Evaluating Knowledge-Oriented Management: An Iranian University Case Study

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ABSTRACT:

The rapid change in science and technology bring in widespread changes in many different areas has challenged organizations managers.   Hence to survive and compete in dynamic and unpredictable situations, they have to revise their policies directed and their leadership styles in the proper directions. One of these innovative instruments is knowledge management which can play an effective role in Iranian organizations specifically in universities. The major objective of the present study is to identify and measure the promotion of knowledge - oriented management in universities.

 The research methodology comprised of both; qualitative and quantitative method. A literature review of knowledge management in the university was collected. Data obtained from 124 participants (more than 40% of the population) has been analyzed. The instrument used was a standardized questionnaire on knowledge management of which the internal correlation was calculated through Cronbach's alpha of 92%, and then analyzed using SPSS, and was measured through t test and Pearson correlation. In this study, besides descriptive statistics methods, depending on the type of variable, t test and correlation coefficient were applied for investigating the correlation.

In general, the findings indicated that: There are some tokens of knowledge- oriented management which were above the medium level (strategic vision and leadership), the indexes for human resources and general management were average, but especially internal process was lower than average. The embracement of knowledge management was following an increasing pace. Also the result showed, there was a significant difference between two groups (lecturer and staff) perception and experience of Knowledge – oriented management in the university. Furthermore, there are some evidences such as software and hardware networks, resources, conducting training, creating cultural basis, budgeting on research etc, imply the trend of Knowledge- oriented management development.

Keywords: *Knowledge management, Knowledge-oriented, Measurement, Indicator, University*

1.   Introduction

In recent years, knowledge management (KM) has become a critical subject of discussion in the business literature. Both business and academic communities believe that by leveraging knowledge, an organization can sustain its long-term competitive advantages (Bhatt, 2001). Nowadays, the competitive conditions and context in organizations have developed to be more widespread and varied than the past. Such context is changing so rapidly than for the majority of organizations, it is far much more rapid than they can respond and keep up. In the other words, as soon as there is a change in the mentioned conditions and the organization attempts to react against the change and adapt itself with it , the next change take place and the organization needs to adjust itself with the new change so that it can maintain and survive.

There is no doubt that universities are no exceptions. Since they are the centers for production and distribution of knowledge, they need to be potential enough for more dynamicity and stability. Since the past, establishing innovation and consequently, creating new knowledge have been regarded as important achievements of academic institutions and they have mainly focused their attempts on promoting knowledge and enriching intellectual capitals through implementing the present resources. These resources include not only information but also all the intellectual capitals as well as human resources who need to be identified and used systematically through the proper management methods. Emergence of KM following management of information is indicative of attempts in the fields which put internal intellectual capitals and the resources produced internally together with external resources and spread their activities beyond educating and

researching issues, touching the official procedures of executive processes. To achieve this goal, Islamic Azad University of Firouzabad as a centre for creation and distribution of knowledge, just like any other organizations, calls for implementing KM to be able to handle the potentialities and commitments of skilled employees through identifying methods for creating, recognizing, implementing and distributing organizational knowledge. So, at the organisational level, KM puts emphasis on the creation, utilization and development of an organisation's collective intelligence (Loh et al., 2003).

Bhatt (2001) claims KM shapes the interaction pattern between technologies, techniques, and people. However, that exclusive focus on people, technologies, or techniques does not enable a firm to sustain its competitive advantages. It is, rather, the interaction between technologies, techniques, and people that allow an organization to manage its knowledge effectively. By creating a nurturing and "learning-by-doing" kind of environment, an organization can sustain its competitive advantages (Bhatt, 2001). So, this is a campaign by which university can overtake its rivals in today's complex and anarchic contexts.

In this research, the attempt is focused on identifying level of knowledge – oriented management (K-OM) and to find the strengths and weaknesses due to achieve K-OM perfect, because the knowledge-based view promises to have one of the most great depth changes in management thinking since the scientific management revolution up to know (Grant, 2000). In fact, this study tended to investigate the relationship between KM in the field of management and infrastructure of Firoozabad Islamic Azad University, its variables including the general management conditions, the leadership style, the strategic vision, the internal processes for management, the situation of human resources, as well as factors such as age, gender, education level, experience, the type of the groups (faculty members and the staff). Also, studying the hardware and software and researching facilities and other concrete cases as a sign/evidence of KM was sought. At the same time, the study aimed to clarify whether it is possible to provide the strategies for making the KM more effective referring to the present findings? The research methodology was mixed two methodologies (two phase study); the first phase was qualitative method, and the second phase was quantitative method. By the way, in this research we address the following questions according to literature:

➢ What is the contribution of the literature in the field of KM assessment in the organizations?

➢ What are the KM evaluation criteria?

And, qualitative study based on case study consisted of three questions:

➢ Are there any evidences observed for K-OM at university? And what are the strengths and weaknesses?

➢ What are the perspective employees toward K-OM?

➢ Are there any significant differences between two groups (lecturer and staff)?

2.   A Review Study Of KM

In recent years, different researchers have focused on KM and its success with various dimensions and aspects. Some authors have attempted to help the organizational knowledge (Argyris, 1990; Sommerville and Dalziel, 1998; Goffee and Jones, 2001; Rampersad, 2002; Hall and Andriani, 2002; Hwang, 2003; Albers and Brewer, 2003; Kakabadse et al., 2003; Bose, 2004; Vlok, 2004; Goh, 2004; Abdullah et al., 2005; Wu and Wang, 2006; Montequín et al., 2006; Fernandez et al., 2006; Gillingham and Roberts, 2006; Golban and Kianzade, 2005; Shen et al., 2007; Gumus, 2007; Tseng, 2008; Kayakutlu and Buyukozkan, 2008; Chang and Wang, 2009; Chen and Lin, 2009; Wen, 2009).

Some KM studies dealt with the theoretical and fundamental (Barney, 1991, 1996; Von Krogh and Roos, 1995; Wernerfelt, 1984, 1995; Teece, 1998, 2000; Wheelwright and Clark, 1992; Argyris, 1990; Sveiby, 2001; Schultze and Leidner, 2002; Hall and Andriani, 2002; Rodrigues and Martis, 2004; Wong and Aspinwall, 2004, 2006; Papoutsakis and Vallès, 2006; Park, 2006; Gillingham and Roberts, 2006; Lin, 2007; Thitithananon and Klaewthanong, 2007; Alrawi, 2007; Tseng, 2008; Wu et al., 2008; McFarlane, 2008; Chen and Lin, 2009) played a significant role.

