

THE EFFECT OF KNOWLEDGE MANAGEMENT ON ORGANIZATIONAL LEARNING IN SHIRAZ MUNICIPAL

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ABSTRACT

The purpose of the present study was to investigate the effect of Knowledge Management on organizational learning in Shiraz Municipal. The statistical population of this study was 52 individuals among Shiraz Municipal staff. To analyze the corresponding data, the research variables, parametric and non-parametric statistical methods, along with two types of questionnaires, Organizational behavior questionnaire of Podsakoff and Organizational management questionnaire of Paterson were also used. To this end, both descriptive statistics and inferential statistics were used. The amount of organizational learning as a dependent variable, variables of Knowledge Management, including human dimension, process(structure) and technology, respectively, as independent variables were imported into regression equation. Moreover, the rate of organizational learning was calculated by multiple regressions through organizational learning mean. The results showed that human dimensions, process(structure) and technology respectively played significant roles in organizational learning in Shiraz Municipal Organization.

Keywords: Knowledge Management, Organizational Learning, Human Dimensions, Process (Structure), Technology

INTRODUCTION

Knowledge is set of facts and information that man takes advantage of them in his life(Hamlyn, 1970).According to **Davenport and Prusak (2000)**Knowledge is a fluid mixture of experiences, values, available information and experts organized attitudes which provide a framework for evaluation and use of experiences and new information. Knowledge is created and used intellectual minds. Knowledge is depicted in not only records and resources of knowledge, but also in organizational routines, processes, practices, and norms. This definition indicates that knowledge is not clear and simple. It is fluid as well as formally structured; it is intuitive and therefore, we cannot easily put it into words and present a logical definition for it. Knowledge exists within people, part and parcel of human complexity and unpredictability. Changes and developments in technology is much more faster than the time required for training specialists, conducting training courses and human resources development. Not only technologies change rapidly, but also products, product lines and rules follow this procedure as well. So, there is a focus on accelerating the production of knowledge and its universality. Knowledge Management(KM)provides an answer to this problem. According to the definition of knowledge, Knowledge Management is a general process that create, store, maintain and share the knowledge that generally must include identification of the current status, diagnosis, clarity of the needs and demands and improvement work processes and consequently Knowledge Management projects are improvement project (Jahanian, 2010).

In another definition, Firestone & McElroy (2005) states that Knowledge Management is the process of changing the present pattern in order to enhance the knowledge of the search for new technology, based on the analysis of databases that will ultimately lead to quality improvement of organization. In fact, Knowledge Management is a comprehensive way of understanding the efficiency of knowledge in management processes as well as the authentic guide for individuals and organizations to compete with the increasing complexity and change in the modern economy (Dennings, 2002). Knowledge Management is one of the most important success factors of organizations in the competitive situations and the information age. The importance of this issue is to the extent that these days, some organizations measure their knowledge and reflect it in their reports as intellectual capital of the organization as well as an indicator to rank companies (Musavi, 2006). Knowledge Management as an essential part in the success of the organization, organizational covers a wide range of organizational ideas, including strategic, economical, behavioral and managerial innovations.

In today's world, where production of goods and services are heavily based on knowledge, knowledge is the key factor for competitive advantages (Zaferanian et al, 2008).

According to Jessani & Reid (2005), Knowledge Management strategy answers to three questions below:

1. Where is the organization now? How much knowledge is there about the organization's activities and how this knowledge manages?
2. Where should the organization be based on global changes and importance of information updates?
3. How can the organization reach there? What plan, process and or technology can help the organization to improve the quality and efficiency of the organization in order to reach to global efficiency?

REVIEW OF LITERATURE

People, processes (structure) and technology are three main elements in every organization. Knowledge Management emphasizes the individual and organizational culture in order to create a spirit of sharing and using the knowledge. In order to find, create, acquire and share knowledge, the focus is on the processes or methods. And to store knowledge and render it applicable during group work (without the individual actually be next to each other physically), the focus is on technology. People are the most important part, because Knowledge Management is directly dependent on people's tendency to share and use knowledge. People, processes and technology can always be a stimulating factor or a barrier to the movement of knowledge.

