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The Impact of Knowledge Management Dimensions on Organizational Learning

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ABSTRACT

Objective: The Current Research Investigated the Impact of Knowledge Management Dimensions on Organizational learning in the Jahrom University of Medical Sciences. **Method**: Using multiple regressions, organizational learning measured by calculating averages of organizational learning items. Then knowledge management dimensions including human dimension, process, and technology inserted as independent variables respectively. **Results**: results showed that 3 dimensions of knowledge management predict 81.3 % of changes in organizational learning. The variables of process, human dimension, and technology had the most significant impacts respectively.

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INTRODUCTION

Knowledge is a collection of some worth knowing that human use them for their life. (Hamlyn 1970). Knowledge is a fluid mixture of experiences, values, available information and organized expert attitudes which organize a frame work to measure and use new information and experiences Knowledge is created and applied in the learned persons mind (Dennings, 2002).

Knowledge in the organization is embodied in the Knowledge document and sources and also in the work procedures, organizational processes, actions and norms (Hamlyn 1970).

In the beginning, this definition determined that knowledge is not simple or clear but it is a mixture of several different elements. Knowledge is a fluid however which has clear structures and finally it is ambiguous and intuitional thing. So this cannot be contained in the word from easily. Also this Knowledge cannot be presented as logical definition(Firestone, MC Elroy, 2005).

There is Knowledge in people and is considered as some complexities of human unknowing. (Davenport and Prosak, 2000). The rate of change and development in technologies is much more than required time for training specialist people, performing education course and the development of human resources. Not only technology changes in high rate but productions or yields, production lines and regulations also follow this procedure(Dennings, 2002).

Knowledge management is a category that responses this question. According to Knowledge definition is a general action for managing creation and maintenance processes and for participating Knowledge which generally includes identifying available situations , determination, the clarity of demands or needs and the improvement of the effected processes and as the result of this fact, the projects of Knowledge management are efficient projects. (Jahaniyan, 2010).

In the other definition Knowledge management is a collection of processes that should change the present pattern for promoting available Knowledge by searching new technology based on the analysis of Knowledge bases which finally resulted in organization quality improvement (Firestone, MC Elroy, 2005).

In fact, Knowledge management is a comprehensive route of Knowledge role perception and use in the processes of work management and performance and also is a credit guide for people and organizations in competition with complexity and changes increase in the modern economic environment (Dennings, 2002).

Studying the effect of knowledge management dimensions on organizational learning in the medical sciences university of Jahrom city

Organizational knowledge management is among the most important success elements of organizations in the competitive conditions and information age. The importance of this subject is so high that all of

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organizations measure their knowledge today and they reflect knowledge in their reports as thought capital of organization and also as index for ranking companies (Moosavi 1384).

Knowledge management as a necessary case in the organizational success includes extensive region of organizational opinions consisting of strategies, economic, behavioral and management innovations (Firestone, MC Elroy, 2005).

Today, in this world, productions and presenting services seriously depend on knowledge so knowledge of assets is considered as an important key to obtain competitive advantage. (Zaafarian and coworkers 1387).

The strategy of knowledge management is answer to the follow questions:

(1)where is the organization now? How much knowledge is there about organization activities?

How is this knowledge managed?

(2)According to worldwide knowledge revolution and according to the importance of data update, where should the organization reach there?

What planning, process and or technology can help to improve quality and world yield for organization?

Their main elements of each organizational environment are people. Processes (structure) and technology.

Knowledge management emphasizes on people and organizational culture for creating the spirit of knowledge contributes.

Knowledge focuses on processes and methods in order to knowledge obtaining, creating, finding and contributes. This knowledge focuses on technology in order to knowledge reserving and contributes in a group work (in fact without physically presence of people). People are most important element because knowledge management has direct dependence with people tendency for knowledge contribute .people, processes and technologies usually can be considered as a motivate agent and or as a barrier to transport knowledge.

Therefore barrier must always be identified and removed and motivate agents must be developed.

People: The most important and challengeable action in the knowledge management is the change of organizational culture and its consistence for accepting knowledge management (putting organizational culture in the direction of knowledge management. In the first step, the situation of knowledge management depends on motivation, people tendency and ability for their knowledge contribute and the use of others knowledge.

The structure of public sector is totally island and divided. Governed culture obstructs data transmission from one part to other, in this structure. Seldom, knowledge between different sections of organization or different organizational levels will transmit or progress when managers and staff mental structure of governmental section is based in the same case and having knowledge and its monopoly are considered as a power.

Of course, in some cases, it is possible to share their knowledge and the people. So this knowledge contribute is to get fame, validity, value and esteem and even in some cases it is effected by humanitarian attitudes (Norouzian 1384).

Process:

Knowledge management framework concerning with knowledge management techniques and processes suggests following cases according to present methodologies.