Other studies (Quinn, 1992; Drucker, 1993; Nonaka and Takeuchi, 1995; Prusak, 1997; Davenport and Prusak, 2000; Bhatt, 2001; Schultze and Leidner, 2002; Hijazi and Kelly, 2003; Wu and Wang, 2006; Papoutsakis and Vallès, 2006; Rodrigues et al., 2006; Alhawary and Alnajjar, 2008) have focused on

relationship between KM and IT. Also, some authors consider categories for KM (Drucker, 1990, 1991; Grant, 2000; Nonaka and Takeuchi, 1995; Sveiby, 1992, 1997; Von Krogh et al., 1998, 2000a, 2000b; Applegate et al., 1999; Bontis, 1999; Alavi and Leidner, 2001; Kakabadse et al., 2003; McNurlin and Sprauge, 2004; Jafari et al., 2005; Khadivar et al., 2005; Lee et al., 2005; Gillingham and Roberts, 2006; Montequín et al., 2006; Papoutsakis and Vallès, 2006).

To find how KM could obtain competitive advantages some researchers have studied? (Senge, 1990; Rowley, 2000; Bhatt, 2001; Wangenheim et al., 2001; Scott, 2000; Hall and Andriani, 2002; Loh et al., 2003; Castellanos et al., 2004; Willcoxson, 2004; Wong and Aspinwall, 2004, 2006; Golban and Kianzade, 2005; Sarkar Arani, 2005; Choy and Suk, 2005; Akhavan et al., 2005; Hazeri and Safarzade, 2007; Montequín et al., 2006; Shen et al., 2007; Lin, 2007; Tseng, 2008; Wu et al., 2008; Chang and Wang, 2009; Chen and Lin, 2009).

In any case, there have been various researchers discussing different aspects which are classified in several categories: Investigating the types of research; Research based on Balanced Scorecard; The studies assessing the measure of effect; The studies on measuring quantity; The studies investigating the causative relationship between KM and the company of interest with or without   considering information technology (Gillingham and Roberts, 2006). Papoutsakis and Vallès (2006) divided the theorizations of knowledge management and IT into segments. A remarkable number of contemporary papers (Drucker, 1990, 1991; Grant 1996, 2000; Nanoka and Takeuchi 1995; Sveby 1992, 1997; Von Krogh et al., 1998, 2000a, 2000b) support this approach that directing knowledge leads to innovation, learning, creativity and novelty. So, none of the above mentioned scholars and no industrial managers react identically and consequently, the organizations' endeavors in implementing KM often emerged through activities manifested under KM (Papoutsakis and Vallès, 2006). The second group of scientists (Davenport and Short, 1990; Henderson and Venkatraman 1993; Venkatraman, 1994; Applegate et al., 1999; Mc Nurlin and Sprauge, 2004) agreed with the fact that emergence of information technology is likely to be the hidden encouraging factor for conscious transformation in business. In order to obtain the maximum advantages from opportunities facilitated by information technology mainly in KM application, the senior managers need to manage information technology to successfully combine it with the company's strategic goals (Papoutsakis and Vallès, 2006). The result of Shen et al (2007) shows that management of both endogenous and exogenous knowledge through IT applications significantly enhances dynamic capabilities (Shen *et al*., 2007).

Bhatt (2001) categorized KM process into: knowledge creation; knowledge validation; knowledge presentation; knowledge distribution; and knowledge application activities, and he believes to capitalize on knowledge, an organization must be swift in balancing its knowledge management activities (Bhatt, 2001). Liebowitz et al (2000) classified the various approaches according to four major focuses: Benchmarking focus; Performance measurement focus; IC measurement focus; The Skandia 'Business Navigator'; Value focuses (Liebowitz et al., 2000). Alavi and Leidner (2001) summarized the various views of knowledge. Perspectives Knowledge consist: vis -à- vis data and information, State of mind, Object, Process, Access to information and capability. A variety of KM approaches and systems needs to be employed in organizations to effectively deal with the diversity of knowledge types and attributes (Alavi and Leidner 2001). Kakabadse et al. (2003) summarized perspectives of KM to five categories: philosophy-based model, cognitive model, network model, community model and quantum model.

Mostafa Jafari et al (2005) in an exploratory study, identified thirty three measurement methods of knowledge and intellectual capital, and classified them in four groups: direct intellectual capital, score card, marketing cost methods, and return on assets (Jafari et al., 2005). According to their categories some of methods such as: find real value, value-driven intellectual, creation value, financial method and intangible assets measurement, are included in group of direct intellectual capital; and also balanced score card, intellectual capital index, intangible asset, knowledge monitoring cycle, strategic assets map and intellectual capital grading, are included in score card groups. They mentioned that comprehensive visualization of organizational condition is created more than others by methods of "direct intellectual capital" and "score card", and they are suitable and useful for private organizations, parts of organizations internal, general organizations, social and cultural goals. Bontis (1999) classified intellectual capital models into four groups: marketing cost methods, return on assets, direct intellectual capital and score card, and intellectual capital was defined as encompassing by Bontis (2001) : human capital; structural capital; and relational capitals. Khadivar et al (2005) classified the studied methods in three approaches: knowledge measurement in product and process, measurement of knowledge value internal organization, and measurement of organization conditions based on KM process (Khadivar et al., 2005). They grouped comparative indexes of measurement methods in three groups: Covering three main indicators of KM (people, structure, technology); Continuous monitoring and

contingency. They mentioned the fact that any indicators can measure all of various aspects of KM in organizations; consequently to get the best result, integrating some indexes is the best way. Knowledge systems are the core requirements for organizing, controlling, and collaborating across systems of people, structures, and processes (McFarlane, 2008).

On the other hand, Jafary (2005) divided the metrics under twofold: qualities and quantities, and claimed the qualitative (Anecdotes and success stories, Employee awareness of the program, User feedback detailing their experiences) and quantitative (Time saved, Cycle time reductions, Contributions to knowledge database, Communities of practice, Participation in communities of practice, Usage frequency, Number of users) metrics should attempt to capture the relative success the pilot program is having at getting users to share and transfer knowledge (*Jafari et al.,* 2005).