People Changing the organizational culture and its adaptation to the adoption of Knowledge Management (placing the organizational culture parallel to Knowledge Management) is the most important and most challenging work in Knowledge Management. Knowledge Management position is dependent on motivation, desire and ability to share their knowledge and the use of others' knowledge. The structure of the public sector is completely divided and has an island-like form. In this structure, the dominant culture hinders the transference of information from one sector to the other. As long as the mind structure of managers and employees in the public sector is on the basis of such a thing, and the consider possession and monopoly of knowledge as power, rarely does knowledge happen to flow between different sectors of the organization or to transfer to different organizational levels. However, in some cases, people may be sharing their knowledge with others that his is more to gain fame,

prestige, credibility, or even in some cases it is the resultant of humanitarian tendencies(Norouzian, 2005).

Processes

According to the existing methodologies, Knowledge Management framework, in relation to Knowledge Management techniques and processes, offers the following items: 1 - Identification 2- Conquering 3-Selection 4- Storage 5 -Sharing-6Application-7 Creation(Norouzian, 2005)

Identification

Identification is determining the internal qualification, strategic resource, the domain of knowledge(Zaferian et al., 2008).One way to identify the knowledge they are to acquire(the knowledge existing in the minds of organization experts) is to perform Knowledge Audit. By carrying out an audit, various types of needed knowledge, resources, strengths and weaknesses, knowledge flows etc. required for the development of a knowledge strategy for the organization, will appear(Norouzian, 2005).

Conquering

Conquering is to formalize the existing knowledge. **Selection** is to determine the relationship between knowledge, value and accuracy, and eliminate in compatible sciences. And, storage is to introduce the unified memory in knowledge repository to a variety of its models (Zaferian, 2008).

In the context of knowledge sharing, employees should be courageous. In order to develop the application of knowledge in public organizations, a position can be considered for Knowledge Management in the organizational structure, which leads to sharing activity and use of knowledge in a very specialized way activity and modifies people's intellectual and ideological foundations in this respect. After sharing knowledge, the acquired knowledge should be used and internalized so that the output is the re-creation of knowledge. Knowledge creation may be in various forms such as new products or services, increased innovation, improving customer relationships and the like. This fact in organizational sections appears in the form of organizational processes, innovation and improving communication with the public in new ways of working together(within the organization or other agencies)should be (Norouzian, 2005). Knowledge application, use and development are processes that expand the knowledge taken from others with regard to their features of his knowledge, and also allow the use of knowledge at various work hours. The applied knowledge should manifest its impact on increasing effectiveness or increasing the efficiency of the organization (Bakhtiari, 2007).Knowledge creation is the processes by which knowledge needed by the organization, is created within the organization. For example, a new way of responding to the needs of customers, can be a knowledge that is discovered in the marketing and sales section by support personnel (ibid.,2007).

Technology

Technology is used in all processes of Knowledge Management and, accordingly, there are many technological solutions in this regard, on the market. The main difficulty is the selection of appropriate technology. It should be noted that technology is merely a facilitator through which we can create a connection between people with information and people with each other. However, technology is not a solution per se (Norouzian, 2005).The concept of Knowledge Management without technologies based on knowledge will have limited capabilities. The highest value of technology in Knowledge Management is

increasing access to knowledge and accelerating its transfer. Information technology allows the extraction of knowledge from the expert's mind. Then, through technology, that knowledge can be incorporated in regulated forms and transferred to other internal agencies and the organization business partners in the world. Technology helps to codify knowledge and sometimes helps to create it (Afrazeh, 2004).