1-Recognizing 2- capture 3- Choosing 4- reserving 5-Sharing 6- applying 7- creating (Norouzian 1384).

Recognition is considered as the determination of intrinsic jurisdictions, strategy source and knowledge region. (zaafarian 1387). Knowledge auditing is considered as on way for determining a knowledge which should be obtained or get (a knowledge that is in the specialist people mind of the organization.

All classes of required knowledge, sources, week and power point and proceedings of knowledge etc are determined which they are necessary to develop and create a knowledge strategy for the organization by knowledge auditing (Norouzian 1384).

Capture is considered as formalizing present knowledge, the selection of determining knowledge communication, value and precision, removing inconsistent knowledge and reserving united memory in the knowledge sources with its different patterns (zaafarian 1387) .

Staff must be encouraged to contribute knowledge.

To develop knowledge application in the governmental collections, a situation can be considered in the organization which specially leads contribute knowledge activity and improves people belief and thought foundation in this field.

Obtained knowledge must be applied internalized to recreate knowledge as an out put after sharing knowledge.

Knowledge creating can be manifested as different models such as new services and products, increasing innovation, improving communication with clients and its similar cases. This case can be presented in the governmental section in the from of organizational systems and processes, innovating and improving communication with people and new method of each other collaboration (in the organization or other organization Norouzian 1384).

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Application, consumption and knowledge development are among some processes which develops obtained knowledge from other according to the other its knowledge media and also meets the possibility knowledge application in different work hours.

Applied knowledge must indicate its effect for increasing organization utility.

Knowledge creating is a process during which required knowledge of organization is produced in the organization .As an example, new method of meeting customers' needs can be considered as a knowledge which is discovered in the marketing and sale section by support personnel. (Heman 1386).

Technology: Technology is used in the all of knowledge management processes and there are very technologic resolutions in the market in the same direction.

The major problem is suitable for choosing technology. It should be mentioned that merely Technology is a facilitator during which people communication with data and also people communication with each other can be produced. But technology is not a resolution alone (Norouzian 1384).

The term of knowledge management will have very limited capabilities without knowledge based on technologies. The most value of Technology in the knowledge management is the increase of accessibility to knowledge and its fast transmission. Information Technology provides the possibility of knowledge extraction from knowledge owner's mind. Then knowledge can be contained in regular from by Technology and can be transported the other inner members and commercial partners of organization in the world. Technology helps to code and create knowledge .(Afrazeh 1383).

Information technology plays important role on the implementation of knowledge management. In face it can be mentioned that applying IT is the main base of knowledge management success in the organization.

The system of knowledge management develops by three sets of technology. Communication, collaboration and reserve or recovery is considered as three applied technologies in the knowledge management. Communication technologies allow users to reach required knowledge and to communicate each other (especially with specialists). E.mail, Internet, Intranet and the other web based on instruments, even fax and phone are among IT. Technologies help to create group work. The group members can do activity on a subject simultaneously and non simultaneously and however can be not in the same place physically. In fact the attempts are to create a virtual place for performing group works without the simultaneous presence of people. The technologies of information reserve and recovery are based in applying data base systems to clear knowledge reserve and management.

Of course, implicit knowledge management and reserve also needs its special instruments knowledge contributes and development must be distributed and shared in the organization before applying in the organization level.

The interaction between technologies and human power in the organization can have direct effect on the distribution.

Knowledge distribution decreases interaction by supervising or leading a predetermined channel and so the investigation chance of transmitted knowledge valve is decreased. Knowledge distribution in the organization can be supported by applying email, Internet and discussion group and human power allows interpreting and discussing information from various aspects. (Banke Meli of Iran 1387).

Implementation of knowledge management is a important element in the knowledge management which has been investigated by different investigators.

Graver and Danport have suggested a pattern to implement knowledge management in organization as follow:

This pattern has been created based on seven Term which their first letter is C including these words.

1- contribute, 2- capture 3- create 4- collaborate 5- consume 6- communicate 7- culture (zaafarian and coworkers 1387).

Getting Knowledge: Some processes during which related knowledge is given to the organization

Concerning to collaboration, new knowledge is entered to organization by contributing and propagating technology, removing staff between organizations, communication with partners.

According to susan fisher and Margaret white, organizational learning is a reflective process in which all of organizational members play role in all of levels including a collection of information which is obtained from inside and outside of organization environments. This information is filtrated and passed from a group process. This information is considered as divided and finally motivates activities to continue changes in the information behavior and used theories. This definition implies a process in which the information is collected and is interpreted by recognition- social process. Collected information from this process is changed into an organizational knowledge base and this knowledge is reserved in the organizational memory including organizational culture, files, documents, trends and policies. (Bromand 1388).