Chang and Wang (2009) classified the measurement approaches in seven main aspects including employee traits, strategy factor, superintendent traits, audit and assessment, organizational culture, operating procedures and information technology. According to Wen (2009), the tool of knowledge management assessment is arranged of five basic elements: strategy and leadership; culture; technology; measurement; and process. Montequin et al (2006) believes that their research identifies analyses and compares intellectual capital (IC) elements that are relevant for SMEs. There is a question, how they can be linked with the IC measurement methods for determining if a company is ready for KM? They identified a set of knowledge success factors (KSFs) relevant for SMEs and with a direct impact on business improvement in order to meet KM requirements. The set of KSFs cover the three main categories: technology, process and people (Montequin et al., 2006). Some authors defined as a logistic function having five components that can be used to determine the knowledge circulation process: knowledge creation, knowledge accumulation, knowledge sharing, knowledge utilization and knowledge internalization (Lee et al., 2005).

Wu and Wang (2006) identified five variables (system quality, knowledge or information quality, perceived knowledge management system (KMS) benefits, user satisfaction, and system use) were used as dependent variables in evaluating KMS success. Bose (2004) presented three popular methods used by organizations for measuring the performance of KM strategies. The balanced scorecard, Economic value added, Skandia Navigator. Lin (2007) identified three key dimensions of KM: KM process (knowledge acquisition, knowledge conversion, knowledge application and knowledge protection), KM effectiveness (individual-level and organizational-level KM effectiveness) and socio-technical support (organizational support and information technology diffusion) based on the previous literature. Chen and Lin (2009) showed that the more beneficial managers' label was toward KM project issues, in fact there is strong correlation between attention to discuss and issues on organizational meetings. As a result, managers' various scope definition of KM had affected their evaluation of the issues (Chen and Lin, 2009).

Adli (2006) proposed four key indicators: context, input, process and output indicators. Sveiby (2001) recognized nine knowleledge transfers/conversions for creating value in an organization: Transfers/conversions of knowledge: between individuals; from individuals to external structure; from external structure to individuals; from individual competence into internal structure; from internal structure to individual competence; within the external structure; from external to internal structure; from internal to external structure and within internal structure. Daniël Vlok (2004) considered fourteen dimensions in the three areas, background/structural factors, knowledge production and knowledge integration. Recently, Wen (2009), considered five criteria of KM: Staff, Information, Data, Knowledge, and Wisdom.

Whilst Loh et al (2003) states there are some gaps between current KM and an expected KM, there are a lot of KM applications but very few KM systems too. They listed the main criticisms of current KM. In the end, the validity of knowledge and to build on its strengths, knowledge mobilization is supplementary of KM. So based on their results, the aim of Knowledge sharing was at helping mobilize critical enquiry, thought leadership and research excellence to influence and hopefully add value to the efforts of the managers who will build the KM equivalents of companies (Loh et al., 2003). However, the foremost challenge of the next few years will be to bring together these theoretical and practical developments in a fuller specification of the implications of the knowledge-based view for business strategies, organizational structures, and management systems and inter organizational relationships (Grant, 2000). As a result of the literature review of KM performance evaluation, we can classify some into several perspectives (see table 1).

3.   **Knowledge Management >In Universities**

Many authors have studied on knowledge and different meanings of knowledge (Argyris, 1990; Goffee and Jones, 2001; Ramperdsad, 2002; Hall and Andriani, 2002; Kakabadse et al., 2003; Fernandez et al., 2006; Gillingham and Roberts, 2006; Golban and Kianzade, 2005; Adli, 2006; Tseng, 2008; Wu et al., 2008; Cranfield and Taylor, 2008; Chen and Lin, 2009; Chang and Wang, 2009). But, it seems the most important challenges are creation and utilization of knowledge. However, the greater challenge lies with the other two elements of knowledge management: in the creation of a knowledge environment, and the recognition of knowledge as intellectual capital (Rowley, 2000). Because, in today's world, people face with the difficulties which are more internationally oriented rather than being nationally driven to be solved willingly. In the other words, these difficulties are global and bring about with themselves special international effects. As a result, international constructive will, recognition, and attitudes will be necessary to decrease or eliminate them and this will not be achieved except through the mutual recognition and understanding of cultures, civilizations, economical political and social conditions of nations. The required cooperation for dealing with difficulties such as international disputes, third world countries poverty, environmental hazards, population explosion, calls for constructive awareness and attitude; and this important issue will only be gained through the mutual recognition and understanding of nations from each other and about the roles they will play in solving such problems (Sarkar Arani, 2005).

In recent years, KM has become a critical subject of discussion in the business literature. Hazeri and Sarrafzadeh (2007) believe universities are the main centers for producing and distributing knowledge. Both business and academic communities believe that by leveraging knowledge, an organization can sustain its long-term competitive advantages (Bhatt, 2001).

So, in such situations, universities will play their new roles more effectively through spreading knowledge among cultures, cultural values, the researching skills for scientific thinking,   teamwork, and expanding the process of learning and teaching to the overseas universities (Sarkar Arani, 2005).

Table 1 KM Categories Based On Specific Aspects

Perspective	Classifications/categories	No	Author(s)
Method-based	• Marketing cost methods, return on assets, direct intellectual capital, score card	4	Bontis, 1999
Major-focus-based	• Benchmarking focus, performance measurement focus, Skandia Business Navigator, value focus	4	Liebowitz et al., 2000
Knowledge – steps	• Knowledge creation, knowledge validation, knowledge presentation, knowledge distribution, and knowledge application activities, knowledge capitalization, knowledge balancing	6	Bhatt, 2001
Indicator-based	• General management, leadership style, strategic vision, internal process, human resources	5	Rampersad, 2002
Method-based	• The balanced score card, economic value-added, Skandia Business Navigator	3	Bose, 2004
Area-based	• Background/structural factors, knowledge production, knowledge integration	3	Vlok, 2004
Area-based	• Knowledge measurement in products and processes, measurement of knowledge value in internal organization, measurement of organizational conditions based on KM processes	3	Khadivar et al., 2005
Method-based	• Direct intellectual capital, score card, marketing cost methods, return on assets	4	Jafari et al., 2005
Knowledge – applied	• Knowledge creation, knowledge accumulation, knowledge sharing, knowledge utilization, knowledge internalization	4	Lee et al., 2005
KM – aspects	• Psychological, culture, process, functionality, architecture	5	Abdullah et al., 2005
Indicator-based	Context indicator, input indicator, process indicator, output indicator	5	Adli, 2006
KM – aspects	• Technology, process, people	3	Montequín et al., 2006
Model-based	• Cognitive model, network model, community model, quantum model, philosophy-based model, general intellectual capital (IC) measurement model	6	Kakabadse et al., 2003; & Montequín et al., 2006
Indicator-based	• Knowledge or information quality, perceived knowledge management system (KMS) benefits, user satisfaction, and system use were used as dependent variables in evaluating KMS success	4	Wu and Wang, 2006
Indicator-based	• KM process (knowledge acquisition, knowledge conversion, knowledge application and knowledge protection), KM effectiveness (individual-level and organizational-level KM effectiveness) and socio-technical support (organizational support and information technology diffusion) based on the previous literature	3	Lin, 2007

