

Impact of Organizational Memory on Knowledge Sharing (Case Study: Medical Sciences and Health Services University in Bushehr)

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Abstract: The present study was aimed to examine the effect of organizational memory on sharing knowledge in Medical Sciences and Health Services University in Bushehr. Research method was practical in terms of objective and in terms of data collection method, it was descriptive-correlational. The statistical population of the present research consisted of 301 people working in educational deputies, research and technology deputies and cultural and scholastic deputies. From them, 170 individuals were selected as sample size, using Morgan and Krejcie tables and stratified random sampling method. In order to collect data, Beig and Ghavamifar's 052 standard organizational memory questionnaire (21 items) and Rahnavard and Sadr's sharing questionnaire were used. After collecting the questionnaires, examination of data and hypothesis testing was done through structural equations modeling method and Smart PLS 2 in two study measurement model section and structural study. In the first study, technical characteristics of the questionnaire were examined, including reliability, convergent validity and divergent validity exclusive to PLS Software. In the second study significance coefficients of the software were used in order to examine research hypotheses. Results showed that organizational memory and its components such as personal memory, cultural memory, managerial memory and research-development memory affect sharing knowledge in Medical Sciences University and Health Services in Bushehr.

Key words: Organizational memory, sharing knowledge, cultural memory, managerial memory, PLS

INTRODUCTION

In performing their duties, organizations acquire valuable knowledge and experience which can assist them in performing their organizational duties more efficiently. This knowledge which is called organizational knowledge includes experiences gained from doing different projects (successful or unsuccessful), facing new occupational problems and situations and/or innovations for speeding up work procedures. Organizational knowledge is a highly precious capital in the organization which requires management (Ghobadi and Mathiassen, 2016). In line with this, it does not suffice to use a passive information system but it seems necessary to use a dynamic system. Such a system which is called an organizational memory system is to collect organizational knowledge and actively redistribute it among clerks and organizational players (Gunning, 2015). Simply put, this system contributes to Organizational Learning (OL) (Fataneh and Fereidun, 2006). In such conditions, it seems that managers accept the presence of difficulties in some organizational processes and they must equip their staff with knowledge which guides them to how they can confront hardships (Ritala *et al.*, 2015). However, if we can

effectively attribute experiences available in organizational memory to organizational model or architecture and if we accommodate procedures and processes, not only will we be able to solve problems but we will also help other organizational human resources to not face problems. The same thing, in a different way is true for positive experiences (April *et al.*, 2016).

Today, organizations see their produced knowledge and sharing it as a major capital and try to collect and maintain it (Obrenovic *et al.*, 2016). This sharing of knowledge can include a set of beliefs and behaviors which lead to development in learning among different individuals or in an organization (Zappa and Lomi, 2016). By definition, knowledge sharing is attributed to sharing values, information and organized expert attitudes which provide a framework for evaluating and exploiting new information and experiences and it is realized through interaction with individuals, constant face-to-face contact in activities and talks, providing opportunities to be aware of available knowledge and educational needs (Alizadeh *et al.*, 2010). Generally, sharing knowledge includes activities such as transference and distribution of knowledge (implicit and explicit knowledge) from a person, group or organization to others. Many believe

that effective sharing of knowledge is one of the most valid ways to apply key eligibilities and to acquire competitive advantage (Hicks *et al.*, 2007).

For instance, the staff working in 3M Company shares knowledge through telling stories and in British Petroleum Company, the staff shares knowledge within face-to-face interaction with people in other related factories (Schilligo, 2007). In line with this, creating and promoting organizational memory is a way to manage intellectual resources. Organizational knowledge refers to a storage in which information is stored for future uses (Schwartz, 2016). Decision-makers not only store data but they also store trivial information. This trivial information can take the form of experiencers, skills, interactions and so forth. Organizational memory is considered as a tool for managing knowledge; in fact, it is an organizational memory system which relates organizational knowledge to job tasks and can lead to productivity and organizational learning. In this research, a set of components and compulsory identities necessary in a task-focused organizational memory system have been presented as a tool for implementing knowledge management.

