

An empirical investigation on relationship between organizational intelligence and faculty members' knowledge sharing behaviors

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ABSTRACT

Universities and institutions of higher education with a professional, special, educational and cultural environment play important roles in the direction towards the effective management of knowledge and space provision for the sharing of knowledge. Faculty members are known as the main elements of the university and they are the mental and intellectual investment banks who share their knowledge under certain conditions. In addition, their knowledge sharing behaviors lead to the success and improvement of individual and organizational operations. Moreover, organizational intelligence is the capacity of the organization to create knowledge and to use it in a strategic way to coordinate and to conform itself to its surroundings. This study examines the impact of organizational intelligence on faculty members' knowledge sharing behaviors. Data collection for qualitative research includes interviews with experts and quantitative research is performed using a questionnaire. The research results show that there was a significant relationship between organizational intelligence and faculty members' knowledge sharing behaviors. Among these dimensions, “knowledge application” influenced other dimensions. On the other hand, “common outcome” had a significant relationship with the “behavioral” dimension and “special and professional activities”.

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1. Introduction

Knowledge is considered as a valuable asset and as a source of competitive advantage for an organization and in order to succeed in this competitive environment, necessary knowledge should be acquired more effectively than competitors should. Today, moving towards using knowledge has made knowledge management a key strategic instrument for improving the productivity levels of business units for sharing and using knowledge (Khadem et al., 2013). Knowledge sharing is considered as an essential area of knowledge management located within knowledge processing, where knowledge is first created and then it is used. In fact, knowledge management means providing

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suitable information for relevant people at the right time so that they could generate and share necessary information. Sharing knowledge also means providing acquisition of knowledge to those who need it. In other words, knowledge sharing is a process in which the knowledge processed by a person changes in a way that could be recognized by others. So it seems that one way of successful knowledge management is the usefulness and effectiveness of knowledge sharing (Seonghee & Boryung, 2008). Among organizations, universities and institutions of higher education with educational and academic environments are considered suitable places for knowledge sharing. Moreover, faculty members as the components of the university and the mental and intellectual investment banks share their knowledge under certain conditions (Nonaka et al., 2006).

The subject of this study is faculty members' knowledge sharing behaviors and the effect of organizational intelligence on this behavior. This was a qualitative and quantitative study, with the priority on qualitative. In the first phase, the elements of knowledge sharing behaviors are diagnosed and determined and in the second phase, descriptive statistics are included and statistical analysis has been accomplished to detect the significant relationship between the dimensions of organizational intelligence data with the components of knowledge sharing. Hence, in this study, the "behavioral" dimension of faculty members' knowledge sharing has been examined and the four dimensions are determined as knowledge sharing behavioral dimensions. We then use some descriptive statistics and a two-step method of Holland (1999) has implemented to reach the correlational condition. In the first stage, the model has been measured based on validity and reliability by the load factor method (confirmatory factor analysis) and in the second stage, the structural model has been examined through the analysis of indicators of fitness, coefficient of determination and path analysis.

2. Theoretical Framework

Organizational intelligence and its dimensions (Albrecht, 2007) have been accepted as the theoretical framework of this study and it has been used after studying and determining the knowledge sharing behavior dimensions in the field of this study and to test their impacts.

2.1. Organizational Intelligence

Organizational intelligence as a well-known concept has long been a concern within various kinds of organizations and it has been over three decades among academic scholars. Some authors claim that Porter (2002) created organizational intelligence by introducing the five competitive forces. According to Albrecht (2002) "Organizational intelligence is the capacity of an organization to mobilize all intelligence capabilities of the organization and focus it to achieve its mission". In another definition, organizational intelligence combines all sorts of necessary skills for the organization and they include the ability to adapt to changes, speed of interaction, flexibility and empowerment (Simic, 2005). In fact, organizational intelligence, which is in the organization's possession, is an overall understanding of that organization, environment and activities, and is a combination of daily data analysis and reviews of abundant data, which bombards the organization daily. In the light of this knowledge, the managers are able to observe the organization's current and future status and make better decisions (RahmanSeresht, 2012). According to Albrecht (2007) defined organizational intelligence as the talent and capacity of a firm to mobilize mind power to reach its mission. He believes that leaders cannot make the organization intelligent by themselves and so all persons belonging to an organization are involved in this process. Albrecht stated that organizational intelligence includes the following components:

2.1.1 Strategic Vision

The ability to create, evolve and express the purpose of an organization.