KM – aspects	• People, structures and processes	3	McFarlane, 2008
Analysis-based	• Qualitative analysis, quantitative analysis, non-financial indicator analysis, financial indicator analysis, internal performance analysis, external performance analysis, project-orientated analysis, organization-orientated analysis	8	Chen *and Lin,* 2009
Different aspects	• Employee traits, strategy factors, superintendent traits, audit and assessment, organizational culture, operating procedures, information technology	6	Chang and Wang, 2009

The four pillars of knowledge and education suggested by UNESCO report (1996): Everyone must learn to know; a future citizen must learn to do; people must learn to live together; people must learn to be (The quality of being is based on man's ability to develop himself as a holistic personality and as a responsible individual, with lifelong learning constituting part of his human existence, without continuous compulsions or threats. According to Castellanos et al. (2004) in universities, an important part of intellectual capital is the research development-transfer capital. Since long ago, establishing innovation and consequently, creating new knowledge has been one of the most remarkable achievements of academic institutes and to achieve such goal , the main attempts of academic societies have been focused on improving knowledge and enriching intellectual capitals through implementing the existing resources. These resources include not only the information resources but also intellectual and human resources which need to be identified through employing proper methods of management and be used systematically.

The university community and its major stakeholders stand to gain through effective knowledge management and the further development of its knowledge sharing culture enabled by top management support and allocation of sufficient resources, suitable organisational structures (e.g. the appointment of a chief knowledge officer as head of a KM unit). It is as a reward system which puts a premium on knowledge sharing and innovation rather than knowledge hoarding, top notch KM software solutions and effective KM processes (Loh et al., 2003). Moreover, Wangenheim et al. (2001) in order to effectively and efficiently support learning in university software R&D organizations, the processes necessary to continuously create and share knowledge across the organization have to be supported systematically. This is the goal of KM: to deliver the right information or knowledge at the right time, at the right place, in the right format, satisfying the quality requirements at the lowest possible cost. In order to operationalize KM in software R&D organizations in university environments, relevant know-how has to be continuously build- up by gathering new explicit and tacit knowledge during the planning and execution of R&D activities (Wangenheim et al., 2001).

According to Loh et al. (2003) the missions and functions of universities are 'pragmatized' because of emerging new players and competing markets for knowledge production, the availability of higher education to a wider range of social classes and age groups, as well as the assimilation of information technology into the university environment. The dynamics and conduct of university research, in particular, has correspondingly become more sensitive to industry collaboration opportunities, commercial exploitation, and is increasingly over disciplinary. …They argued that knowledge management concepts and tools can indeed benefit and have the potential to advance the cause of research in the university. Based on Rowley's (2000) typology of KM objectives in universities, it was found that KM-led activities and tools in the areas of knowledge repositories and knowledge access have been sufficiently addressed to advance research in Singapore Management University (SMU). In tandem with the rapid expansion of SMU, more emphasis will be put on the cultivation of a knowledge-sharing environment and knowledge valuation (Loh et al., 2003).

With regard to the necessities explained, every attempt which paves the way for understanding, recognition, discourse and interactions among the nations should be praised. In this case, if the path is started by cultural, scientific, educational and researching issues which are regarded as the prerequisites of deep mutual recognition and understanding of cultures, economical and political cooperation and interactions as well as bilateral and multilateral international cooperation.

In these conditions, educational institutes including universities and higher educational institutes not only should they provide the necessary opportunities for cultivating individual capabilities and life skills and native cultures but also they should take a combined approach to human beings and their competence in all the fields and try to provide the opportunities for them. This is important because of both economical and political reasons and cultural and social reasons and the role of universities should be considered regarding these two perspectives (Scott, 2000).

KM at universities can be assessed from different aspects such as: learning organizations, approach oriented attitude toward KM, or duty- procedures approach and approach of infrastructures or in the other words, hard

wares and soft wares of KM such as libraries, facilities for information technology, and indexes for human resources, line and staff and researches. In a research, Hazeri and Sarrafzade (2007), consider the relationship between KM and the role of libraries: Librarians have been able to make big steps ahead through implementing skills and policies for KM. Through information banks of human knowledge resources, they have managed to increase the level of people's knowledge about "who knows what" and provide valuable guides for the ones seeking knowledge by referring to knowledge , skills, studying - researching potentialities and interests in these banks (Hazeri and Sarrafzadeh,2007).

On the other hand, from the point of view of the learning organization, the concept of KM will be much more spread and introduces a reciprocal totality of human-technology. The learning organization expresses an organized form through capacity for learning and learning consequences which are behavioral change and learning. Willcoxson (2004) has discussed the approach of learning organizations to improve the quality of universities (Golban and Kianzade, 2005). The Japanese had realized the importance of delays in the process of production, since they had perceived the process of receiving the order, tabling the production, preparing the ingredients, production and distribution as a comprehensive system. These disorders in distribution of products, the wastage, and inefficiency is echoed in the whole system (Senge, 1990). Creative learning calls for understanding the systems which are controlling the events. When we fail to recognize the systematic source of problem, we are left by ourselves to follow the evidences instead of eliminating the major causes and as a result, the best way to react is compatible learning. In fact, KM and IT in organizations have been introduced following the issues in production organizations discussed by Senge (1990) to replace the compatible learning with creative learning. To Senge (1990), the major reason for transformation is demolition of students by the traditional system. Therefore, we need establish KM and organize it which are still in the beginning and this research will be a step in this unknown field for conceptual understanding and preparing the appropriate context for creation of software concepts.

Due to the appearance of new knowledge producers in the education sector, more and more universities are looking into the possibility of applying corporate knowledge management systems (Loh et al., 2003). In this case, there are some factors which effective on success KM in university: Leadership, The nature of academic staff, Evidence of the benefits, the taxonomy for the application of KM within the university, management structure, history of the university (Cranfield and Taylor, 2008). Hijazi and Kelly (2003) claim KM can help to solving problem between industry and the university, such as: align IT with social networks and dealings; Encourage and support the use of KM; Allow knowledge transfer across different tasks; Apply knowledge to workers' management and Practice tacit knowledge within your surroundings. Meanwhile, Abdullah et al. (2005) proposed a framework of Knowledge management system: Psychological: motivation, awareness, reward, strategy; Culture: truth, believes, value, experience; Process: acquisition, stone, disseminate, use; Functionality: agent, email, video conferencing, chats; Architecture: application, technology, infrastructure, repositories.

