



Knowledge Sharing Model Based on Individual and Organizational Factors Related to Faculty Members of University

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Knowledge Sharing, Individual and Organizational Factors, Faculty Members

This study presents the knowledge-sharing model based on individual and organizational factors related to faculty members. To achieve this goal, individual and organizational factors were presented through qualitative research in the form of open codes, axial, and selective observations; then, the final model was obtained using a structural equation model. Participants included 1,719 faculty members of the university in Iran. The samples related to the qualitative survey included 25 faculty members and the samples for the quantitative survey included 326 faculty members selected by multistage cluster sampling. A 72-item questionnaire was used to measure the quantitative variables. The results showed that the status of knowledge sharing is moderate in universities. Individual factors influencing knowledge sharing included the sharing of educational materials, perception, confidence and knowledge self-efficiency, and organizational factors influencing knowledge sharing included structural social capital, cognitive social capital, social capital relations, organizational communication, organizational structure, organizational culture, IT infrastructure and systems of rewards. Finally, it was found that the contribution of individual factors on knowledge sharing was more than organizational factors; therefore, a model was presented in which the contribution of individual and organizational factors was determined.

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Introduction

Universities and institutions of higher education are knowledge-based organizations in which access to knowledge and continuous learning is crucial for faculty members to play their roles and functions. Due to the spread of knowledge and the limitations of individuals and institutions around the existing knowledge, knowledge sharing has become increasingly important. Knowledge has become the key asset for the economy to gain competitiveness. The knowledge-based economy is expected to promote an environment for innovation by reinforcing the delivery of better quality education and fostering innovation and technology (Pook et al. 2017). Higher education institutions are providing important benefits to the business world and the society at large by creating and diffusing new knowledge (Kalkan 2017). In the emerging knowledge society, universities are the expected drivers of innovation, thereby contributing to the development of a learning society. Universities are the intellectual centre of knowledge production and research. Higher education institutions through their faculty members can acquire new skills, concepts and share and deliver knowledge (Turban et al, 2007). University have been always an environment for generation, storage, or expansion of knowledge. Knowledge as the intellectual capital of the organization has become increasingly important in enhancing competitive advantages. For such capital in organizations, Members must make their knowledge available, i.e., to share their knowledge with their colleagues (Hoof and Huysman, 2009). Given the interest of faculty members in the production, deliver and application of knowledge, sharing of knowledge may provide more opportunities to exchange ideas and engage in collective action. As a result of these activities, their effectiveness increases on the success of their organizations (Kim and Ju, 2008). Therefore, a systematic structure is required to stimulate and encourage faculty members to exchange knowledge with each other. Concept of knowledge sharing reflecting the process of knowledge is wider than the simple knowledge delivery. Hoof and Huysman (2009) emphasize that knowledge management can be a personally, mentally, socially, and implicitly related to daily activities. Therefore, knowledge sharing is not mandatory. Rather, it is a result of motivation and desire to share, desire for social interaction and generosity, which is called "emergency approach" towards knowledge sharing. The basic concept is that knowledge sharing does not depend on management intervention, but on social capital of a group of people. Being aware of the fact that knowledge cannot be directed from outside the organization, the management has decided to pay

more attention to its role in knowledge management. Another approach addressed by Hoof and Huysman is the engineering approach to knowledge sharing. This approach assumes that sharing knowledge can be managed. The underlying assumption is that management can create an ideal environment for this process to play a good role in the organization. They believe that sharing knowledge cannot be created under pressure, structural or organizational tools, but through rich social interactions. On the other hand, knowledge sharing is not just knowledge delivery, but creation as well. It seems that most organizations do not hit the goals intended to share knowledge. Perhaps it is due to the lack of a clear relationship between knowledge management strategies and goals of the organization and on the other hand, isolating knowledge-sharing activities from other activities of the organization. For personnel, barriers of sharing are often recognized by factors such as lack of communication skills and lack of social networks, differences in national cultures, overemphasis on the opportunities and the lack of knowledge and trust. At the organizational level, barriers are associated with economic capabilities, lack of infrastructures and resources and availability of formal and informal meetings and physical environment (Riege, 2005).

Reviewing and prioritizing cultural factors affecting knowledge sharing in petrochemical research facilities, Pahlavani et al (2010) concluded that mutual trust and communication between workers and information systems, reward systems and organizational structure are the most important factors in sharing of knowledge. Before implementing the KM in academic institutions, the management should involve in significant amount of pre-arrangement of knowledge management enablers such as Organizational Structure, Technology, Collaboration and Trust in such a way the implementation knowledge management will be successful in higher educational institutions (Kumaravel1 and Vikkraman, 2018).

Hoseyni et al (2008) determined the effective factors on delivery and exchange of knowledge between departments of rehabilitation and organizations providing rehabilitation services in order to find a suitable solution for effective knowledge delivery. The most important factors identified in this research included weaknesses of identifying requirements of the society in the design of research projects, individualistic culture, lack of teamwork and lack of structural relationships between universities and organizations providing rehabilitation services. Appropriate strategy for effective knowledge delivery in this study was joint committee or organization between users and producers

of knowledge to respond to the needs and facilitate the process of knowledge delivery.

To examine the direct and indirect effects of quality and self-efficiency of knowledge management system, organizational environment and attitude to willingness to share knowledge through production of new products, Chen et al (2012) concluded that attitude is the key effective factor on intention to participate in knowledge-sharing activities. Whatever a factor (such as self-efficacy of knowledge management system and organizational climate) can positively contribute to the attitudes, it can help knowledge sharing more. They found that knowledge management system plays an important role in determining those knowledge-sharing behaviours integrating organizational knowledge and supporting organizational knowledge processes in the production of new products. However, they noted that knowledge management systems are not a final solution, but in fact a tool to help members of the organization to manage the organizational knowledge effectively. From a managerial point of view, they refer to these points that knowledge management system is a tool which particularly supports the explicit knowledge. On the other hand, organizational knowledge is also tacit depending on the context; it is hardly imitable and it cannot be encoded. According to certain kinds of knowledge sharing, companies need to develop a culture of sharing and encouraging people to engage in problem solving, communication and interaction. Therefore, companies should emphasize the growing capabilities of their staff and sharing culture instead of focusing on information technology. They also emphasized that employees are considered as specific elements to share knowledge. Thus, the most important art is to foster a positive organizational climate (e.g., bilateral relations, mutual aid and communication channels). They agreed on the need of organizations to train their employees to take the skills that can enhance their capabilities. Once people acquire the ability to use knowledge management systems, their willingness and intention will increase.

