools to establish powers.
- The Directorate of Education of Babylon should be open to international experiences in the field of knowledge management in order to benefit from its applications.
- The Directorate of Education of Babel should carry out training courses in the institution to train and train the various administrative levels at the hands of experts specialized in the field of knowledge management, without bypassing the rest of the interests in order to improve their knowledge through forums and conferences.
- Constant striving to generate and gain knowledge that meets the functional needs of the Directorate of Education of Babylon and is capable of achieving the process of raising knowledge and working to spread the necessary and sufficient knowledge at the appropriate time to all relevant parties.

We have tried to propose a methodology that may help the Directorate of Education of Babel, and this methodology is graded through the following stages:

- Determine the objectives of knowledge management in line with the specificity of the Directorate.
- Create a department or assign a team responsible for knowledge management.
- Spreading awareness and commitment to the knowledge management project.
- Creating its own culture within the Directorate.
- Equipping the Directorate of Education of Babel with an infrastructure for information and communication technology.





- Building a memory for the directorate by collecting, transferring and preserving the acquired knowledge.
- Avoiding factors that hinder the knowledge management project in the directorate.

#### Resources

- 1. Al-Ahmar, Maher Abdel-Kazem (2007), "The Impact of Human Resource Management Strategies on Operations Strategy," an exploratory study of the opinions of a sample of managers in the General Company for Electrical Industries, a master's thesis in industrial management (N.M), submitted to the College of Administration and Economics Baghdad University.
- 2. Hammoud, Khudair, Al-Kharshah, Yassin (2006). Human Resources Department, Dar Al Maysara, Amman.
- 3. Al-Salem, Moayad Saeed, Human Resources Management, An Integrated Strategic Approach, 2009, Dar Al-Athraa for Publishing and Distribution, Jordan.
- 4. Al-Sulami, Ali (2002), "Managing Excellence: Management Models and Techniques in the Age of Knowledge," Cairo, Dar Gharib.
- 5. Al Najjar , Farid (2007), "Strategic Management of Human Resources "1st edition. University House for Publishing and Distribution, Alexandria.
- 6. Tawfiq, Abd al-Rahman (2004): "Management by Knowledge: Changing What Cannot Be Changed," Center for Professional Experience in Management, Cairo.
- 7. Yassin, Saad Ghaleb (2007): "Knowledge Management, Concepts, Systems, Techniques", Dar Al-Manhaj for Publishing and Distribution, Amman.