Organizational memory plays a crucial role in organizational learning. Two aspects of learning, i.e., usability and practicality depend upon the effectiveness of organizational memory and the main challenge for organizations when interpreting information is forming organizational memory which is easily achievable (Marsh, 2016). For this, the most obvious source is information treasures such as company book, databases, file maintenance systems and even stories and fables which prevent organizational forgetfulness.

In universities such as Medical Sciences and Health Services University of Bushehr, this obvious concept as a capable and strong pillar in the country's scientific cycle which results in high costs of education, increasing knowledge and organizational learning for students, employees and faculty members, must be the focus of attention and through the knowledge stored in organizational memory, it must take measures to increase and improve scientific knowledge and to share this knowledge as well as experiences with other individuals because this university like many other organization is involved in complex activities such as incorporation and maintenance of documents, employee's educational and learning costs and so on hence, in order to survive, it must constantly receive three types of information: information about surroundings, information about past, an finally information about the inside of the organization and its derivatives. Although, such a university has experiences connected to management of physical and financial capitals and although it uses other resources,

there still are inadequacies in finding tools for gaining, creating, storing, publishing and using intellectual capitals. The knowledge present in the minds employees are the most valuable organizational assets in information systems and the knowledge present in organizational culture. It can be said that facing different problems connected to intellectual thoughts as well as other factors such as a change in age pyramid, a sharp increase in information and more specialization in activities has led to the emergence of a phenomenon called "knowledge management" in the late decades of the last century. Studies have shown that despite the increasing importance of knowledge, only thirty percent of it is used in organizations and due to the inaccessibility of information, costly but preventable mistakes occur. And the risk of losing knowledge is more intense when individuals leave the organization. Another, study has shown that 74% of respondents believed that the best type of knowledge in their organization is inaccessible and 67% of them referred to the fact that mistakes are repeated.

Narges midwifery institute started its midwifery training in Bushehr (1983); in 1988, Nursing and Midwifery College and Paramedical College admitted students and in 1990, for the first time, they admitted medical students in PhD level and in 1995, Medical Sciences and Health Services University started in Bushehr and in 2011, a Dentistry University was started. Bushehr's Medical Sciences University consisted of 5 colleges medical, Dentistry, Nursing and Midwifery, Health, Paramedical and three research centers for tropical and infectious medication in the Persian Gulf, nuclear medication in the Persian Gulf, Sea Biotech of the Persian Gulf and 158 faculty members. Currently, over 2000 individuals are studying in the university in 22 fields of study for associate 3^o fields for BA, 4 fields for MA and PhD and 3 fields for assistance (medical expertise).

Bushehr's Medical Sciences University's strategic plans are delivering distance services based on e-governance, enhancing the delivery of services qualitatively and quantitatively, improving the culture of public health in the society, institutionalizing applied researches in a health system, increasing the share of the private sector, cooperating and doing charity for health services and reducing governmental dominance, increasing employee's motivation through available opportunities, reaching new financial resources necessary in universities through existing provincial capabilities, decreasing the costs of the system, providing a favorable atmosphere for increasing cooperation in the society, implementing and evaluating health services,

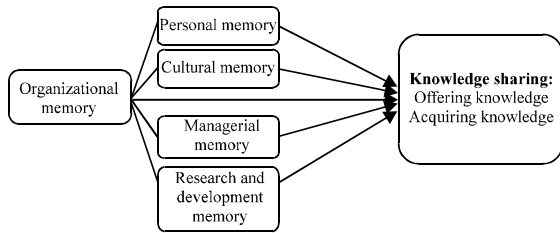


Fig. 1: Conceptual model of the research

reinforcing inter-sector cooperation with an emphasis on the environment, nutrition, lifestyles and its quality, decreasing the load of contagious and non-contagious diseases, prioritizing health programs and implementing health services classification (www.bpums.ac.ir).

Considering the strategic plans of the university such as distanceservices based on e-governance, institutionalizing applied researches in the health system, increasing employee’s motivation through existing opportunities, reducing system costs, providing a favorable atmosphere for increasing social cooperation in decision-making and so forth, we can realize the importance of examining knowledge sharing and organizational memory in the university.

