

## **EVALUATION OF TECHNICAL AND STRUCTURAL FACTORS IN THE IMPLEMENTATION OF KNOWLEDGE MANAGEMENT (KM)**

**(Case study of Islamic Azad University, Isfahan (khorasgan) Branch)**

**Amirreza Naghsh <sup>1\*</sup>, Mohsen Taheri Demneh <sup>2</sup>**

*1- Faculty Member, Department of Governmental Management, Khorasgan (Isfahan) Branch, Islamic Azad University, Isfahan, Iran (Corresponding author), Email: ar.naghsh@khuif.ac.ir*

*2- PhD Candidate of futures studies, Faculty of new Sciences and Technology, Tehran University, Iran*

### **Abstract**

*The aim of this study was to identify and analyze the structural and technical requirements of implementation of knowledge management in Islamic Azad University of Isfahan (khorasgan) Branch. The research method was descriptive - survey. Statistical community was equal to 270 and statistical sample with reference to the table sampling Morgan was 159 people. Also according to the different classes in society, statistical identification was classified random sampling method. The data was collected through questionnaires and in order to determine the validity of the questionnaire was used formal and content validity and its reliability was calculated through 0.876 with the value of cronbach's alpha coefficient. Research data has analyzed by descriptive statistics methods and sample of community average. The findings of the study showed the average indicator of substructure (requirements) with an average of 2.8 in the organizational structure of the University was less than the average level; This is while the technical substructure (the obligation) indicator (information technology) at the University of 3.38 was more than average level.*

**Keywords:** *Knowledge Management, Knowledge Management substructure, Knowledge Management Implementation, Organizational Structure, Information Technology*

### **1- Introduction**

While in the past, the value of Organization usually was evaluated based on capital and tangible asset, but in the third millenary the intangible asset is considered as the best asset of organization [1]. Today's ultra industrial society is an information society in which the power technology gradually is replaced by the knowledge technology. There is a growing understanding in relation to the importance of knowledge as a vital resource for organizations in the field of management [12] and knowledge is the major part of the capital and the most powerful production engine in organization. So the emphasis should be on its management organizations [14]. By study and analysis the knowledge and the importance of its characteristics in the domains of organization, it can be found that the enjoyment of the day to day knowledge and information is an irrefragable necessity for organizations life. Managers, in the complex and uncertainty situation, need new knowledge (knowledge of knowledge management system). If an organization fails to apply the appropriate knowledge management system, it will be faced with problem. On the other hand, continuous evaluation of this system is managers's concern. While, researchers are trying to use different methods in

measuring knowledge management [13]. As a result, knowledge has quickly become as a vital capital for the promotion of Organization performance in future. Therefore, the establishment of indicators and the measurement of organization knowledge by high management to decide on the knowledge management's activity is extra vital.[8]

The managers are facing with the decision making problems about the extent and quality of the implementation of knowledge management to achieve the proper performance and issues related to the duplication of knowledge management's roles in organizations. It is natural that implementation of knowledge management in organization, such as any implementation, must be a gradual, step-by-step process, because experience indicates that sudden change not only doesn't solve any problem of organization, it can cause the loss of existing capital.

In General, the various methods in implementing knowledge management has been created, which the difference in them is due to the difference in the partial ideas about knowledge management and the variety of social organization and their needs.

The important points which should be considered in terms of the implementation of knowledge management in University environment, are the quantitative behavior of University organization, flexibility of the program content, the existence of general union in team works and the exchange of information and knowledge, enjoyment of the implemented method and the experiences of the leading University, and finally gradual implementation process.

Therefore, it seems that for implementation of knowledge management, the identification and analysis of its implementation requirements is first. Substructure is a mechanisms through which the organization manages knowledge and people in different parts of it, share their knowledge through this substructure drives, so that members can use this knowledge effectively.

This substructure makes performing the essential processes of knowledge with the maximum efficiency, using hardware and software more efficiently and the creation, sharing and applying of knowledge. The purpose of this substructure is nothing but shedding the knowledge in the vessel of Organization work processes [4].

In this regard Rahnavard and Mohammadi (2009) indicate that with coming to the third millenary there are signs of rapid changes in technology and the intensity of the complexity of the environment.

In such a situation, creating strategic competitive advantage requires a new type of organization, with the ability to create qualitative knowledge. For this reason, managers are expected to have a deep understanding of organizational evaluations and promote organization performance through investment in knowledge-based projects. The most important step in this regard is the identifying of effective factors in knowledge management and its constraints [3].

According to experts, the benefits of correct implementation of knowledge management is not just for the economic company and universities as an organization of creating and promoting knowledge , can benefit from it. In academic environments, knowledge is one of the fundamental factors in the growth and development and can help universities to provide exquisite service [5].

Today, applying knowledge management in all universities and institutions seems to be essential. Universities and institutions in order to optimal applying of knowledge management have to understand the necessity of knowledge sharing cultures among staff through the process of the establishment of knowledge management . by establishment of knowledge management universities ,we can develop innovation in universities [2].

