A Proposed Concept for the Application of Knowledge Management in Higher Education Institutions

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Abstract – **Under the development of the information technology (IT) science, the time has come for our institutions to benefit from the data of this science, to adjust its uses to be consistent with the environmental variables that govern the academic & educational operation, and gives it a multiple competitive advantage ensure its growth, survival, and continuity in order to enable these institutions to contribute distinctly and qualitatively in the progress and development of the Arab community. The problem with this paper is lies in diagnosis of the difficulties and obstacles that leads to the failure of the application of knowledge management and detect the components and requirements that help to remove these difficulties and obstacles or minimize their impact in order to facilitate their adoption and their conformity with the requirements of the local University's environment, which will enable those universities to develop & implement their plans, their annual budgets, and then designing a proposal conception for the application of knowledge management. This modest paper aims to provide an intellectual framework to shed light upon the requirements and processes which is considered one of the most important mechanisms for the implementation of the knowledge management program, as well as to raise recommendations and mechanisms of implementation that would help in the application of this management.**

Keywords – **Knowledge Management, Knowledge Economy, Infrastructure, Intellectual.**

I. INTRODUCTION

The concept of knowledge management can be described as an intellect and culture more than it is a method or management program which, if its ideas adopted properly then the its output will be a high-ranking organization in which all its staff members at all levels try hard to achieve the organization objectives & goals with the highest quality based on knowledge and information (Zeinab 2001). Accordingly, the concept of the knowledge management points out to the various processes and activities related to the discovery of new knowledge, acquiring of current knowledge, sharing knowledge with others, application of the obtained knowledge, in addition to the requirements of those operations such as systems, mechanisms, technology and infrastructure (Ibrahim 2007). While knowledge management in this study is intended to: the systemic processes that helps educational institutions to generate and create knowledge and test it, organize, use, dissemination, and make it available to all employees and the external beneficiaries. The field of knowledge management in its modern conception and its global challenges imposes upon the institutions to spare no effort in this area, because knowledge management, knowledge economy, as well as the intellectual capital has become one of the bases upon which the advanced nations are bold, and it is the main concern of the world's experts in the present day, and this represents the biggest challenge for universities that force universities to make a qualitative leap in the knowledge management and build their strategies on this basis (Yassin2007).

II. METHODOLOGY

Justification for the Switch to Knowledge Management:

Paying attention to knowledge management was not mere an intellectual luxury, on the contrary it came in response to several requirements and internal & external environment effects, namely, keep pace with change towards achieving some kind of adapting to these environmental requirements, however, it seems that this trend has become inevitable and not just a choice, especially for the professional service organizations such as: (Financial, consulting, educational, and technological institutions). Among the most prominent justifications for encouraging the shifting towards knowledge management are the following: The standard tangible of knowledge: where the majority of institutions become capable of probe the impact of knowledge in their business operations, and able to measure this effect with greater transparency. Recognizing international financial markets: where the information and knowledge represent the most important assets of the intellectual capital at all institutions and they are the source of the competitive advantages which is more important than the traditional sources such as; land, capital and work. The broad and rapid change in the communities' tastes & trends: which the traditional management patterns inappropriate to keep pace with up with those changes. Expansion of the areas in which knowledge management has succeeded in processing them: particularly in the field of competition, creativity, renovation, and diversity. Universities usually have an organizational environment characterized by trust: because any member will not hesitate and afraid of disseminating and distributing his knowledge. The benefits of application knowledge management: The use of knowledge management ways and methods in high education will achieve numerous benefits to the educational institutions including: encouragement and motivation to the emergence of a high level of intelligence on the surface, increasing the effectiveness of those institutions by increasing the level of knowledge about how to manage the high education institutions, and upgrading the level of performance assessments in the educational institution through the presence of an effective system for information management. Since a group of researchers has pointed out that educational institutions that have adopted such initiatives have achieved a range of benefits such as: These institutions have become able to face challenges or to create strategic changes aimed to improve performance and achieve cooperation, bonding and coordination between colleges and university departments distributed in the distant geographical areas, as well as for linking and coordination between universities on both the local and global levels. The process of decision-making has improved, as decisions are made faster at lower management levels, and by using fewer human resources, and by a better form than if they had been taken by the senior management levels. The personnel become more capable of knowledge with regard to their jobs and other jobs similar to their own ones, as a result they become able to raise initiatives to perform better improvements, faster learning of new procedures relating to the operations and to help in the improvement of the work. Personnel becomes more aware and better experience with regard to the operation processes, the content and nature of the products, services, customer needs, the company's policies and procedures. Therefore personnel become able to provide the best-quality of work, and working to correct errors without interference of the supervisors or without the need for quality control Strengthening the quality of the methods and the provided educational programs by identifying and providing the best practices & experiences, as well as examining and evaluating the outcomes. Improving the effectiveness of the performance of faculty members (teaching staff) by taking advantage of the previous lessons and experiences of the colleagues, students' evaluation, and other inputs that can be used to improve performance. Easiness of designing and developing methods and joint programs between several specializations or numerous programs due to the easiness of discussion and planning across the various departments and colleges; as a result of the availability of knowledge management methods