4.   Assessing KM At Universities

Regarding the KM in universities, Sar karani (2005) has focused on the challenges of Japan and the prerequisites for internationalization of universities as well as its duties for producing the knowledge and KM. Following his conclusion, he states: In a world, in which the strong boundaries of the past are collapsed by information technology and communication, the stability of the past findings will be paled, the educational institutes including universities and their curriculums should be reconstructed so that our mutual understanding from each other is possible through expanding the international co operations. This dynamic recognition and cooperation helps us know our background better and more realistically and reach self awareness and self consciousness more than ever. Then the required preparation for international understanding and cooperation specially in national regional and global issues and make participation of more higher education institutes in the field of production of science possible, can be gained (SarKar Arani, 2005). Jamshidi and Nemati (2008) have worked "knowledge share and experience" on social capital development within IT units" in university, that their result showed there was a significant difference between knowledge share process and social capital experience (Jamshidi and Nemati, 2008).

In this study, the indexes for the success of the KM system have been provided by a questionnaire. In this case, a combination of indexes introduced in the questionnaire as suggested by Rampersad (2001) and the questions cited in "journal of Knowledge of Management-Iran" (2007) have been applied. The second index is generalizing the model of success for the system of KM. The research suggests that the models accepted based on theories or other supported models should be generalized. Since, the theories and models offered in the academic theories have gained the necessary credit by the researchers of society. And the third index for

the model of success for the KMS in the studied sample is its applicability in the formation and the approach of KM toward that. In fact, evaluation in this study takes place through two approaches: determining the characteristics of process-duty approach or infrastructures- foundations.

4.1. The Specific Research Questions

The research questions of the study were as follows:

➢ Which level is the KM at this university? In the other words, what is the status of the main parameters of KM at Islamic Azad University including general management, the leadership style, strategic vision, internal processes of management, and human resources?

➢ What kind of relationship is there between demographic factors as age, gender, education, experience and groups of the study (faculty members and staff) and KM?

➢ How can KM be practical at university and how should the strategies be provided for enhancing effectiveness of KM in Firoozabad Islamic Azad University?

One hundred and twenty four faculty members and university staff (more than 40% of the whole population) were selected through stratified random sampling and investigated through standardized instrument for management of knowledge designed by the researcher. The collected data was analyzed using SPSS and to test the hypotheses, t-test and Pearson correlation tests were applied.

5. The Methodology Of The Study

The present study is of a survey type and involved all the faculty members and staff of Firoozabad Islamic Azad University. The population of the study was selected through stratified sampling. The data obtained from 124 participants (more than 40% of the population) as the sample have been analyzed. In this study, besides descriptive statistics methods such as percentage, mean and …, Depending on the type of variable, t test and correlation coefficient were applied for investigating the correlation.

5.1. Participants

Questionnaires were sent to employees with significant responsibility for measuring the level of knowledge – oriented management. 140 faculty members and university staff were selected through stratified random sampling and investigated through standardized instrument for management of knowledge designed by the researchers. The collected data was analyzed using SPSS. The t-test and Pearson correlation tests were also applied.

From 140 questionnaires distributed, 131 employees completed back their questionnaires, resulting in 124 (58 staff & 66 lecturers) usable responses (see Table 2).

Table 2: Frequency Of Participants.

Gender		Age			Marital		Education				Experience		
man	woman	<30 years	30-40 years	>40 years	married	single	Under bachelor	bachelor	master	phd	1-5 years	5-10 years	>10 years
76	48	28	63	32	97	27	11	47	30	36	34	43	47

5.2. Sampling Design

Five sets of measures were adopted and used to measure each of the five constructs, namely, general management, leadership style, strategic vision, internal process and human resources. These measures were made by integrating Rampersad test (2001), journal of organizational knowledge test (2007) and were subjected to a formal pre-test by some managers and experts. Some minor modifications were carried out to make the meaning of some items clearer. A variety of KM approaches and systems needs to be employed in organizations to effectively deal with the diversity of knowledge types and attributes (Alavi and Leidner, 2001). Therefore, the questionnaire not to following of a especial idea. According to Alrawi (2007) there are

many aspects of KM, and how to apply in organizations, it depends to the structure of organization. However, at present, the structure, processes, and procedures of KM have not been defined as a tangible standard, and it is difficult to find comprehensive and clear comment criteria (Wen , 2009).

An internal consistency analysis was performed separately for each variable in the theorized model by calculating the Cronbach's alpha, i.e. the reliability alphas. The results in Table 1 show that the Cronbach-a s for all the variables in the model were above the critical value of 0.7 (Nunnally, 1978). Hence, the authors concluded that all the items had been appropriately assigned to each variable. The instrument developed also had content validity, since the selection of measurement items was based on an exhaustive review of the literature and a detailed evaluation by academics and practitioners. Content validity depends on how well the researchers created the measurement items to cover the content domain of the variable being measured (Nunnally, 1978). The study used a five-point rating scale, i.e. from 1 (strongly disagree) to 5 (strongly agree). The reliability alphas (a) of different variables and sample items for each variable are discussed as follows.

5.3. Findings Of The Study

Correlation and validity of the instrument's statements through Cronbach method, the correlation for all the subscales of KM were high and significant in 0.01, but the correlation for the indicators of leadership style in the first rank (r=0.886), strategic vision in the second rank(r=0.732), internal process in the third rank (r= 0.715), general management in the forth rank (r= 0.682) and human resources (r= 0.679) is last rank (see table 2).

Cronbach - as of general management was found .85, Leadership had a very good   (0.87). Among the indicators, strategic vision is least (0.75), and others are more than it (internal process=.83 & human resources=0.85). Fortunately, the reliability alphas of Total KM (0.92) were very strongly (See table 3), and the alpha value of 92% indicates that the research instrument enjoys a rather high validity. Also, minimum of the alpha value for sub scales is equal to 75% and has a rather high value.