As Universities in terms of the size, extent and variety of mental capital, are one of the most extensive formal social institutions, they should be pioneer in the establishment of knowledge management as the main sufficiency in comparison with the other organizations and as a knowledge Organization direct their major activity to learning, knowledge creation and its dissemination [6].

The importance of knowledge management for many organizations is clear and obvious. Therefore, leaders and managers seeking factors and reasons which make the designing and implementation of knowledge management system successful in the Organization of [11]. But research has shown, the great percentage of organizations that implement knowledge management as a strategy , they hasn't achieved their goals [9]. For this reason, identification of factors affecting the success of knowledge management has great importance.

The results of monavarian's and kasae's researches (2007) indicates that organizational culture, information technology and education affect on knowledge management and the most affective factor in implementation of knowledge management in organizations is cultural factor [17].

In addition, Hauschild et al(2001) believe that motivation, rewarding proceedings based on knowledge, encouraging innovation, valuation of knowledge production and encouraging the group activities has an effective role in the establishment of the knowledge management [10]. According to Moffett's and Parkinson's (2003) research, compatible organizational culture as well as senior management's commitment, staff's involvement and participation, devolution, and organizational structure were also identified as the factors that affect the success of knowledge management in Organization [16]. Also, Ajmal's and Kekale's findings (2010) showed that the factors affecting the success of knowledge management are: coordination, motivation, autonomy, recognition, culture and systems [7]. With regard to the above the important factors that can have an impact on knowledge management include: technology, culture, organizational structure and rules as well as the process of knowledge management.

## **2- Research Questions**

- 1- How are Technical requirement indicators statuses (information technology) for the establishment of the knowledge management in Islamic Azad University of Isfahan?*
- 2- How are knowledge management indicators status for the establishment of the structure requirement in in Islamic Azad University of Isfahan*

## **Research Methodology**

The research method was descriptive-survey. In this study, the methods of library and survey Are used. In The first stage, by using the present documents, the related theoretical topics are expanded. the survey study includes two-stage: the preliminary study and field data collection. In a preliminary study, the required information is gradually collected and analyzed with a variety of techniques including deep interviews. In a way that at the end of this stage the variables related to the basic factors in implementation of knowledge management and the relationship between them are analyzed. In the next stage, relying on experimental knowledge of the pilot phase, the variables in form of a questionnaire, by sampling method in the form of the field (users and distribution system) is collected. Then the collected data is extract in the form of statistical software and finally described and analyzed. The Statistical community includes all the assistants, directors, managers, administrators, experts and managers of departments at the University of Isfahan, Azad (khorasgan Branch). their number at the time of study was equal to 270. By Referring to Morgan's sample table, the obtained statistical sample was 159 with respect to identify the different classes in society; the random classification sampling method was used.

In the compilation of the questionnaire content and face validity were used. the initial questionnaire was reformed on the basis of experts's and university professors 's comments. For the measurement of sustainability was used cronbach's alpha coefficient and also the following hypothesis was examined.

**Table 1-survey questionnaire reliability test**

Is the reliability of the designed questionnaire acceptable?
The reliability of the designed questionnaire is acceptable.
The reliability of the designed questionnaire is not acceptable.
$H_0: \text{Alpha} \geq 0.70$
$H_1: \text{Alpha} < 0.70$

The test results showed that, as the calculated reliability coefficient was ( $\text{Alpha} = 0.876$ ) greater than 0.70 thus the assumption of zero is confirmed .this means that the reliability of the designed questionnaire is acceptable

Before starting the hypothesis test stage, we should be sure that the research variables are in a normal state, and it is done by kolmogoroff-smirnov test. The designed hypothesis is shown in below table.

**Table 2-test being normal research variables**

Question	Does technical Variables (information technology), organizational structure, cultural substructure and knowledge management processes have normal distribution?
Research hypothesis	The relevant variable is normal
	The relevant variable is not normal

As the sig of the all factors is greater than 0.05, it can be said that the distribution of all the factors is normal. Therefore, we can use the parametric tests. The more relevant results of hypothesis test is shown in follow.

### 3- Research Findings

**Table 3-related tests to check the status of the technical (information technology) substructure (requirements) Azad khorasgan branch-level facilitators**

Question	How is the Present status of technical (information technology) substructure (requirements) in Islamic Azad University of Isfahan?	
Research hypothesis	H1	the Present status of technical (information technology) substructure (requirements) in Islamic Azad University of Isfahan is suitable.
	H0	the Present status of technical (information technology) substructure (requirements) in Islamic Azad University of Isfahan is not suitable.
Conclusion	H1: $\mu \geq 3$	

	H0: $\mu < 3$
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as the calculated significance level is less than 0.05 ,it can be said that the average of technical (information technology) substructure (requirements)in Islamic Azad University of Isfahan has significant difference with the number 3. By Referring to column t and considering their marked, we can find that the average of the technical (information technology substructure (requirements)) in Islamic Azad University of Isfahan is 3.38, which is more than 3. So it can be said that the status of Islamic Azad University of Isfahan in terms of this indicator is suitable.