and practices for linking individuals. Improving the efficiency and effectiveness of the efforts of student supervision through the collection and standardization of the currently fragmented and distributed efforts among the members of faculty and staff who provide support services to students, such as; staff of Admission and Registration Department and Student Affairs staff and others.

III. THE PROBLEMS OF APPLICATION OF KNOWLEDGE MANAGEMENT

There are many reasons that hinder the application of knowledge management, notably: Lack of understanding of the fact that; the knowledge management is not only informative & technology management owned by the institution but also it is a management philosophy aims to make this institution more proficiency, intelligence and response to emergency situations and the changing environment. Knowledge management is used in order to make long-term strategic improvements, where the of non understanding of this fact the existence of the required support from senior management to apply knowledge management is also lacking, therefore the allocation of the necessary financial resources for the application of the knowledge management is not performed. The most prominent difficulties & problems that lead to the failure of the application of the knowledge management are: The executors of knowledge management system may isolate this system from the organization senior management this in return leads to build and develop capabilities and potentials fit with their personal beliefs not those preferred by the institution, such act leads to build and develop capabilities that would not be used in its complete image in accordance with the system of knowledge that has been built, and here the necessity and the importance of coordination with the senior management manifest itself when building and developing the institution knowledge management system. The promotion of knowledge management system may be conducted by non realistic manner, and by unrealistic capabilities and potential which may reflected in the form of frequent failure & disappointments along with liquidation or deleting operations to some part of plans and goals. The focus on market opportunities and business needs wasn't operated frequently, rather the focusing was dedicated to providing knowledge management that has general capabilities and potential which reveals non clear and specific competitive value, this concentration will lead to achieve a limited competitive advantage less than expected. There is hesitation in sharing & using knowledge because staff feels that their sole dominance over knowledge gives them a power if they were the only party in the facility who knows how to do the work and due to the least likely to dispense with them, and they are more likely to obtain an increase in their salaries and wages. From the individual point of view, there is no sense to allow others to participate in knowledge and skill they own in the conditions characterized by competition the lack of immaturity of knowledge basis in the organization could be a problem, because there is are a few experts even in the case of learning through their work. Many of knowledge management efforts failed and unsuccessful after submission due to the non-allocation of the sufficient human and material resources to its success, while the costs of the knowledge management system may be high. The application of entrance of knowledge management requires a full and sufficient understanding for the long term before the efforts of application, where the non-consideration of this matter will reflect negatively on the fundamental results of the organization. The inability to measuring the financial benefits achieved as a result of the application of knowledge management along with the lack of incentives and rewards for participation in knowledge. In the majority most of the universities there is a volunteering work team from the faculty members of the scientific consulting.