Ighbal et al (2011) studied knowledge sharing among university staff and innovation capability of the university. The results showed that increased knowledge sharing behaviours had a positive effect on innovation capabilities of university. In addition, self-efficacy and social network helps to develop knowledge sharing which is positively related to increase in knowledge sharing behaviours. "Trust" is considered as a positive bond to develop and desire for knowledge sharing. Moreover, there is a unique relationship between attitudes, social norms, trust and willingness to share knowledge, which results in support for organizational innovation capabilities.

Al-adaileh (2011) studied the effect of organizational culture on knowledge sharing. This study investigated the influence of organizational factors such as trust, collaborative work environment, common vision, management activities on knowledge sharing in phosphate mining company in Egypt. Findings showed that cultural characteristics are regarded as important factors which can determine the extent of knowledge sharing in an organizational context. In fact, they have stated that organization is considered as a social unit in which the level of trust, cooperation and interaction between people, their vision and management are very important social trait. Emphasis on cultural characteristics not only is related to try to understand culture of the organization, but also emphasizes the strengthening of a set of cultural characteristics which can support knowledge management in general and knowledge sharing behaviours in particular.

Salim et al (2011) conducted a study to understand the attitudes and willingness to share knowledge and explore factors influencing these concepts. The results indicate that both intrinsic and extrinsic factors are important in development of attitudes and willingness to share knowledge; however, it was found that intrinsic factors, especially "seeking pleasures from helping others" play a special role in attitude and willingness to share knowledge. Participants in this study considered knowledge sharing as a helpful and valuable experience and stated that they would share their knowledge. Staff believed that although sharing of knowledge between colleagues would not influence the existing relationships and organization would not motivate them to share knowledge, they considered knowledge sharing as a pleasurable activity. In addition, they also felt that their knowledge was valuable and certainly influenced the effectiveness of the work of others.

Li and Haiyan Wang (2010) conducted a study to explore the factors affecting the willingness to share tacit knowledge. The results indicated that individual characteristics (satisfaction of needs, self-respect and altruism), internal mechanisms (interpersonal trust, team cohesion and strong leadership) and the support framework (sufficient resources and self-efficacy) were particularly related to tendency to share tacit knowledge. Ismail and Yosuf (2010) examined the Effect of individual factors on the quality of knowledge sharing. They concluded that individual factors (awareness, trust and character) were strongly correlated to the quality of knowledge sharing. Character has been recognized the strongest factor influencing the quality of knowledge sharing in this study.

Zaeri Matin et al (2010) studied knowledge sharing systems in management organizations, tried to identify

structural, behavioural, social, cultural, technological factors as intra-organizational capabilities and then examined their effects on Knowledge sharing behaviour. They found following results: there are positive tendency for knowledge sharing in organizations with cultural capabilities such as extroversion, employees' autonomy, respect for cooperation and outspoken behaviours, trust, low power distance and respect for employees; this will lead to improved performance in various aspects. Learning and growth are measures of organizational performance in organizations with low formality focusing on behavioural and structural capabilities for knowledge sharing. In such organizations, the tendency for mutual learning and innovation is very high. Innovation is one of the capabilities of sharing knowledge, which in itself will not lead to knowledge sharing, but also adds to speed and adequacy of sharing knowledge and increases transparency. Thus, the desire for knowledge sharing increases and organizational performance improves in all aspects, especially in financial aspects. Social capital can be a strong predictor for sharing knowledge and improve performance, especially in internal processes. In general, organizations with horizontal structure and the network based on team work, as well as organizational culture based on mutual trust, low power distance and high social capital in terms of relational, cognitive and structural factors, Availability of information technology and the wide application of fast data transfer networks, are considered as key factors for knowledge sharing which causes a positive tendency to share knowledge and eventually knowledge sharing itself.

Shim and Roth (2009) conducted a study to investigate the process of sharing learning and teaching skills by teachers. They used qualitative methodology by semi-structured interviews to evaluate and modify sharing of skills. Through interviews, it became clear that these teachers encountered obstacles to share their skills with others. One of the barriers was warning them not to violate the laws governing higher education institutions. In addition, they must comply with the environmental barriers such as scheduling and physical environment. It was found that elimination of these obstacles could provide secure ways to share teaching skills.

He and Wei (2009) conducted a study to answer the question that "what gives continuity to the sharing of knowledge?" This study validated and expanded knowledge management systems from two points: 1) Knowledge Share, 2) knowledge search. In the context of knowledge management, this study analysed "continuity" model from this point that the constant desire of knowledge users as well as facilitating organizational situations predict constant knowledge

sharing behaviours in the organization by the knowledge management system, while the "intention and desire" are determined by beliefs and attitudes of users. The results showed that cognitive beliefs of users vary based on the role of these beliefs in influencing desire and intention to share knowledge in different contexts. Knowledge workers refer to knowledge management system and share their knowledge because of Social relationships, enjoy of helping others, administrative support, taking into account the costs associated with helping behaviours, and not because of imagination, reciprocity and organizational reward.