**Table 4 – test related to check the present status of organizational structure substructure (obligation) in Islamic Azad University of khorasgan branch**

Question	How is the Present status of organizational structure substructure (obligation) of Islamic Azad University?	
Research hypothesis	H1	the Present status of organizational structure substructure (obligation) of Islamic Azad University is suitable
	H0	the Present status of organizational structure substructure (obligation) of Islamic Azad University is not suitable
Statistical hypothesis	H1: $\mu \geq 3$	
	H0: $\mu < 3$	

As the calculated significance level is less than 0.05, it can be said that the average of organizational structure substructure (obligation) of Islamic Azad University in Esfahan has a significant difference with the number 3. By Referring to column t and considering t marked, their marks, we can find that the average of organizational structure substructure (obligation) is 2.8. That is less than 3. So it can be said that the status of Islamic Azad University of Isfahan in terms of organizational structure substructure (obligation) is not suitable

## Discussion and Conclusions

The results of the analysis of the collected data through the questionnaire on a field agent of knowledge management processes indicates that the status of the processes of creation and gaining knowledge in the Organization, will require the implementation of strategies to promote the position of the Organization, so experts spontaneously would codify own experience and knowledge and gain knowledge from the external resource of organization. Reviews showed:

- The status of the assessment and organization of knowledge requires the implementation of strategies to promote the position of the Organization in these processes.
- The status of the sharing of knowledge is optimal and requires stabilizer measures.
- The status of the knowledge implementation is stable and optimal.

The result of the analysis of the collected data through the questionnaire on ICT factor Suggests this:

- The status of the information system substructure, in Islamic Azad University of khorasgan branch (Isfahan), optimal and requires stabilizer measures.

- The status of the processes of information in Islamic Azad khorasgan branch-level facilitators (Isfahan), is medium and requires stabilizer measures such as a expansion of the exchange possibility of information at different levels of an organization, such as information technology systems through Forum.

- The status of information technology management in Islamic Azad University of khorasgan branch (Isfahan), requires the implementation of strategies to promote the position of the organization. In General, the status of information technology in this company is optimal and stable, and prepared the proper basis for introduction of software system for knowledge management in Islamic Azad University of khorasgan branch (Isfahan).

The result of the analysis of the collected data through the questionnaire on a field agent of the organizational structure indicates:

- The status of Motivational system indicator in Islamic Azad University of khorasgan branch (Isfahan) requires the implementation of strategies to promote the position of the organization

The status of administrative bureaucracy indicator in Islamic Azad University of khorasgan branch is undesirable and requires facilitating measures.

The status of gradation system indicator in Islamic Azad University of khorasgan branch (Isfahan) is desirable and requires stabilizer measures and making it more knowledge-oriented.

In total the present situation of the Islamic Azad University of khorasgan branch (Esfahan), in terms of substructure indicator (obligation) of organizational structure is not suitable.

Substructure is a mechanisms through which the organization manages knowledge and people in different parts of it, share their knowledge through this substructure drives, so that members can use this knowledge effectively.

This substructure makes performing the essential processes of knowledge with the maximum efficiency, using hardware and software more efficiently and the creation, sharing and applying of knowledge. The purpose of this substructure is nothing but shedding the knowledge in the vessel of Organization work processes.

The basis Factors of knowledge management which have been studied in the present survey are the cultural factors, psychological factors, management factors, and knowledge management processes factors, information technology factors.

Knowledge management focuses on individuals and their interactions. Creation and sharing of knowledge is result of interactions during the act, therefore, in knowledge management, at first people should be related to knowledge management goals. This relationship includes processes and encouragement, not just for creation of trust and use of the available information, but for sharing in global source of information. Then people should be linked together. They should be able to find each other and be comfortable in asking help and sharing their experiences. This makes them feel sharing in achieving strategic goals in organization. Knowledge management should not be confused with data management. Data management focuses on process and technology, whereas the pillar of knowledge management is people and their collective ability for rapid and effective participation. without data management, knowledge management will not be successful. Linking both requires a commitment to the knowledge sharing culture. To achieve this, Organization has no way but the investment and commitment to establish the optimal organizational culture. If people don't have commitment towards knowledge and don't accept current knowledge activity knowledge substructure will not be successful. Also, without having a technology

substructure, in order to support the activities of strong knowledge, knowledge substructure doesn't work, as long as there aren't knowledge-based processes, too, knowledge management doesn't have proper substructure, for operation [18]. The metaphor of science transmission from arm to brain and conversion of information into knowledge and finally to output which has the added value, indicates that diversity, creativity, innovation, and being knowledge – oriented organization, is an inevitable choice for the 21<sup>st</sup> Organization [15]. Knowledge management is a process that is started with the beginning of the Organization's work and isn't thought to have an end. When organizations decide to perform knowledge management, in fact, it has decided to reinforce the inevitable activities and solve its weakness, the activities which have been performing in organization before. For the establishment of the knowledge management system in Isfahan, Azad (khorasgan Branch), it requires to examine and understand the basis factors in knowledge management. Therefore, this part of the project has surveyed the current status of knowledge management factors in Azad, khorasgan branch (Isfahan)

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