Table 3: Statistical Information

Indicator	No of Items	Cronbach's Alpha	Mean	Correlations	Sig
General Management	13	.85	39.64	.682**	.000
Leadership Style	7	.87	22.63	.886**	.000
Strategic Vision	5	.75	16	.732**	.000
Internal Process	7	.83	20.44	.715**	.000
Human Resources	7	.85	21.35	.679**	.000
KM- Total	39	.92	120		

5.3.1. Description Of Data

5.3.1.1. Normal Distribution

Table 3 shows Mean, SD, Skewness and Kurtosis of 5 indicators: general management, leadership style, strategic vision, internal process, human resources and total of KM. Normality distribution (fig 1) of variables assessed based on Kurtosis and Skewness, result exploratory analysis showed an excellent normality KM scale.
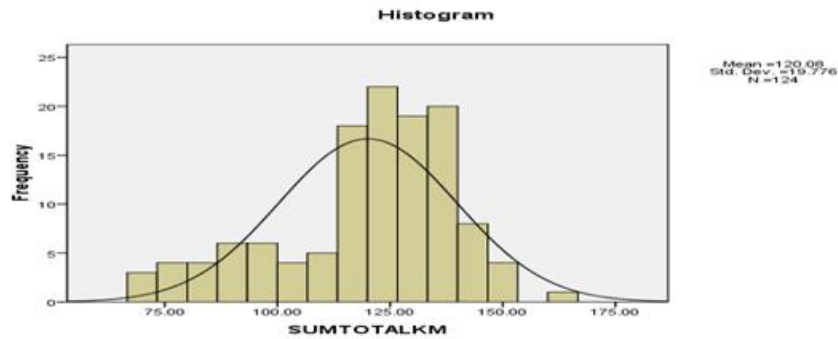
Figure 1: Normal Distribution

5.3.1.2. Means Of Different Variables

The mean values of the different variables are discussed as following (Table 4).

The mean values on a five-point scale (1= strongly disagree; 5 = strongly agree) of the five indicators under KM were 39.64, 22.63, 16.02, 20.44 and 21.35 for general management, leadership style, strategic vision, internal process and human resources. Also the mean of KM (sum) was 120, which indicated that the respondents believed that the level of knowledge management according to mentioned criteria's was average and internal process was a little less than average. Actually the employees did not indicate a positive approach on:

➢ Learning environment characterized by positive thinking, self esteem, mutual trust, willingness to intervene preventively, taking responsibility for performances, openness, enjoyment, and passion.

➢ Knowledge growth is promoted through the organizational culture.

➢ Problems are integral and are tackled methodically by a systems approach.

➢ The most important they did not believe that their knowledge share spontaneously with each other.

It seems internal process is more challengeable and tangible than the others.

Table 4: Descriptive Statistics

Indicators	NO	No of Items	Mean	SD	Skewness	Kurtosis
General Management	124	13	39.6371	7.89806	-.018	-.093
Leadership Style	124	7	22.6290	5.80646	-.851	.032
Strategic Vision	124	5	16.0161	3.62687	-.535	-.398
Internal Process	124	7	20.4435	4.26424	-.635	-.079
Human Resources	124	7	21.3548	5.21598	-.755	-.218
KM- Total	124	39	120.0806	19.77623	-.797	.149

5.3.1.3. The Indicators Of Knowledge- Oriented Management

Table 5: An Analytical Survey Of Indicators

indicator	Total mean	Maximum		Minimum	
		issues	Score	issues	Score
General management	3.05	(Making mistakes is allowed; failures are tolerated and not penalized)	[3.57]	(The organization has a network of knowledge workers) & (there is an active program for developing ideas)	[2.7, 2.8]

Leadership 3.23	(managers support to dealing and transaction of knowledge)	[3.56]	(solving the organization problems through teamwork)	[2.71]
Strategic vision 3.07	(Executive indexes for the purpose of learning and knowledge with the developing vision at university)	[3.46]	(executive indicators)	[3.04]
Internal process 2.91	--------	------	(Transferring knowledge regularly, knowledge measurement, & using friendly of information system and communication) were lowest.	[----]
Human resources 3.05	(proactive competence development policy)	[3.21]	(Managers and employees are not judged enough, by what they do) &(The knowledge of departing employees is not passed pervasive on to successors)	[2.8]

5.3.1.3.1. General Management

From among 13 statements which were indicative of KM, the total mean was 3.05 and highest mean belonged to the first statement (Making mistakes is allowed; failures are tolerated and not penalized) being 3.57 and the lowest mean were 2.7, 2.8 for statements numbers 8 (The organization has a network of knowledge workers) and 11 (there is an active program for developing ideas) In the other words, the staff's mistakes in the failure process were approached without penalizing ,however the organization has not a suitable network of knowledge workers, further more they believe there is not an active program for developing idea.

5.3.1.3.2. Leadership Style

According to Lakshman (2007) and Bell De Tienne et al. (2004) leadership has been identified as a key variable in the relationship between KM and organizational effectiveness by researchers. Similarly, McFarlane (2008) contends that, "effective leadership is a salient requirement in organizations where the knowledge worker is the key to developing as well as unlocking the sources and potential for sustainable competitive advantage in the knowledge economy". The total mean for the 7 statements measuring leadership style was equal to 3.23 which is more than average score. Maximum is 3.56 belong to 17 (managers support to dealing and transaction of knowledge), Except for the statements number 15 (solving the organization problems through teamwork) which had a mean of 2.71 and indicated that solving organization problems through teamwork was low, the mean for rest of the statements showed that:- the high ranking principal of university, to a high level, makes sure to increase the learning potentiality of learners and establishing learning organizations,- it ,to a great extent, is aware that knowledge plays a significant role in the success of the organization,- the individual and team cooperation of managers has been high in exchange of knowledge and learning,-they have been very active in control and acquiring knowledge of the organization,- they have facilitated learning to a great deal,- the management of university has been active in identifying the processes and cultivating the learning process and communication knowledge in high levels, and the participants highly considered the management of knowledge to be a strategic matter.

5.3.1.3.3. Strategic Vision

KM for higher education in a global economy requires strategic alliances on an international arena, and the creation of global knowledge repositories, which are used to the competitive advantage of the partner in the alliance (Rowley, 2000). In this case, there was 5statements measuring strategic vision. The total average of them is 3.2 and indicated that the level of strategic vision of sample was rather high especially from the employees point of view .In the other words, there has been group learning for developing the core capabilities of the organization and a medium level credit for university and knowledge in an above medium level (3.07) . Executive indexes for the purpose of learning and knowledge with the developing vision at university has been above the medium level (3.46) and executive indicators (3.04) have had the value lower level for the organization. All in all, participants showed a rather high strategic vision.