2.1.2 Common Outcome

Having a sensitive sense of common purpose and common understanding of the organization's mission, which could increase the employees' commitment to the organization.

2.1.3 Desire for Change

Some founding executive team guides some organizational cultures where these cultures, the operational and thinking method are consistent with the environment so that any change could be considered as a disease. Changes in this element represent challenges, new experiences and the chance to begin a new task.

2.1.4 Knowledge Application

Today, success and failure of any organization are based on the effective use of knowledge, information and data; so that activities of any organization depend entirely on acquired knowledge and its utilization.

2.1.5 Performance Pressure

In an intelligence organization, all individuals are involved in an action. Leaders can promote the concept of pressure and support it. Key indicators of performance pressure include understanding expectations by employees, removing administrative difficulties of employees by managers and receiving feedback about their performance (Braynion, 2004).

2.2 Knowledge Sharing

Knowledge sharing can be described as sharing the proper information, ideas, suggestions and expertise with others in the organization (Bartol & Sirvastave, 2002) or a set of behaviors that involve the exchange of information or help others (Javanmard, & Alhosseini, 2013; Azad et al., 2013). Lee (2001) also defined knowledge sharing as a systematic activity in order to transfer and to exchange knowledge and experiences among a group or an organization with a common goal.

2.3 Knowledge Sharing Behavior

Knowledge sharing behavior are some set of activities associated with the exchange of knowledge in which the key factors such as knowledge content, organizational conditions, appropriate media and environment play an important role (Albino, 1999; Lee 2001).

3. University and Faculty Members

Universities as an educational and research environment are appropriate places for sharing knowledge. In fact, universities like other organizations have competitive environments, so it is necessary to make sure that in this environment, knowledge is created, transferred and shared among individuals. Faculty members are the main components of production and application in academic institutions and the main activities are teaching, researching and doing other related professional activities (Seonghee & Boryung, 2008). They tend to share their knowledge through formal and informal groups, electronic communications and training workshops with colleagues and this kind of knowledge sharing increases the speed of learning (Chaudhry, 2003).

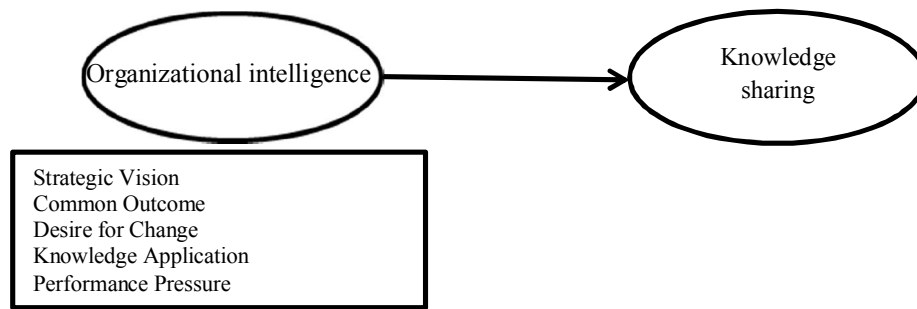


Fig. 1. Conceptual model of the study

4. The proposed method

A scientific proposal is a special and systematic type of research that is always in search of the truth; the truth that is defined by logical investigations. This study was planned in two qualitative and quantitative sections and the quality of relationships and impacts of organizational intelligence on knowledge sharing behaviors were researched; afterwards, we identified and defined different dimensions of knowledge sharing behaviors.

4.1. Purpose of the study

The main purposes of this study are to identify different dimensions of knowledge sharing behaviors among faculty members as well as measurement of the impact of organizational intelligence on knowledge sharing behaviors of faculty members.

4.2. Research questions

Main research questions were:

1. What are the different dimensions of knowledge sharing behaviors among faculty members?
2. How much impact does organizational intelligence have on the knowledge sharing behaviors of faculty members?

4.3. Variables measured in this study

In this study, the independent variable is organizational intelligence and the dependent variable is the knowledge sharing behavior. In this regard, organizational dimensions and factors and their related definitions raised from the theoretical research framework were considered as other independent variables, and the knowledge sharing behavior features that were extracted by the study of fieldworks as other dependent variables.

4.4. Methodology

This exploratory field research investigates the knowledge sharing behaviors' valid variable defined in the fieldwork of the study. The correlational descriptive method was used to evaluate the relationships and impacts among variables. The environment of the research is natural and the method is a field study.