Kim and Ju (2008) studied the main factors influencing knowledge sharing, perception and attitude of faculty members towards knowledge sharing and collaboration in academic institutions. They examined six key factors, identified in previous studies, in a private university in North Korea; the factors included those related to "relationship" (perception, trust, openness in relations and cooperation) and factors related to "structure" (reward system and IT-based communication channels). This study found that only two factors, "perception" and "reward system" had a positive impact on knowledge sharing in university. According to the regression analysis undertaken in this study, it was found that "perception" and reward system were the highest and second highest influential factors on knowledge sharing among faculty members.

Considering above, the problem is that level of Knowledge sharing between university faculties is not clear; with regard to cultural and economic context, moreover, barriers and facilitators of knowledge sharing behaviours are not clear. One way to promote this behaviour is to make the current status of knowledge sharing clear and to know how to reach the optimal status. What factors are decisive and effective, what is the contribution of each factor on knowledge sharing and, finally, what model can be developed for knowledge sharing between university faculties? By clarifying the status of knowledge sharing between faculty members, identifying effective factors and determining the contribution of factors, this study will eventually develop a model using quantitative and qualitative data from interviews, questionnaires and literature. This model is expected to be able to contribute knowledge sharing by faculty as a guideline for development and management of knowledge resources in universities. In order to achieve this goal, consider the following questions:

The main question: what kind of a model can be developed for knowledge sharing among faculty members of university?

Special Question 1: How knowledge sharing works in universities?

Special Question 2: What are the individual factors influencing knowledge sharing?

Special Question 3: What are the organizational factors influencing knowledge sharing?

Special Question 4: how individual factors contribute knowledge sharing?

Special Question 5: how organizational factors contribute knowledge sharing?

Methodology

The methodology of the present study was correlation by structural equation modelling. The purpose can be regarded as extended and practical angles. This study is extended research in which a new subject, particularly among educational management studies and the researcher tries to play a new role in knowledge-sharing management by this study. Both qualitative and quantitative data were obtained. Participants consisted of all faculty members' university. In the qualitative research, 25 faculty members were interviewed who had Teaching experience in educational institutions and published research papers in national and international conferences, authored and translated several books and scientific articles. To determine the quantitative sample size (326) and Krejcie and Morgan table was used. A Cluster sampling method was also used. In this research, 342 questionnaires were distributed and 326 questionnaires were analysed to ensure that the net number of returned questionnaires was greater than above amounts. In this study, data were collected through semi-structured interviews. Interview started with general questions about status of knowledge sharing in university. Then, their opinions were asked about the factors influencing knowledge sharing among faculty members, including facilitating and inhibitory factors. All interviews were recorded with the written consent of the participants. Interviews lasted 35 to 60 minutes, on average. Immediately after the interview, the content was written word by word. This prevented ignorance of words or sentences. For a deeper understanding and exploring the factors influencing knowledge sharing by discussing specific questions, the researcher directed the faculty members to express their stories with the details

necessary to understand the phenomenon and analysis. Individual and group interviews were conducted. Hence, both individual and group interviews together could provide richer and more comprehensive data. After conducting and writing interviews by the researcher, encoding was done in three stages, namely open, axial, and selective coding. In open coding, the first level of concepts associated with the study was identified and assigned codes. Given code were words of participants or implicit codes of researcher. Then, main codes were compared for similarities and differences. Codes with similar meanings were placed in one class; this step is called axial encoding in which, based on paradigm of Charmaz (2010), classes were extended and Similar classes were combined to reveal more implicit classes. Finally, selective coding was conducted in order to identify the main components. discussed Strategies and techniques used different tools to collect required data, including library methods (including research articles, books, journals and theses) and field method (including questionnaires and interviews). To evaluate knowledge sharing and effective factors, a 72-item closed questionnaire was used which was designed by 5-point Likert scale. For qualitative and quantitative evaluation of content, the researcher asked the experts to evaluate interviews and questionnaires and provide feedback in order to modify the materials. To determine face validity, qualitative and quantitative items, simplicity, and complexity of the items, experts and professors were asked to give their opinions. In order to measure reliability of the measurement material, the Cronbach's alpha was used. For reliability of the sample, 50 received questionnaires were analysed by SPSS software. As a result, alpha coefficient was obtained for the total items (0.93). This number indicates that the questionnaire is reasonably reliable.

Findings

Special Question 1: How knowledge sharing works in universities?

Table 1 presents knowledge-sharing status in universities by interviewing with faculty members.

Table 1. optimality of knowledge-sharing status

	Optimality	No. References	References %
1	Optimal	1	4
2	Quite optimal	3	12
3	Moderate	5	20
4	Quite moderate	8	32
5	Weak	8	32

Frequently, majority of interviewees stated that the status of knowledge sharing is not satisfactory; only a small percentage of faculty members found specialized group sessions optimal only in the form of knowledge sharing. According to different departments at the university and due to the lack of coordination between groups by the directors of university, Status of knowledge sharing is not optimal. Therefore, 32% of the interviewees thought that knowledge sharing is weak in

universities. 32% of respondents found the knowledge sharing quite moderate and 20% of those interviewed reported that knowledge sharing was moderate in the university.

In Order to evaluate knowledge sharing from the perspective of faculty members in the form of quantitative analysis, a 7-item questionnaire was designed (Table 2). Average of seven items was considered as the score of knowledge sharing.

Table 2. Descriptive indicators related to knowledge sharing

	Items	No.	Average	Standard deviation	Mean standard error
1	Sharing knowledge and experience	326	3.9632	1.10043	0.06095
2	Responding to specialized questions	326	3.8742	1.07538	0.05956
3	Informing scientific projects	324	3.4352	0.98226	0.05457
4	Delivering new information and knowledge	323	3.4923	1.01958	0.05673
5	Interacting in learning	322	3.5497	1.07028	0.05964
6	Helping to acquire skills	321	3.6293	1.10239	0.06153
7	Delivering ideas to coworkers	319	3.5361	1.04811	0.05863
-	Sharing knowledge (variable)	326	3.659	0.6917	0.036

As shown in the table above, score of the items related to the assessment of knowledge sharing was >3 (average of 5-point Likert scale). Quantitative findings from the first item indicated that faculty members saw knowledge sharing as moderate. The highest score was related to knowledge sharing status and experience of faculty members (mean score 3.96) and the lowest score was related to informing scientific projects (mean score 3.43). A standardized factor loading of seven items was 0.5, which indicates the significance and optimality of items representing knowledge sharing.