5.3.1.3.4. Internal Processes

Process is one the triangle corner of Knowledge (McFarlane, 2008).There were 7 statements measuring the internal process variable of one of the parameters of management of knowledge. The total mean of the

internal processes are very low and equal to 2.91 which is lower than the average. With regard to the score average of each of the statements, it can be mentioned that : The staff and lecturers and university have been acting rather poorly in case of regular and wide exchange of knowledge. "Encouraging development in knowledge from organization", "systematic approach to the university problems" and "responsibility, trust, self assessment and satisfaction" have been in medium level; and also, "transferring knowledge regularly", "knowledge measurement", and "using friendly of information system and communication" have been lower than average. Documentation of developed and acquired knowledge has been very weak and rarely accessible.

5.3.1.3.5. Human Resources

There were 7 statements measuring the concept of human resources of one of the parameters of management of knowledge. The total mean of human resources has been 3.05. but for the statements number 36 (proactive competence development policy) which had a rather high mean equal to 3.21 and indicated the strength in the quality of the internal and external training, courses, working conferences, symposia and seminars., the mean for the statements 34 and 39 were very low (2.8). In fact, the respondents believe "Managers and employees are not judged enough, by what they do" and "The knowledge of departing employees is not passed pervasive on to successors".

5.4. Data Analysis

The main objective of this research was identifying and investigating the pattern for establishing a knowledge oriented management at university. In the other words, this research sought the answer to this question that are there any signs observed at university for knowledge based management and how can this new and efficient pattern can be implemented or strengthened at university? The minor objectives of the study included studying the demographic features as gender, age, education, and the groups of the study (faculty members and staff) as well as studying the parameters of knowledge based management such as the general style of management at university, the leadership style, the strategic vision, the internal processes of management, and investigating the status of human resources at university. According to table 4, the mean of 2 groups (staff and lecturer) in general management is approximately the same. But for others are indifferences. It means there are significant differences between approach of staff and lecturer aspect of leadership, strategic, process and resources. In addition, the ranges of SD in general management and also in other measures show differences between two groups. It seems the approach of lecturer were concentrated. So, it was assessment with more positive approach by the lecturers, because they have more information and deeper/wider vision.

Table 4: Group Statics

Items	Position	N	Mean	SD
General management	Staff	58	39.3448	10.05520
	Lecturer	66	39.8939	5.40692
Leadership style	Staff	58	20.1897	7.10438
	Lecturer	66	24.7727	3.09240
Strategic vision	Staff	58	15.2241	4.15930
	Lecturer	66	16.7121	2.94443
Internal process	Staff	58	18.6034	4.95219
	Lecturer	66	22.0606	2.68832
Human resources	Staff	58	18.1379	5.60216
	Lecturer	66	24.1818	2.57150
Total of KM	Staff	58	111.5000	24.73243
	Lecturer	66	127.6212	8.95762

5.4.1. T-Test

In order to identify mean differences of KM staff and lecturer utilized a series of T-Test; results revealed that there is not a significant differences in general management (t=-.371, p =.711), between staff (M=39.34,

SD=10) and lecturer (M=39.9, SD=5.4). Overhand, there is a significant difference in:

leadership style (t= .4.549, p <.05), between staff (M=20.19, SD=7.1) and lecturer (M=24.77, SD=3.1)
strategic vision (t= -2.27, p <.05), between staff (M=15.22, SD=4.16) and lecturer (M=16.71, SD=2.94)
internal process (t= -4.738, p <.05), between staff (M=18.6, SD=4.95) and lecturer (M=22.06, SD=2.69)
human resources (t= -4.701, p <.05), between staff (M=18.14, SD=5.6) and lecturer (M=24.18, SD=2.6) and
for total of KM (t= -4.701, p <.05), between staff (M=111.5, SD=24.73) and lecturer (M=128.62, SD=8.96).

It is obvious that the statements of "general management" were understandable; it means most of the employees (staff & lecturers) are satisfied enough. Since the others indicators (leadership style, strategic vision, internal process & human resources) needed to a wider vision and deeper sights. Because following promotion of facilities by university to achieve KM. the lecturers seemed to be more satisfied with the present situation.

Anova- one way, The anova was conduct for general management (F= .464, P= .708) and strategic vision (F= 1.923, P= .129) there was no significant differences between staff and lecturer. But, for leadership style (F=7.440, P< 0. 05), internal process (F=8.156, P< 0. 05), Human resources (F=21.933, P< 0. 05) and total of KM (F=8.081, P< 0. 05), there is a significant differences between two groups.

5.4.2. Kruskal-Wallis Test

Table 5. Test Statistics[a,b]						
	General management	Leadership style	Strategic vision	Internal process	Human resources	Total KM
Chi-Square	1.386	11.904	3.788	16.350	37.454	13.569
df	3	3	3	3	3	3
Asymp. Sig.	.709	.008	.285	.001	.000	.004

Anova result shows that. Homogenize of variance has been violated, then we requested kruscal-wall s. Results also, revealed that there is a relationship between leadership style and education [(Κ=11.90, P=.008 / (Κ(df=3) = 11.90, P< .01)], internal process and education [(Κ(df=3) = 16.350, P< .01)], human resources and education [(Κ(df=3) = 37.454, P< .01)], and also between education total of KM [(Κ(df=3) = 13.569, P< .01)]. There were no significant differences between education and some items such as: general management and strategic vision.

Spearman's rho test was used in order to identify correlation between age and KM. The result revealed that there is a no significant / weak negative relationship between age and KM.

A series of one way Anova was used to determine relationship between experience and KM. Only the Anova table results (F (2, 121) = 3.32, P< .05) shows that mean of human resources is significantly different within levels of relationship variable. The mean values table shows that the more experience, the more the support. Also, the model from the Anova table showed that about 20% of variance in dependent variables KM is explained by seven independent variables, that position was a significant predictor , in this model (Beta= .451, P< .05) in the first stage of analysis to request multiple regression analysis result, of multiple regression emerged a significant model (F (6,117) = 4.74, P=< .01).

## 6.   Discussion Of The Findings

According to Wu et al. (2008) how to evaluate knowledge-based organizations has become one of the most important issues in knowledge management, and KM is an important strategy for improving organization competitiveness and performance (Wong and Aspinwall, 2004, 2006). So, the literature showed most of the studies, researches and theories are for determining of criteria/indicators and method of measurement but hardly any effort has been done to measure O-KM based on a series of criteria.