Information technology plays an important role in the implementation of Knowledge Management. In fact, it can be said that the backbone of the success of Knowledge Management is the use of information technology. Knowledge Management systems are developed by three IT categories. Communication, collaboration, storage and retrieval are three used technologies in Knowledge Management. Communication technologies allow the users to gain knowledge and to communicate with each other (especially with professionals). E-mail, Internet, intranet and other web-based tools and even fax and phone are among communication technology components. Technology will help the group work to be created. While not physically in one location, members of the group can operate on one issues simultaneously or non-simultaneously. In fact, the main effort is to create a virtual space to do group works with out people being together physically. Based on the use of database management systems, storage and retrieval of information technologies are established to store and manage explicit knowledge. However, the storage and management of tacit knowledge need their specific tools. Regarding the development and sharing of knowledge, it must be distributed and shared across the organization before being exploited to the level of organization. Knowledge sharing reduces interaction through supervising a predetermined channel and thus the opportunity to check the value of transferred knowledge decreases. The use of email, internet and discussion groups can support the distribution of knowledge throughout the organization and allow human resources to discuss debate and interpret information from multiple parties.

The implementation of Knowledge Management is an important element in Knowledge Management, which has been studied by various researchers. Grover and Davenport have suggested a seven-C model for the implementation of Knowledge Management in organizations. This model has been established on the initial letters of seven words, therefore, the pattern has been dubbed seven-C which includes: 1. Contribute, 2. Capture, 3. Create, 4. Collaborate, 5. Consume, 6. Communicate, 7. Culture, (Zaferian et al., 2008).

Knowledge: the processes by which knowledge is given to the organization.

Regarding cooperation, the new knowledge enters the organization through sharing and dissemination of technology, replacing staff between organizations, communication with partners, etc.

According to Susan Fisher and Margaret White's definition, Organizational Learning is a reflective process in which all members of the organization at all levels play a role and includes information which is attained from inside and outside the business environment. This information passes through a group process and get refined, so that it is divided to the explanation and ultimately is used to stimulate activities that are unique to the continuing changes in organizational behavior and its applied theories. This definition suggests a process in which information is collected and interpreted through cognitive-social processes. Information gathered from this process becomes a corporate knowledge base and this knowledge is stored in organizational memory that contains the files, documents, procedures, policies and organizational culture (Broumand, 2009).

Fundamentals that prepare the ground for improving learning opportunities are called organizational learning mechanisms. Organizational learning mechanisms are structural and cultural aspects of an organization that facilitate the development and improvement of a

learning organization. Cultural aspects include a set of shared values, beliefs, norms, attitudes, roles, assumptions and behaviors that render real learning possible (Ebrahim-Zadeh, 2005). Peter Senge considers learning organization as a group of people who work collectively to increase their abilities so as to reach a conclusion that they have in mind. Learning organizations learn new information and ideas. They disseminate the new knowledge throughout the organization, and ultimately seek to create an environment in which staffs are encouraged to use new methods and always welcome developments (Broumand, 2009).

With all the problems afflicting today's organizations ranging from global competition, rapid technological advances, intensive markets work, change and demographic characteristics of the community, the more important problem is that how the organizations manage massive and growing supply of data and information that they are generating?

Knowledge Management is a lifesaving factor that can guarantee the success of an organization. Management parallel with Knowledge Management is the same as organizational learning. Some believe that Knowledge Management and organizational learning should be integrated. Peter Senge states that to create knowledge something new should be taken after learning. Accumulation of information is destructive thing that reduces confidence and leads to undermining cooperation with the organization. Knowledge Management can be a sign of the peak and integrity of many ideas of the organizational improvement, including organizational learning (Borumand, 2009).

Finding and Results

After the conducted surveys and studies, in order to explain the theoretical framework, the study items are listed in Table 1. After being confirmed by professors and experts, the validity and reliability of the designed questionnaire was analyzed by Cronbach's alpha. The obtained Cronbach's alpha was 0.97 that shows the high reliability and validity of the questionnaire.