Special Question 2: What are the individual factors influencing knowledge sharing?

To answer this, At first it was necessary to use a qualitative research to classify components of individual factors in the form of open and axial codes identified in tables related to facilitating ways and barriers of knowledge sharing; Finally, key components effective on knowledge sharing were determined using selective encoding and literature review. The following table defines open codes related to facilitating ways and barriers of knowledge sharing in the form of individual and organizational factors.

Table 3. open codes; facilitating ways of knowledge sharing

	Components	References		Components	References
1	Specialized problem-solving sessions	5	10	Qualitative growth of information sources	3
2	Seminars	8	11	Intra-organizational publications	3
3	University website	5	12	Management support policies	20
4	Articles	6	13	Excellent encouragements	8
5	Email	2	14	Scientific recognition of coworkers	4
6	Motivation	4	15	IT	7
7	Scientific conference	5	16	Organizational structure	4
8	Equipped libraries	4			
9	Internet speed	4			

Table 4. open codes; barriers to knowledge sharing

	Components	References		Components	References
1	Mistrust	8	7	Weak digital facilities	8
2	Unfamiliarity to capabilities	8	8	Lack of sufficient knowledge of coworkers	3
3	Fear of Release	5	9	Poor sources of information	2
4	Lack of interest	6	10	Mismatch of organizational fields	5
5	Insufficient time	15	11	Weak support policies of Directors	7
6	Lack of social interaction	7	12	The lack of great encouragement	8

The names chosen for these open codes were mostly based on the words used by faculty members in interviews. Findings from axial encoding show that knowledge-sharing characteristics, if any existed, such as cooperation in 75% and knowledge participation in 64% have been considered as re-encoded data in positive dimensions. Thus the interviewee considered causal conditions as organizational structure and organizational culture (73% and 68%, respectively), Conditions interfering with the use of IT infrastructure (71%), knowledge self-efficiency (73%), reward system (78%), organizational communication system (79%), and social capital (75%). On the other hand, appropriate working environment to adopt suitable strategies and support of senior managers (61%) and optimistic success rate (67%) have been determined. Finally, individual factors influencing knowledge sharing based on selective coding include sharing educational materials, trust, perception and knowledge self-efficiency. These factors were found

by qualitative analysis of interviews and simultaneously references to the literature.

Special Question 3: What are the organizational factors influencing knowledge sharing?

Organizational factors affecting knowledge sharing based on the selected encoding include organizational culture, organizational structure, corporate communications, IT infrastructure, structural social capital, cognitive social capital, and social capital relationships, support of senior management and reward systems.

Special Question 4: how individual factors contribute knowledge sharing?

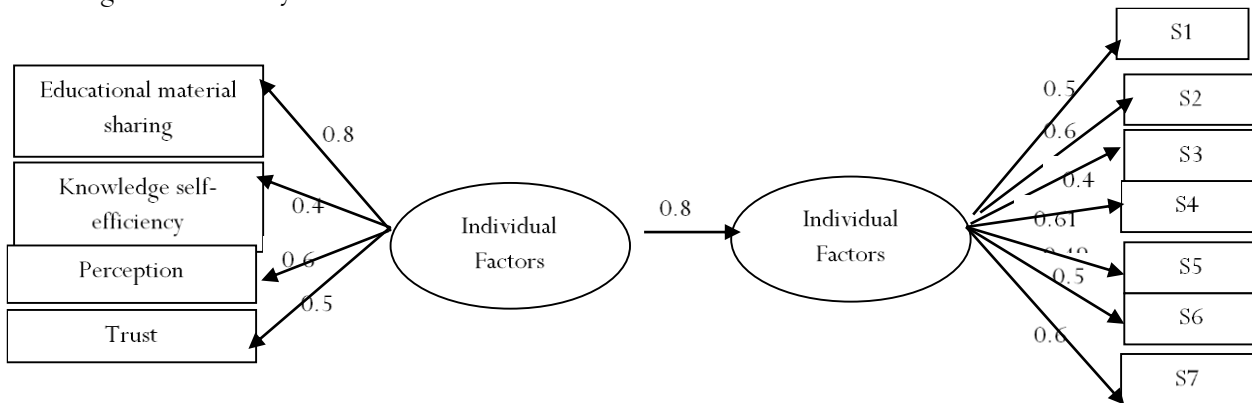


Figure 1: individual factors and knowledge sharing

Chi-square=96.93; df=43; p-value=0.000;
 RMSEA=0.032
 Direct effect: individual factors 0.88
 Indirect effects:
 Educational material sharing: $0.81 \times 0.88 = 0.7128$
 Knowledge self-efficiency: $0.44 \times 0.88 = 0.3872$
 Perception: $0.61 \times 0.88 = 0.5368$

Trust: $0.54 \times 0.88 = 0.4752$
 Obviously, educational material sharing and knowledge self-efficiency have the highest and lowest contribution, respectively.

Special Question 5: how organizational factors contribute knowledge sharing?