Some substructures that provide a suitable ground to improve learning opportunities are called as organizational learning mechanism.

Organizational learning mechanisms are considered as structural and cultural aspects of organization that they facilitate the development and reconstruction of a learning organization. Cultural aspects include a

collection of shared values, beliefs and norms, attitudes, roles, hypotheses and behaviors that make possible real learning. (Ebrahimzadeh 1384).

Peter Senge believes that learning organization is a people group that work together to increase their capabilities for reaching their aim. Learning organizations include new data and beliefs and issue new knowledge to the organization and finally try to create an environment that their staff are encouraged to use new methods for performing work and they welcome revolution (Bromand 1388).

The more important case is that how do organizations manage great reserves data and information that are its generator in spite of all today organizations problems including worldwide competition, fast technological development, compact work markets, change and the features of society demographic .

Knowledge management is considered as major element which can ensure organizations success. Management equal to knowledge management is the same organizational learning. Some investigators believe that knowledge management must be incorporated to organizational learning. Petersenge explains that a serious action should be performed after learning to create knowledge. Collecting information is not a suitable action because it is resulted in trust lessens and lock of collaboration in the organization.

Knowledge management implies the integration and peak of many organizational improvement opinions such as organizational learning (Bromand 1388). To determine study theoretic framework, some studying buoys have been introduced in the Table 1 after performed studies.

Designed inventories validity and reliability were analyzed by alpha – cronbach after confirming by relative professors and experts.

Obtained alpha- cronbach was 97% which implies high validity and reliability of inventory.

Table 1: Investigating buoys in the different dimensions of Knowledge management.

dimensions	buoys
Human	Organizational culture in the direction of Knowledge management, motivation, people tendency and ability for its Knowledge sharing and the use of other Knowledge, holding congress or convention, providing suitable magazines and books for personnel, creating motivational and competitive system between different subject organization, special training for experts for continuing organizational, cultural, technological strategies, and thought properties.
Process (structure)	Inducing precious parcels of produced Knowledge in projects , the use of many experts for exchange of views about Knowledge, Knowledge cooperation amony groups, making decide by recovering and the use of Knowledge, resolving problems, work automating and supporting, job and creative idea, offering new Knowledge to market in the form of production and services.
technology	Internet, intranet, email, picture conference, news groups, , discussion boards, providing electronic magazines, electronic training courses.

The instruments of data fitting study and examination:

Librarian sources were used in this study and questionnaire was used in the field section the most of questions was closed questions sample in the questionnaire. Determining questions (about records and specifications), Knowledge questions (the rate of recognition and Knowledge) and measuring in the form of closed and open questions had been used in its designing.

Five sections spectrum of Likert from very low (score 1) to very much (score 5), was applied for closed question and buoys related to the effect of every separated elements had been investigated.

The validity of the used instruments in this study that is questionnaire was confirmed by respective teachers by attributing to management suggestions. Questionnaire and cronbach alpha coefficient were used to measure reliability in this study according to different methods of reliability measurement. The value of cronbach alpha coefficient was 97% and because it was more than 70% it was determined that questionnaire was of high validity.

Study methodology:

Parametric and non-parametric statistical methods had been used to analyze data proportional to study variables. Descriptive statistics and inference statistics were used to this case.

Frequency distribution table, the dispersion index and central index had been applied to describe society in the descriptive statistics.

Multiple regressions had been used to examine study hypotheses in the inference statistics according to measurement scale of dependent and independent variables.

Study findings:

In this study, statistical society consisted of staff employed in medical sciences university in Jahrom city.

The number of these staff record of service indicated that 34% of them had lower than 10 years record of service. The rate of organizational learning from the measurement of organizational learning rate measurement buoys was considered as dependent variable in this study by multiple regression and the variables of knowledge management dimensions including human dimension, process (structure) and technology were entered regression equation as independent the variable respectively.

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According to table 2, we could understand that regression analysis had been developed for 3 steps.

Structure variable was entered in to regression equation in the first step rate of its correlation coefficient with dependent variable (organizational learning) was 869%.

In this step, coefficient of determination rate was observed equal to 756% and regularized coefficient of determination was observed equal to749%.

Multiple correlation coefficients increased up to 897%, coefficient of determination increased up to804% and regularized coefficient of determination increased up to 793% in the second step by entering the second variable that is human dimension.

Technology variable of multiple correlation coefficients increased up to 91%, coefficient of determination increased up to 829% and regularized coefficient of determination increased up to 813% in the third step (table1). In the other words it could be mentioned that the first variable with 869% regression coefficient, it self-determines about 87% of dependent variable variations according to F-test significance in the 1% significance level. The second and third variable very low regression coefficient as compared with the first variable

To tally, all three variables determine 81.3% of organizational learning rate variations according to regularized coefficient of determination.