4.5. The purpose and nature of the study

This study is based on theories, principles and techniques proposed in universities regarding the interpersonal and inter-organizational relationship of faculty members. The study's goal is to develop

an applied science and remove interpersonal and inter-organizational challenges. Hence, this study has an applied nature and intention.

4.6. Statistical framework, statistical population and sampling

The statistical framework for this study is the list of Iranian full-time faculty members of state universities extracted from updated official university websites. The statistical population includes faculty members of the top five universities in Iran, and the statistical sample size is as follows,

$$n = \frac{N \times z_{\alpha/2}^2 \times p \times q}{\varepsilon^2 \times (N - 1) + z_{\alpha/2}^2 \times p \times q}, \quad (1)$$

where N is the population size, $p = 1 - q$ represents the yes/no categories, $z_{\alpha/2}$ is CDF of normal distribution and finally ε is the error term. Since we have $p = 0.5$, $z_{\alpha/2} = 1.96$ and $N = 145$, the number of sample size is calculated as $n = 108$, the study distributed 110 questionnaires and 100 were collected and used for final analysis.

4.7. Validity and reliability/ consistency

To be assured about the validity of the study in terms of experts' opinions, the initial questionnaire was reassessed and re-evaluated several times to reach a final one with valid content. This final questionnaire, after some reviews was given to experts, and their ideas and suggestions were taken account to satisfy the pre-testing requirements for a questionnaire to gain maximum validity. Moreover, through confirmatory factor analysis, measurement instruments were also confirmed. Cronbach's alpha (α) was used as a determinant of the reliability of the questionnaire. Cronbach's alpha for all of the questions on knowledge sharing behavior was calculated as $\alpha = 0.892$ and for questions about organizational intelligence it was $\alpha = 0.901$.

4.8. Data collection method

To collect data for theoretical bases and aspects of the study, library research and for other information and data, the field research method was used.

5. Data analysis and conclusion

In the qualitative part of the study, initially the data collected through interviews with experts were analyzed and their results were set. In the interview sessions, the dimensions of knowledge sharing behavior were determined and specified. Subsequently, different dimensions of knowledge sharing behaviors among faculty members were determined and defined.

5.1. Result of the qualitative part

In this part, dimensions of knowledge sharing behaviors in the field of research were determined and defined as follows:

Table 1
Dimensions confirmed definitions of knowledge sharing behaviors

No.	Dimension	Definition
1	Research & Study Activities	Research activities done by faculty members to achieve privilege and rank, promote professional goals and provide others with information
2	Educational Activities	All activities that aim to promote education of the students and themselves
3	Professional & Occupational Activities	Activities performed based on their proficiency in a specific field to promote social welfare and knowledge level in the organization, industries and service centers
4	Cultural Activities	Activities to promote and develop culture

In the quantitative part of the study, in order to summarize the respondents' answers to the questionnaire, the mean, median, variance and range for every question were calculated and to examine the dependence of the variables the two-step method of Holland and the coefficient of determination in addition with the path coefficient were used. So, in order to summarize and describe the data descriptive statistics and to analysis them, inferential statistics were applied. According to the results from qualitative part and dimensions of knowledge sharing behaviors in the field of research we have the following model:

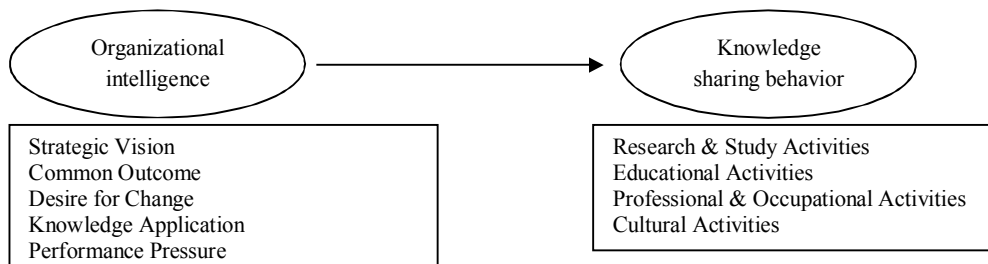


Fig. 2. Final Conceptual Model of the Study

5.2. Review of dependence and impact

The regression coefficient was calculated at 0.592 in the examination of organizational intelligence variant impacts on knowledge sharing behaviors. With t-distribution equal to 5.535 and a significant level of 5%, it could be concluded that the path coefficient at the level of 5% is significant. This means that organizational intelligence with the probability of 95% has a positive significant impact on knowledge sharing behaviors and the results are summarized in Table 2 as follow,