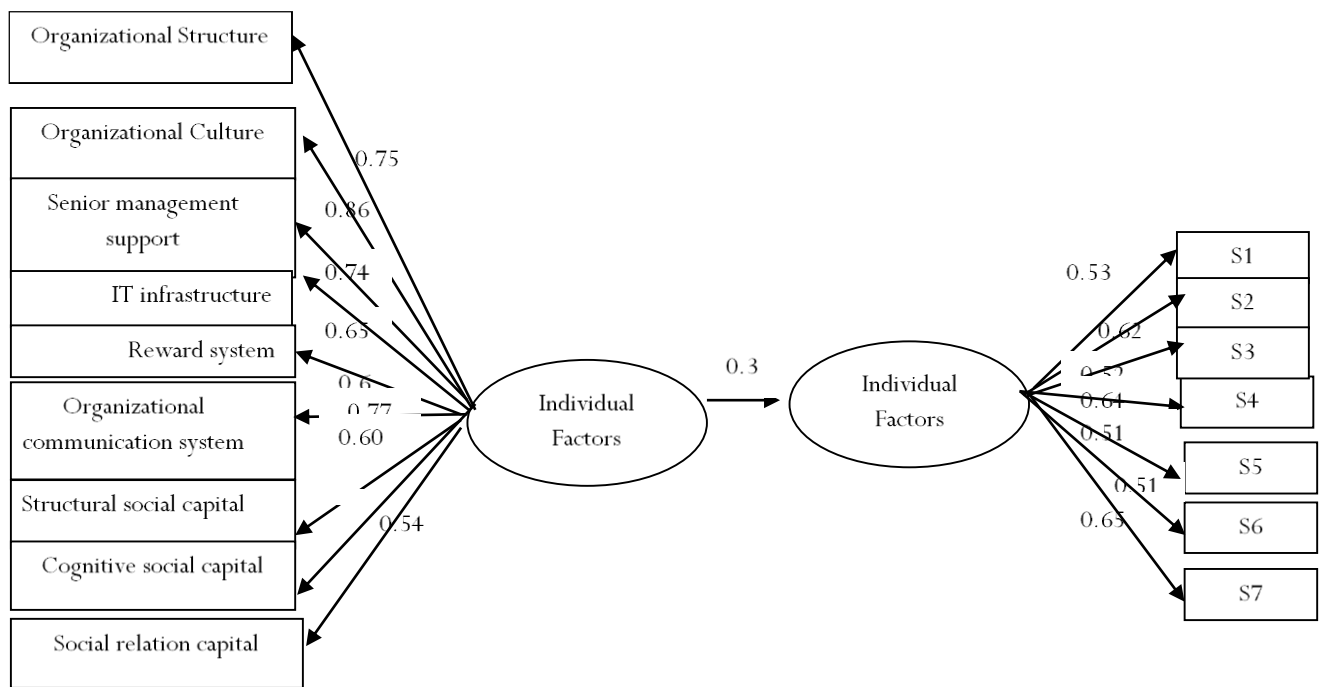


Figure 2: organizational factors and knowledge sharing

Direct effect: organizational factors 0.37

Indirect effects:

Organizational structure: $0.76 \times 0.37 = 0.2812$

Organizational culture: $0.86 \times 0.37 = 0.3182$

Senior management support: $0.74 \times 0.37 = 0.2738$

IT infrastructure: $0.65 \times 0.37 = 0.2405$

Reward system: $0.69 \times 0.37 = 0.2553$

Organizational communication system: $0.77 \times 0.37 = 0.2849$

Structural social capital: $0.60 \times 0.37 = 0.2220$

Cognitive social capital: $0.56 \times 0.37 = 0.2072$

Social relation capital: $0.54 \times 0.37 = 0.1998$

Among organizational factors: organizational culture and social relation capital had the highest and lowest contributions, respectively

The main question: what kind of a model can be developed for knowledge sharing among faculty members of university?