Table 2: The regression model summary of effective element in the organizational learning.

The estimation of standard error	Regularized R2	Coefficient R2	Coefficient R	Model
45098/0	0.794	0.756	0.869a	1
40967/0	0.739	0.804	0.897b	2
38889/0	0.813	0.829	0.91a	3

a: predictor: structure variable
b: predictor: structure and human dimension variables
c: predictor: structure , human dimension and technology variables.

The summary of regression model has been in table 3 and exam coefficient have been come in table 4

Table 3: The summary of regression model.

Significance level	F-test	Mean squares	Degree of freedom	Sum of squares	Model
0/000a	111.424	22.661	1	22.661	Regression
		0/203	36	7.322	Remainder
			37	26.983	sum
0/000b	71.826	12/055	2	24.109	Regression
		0/168	35	5.874	Remainder
			37	23.983	sum
0/000c	54.760	8.281	3	24.842	Regression
		0/151	34	5.141	Remainder
			37	29.983	sum

A: predictor: structure variable
b: predictors: structure and human dimension variables
c: predictors: structure , human dimension and technology variables.

Table 4: Regression test coefficients.

Significance level	-testt	Standard Coefficient		Non Standard Coefficient	model
		Beta Coefficient	error of standard deviation	B Coefficient	
0/281	-1.095	0.869	0.277	-0.304	Constant
0/000	10.556		0.093	0.982	structure
0/025	-2.35		0.279	-0.656	Constant
0/000	5.246	0.609	0.131	0.688	Structure
0/006	2.937	0.341	0.144	0.423	human dimension
0/008	-2.818		0.269	-0.758	Constant
0/000	4.287	0.510	0.134	0.576	Structure
0/023	2.374	0.272	0.142	0.338	human dimension
0/035	2.201	0.222	0.131	0.289	technology

Regression equation can be written based on beta coefficients in table 3 as follow:
Y= 0/758+0/576X1+0/338X2+0/289X3
Y: the forecasted value of organizational learning dependent variable
X1: structure independent variable
X2: human dimension independent variables.
X3: technology independent variables.

Three independent variables including structure, human dimension and technology had major role determining organizational learning based on their Significance and contribution.
These cases by 99% probability were on determining the rate of organizational learning

Of medical sciences university in jahrom city. As mentioned before, 81.3% of organizational learning have been determined by these variable based on regularized coefficient (table2).

Indentifying knowledge sources and required knowledge for personnel, identifying personnel identifying personnel, recognizing their required knowledge ,creating communication between different personnel knowledge and removing knowledge, producing organizational information source, encouraging or persuading staff to develop knowledge application and knowledge sharing , applying represented knowledge for organizational resolving problem and making decide, producing new knowledge by staff scientific experiences, innovating new methods of presenting services to client are among buoys of structure variable. Applying knowledge and science for presenting services to client, creating motivation and tendency for applying science and knowledge to represent services, increasing personnel ability for applying science and knowledge to present services, increasing personnel ability for its knowledge sharing and others, increasing personnel ability for other knowledge sharing, personnel participation in congresses, the use of magazines and books proportional to organizationalpost, producing motivational and competitive system between organization for applying new knowledge, specialized training to continue organizational strategies are related to human dimension variable. Finally, technology variable includes applying internet and internet and email for data resolving problems, participating in the representation conferences. Applying **** for information and knowledge and also discussion **** for increasing staff knowledge, applying news groups, access to electronic magazines, holding electronic training courses.

Suggestions: follow cases are suggested to perform some necessary changes according to obtained results of this study and according to presented frame work.

1- Producing and developing knowledge management dimensions in the organization such as the culture of knowledge sharing to reduce available restrictions or barriers.

2- Increasing staff information about knowledge management advantages and profits. Stuff and management implementation.

If they believe that knowledge and its monopoly will be considered as a power, they must understand reciprocal knowledge can be used by this feature.

3- Producing a reliability and trust based on an environment. When staff trust each other, they will have more tendency for knowledge sharing.

4- Training some staff as leaders in the organization like a pattern or model to promote knowledge sharing.

5- Appreciating staff for applying knowledge management dimensions and for knowledge sharing. This design can be performed by yearly promotion designs of people during formal ceremonies or choice as top employment.

6- Identifying suitable software and hardware of organization for knowledge management and obtaining trust to use technology proportional to organization processes and sources.

7- Not designing a technology sub structure proportional to organizational needs and knowledgemanagement dimensions by identifying staff needs.

8- Producing intranet by capability for communication and presenting extensive cooperation in the organization for knowledge sharing and requesting staff for weekly or monthly report about this.

9-organizing present knowledge constantly and using and reserving them by helping electronic hard wares to better extraction and availability.

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