Hence, in spite of few studies conducted in connection to organizational learning and knowledge sharing and the fact that some organizations are applying these concepts, it is extremely important to re-identify such phenomena. In line with this, in the present study, we are trying to answer the question, “What effects does organizational memory have on knowledge sharing?”. Therefore, considering the above-mentioned, hypotheses and conceptual model of the present research (Fig. 1) are expressed as follows:

- Organizationalmemory affects knowledge sharing in Bushehr’s Medical Sciences and Health Services University
- Personal memory affects knowledge sharing in Bushehr’s Medical Sciences and Health Services University
- Cultural memory affects knowledge sharing in Bushehr’s Medical Sciences and Health Services University

Managerial memory affects knowledge sharing in Bushehr’s Medical Sciences and Health Services University. Research and development memory affects knowledge sharing in Bushehr’s Medical Sciences and

Health Services University. Based on the above hypotheses, the conceptual model of the research is given in the following figure:

MATERIALS AND METHODS

The present study was practical in terms of objective; and in terms of data collection method, it was correlational and descriptive. The statistical population of the research consisted of 301 employees working in educational deputies, research and technology deputies and cultural and student deputies. Form them, 170 individuals were selected as sample size, using Morgan and Krejcie table as well as Stratified Random Sampling method. In this research, groups included educational deputies, research and technology deputies and cultural and student deputies.

In this study, in order to collect data, organizational learning questionnaire (21 items) was used: 3 items for measuring four dimensions of personal memory, 3 items for cultural memory, 10 items for managerial memory, 5 items for research and development memory. Sharing knowledge also included 17 items taken from studies done by (including two dimensions); knowledge presentation (8 items) and knowledge acquisition (9 items). It must be noted that all questions follow a 5-point Likert scale: one point for “I totally disagree” to five points for “I totally agree”.

In the present study, in order to calculate the validity of the questionnaires, content and construct validity were used. To examine content validity, the questionnaires were approved by supervisors and experts in this field and necessary corrections were applied. For construct validity, structural equation modeling and Smart PLS Software were used. Construct validity is divided into two parts convergent validity and divergent validity. For convergent validity, AVE (Average Variances Extracted) criterion was used; its results for research variables were >0.5 which showed convergent validity of the tool. In addition, the matrix formed for calculating divergent validity showed that divergent validity is approved. additionally, in order to calculate reliability, Cronbach’s Alpha coefficient and composite reliability coefficient were used and results showed that the tool is reliable because in both indexes, the value of this coefficient was calculated to be >0.7. Results of the tool’s psychometric features for research hypotheses are given in the following table: Analysis of the data obtained from implementing the questionnaires was done using PLS Software through a structural equation modeling method in an inferential study.

RESULTS AND DISCUSSION

In this stage, the cause-and-effect relationship between organizational memory and sharing knowledge was examined through a structural model section. As it can be seen from the following, the effect of organizational learning on sharing knowledge in Bushehr’s Medical Sciences and Health Services University is positive and significant. In the following figure, beta coefficients have been presented for research hypotheses.

The above figure presents the causal effect coefficient of research model and the effect of organizational learning on sharing knowledge. The output of PLS Software approves the main hypothesis as well as subsidiary hypotheses which are given in the following Table 1 and 2. Since all values of “t” are >1.96, all hypotheses are approved:

- Organizational memory affects sharing knowledge in Bushehr’s Medical Sciences and Health Services University
- Personal memory affects sharing knowledge in Bushehr’s Medical Sciences and Health Services University
- Cultural memory affects sharing knowledge in Bushehr’s Medical Sciences and Health Services University
- Managerial memory affects sharing knowledge in Bushehr’s Medical Sciences and Health Services University
- Research and development memory affects sharing knowledge in Bushehr’s Medical Sciences and Health Services University

Considering the importance of the role of sharing knowledge in universities in developing higher education system and accordingly the society, the present study is allocated to this subject and tries to examine the effect of organizational memory on sharing knowledge. Hence, in this section, first, a summary of research findings is given and then based on research background and data analysis results, certain propositions are offered.