IV. RESULTS AND DISCUSSIONS

Despite those difficulties and challenges facing the application of knowledge management, however if we take into account the success factors when planning for the application of knowledge management and try to implement mechanisms to avoid them or minimize their impact they will be applied easily and conveniently, because it will greatly contribute to the success of the application of knowledge management. The most prominent factors that help in the success of the application of knowledge management are the following points: Building a knowledge management strategy that identifies: users, resources, operations, strategy of knowledge conservation and storage, as well as links that connected the knowledge to knowledge management system. The presence of a clear objective and purposes of knowledge management system, establishment of standards or criteria for assessing the impact of using knowledge management systems, verifying the acquired and founded knowledge is the correct knowledge required to improve the organizational performance. Developing a common understanding on the relevant levels in the first place, as long as the centre of learning and knowledge using are lying in these levels dramatically, and then gradually shift to the level of the institution as a whole. Providing a payment plan depends on skill as part of the comprehensive incentives and rewards system, due to the fact that such a plan will motivate workers by greater manner for development and excellence in the new skills appropriate to the institution strategic skills, also this plan helps to create a multi-skilled workforce, and generate a culture that evaluates and rewards the continuous learning of the people. Providing an integrated technical infrastructure structure including: networks, databases, conservation warehouses, computers, software, and experts in knowledge management systems. Identifying and developing the leaders who are building and supporting learning models on the individual, team, and institution level. Managers should focus on outstanding cases in their institutions during their comparing checklist of the organizing process for comparison and learning purposes. Remember that in any successful creativity or successful change there is a common critical factor which is strong motive and a strong objective that anyone can easily understand and adopted. Enable individuals on frequent occasions to start discussions and circulate dialogues so that the basis of the knowledge to accomplish their work becomes clear to them. Innovation and emphasize the continuous learning opportunities for individuals and pushing them to develop and share the collective vision. Providing opportunities for individuals to participate in the dialogue, research, and discussion, as well as encouraging rewarding for the spirit of cooperation and emphasize them on a permanent basis. Maintaining exchange of knowledge between producers and consumers of knowledge and keeping off Individuality & monopoly of knowledge and encouraging the concept of group work. Maintaining credibility in dealing and accountability in terms of commitment to professional ethics in all functional areas aspects. The steps and assistant factors for the implementation of the above-mentioned points are embodied in recognizing the importance of the following aids: Discovering and understanding knowledge owned by the institution since in each institution there is in plenty of non used knowledge, or it has not been used properly, either because they have not been identified, not be able to access, or the institution did not recognize its value and how to use it. Identifying and anticipate the required knowledge: where organizations working on skill development as anticipation of the future need. Making knowledge ready and available in the largest form: organization resort to develop databases, information, and knowledge to enable its cadres to be accessing them when the need arise, knowledge also develops systems that helps the needy to knowledge to identify and access to persons who have such knowledge. Knowledge about clients: organizations know a little about their customers, this face prompting

many institutions to intensify their knowledge about their customers (their needs, desires, expectations, and their satisfaction levels) as well as to identify potential customers. Knowledge about job motivations and satisfaction: some institutions consider knowledge management as an open window to realize the extent of understanding of its cadres to their works and their employees, where these institutions has seek to achieve cultural change by using the tool of developing a working model named (worker, customer, and profit chain) in such a manner that the companies began to see how to pointing changes in work training and learning and the worker's view towards their works and institution. Learning from experience: the educated institutions monitoring its expertise to create continuous improvement. Where these institutions works to repeat its performance to create its expertise and learning from it as an effort to improve their current performance better than the former one, that is to say; learning from mistakes. Learning from Others: Smart institutions find itself interested in their external status, since internal operations and practices can be improved if the institution got to knowledge from a counterpart and competitor institutions, where the benchmarking is necessary to do so. Purchasing External Knowledge: Institutions cannot develop all the internally required knowledge, because institution must purchase some knowledge from abroad through external sources for the non-fundamental activities. Development of Self-education Culture: institutions need to develop the appropriate culture and needs leaders at every level, not just those who can bear the responsibility of the institution work performance, but also who can bear the responsibility of the culture that keeps the new model alive. Designing new information systems: institutions need to develop new types of information systems compatible with the nature of the newly introduced programs and the updated uses. Ensure that the search and retrieval functions and perception carried out by the knowledge management system supports the easiness of access to and use of knowledge. The proposed conception to build a model for knowledge management: The basics and requirements for application of knowledge management. Steps and phases of application of knowledge management.