Table 1. Examined Items indifferent Aspects of Knowledge Management

<i>Aspects</i>	<i>Items</i>
Human	Organizational culture towards knowledge management, motivation, people's willingness and ability to share their knowledge and use of the knowledge of others, conference, providing magazines and books for personnel, establishing incentives and competition between affiliated organizations, specialized training for experts to maintain organizational, cultural and technological strategies, intellectual property
Process(structure)	Creating a valuable package of knowledge generated by the project, using a large number of experts to discuss knowledge, sharing knowledge between groups, recycling and use of knowledge indecision-making, problem solving, automation and support business and job assistance and training, generating new knowledge through research, experiencing creative work and thinking, supplying new knowledge to market in the form of products and services
Technology	Internet, intranet, e-mail, video-conferencing, bulletin boards, newsgroups, etc., discussion boards, access to e-journals, e-learning courses

METHODOLOGY

Research Tools

In this research, library and field resources were used. Most questions in this questionnaire were closed questions. In the design of identification questions (about the record and specification), questions of knowledge (the level of recognition and knowledge) and evaluation, open and closed questions were used. In closed questions, 5-part Likert scale (from very low (score 1) to very high (5 points)) was used and statements about the impact of each individual factor were questioned separately. The credibility of instruments used in this study, which was a questionnaire, was confirmed by the related professors with reference to management theory. To assess the reliability, with respect to different methods of measuring reliability and wide application of Cronbach's alpha coefficient, this method was used in this study. And the obtained Cronbach's alpha coefficient was 0.97 and because it was more than 0.70, it was found that the questionnaire had high reliability.

Data Procedures

To analyze the data corresponding to research variables, parametric and non-parametric statistical methods were used. To this end, both descriptive statistics and inferential statistics were used.

In descriptive statistics, from frequency distribution tables, central and distribution indices and a variety of graphs were used to better demonstrate and describe the community.

In inferential statistics, with respect to measure scales of independent and dependent variables for the research hypothesis, multiple regression was used to test their search hypothesis.

RESEARCH FINDINGS

The statistical population of this study was Shiraz Municipal staffs that 52 individuals were studied. The study of employees' experience showed that 44% had less than 10 years of experience and 56% had more than 10 years.

In this study, amount of organizational learning was calculated by multiple regressions through organizational learning mean and was considered as the dependent variable. And variable of Knowledge Management dimensions included: Human dimensions, process (structure) and technology were entered, respectively, into the regression equation as the independent variables.

As Table 2 implies, regression analysis has preceded three steps. In the first step, structure variable was entered in the equation and its correlation coefficient with the dependent variable (Organizational Learning) was obtained 0.869. At this stage, the coefficient of determination was observed 0.756 and that of adjusted coefficient of determination was 0.749. In the second step, with entering the second variable, that is human dimension, multiple correlation coefficients changed to 0.897, the coefficient of determination to 0.804 and adjusted coefficient of determination to 0.793. And the third step of the technology variable, multiple correlation coefficient increased to 0.91, the coefficient of determination to 0.829 and adjusted coefficient of determination to 0.813 (Table 1). In other words, given the significance of T-test in a significant level, one per cent it can be said that the first variable one, with regression coefficients of 0.869, accounts for about 87 percent of the dependent variable. And the second and third variables, despite being significant, have a regression coefficient was much less than the first variable. In general, these three variables together, on

the basis of adjusted coefficient of determination, account for 81.3 percent of the changes in Organizational Learning.

Table 2. Summary of the Regression Model, Factors Affecting Organizational Learning

Model	R Coefficient	R ² Coefficient	R ² Adjusted	Estimating Standard Deviation
1	^a 0.869	0.756	0.749	0.45089
2	^b 0.897	0.804	0.793	0.40967
3	^a 0.91	0.829	0.813	0.38889

a Predictor: Structure Variable

b Predictors: Structure Variable and Human Dimension

c Predictors: Structure Variable, Human Dimension and Technology

Summary regression model is given in Table 3 and test coefficients are shown in table 3.