Table 2
Regression coefficient and significance of (ksb) on (oi)

Direct Path	Regression coefficient	t-value	Result
Organizational intelligence → Knowledge sharing behaviors	0.592	5.535	Confirmed

Statistical findings and analysis show the results of the impact and dependence of organizational intelligence aspects on knowledge sharing behaviors as follows:

- There is a significant dependence between “strategic vision” and research and study, educational and professional, and occupational activities.

Table 3
Correlation between strategic vision and (ksb) dimensions

Dimensions of knowledge sharing behaviors	Statistic	Research & Study	Education	Professional and Occupational	Cultural
Strategic Vision	R	0.502	0.285	0.238	0.142
	Sig	0.000	0.005	0.21	0.173

- There is a significant dependence between “common outcome” and research and study and educational activities.
- The common outcome variable has an impact on research and study, and professional and occupational activities, but its impact factor on the latter is more.

Table 4
Correlation between common outcome and (ksb) dimensions

Dimensions of knowledge sharing behaviors	Statistic	Research & Study	Education	Professional and Occupational	Cultural
Common Outcome	R	0.276	0.49	0.208	0.090
	Sig	0.007	0.639	0.044	0.388

- There is a significant correlation between tendency to change and research and study, educational, professional and occupational and cultural activities.
- The desire for change dimension of organizational intelligence impacts all four dimensions of knowledge sharing behaviors, but the strongest impact is on the professional and occupational behaviors of faculty members.

Table 5

Correlation between desire for change and (ksb) dimensions

Dimensions of knowledge sharing behaviors	Statistic	Research & Study	Education	Professional and Occupational	Cultural
Desire for Change	R	0.29	0.403	0.044	0.417
	Sig	0.005	0.000	0.000	0.000

- There is a significant correlation between the knowledge application and research and study, educational, professional and occupational, and cultural activities.
- The knowledge application dimension of organizational intelligence impacts all four dimensions of knowledge sharing behaviors, but as the same as desire for change, the strongest impact is on the professional and occupational behaviors of faculty members.

Table 6

Correlation between knowledge application and(ksb) dimensions

Dimensions of knowledge sharing behaviors	Statistic	Research & Study	Education	Professional and Occupational	Cultural
Knowledge application	R	0.29	0.403	0.44	0.417
	Sig	0.005	0.000	0.000	0.000

- There is a significant correlation between performance pressure and research and study, professional and occupational and cultural activities.
- Performance pressure showed no impact on educational behavior dimensions, but among the three others; it has the strongest impact on research and study behaviors of faculty members.

Table 7

Correlation between performance pressure and (ksb) dimensions

Dimensions of knowledge sharing behaviors	Statistic	Research & Study	Education	Professional and Occupational	Cultural
Performance pressure	R	0.396	0.400	0.35	0.318
	Sig	0.000	0.699	0.001	0.35

As seen above, there is no significant correlation between the “common outcome” variant of the organizational intelligence and educational and cultural behavior of faculty members. Strategic vision has no impact on cultural activities, and the performance pressure factor shows no significant correlation with the educational activities of the knowledge sharing behavior domain.

6. Result

Results confirm that variants are dependent, also the path coefficient and the regression coefficient between knowledge sharing behaviors and organizational intelligence has a significant correlation with the regression coefficient of 0.592.

7. Conclusion

According to the research results and defining the level of impact and the relations among variables, several applications from this research in regards to the knowledge sharing behaviors of faculty members are as follows:

- Promoting strategic discourse in organizations and checking workplace permanently in order to facilitate knowledge sharing behaviors,
- Inducing a sense of common goal in every individual and creating a unique understanding of the organization's programs and common results among the employees,
- Having everyone in an organization to make its objectives real and having a proper understanding of expectations by the employees and giving continuous feedback to members to make them feel worthy in their positions and giving promotions based on the members' merits, which all develop knowledge sharing behaviors in an organization.

As future study, we recommend conducting similar research in other parts of universities, conducting similar research on the impact of *spiritual intelligence* on faculty members' knowledge sharing behaviors and considering environmental and organizational factors and management support on knowledge sharing behaviors.

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