Recommendations and implementation mechanisms. Institutions realized that knowledge is the most important intangible asset, since most institutions owns knowledge, but they have not used or used in an inappropriate manner because knowledge predominantly implicit and need to be detected, diagnosed, regenerated, stored and disseminated within the organization and then use it by application and re-used it several times. While the most important basics and requirements that must be available first in the application of this model are: The increasing role of knowledge management in the institutional success, being a great opportunity to offer distinguished services and reduce the cost and promoting the assets of the institution to generate new revenues. The new shift in the business environment that forces the institutions to be distinguished with new capabilities summarized in foresight, excellence in performance, creativity and adaptive capacity. Thus from this perspective the existence of an integrated plan for the knowledge management in the institution constitutes an extremely vital and important matter. The knowledge management has become an indispensable need in today's business environment particularly universities as an educational community-based educational organizations primarily, especially after it being linked with internet the largest, fastest, and wide spreading window in terms of information and knowledge. The administrative status which we live within today in various institutions is characterized by the enormity of administrative organs and the large number of administrative works. Thus, in the global trend towards a knowledge economy as well as the shift from an economy based on information towards the interest-based on knowledge economy, which emphasizes the need for the institutions to invent new designs for science and disciplines compatible with the requirements of the preparation of human

cadres to work in the light of these data, and contributes to the overall development of the society (Table 1). This phase begins with diagnosis of knowledge where in the light of that the policies and programs of other processes would be set up, and its results will specify the type knowledge and knowledge generation through the purchasing or creation or discovery or acquisition. A generation might be embodied by an idea provided by individuals and then storing knowledge, while (retention, research, sustainability, access, retrieval, and place) are expressing the importance of the organizational memory and how it can maintain the knowledge without loss it, Then came the phase of knowledge distribution as an asset that increased by participation, usage, and exchange of ideas, experiences and skills between individuals. While the final phase will be through application of knowledge by use and re-use and benefit from it where these highlights the role of knowledge director in determining the methods and techniques required for the application (Fig. 1).

Table 1. The steps of Application of knowledge Management (lee, et. at., 2002).

| Phases of the Application of knowledge Management	Activities Included in Each Phase
1. Initiative Phase (Composition of Knowledge)	The focus must be on: - Establishing infrastructure, human relationships - rewards systems. - Management of organizational culture - building communication technology databases. - Getting the proposed ideas and opinions
2. Publication stage (Acquisition of knowledge)	The focus must be on: - Justification of ideas, setting up policies and procedures of justification. - Using information technology in the processing and analysis of ideas to justify them. - Monitoring of knowledge and arbitration tools - access to knowledge which has been justified and arbitrated.
3. Internal integration phase (Organizing Knowledge)	The focus must be on: - Integration and knowledge funding according to the requirements of the market level. - Structuring knowledge and drawing its map - access to the funded and integrated knowledge. - Using search engines and their strategies. Adopting technology in performance measurement systems
4. Phase of external integration (Storing, distributing, disseminating and applying knowledge)	The focus must be on: -The efficiency of knowledge management - overlapping networks - external funding. - Management of cooperation Department - teleconferences and video conferences. - E-mail - participating knowledge systems. - Obtain a basic knowledge of networking.
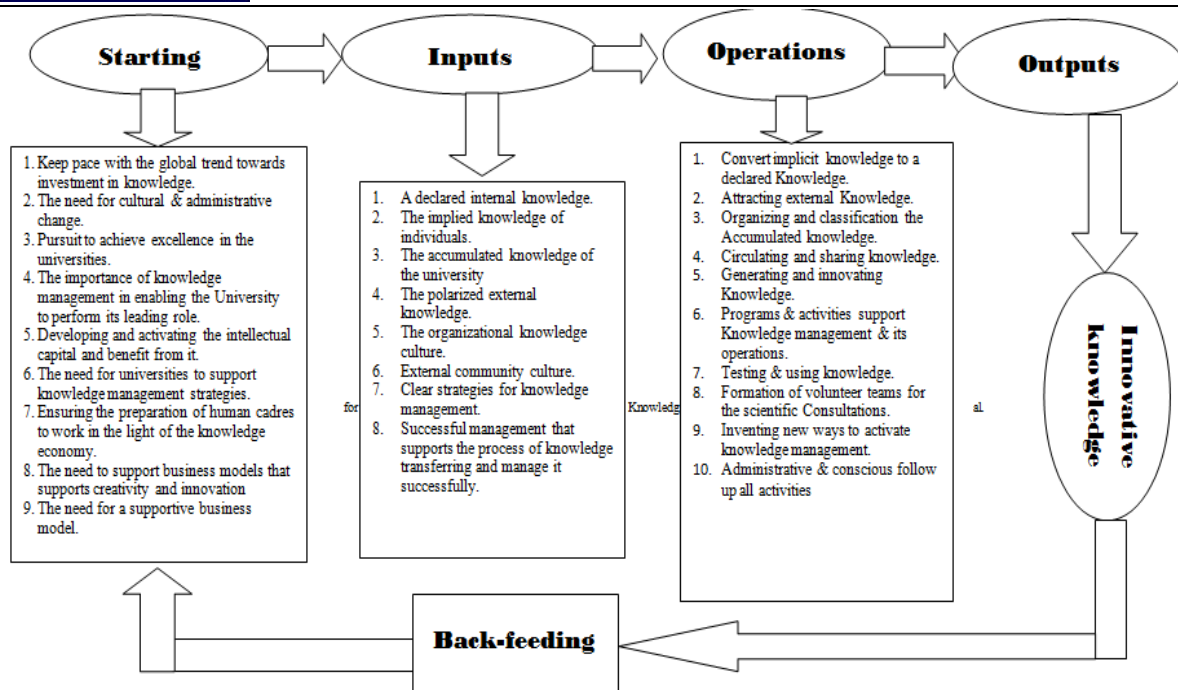
Fig. 1.