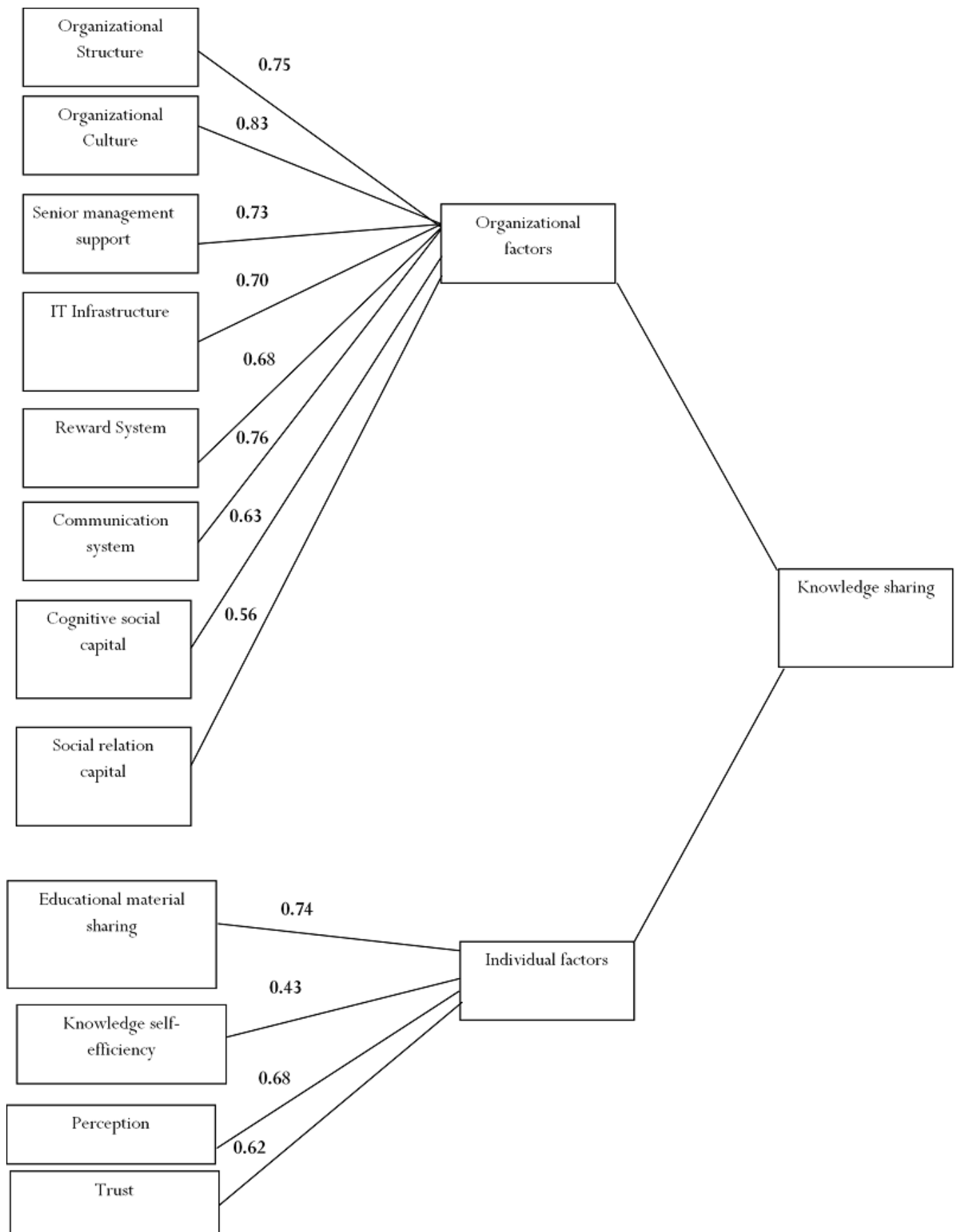


Figure 3: knowledge sharing model based on individual and organizational factors and their contribution

It is considerable that individual and organizational factors demonstrated different contributions in sharing knowledge when they were inserted the model along each other, rather than when they were inserted alone.

Conclusion

Knowledge sharing model was developed by combining individual and organizational factors in the form of qualitative and quantitative research. Different theories have been used to provide a comprehensive and practical model. Findings indicate that many factors can affect knowledge sharing that might be relevant to an individual or organization. The findings showed that the contribution of individual factors was greater than the contribution of organizational factors. One of Individual factors identified in this study was educational material sharing with the greatest impact on knowledge sharing. In other words, intellectual property of faculty members formed in many years of experience in teaching and research in academic setting has been evaluated as the most valuable assets of an institution. Thus, educational material sharing can use potential of faculty in the exchange of information; therefore, they can be individually efficient with regard to their expertise and experience. In addition, a clear perception of subjective norms and in fact attitudes of faculty members toward campus, sufficient knowledge of specialized disciplines and motivations of growth and excellence, tendency to exchange scientific information, sufficient knowledge of materials as well as knowledge of interdisciplinary scientific information and attitude to maintain their knowledge as a source of power can be effective. Respect, fairness, openness, sustainability, participatory and reliable information exchange with colleagues and respect for ethical code represent trust which influence knowledge sharing. Good perception of application of expertise and efficiency in the exchange of scientific information between faculty members is the other individual factor influencing knowledge sharing in the form of knowledge self-efficiency.

The findings showed that when faculty members have the feeling that knowledge sharing with colleagues can cause a positive opinion in others, positive tendencies to knowledge sharing would improve by an increase in expertise and skills in providing valuable knowledge. The results also showed that helping others in challenging problems are interesting for people and at the same time gives them a good feeling. In addition, because getting into the problem solving is challenging and interesting and people like helping others, people find intrinsic motivation to share knowledge with others.

The faculty members also claimed that habits of people simultaneously influence their willingness to share

knowledge. When people improve the habit to share their knowledge and believe that this habit is worthy of preservation, then they will unconsciously share their knowledge. Knowledge sharing Culture in educational organizations is dependent on the attitude of faculty members. If the staff or faculty members do not tend to share knowledge with other group members, it may be so difficult to extend knowledge-sharing culture by encouraging or regulatory requirements. Perception the culture of knowledge sharing may be related to individual factors. The role of educational materials and technology to support the processes of knowledge sharing is also essential. An environment with strong social trust and perception of knowledge sharing must positively direct to knowledge sharing. Therefore, a sincere and defensible interaction is required for knowledge sharing. Familiarity of faculty members with new technologies of education, even in a large geographical area, can facilitate knowledge sharing. When faculty members think they can benefit from technical and non-technical aids if they deliver valuable information, their desire and intention to share their knowledge will increase. According to Kim and Ju (2008), two main tasks of faculty members are research and teaching. As a result, they produce a large amount of educational resources during the process of research and teaching. Most often, these materials are organized and maintained by each member of faculty, rather than efficiently shared with other faculty members who teach the same courses in a same semester or next semesters. Some of these materials are of very high value; due to the lack of systematic and consistent channels to share them, however, they are not effectively collected and organized. The same educational materials are often reproduced over several years, and this repetition will be followed by wastes of time, cost and labour, both for the faculty member and prospects of educational institutions. One type of curriculum is the instructional materials of each course including all materials and instructional subjects produced and organized by teachers to use for lectures, seminars, conferences, classroom discussions, and library resources. Educational materials also contain additional materials, such as advertising boards, news, curriculum development, course structure provided for a field and effective teaching skills. If this valuable information and knowledge is shared self-efficiently between faculty members, they can devote more time to research and interact with students and colleagues, provide high-quality courses for students by integrated educational materials. Some members believed that those with more experience in their jobs could better understand how their expertise is relevant and better be able to share their