The findings of this hypothesis approved the effect of organizational memory on sharing knowledge; in other words with better conditions for organizational memory, we will see improvements in the process of sharing knowledge in organizations. According to Moghadam and Beheshtifar (2011), since organizational memory refers to the source of organizational information for future applications, there will be an atmosphere where employees not only store data and information but they also store trivial information. The trivial information can take the form of experiences, skills, relationships and so forth. This helps employees to tend to share knowledge, values, existing information and organized expert attitudes in order to store them in organizational memory in a better way. In fact, organizational memory provides all employees with a framework for exploiting new information and experiences which is hidden (Paulin and Suneson, 2015). And through interaction between employees, there is a face-to-face and constant contact when doing activities and talks, helping them to be informed of existing knowledge. This motivates employees to share their knowledge with others (Brownlie, 2016). On the other hand, organizational memory is to collect organizational knowledge and actively redistribute it among employees and organizational players. With a careful look at its dimensions, we will realize the effect of each dimension on facilitating the process of sharing knowledge.

Table 1: Results of the tool’s psychometric features for research hypotheses

Dimension	Variables	Resource	No. of items	Alpha	AVE	CR
Organizational memory	Personal memory	Beig and Ghavamifar	3	0.74	0.60	0.78
	Cultural memory		3	0.81	0.64	0.84
	Managerial memory		10	0.74	0.61	0.78
	Research and development knowledge		5	0.70	0.58	0.77
Sharing knowledge	Acquiring knowledge	Rahnavard and Sadr	9	0.75	0.64	0.80
	Presenting knowledge		8	0.74	0.61	0.76

Table 2: Examination of research hypotheses

Hypotheses	Standardized coefficients	Value of “t”	Results
Organizational memory sharing knowledge in Bushehr’s Medical Sciences and Health Services University	0.61	16.03	Accepted
Personal memory-sharing knowledge in Bushehr’s Medical Sciences and Health Services University	0.59	15.63	Accepted
Cultural memory-sharing knowledge in Bushehr’s Medical Sciences and Health Services University	0.50	16.03	Accepted
Managerial memory-sharing Knowledge in Bushehr’s Medical Sciences and Health Services University	0.57	15.63	Accepted
Research and development memory sharing knowledge in Bushehr’s Medical Sciences and Health Services University	0.53	16.54	Accepted

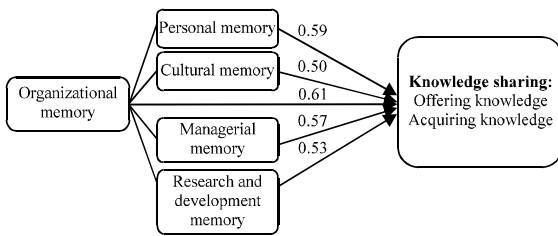


Fig. 2: Causal effect coefficients of research model

Through collecting organizational knowledge and actively redistributing it among employees, in fact, processes connected to sharing knowledge are provided in the organization, because many organizations suffer from over-supply of information or they know that they possess necessary information but they cannot find it here, sharing knowledge is a practical solution (Kwahk and Park, 2016). In addition as stated, organizational memory is a prerequisite for implementing knowledge management in the third millennium; one of the main pillars of knowledge management is the concept of “sharing knowledge”. Hence, it approves the findings of the above hypothesis. Finally, Farahnaz *et al.* (2011) findings are also in congruence with the results of the present hypothesis (Fig. 2).

CONCLUSION

Finally, based on the results of this research, the following propositions are presented. When organizational memory is considered as a norm for the organization, university employees must be ready to publish information connected to a special system. For this, it is recommended that they receive necessary training and learn how to share past knowledge through case studies and reporting and they must also be trained in order to learn how to use a knowledge-sharing tool which is used in universities.

Organizational memory must distribute new knowledge among employees who need it hence, it is recommended that we use public publication or membership mechanisms for receiving knowledge (Electronic Newsletters). This way, it is necessary to create intranet or internet.

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