V. RECOMMENDATIONS

In view of the foregoing, and in order to implement the proposed concept in the actual reality, the following recommendations and mechanism of achievement are proposed: The universities shall adopt knowledge management to be one of their most important priorities. To achieve this recommendation the following mechanisms could be followed: Setting motivation system linked to the practices and activities of knowledge management to encourage individuals to exchange and share their own knowledge and skills with others, and to contribute effectively in the knowledge management activities. Finding a horizontal management following an open-door policy and enabling the flow of knowledge. Strengthening appropriate ways to gain knowledge through purchase or lease it and providing the financial support for it. Adding study materials related to the knowledge management and methods to develop and benefit from them. Setting a strategic plan for the application of knowledge management in the university and supporting it projects. To achieve this recommendation the following mechanisms could be followed: The knowledge management must have a strategic objective within the vision of the institution in order to achieve the commitment of this objective of the senior management and all employees of the institution. Identifying lists of experts and knowledge maps. Forming a specialized team to set up the appropriate training and development programs. dissemination of knowledge culture and planting knowledge visions among individuals. To achieve this recommendation the following mechanisms could be followed: Ensuring the participation of all employee representatives of the educational institution (faculty members "teaching staff", administrators, technicians, and students) when planning to adopt knowledge management. Managing informal meetings to lightening tension that prevails in official relations between the university administration and individuals. Forming a volunteer team consist of university professors to be responsible of all consultations related to knowledge management and activate its operations. Training university staff on the use of information systems and technology. Investing modern technology in information systems. To achieve this recommendation the following mechanisms could be

followed: Establishing a knowledge data bank, including the most prominent knowledge management strategies, and methods of using them. Creating departments for transferring knowledge and coordinate the efforts of the knowledge acquired. Activating the working methods of e-government in the dissemination and circulation of knowledge. Acquainting with the electronic gates allocated to exchange knowledge in some international universities, which has made a remarkable progress in the application of project management knowledge, to benefit from their experiences and take advantage of those sites in the exchange and sharing of knowledge since some of those sites provides the opportunity for beneficiaries from outside the university to participate in and benefit from those sites. Providing a proper environment that achieves the empowerment of knowledge. To achieve this recommendation the following mechanisms could be followed: Using motivation as an essential element in the processes of (organization, generating and sharing). Taking care of creators and accept their ideas and encouraging them. Translating implied knowledge that has been explained by linking them with compensation and reward systems. The necessity of integrating knowledge management in the academic disciplines at universities. Establishing a distinguished website for knowledge management on the internet with updating, editing, and renewing it constantly to ensure the best efficiency.

Developing an effective scientific system for follow-up and evaluation and preparing manuals and instructions that ensuring work with a unified context of. Holding a periodic meetings in academic departments during which displayed distinguished experiences and practices in the various activities of the department, for example such as: Displaying a distinguished of teaching methods, displaying a distinguished of student assessment, the methods of attracting students attention, various educational activities, along with the need for documentation of the reached results and save by an easy matter to refer to and benefit from them when needed.

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