knowledge with others. Therefore, people who are more willing to share their knowledge feel that they have sufficient expertise. Thus, people with high level of expertise are more willing to offer advice. As Sun and Scott (2005) claimed, individual barriers are due to need for a sense of control and confidence. Therefore, people try to create a convenient space in the organization for themselves. In a convenient atmosphere, people can represent themselves, the can cause feelings of differentiation; hence, their positive feelings as a member of the organization increases. Staff beliefs usually originate in the organization in which they work. This means that economic, psychological and social conditions of employees are interwoven with the current context of the organization. In the organization level, Employees can act in a way that prevents one to deliver his information to the team. Fear of losing ownership and control of knowledge is considered as a major obstacle. In the team level, team prevents the transmission of information to the organization level when it feels its security is threatened. They compare benefits of having knowledge in the team with transferring knowledge to the organization; if they realize that knowledge has more advantages inside the team, they will avoid delivery to the organization. Therefore, the research team cohesion should be strengthened. Team cohesion has a direct positive effect on willingness to share knowledge. Cohesion is the basis of creativity and competitiveness in the research team. To improve integration of the research team, the research should be guaranteed first and a climate is required in which team members know meaning and value of their work. Second, living and studying of members should be considered. Third, harmonious relationships are required between the members to strengthen team cohesion. In addition, trust must be established in the research team. This study revealed that interpersonal trust has a positive impact on the willingness to share knowledge. High levels of trust are a necessary condition for diffusion of knowledge. To establish trust in the university, the research team should support open culture and innovation in science, then encourage members to communicate with each other formally or informally and raise mutual perception in order to develop a mutual trust between members. Furthermore, a shared vision is required to strengthen confidence among the faculty members. These will strengthen desire and intention to share tacit knowledge. Many faculty members believed that "altruism" had a direct positive impact on tendency for knowledge sharing; therefore, the altruistic feeling should be encouraged in universities. First, this feeling needs to defuse in life and work of each academic staff through extensive advertising. Second, management needs a

comprehensive mechanism to encourage this behaviour by giving spiritual rewards or philanthropic activities. A sense of pride among members was the other idea of interviewees. The present study emphasizes that the sense of pride has a positive effect on tendency to share knowledge. Members who feel proud of the organization in which they work set organizational Goals as their goals, they highly tend to help other people and share knowledge. To foster a sense of pride in the faculty, first, coordinated interpersonal relationships are required among faculty members, then, a sense of pride, responsibility, and mission can be fostered among members. As they recommended, universities need to consider different motivates and create a proper support system to strengthen the dimensions of incentives for knowledge sharing behaviours enabled among the faculty members.

Other factors were identified as organizational factors which could facilitate or hinder knowledge sharing behaviours. One of organizational factors effective on knowledge sharing, which have the largest contribution in this study, is the organizational culture which universities and educational institutions need to provide by forming specialized groups, seminars and lectures, to provide space for growth and excellence. Knowledge-based culture, vision, clear goals and personal values in relation to knowledge are effective on encouraging and promoting social dynamics which in turn can be useful for knowledge sharing behaviour. Such a culture will lead to deeper insights in which the relevant knowledge exists, there is more active interaction between faculty members, there is mutual perception and an environment of social identity and trust dominate. The results of the study showed that senior managers are responsible to support and maintain such a culture. A culture of collaboration and teamwork, facilitation of scientific relationships between faculty members and valuation of academic information exchange can promote knowledge sharing successfully. Strengthening interdependence, willingness for cooperative participation and attendance in scientific societies and constructive communication skills are important organizational factors representing cognitive social capital. Other identified organizational factor is organizational structure which can facilitate or prevent knowledge sharing in the form of management and leadership characteristics, perceptions of organizational politics and organizational hierarchy. Expertise Communities, traditional and virtual networks and organizational support represent other organizational in the form of social capital. Knowledge sharing is vital in a knowledge-based economy, especially in interaction between teams and social evasion is considered as

phenomenon which reduces knowledge sharing among team members. Social relationships among members and their interactions with outside of the academic environment refer to social relation capital represented as an organizational factor influencing knowledge sharing. Another barrier is the lack of time to share knowledge.

Many of the faculty members noted that they had very little free time, they have been only teaching and their burnout prevented such interactions; many of them knew this was because of economic problems. For some individuals, the age difference is of utmost importance. For example, an individual may not be able to deliver his knowledge to an older or younger person; or they may not be able to communicate with others. Thus, age differences might be one of the barriers to knowledge sharing. Gender differences are also important for some people. They may not know enough about capabilities of opposite sex to be able to deliver their knowledge or they may have difficulties in communicating with the opposite sex; this also can be because of individual or organizational reasons.

On the other hand, people should be able to trust the accuracy of knowledge that they receive; otherwise, they cannot use it. It may be felt that delivering knowledge to colleagues or transferring results to a knowledge database is a kind of detection. Because some types of knowledge are valuable and rare. Another problem is knowledge self-efficiency. Especially for inexperienced and young people, it may be difficult to judge which results of their work can be a valuable knowledge to others. They cannot estimate that whether their knowledge can be useful for co-workers if the knowledge is very general or some of its results can be used for a given situation. For self-efficacy of members, the university leaders should encourage members and consider awards to boost their confidence. Then, they need to introduce some of the prominent and successful members to provide a model for other members in a way that others be aware of the fact that the effort will result in success. In addition, the team should establish close relations and ask the members to conduct positive assessment; this can encourage self-efficacy.

Knowledge is Power. This famous statement is sometimes heard. Where the experts are most popular with their excellent knowledge, they will speculate it rather than try to pass their knowledge to others. Especially in situations where job security is low. Knowledge is power, and for people it seems vital. In other words, knowledge is insurance against the loss of jobs. Many faculty believe that knowledge speculation is necessary for career advancement. It is thought that knowledge sharing weakened position, power and status