Table 3. Summary of the Regression Model

Model	Sum of Squares	Degrees of Freedom	Average of Squares	F-Test	Significance
Regression	22.661	1			
Rest	7.322	36	22.661	111.424	^a 0.000
Total	29.983	37	0.203		
Regression	24.109	2			
Rest	5.874	35	12.055	71/826	^b 0.000
Total	23.983	37	0.168		
Regression	24.842	3			
Rest	5.141	34	8.281	54/760	^c 0.000
Total	29.983	37	0.151		

a Predictor: structure variable, b Predictors: structure variable and human dimension

c Predictors: structure variable, human dimension and technology

Table 4. Regression Test Coefficients

Model	Non-Standard Coefficients		Standard Coefficients	T-Test	Significance
	B Coefficient	Error Standard Deviation	Beta Coefficient(B)		
Constant	-0.304	0.277		-1.065	0.281
Structure	0.982	0.093	0.869	10.556	0.000
Constant	-0.656	0.276		-2.35	0.025
Structure	0.688	0.131	0.609	5.246	0.000
Human Dimension	0.423	0.144	0.341	2.937	0.006
Constant	-0.758	0.266		-2.818	0.008
Structure	0.576	0.134	0.510	4.287	0.000
Human Dimension	0.338	0.142	0.272	2.374	0.023
Technology	0.289	0.131	0.222	0.201	0.035

According to beta coefficients in table 3, the regression equation can be written as follows:

$$Y = -0.758 + 0.576X_1 + 0.338X_2 + 0.289X_3$$

Y: The predicted value of the dependent variable of organizational learning.

X₁Independent Variable of Structure

X₂IndependentVariableof Human Dimension

X₃IndependentVariableof Technology

DISCUSSION AND CONCLUSION

In the order of importance and contribution, the three independent variables of structure, human dimension and technology played a role in explaining organizational learning and with 99% probability were effective in determining organizational learning in Shiraz Municipal. As mentioned, according to the adjusted coefficient of determination (Table 2), 81.3% of organizational learning have been explained by these three variables.

In structure variable, the items of identifying sources of knowledge and knowledge required by the staff are identifying strengths and weaknesses of personnel, recognizing their needed knowledge, linking different knowledge required by personnel and removing incompatible knowledge, creating enterprise data storage, staff encouragement for the development to knowledge application and sharing knowledge, applying the knowledge provided by the staff in the form of new services, using knowledge in decision-making and solving organizational problems, creating new knowledge using the scientific expertise of employees, developing new methods of providing services to clients, experiencing new ways of providing services to client; in human dimension, they are applying knowledge in providing services to clients, creating motivation and desire to use knowledge to provide services, enhancing personnel ability to apply knowledge in providing service, increasing personnel ability to share their knowledge to others, increasing personnel ability to use the knowledge of others, creating a system of incentives and competition among organizations to use new knowledge, specialized training for continuing organizational strategies; and in technology variable, they are using Internet / Intranet and e-mail information in solving problems, participating in video conferences, using the bulletin board to provide information and knowledge, and discussion boards to increase employees' knowledge, applying newsgroups, access to e-journals, e-learning course.

With respect to the results obtained in this study and the proposed framework, the following items are recommended for the required changes:

1. To reduce barriers, dimensions of knowledge management, including sharing culture and knowledge sharing within the organization has created and developed.
2. The employees' awareness toward the advantages and benefits of Knowledge Management should be increased. Employees and managers should be cognizant of changes and benefits resulted from Knowledge Management. If they believe that knowledge and its monopoly is power, they must understand that sharing knowledge creates a double power by which they can make use of mutual knowledge;
3. An environment based on trust and confidence must be created. When have mutual trust and confidence, the staff will be more willing to use the knowledge of each other;
4. The staff should be trained as leaders in the organization, as an example and model encouraging knowledge sharing;

5. The staff should be commended for using knowledge management dimensions and are encouraged to use the knowledge of others. This could be performed through the individuals' annual improvement plans, in a formal ceremony by choosing as the model employee;
6. Appropriate hardware and software for Knowledge Management should be identified and ensure that the utilized technology is appropriate to the organization's resources and processes.
7. By identifying the needs of employees, a technological infrastructure commensurate with the organizational requirements and Knowledge Management dimensions should be designed.
8. Internal network(Intranet) with the ability to communicate and make extensive cooperation and sharing within the organization to share explicit knowledge should be created and the staff should be required to give a weekly or monthly report on the subject.
9. The existing knowledge should be regularly organized. And for availability and better extraction, they are stored and used electronically by hardware.

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