As a result, some of criteria were assessed strongly: Discussing mistakes and errors instead of penalizing, commitment to learning, knowledge important to success, focuses on developing knowledge, the ability of knowledge manager on understanding and processing, Knowledge management as a strategic theme, clearly objectives of learning. And some of criteria were assessedt weakly: quality network of knowledge workers, simply organisational structure , to be active programme for developing ideas, existing an atmosphere of fear and distrust, having being team for identify and solving problem, doing exchange knowledge with each other,

using communication and information systems broadly spread, Documenting obtained knowledge made available to everyone, Managers and employees are judged, share their knowledge with colleagues are rewarded extra and having more promotion opportunities.

With considering to positive and negative points, it can be showed like to "Robert Blake" and "Jane S. Mouton" (1965) model. It seems the positive points indicates to be suitable behavioral and oriented- human. While, the most of negative points indicates that there is problem in organizational structure.

Fig 2. An *Exhibit of indicators level*
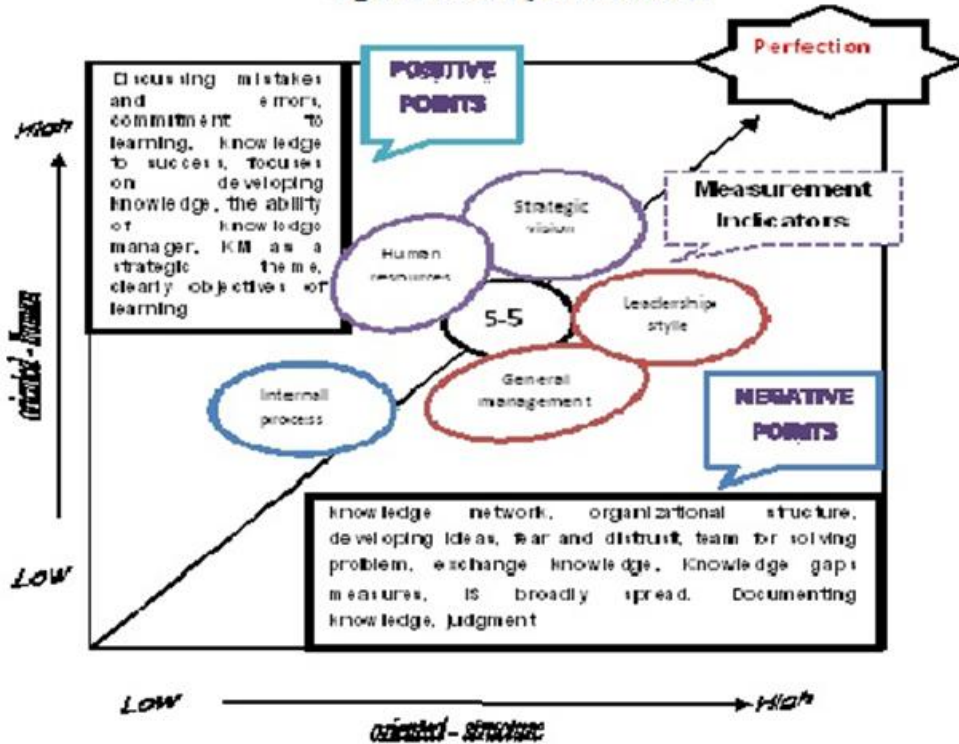
When managers have more wholly recognition of KM, they have better understanding toward the issues and realize the importance. Meanwhile, they also could understand better about the benefit the KM project can bring to the companies and feel the immediacy to take the innovation (Chen and Lin, 2009). According to Kidwell et al. (2000) KM should not be looked upon as an extreme change, its better that the concern should be to focus on implementation of KM seriously. Under above resulting (see figure 2) one of main problem of the university is lack/weak procedure and organizational suitable structure. The result of a researcher (Wen, 2009) showed "procedures; persons, supporting organizational structure and information technology' are four key successes of KM.

In addition, in a ranking by Wen (2009), the priority of criteria was identified: Information, Staff, Wisdom, Knowledge and Data. Meanwhile in our research the minimum score was given to internal process (there were information, knowledge, and transaction, changeover, utilization, etc)

On top of that, to obtain the knowledge and turnover to others, bring synergic power by human resources, Rodriguez et al. (2006) claimed the dimensions of "People Competencies and Environment & Partnerships" and "Externalization and Combination were high practiced. Moreover the study of Alhawary and Alnajjar (2008) showed that the information systems technology had a significant impact on knowledge creation and conversion.

The result of Alhawary and Alnajjar (2008) indicated that there were no significant differences in the perception of academic staff at the Jordanian universities for the use of information systems technology regarding the purpose of knowledge creation and conversion. But, the result of our research showed "there was a significant difference in the perception of two groups (staff & lecturer). Furthermore, the result of

Jamshidi and Nemati (2008) showed there was a significant difference between knowledge share process and social capital experience. Also, they showed that there is a significant difference between groups' aspects of knowledge share and social capital concept. (Jamshidi and Nemati, 2008).It seems some of the problem were related to history of the university (22 years) because, there is a correlation between the history of the institution and its ability to respond to the challenges of the 21st century Knowledge Economy (Cranfield and Taylor ,2008).

7. Conclusion

With regard to the findings, in sum it can be mentioned that there are observable concrete indexes and signs and evidences of K-OM in the fields of research, official and civil, scientific, educational, digital facilities, at university and they are increasing in a not so rapid pace. Also from the point of view of the lecturers and staff of the university under study, there have been advances in the parameters of K-OM especially in leadership style and strategic vision in the University in medium and above medium level. Indexes of internal process of K-OM have not been very successful in the research environment and have been evaluated to be weak. This calls for the principals of the University and other similar universities to take actions. There was no significant relationship found between KM and some variables such as age, gender, education. But there was a significant relationship between KM with groups and experience of the study. In the end, there are some strategies provided to increase the effectiveness of KM in the University.

As a result, to consider the combination of this research qualitative and quantitative, it seems total of O-KM was above average and development trend of O-KM was suitable (22years). But, it is proposed that organizational structure and operational process should be improved or be done re-engineered. Furthermore, the process of O-KM, knowledge creation, utilization, transformation, up to date, as a plan is considered.

Research problems in research environment, generalizability of the obtained findings to other similar environments, weakness of research and experimental effects related to K-OM, can be regarded as the limitations of this study. To faster establish management of knowledge in research environment and with reference to the findings, there were some theoretical suggestions provided for the university principals and researchers as well as some practical strategies to the managers of organizations and executive managers.

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