in the organization! Some people like to keep things for themselves, so that their co-workers and peers recognize and encourage them. Wheatley (2000) also believes that many employees voluntarily share their knowledge to understand that it is important for their jobs, or to be motivated to learn, or to tend to support a co-worker. The present findings indicate that knowledge sharing is under influence of honest behaviour, respect for others' interests, fair allocation of resources and development of transparent procedures. Social capital is a known concept including networks, values and achievements, which are achieved by these networks in relation to developed intellectual capitals achieved by: Composition, knowledge creation using incremental changes and development of existing knowledge and innovation or learning, exchange, social interaction and social activities. Social capital provides a positive situation for both processes and therefore helps to create intellectual capital. In order to analyse these effects on knowledge sharing, three dimensions of social capital can be distinguished here; structural: how people connect and interact -who and how they communicate with each other; relational: values are created and effective through relationships: trust, norms and permissions, obligations and expectations, identities; Cognitive: resources which provide expressions, common interpretations as well as semantic system between members, Such as language, codes and stories (Hoff and Huysman, 2009). In this study, it was clear that university has a positive effect on social relation capital; a structure which forms by roles and responsibilities for sharing knowledge and reducing structural walls will lead to trust, identity and more interactions between members. Another finding of this study was that an effective infrastructure of information and communication technology could have a positive impact on the level of structural social capital. Thus, its role in knowledge sharing involves facilitating interactions by personal blogs and websites. People who considerably connect other people and develop cooperation tend to share their knowledge at the university. University administrators can create an ideal environment for this process. Knowledge not only can be shared under pressure of organizational structure, but also it can be a result of rich social interactions. Hierarchy and Many organizational positions, The difference in the level of experience, lack of interaction, lack of social networks, a sense of ownership over intellectual property due to fear of not receiving compensation from managers and colleagues can be a barrier to knowledge sharing. Lack of leadership and management directions to understand the benefits and values of knowledge sharing can be another preventive factor. Experimental evidence shows that if employees know senior

management supports activities conducted in order to support knowledge management, they will increase their efforts for knowledge sharing. According to the presented model, if these factors are considered in planning and proceedings of the universities, the barriers are eliminated and required facilities are provided, it can be expected that knowledge-sharing behaviour will be improved between members of faculties as a model for developing and managing knowledge resources of universities.

References

- Al-adaileh, R. M. (2011) The Impact of Organizational Culture on Knowledge Sharing: The Context of Jordan's Phosphate Mines Company. *International Research Journal of Finance and Economics*, Issue 63.
- Chen, S-S., Chuang, Y-W., & Chen, P-Y. (2012). Behavioral intention formation in knowledge sharing: Examining the roles of KMS quality, KMS self-efficacy, and organizational climate. *Knowledge-Based Systems*, 31, 106–118.
- He, W., Wei, K.K. (2009) What drives continued knowledge sharing? An investigation of knowledge-contribution and –seeking beliefs. *Journal of decision support systems*, 46, 826-838.
- Hoof, B.V.d. & Huysman, M. (2009) Managing knowledge sharing: Emergent and engineering approaches. *The Journal of Information & Management*, 46, 1-8.
- Hoseyni, M.-A., Jafari, P., Yazdani, S. & Rahgozar, M. (2008) Effective Factors on Delivery and Exchange of Knowledge among Rehabilitation Departments and Organizations Providing Rehabilitation Services. *Educational Leadership and Management*, 2(2), 12-19.
- Howell, K. E. & Annansingh, F. (2013) Knowledge generation and sharing in UK universities: A tale of two cultures? *International Journal of Information Management*, 33(1), 32-39
- Ighbal, M. J., Rasli, A., Hock Heng, L., Bilal, M. B., Hassan, A. I, & Jolae, A. (2011) Academic staff knowledge sharing intentions and university innovation capability. *African Journal of business Management*, 5(27), 11051-11059.
- Ismail, M. B. & Yosuf, Z. M. (2010) The Impact of Individual Factors on Knowledge Sharing Quality. *Journal of Organizational Knowledge Management*. Article ID 327569, 13 pages.
- Kalkan VD. (2017) A constructive response to the challenges faced by higher education institutions: University knowledge management. *Asia Pacific Journal of Advanced Business and Social Studies (APJABSS)*, 3(1): 180-191.
- Kim, S. & Ju, B. (2008) An analysis of faculty perceptions: An analysis of faculty perceptions: Attitudes toward knowledge sharing and collaboration in an academic institution. *The Journal of Library & Information Science Research* 30, 282–290.
- Kumaravel, V. & Vikkraman, P. (2018) Assessment of Knowledge Management Practices in Higher Educational Institutions in India: A Structural Equation Modeling Approach, *Int J Edu Sci*, 20(1-3): 120-136.
- Li, Z. & Haiyan Wang, T.Z. (2009) A Study on the Influencing Factors of the Intention to Share Tacit Knowledge in the University Research Team. *The Journal of Software*, 5(5).
- Pahlavani, M., Parash, R., Alipour, V. & Bashokuh, M. (2010) Prioritizing Cultural Factors Effective on Knowledge Sharing in Petrochemical Research Centers, *Journal of Information Technology Management*, 2(5) 19-36.
- Pook ASY, Chong CW, Yuen YY. (2017) Effectiveness of cross-border knowledge transfer in Malaysian MSC status corporations. *Knowledge Management and E-Learning*, 9(1): 90-110.
- Riege, A. (2005) Three-dozen knowledge-sharing barriers managers must consider, *Journal of Knowledge Management* 9 (3), 18-35.
- Salim, M, Javed, N., Sharif, K. & Riaz, A. (2011) Antecedents of Knowledge Sharing Attitude and Intentions. *European Journal of Scientific Research*. 56 (1), 44-50.
- Shim, H.S., & Roth, G. (2009) Expert Teaching Professors: Sharing Their Expertise, *International Journal for the Scholarship of Teaching and Learning*, 3(2).
- Sun, P. Y., & Scott, J. L. (2005) An investigation of barriers of knowledge transfer, *Journal of Knowledge Management*, 9(2), 75-90.
- Turban, E., Aronson, J. E., Liang, T-P & Sharda, R. (2007) *Decision Support Systems and Intelligent systems (Eight Edition)*. Prentice Hall, NJ, USA.
- Zaeri Matin, H., Alvani, S.M., Gandaghi, G. R., Pashazadeh, Y. (2010). *Designing and Clarifying Knowledge Sharing Model Administrative Agencies to Improve the Performance*. *European Journal of Economics, Finance and Administrative Sciences*, ISSN 1450-2275, Issue 22.