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A Survey of Knowledge Sharing Among the Faculty Members of Iranian Library and Information Science (LIS) Departments

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Abstract

The role adopted by the knowledge sharing in the area of knowledge management is enough important to urge some authors to confess that the philosophy of the knowledge management, as far as it is related to the supporting purposes, is "the knowledge sharing". This research aims at making an investigation into the current status of knowledge sharing among the Faculty Members of the Iranian Library and Information Science (LIS) Departments. To this end, an applied survey method was employed. For gathering required data questionnaires were used and the obtained data were analyzed using the spss statistical software program. Also, the variance analysis test was employed for testing the supportability of the research hypnoses.

The findings from the research on the faculty members' awareness of the knowledge sharing indicate that most of them (52.1%) showed a high degree of awareness of knowledge sharing. With respect to faculty members' attitude and manner towards the knowledge sharing it was found that 75% of them adopted a passive approach and the remaining 25% developed an active one. Similarly, as for the utilization of knowledge sharing means the findings indicate that 91.6% of the total number of the studied faculty members believed that the extent to which the knowledge sharing means are utilized is mediocre, 2.1% reported a higher figure and only 6.3% offered a low estimation. Regarding the factors prohibiting the willingness of the faculty members to share knowledge, the findings of the research offer the absence of an appropriate knowledge sharing culture as the major involved factor.

Key words: knowledge management, knowledge sharing, faculty members, Library and Information Science

1. Introduction

Today, knowledge is seen as a critical tool for getting competitive advantage and knowledge assets management has gained much more importance. In this respect, the issue of knowledge sharing is considered as a key element in knowledge management process.

The knowledge sharing is also considered as a key element in any efficient knowledge management programs (Asadi, 2004 (1383), quoted by Ghorbani Busari, 2011 (1391)). The goal-oriented sharing of knowledge within the organizations has led to a faster individual and organizational learning process, improved creativity and, eventually, improved performance at both the individual and organizational level. Accordingly, all organizations encourage knowledge sharing among their employees, who are, most often, interested in adopting their own way of accomplishing the tasks. It is expected from the individuals to show an interest to share knowledge among themselves if when they have a positive attitude towards it.

The knowledge sharing requires a durable commitment, creativity and interpersonal learning processes (Davenport[4], 1998; Huysman[5], 2000; Wit[6], 2000; quoted by Keshavarzi, 2007 (1386)). Given the huge volume of information and the users' need for new information there would be clearly a need for sharing knowledge among the faculty members; so that the faculty members could adapt themselves to the occurred changes in order to provide services and satisfy their needs in a more effective way. The knowledge sharing is considered to be one of the most important methods through which the faculty members, being aware of its advantages, can meet their needs at the soonest possible time by making use of others' knowledge and experience. So, it would be especially important for the organizations to identify the factors which might affect the individual's attitude towards the knowledge sharing.

2. Statement of Problem

The knowledge sharing is a participatory process by means of which all available information, ideas and skills is distributed. The sharing of knowledge results in a reciprocal and cooperative learning process which, in turn, leads to the creation of new knowledge. According to Hermans [7] and Castiaux [8] (2007) the participatory knowledge creation approach is a means for obtaining desired results in the learning process and, at the same time, is a factor facilitating the process of sharing and distributing knowledge within an organization. As the responsible body for promoting knowledge sharing, the faculty members of the Iranian Library and Information Science (LIS) groups play an important role in promulgating newly obtained knowledge. Considering the huge number of the information resources and their need for new information, the knowledge sharing can be offered to the faculty members as one of the methods for getting an access to the information needed by them. Because of their peculiar attitude towards the knowledge sharing any faculty member of the Library and Information Science departments are more likely to respond positively to the applications for knowledge which they may receive from others or show a positive reaction to the matter on the whole.

It appears that the more the faculty members have awareness about the knowledge sharing and the more they are aware of its advantages the more enthusiastically they will participate in it. But, however, this requires that they adopt an optimistic attitude and dynamic way of acting in their approach towards the knowledge sharing. On the other hand, it is unclear that what is the current standing of the participating faculty members in relation to these three elements i.e. knowledge, attitude and behavior/reaction. The present research attempts to make a probe into the current situation of the knowledge sharing among the faculty members of the Library and Information Science (LIS) departments in Iran and, then, suggest some strategies for improving its status among the researchers and scholars.

3. The research questions

1) What is the level of the LIS faculty members' knowledge about the knowledge sharing?
2) What is the LIS faculty members' attitude towards the knowledge sharing?
3) How the LIS faculty members behave when it comes to the knowledge sharing?
4) What are the factors motivating the LIS faculty members' knowledge sharing?
5) What are the factors discouraging the LIS faculty members to share knowledge among themselves?
6) What kind of means do the LIS faculty members use in sharing knowledge?

4. Research hypotheses

1) There is a significant difference in the male and female faculty members' behavior/ treatment of the knowledge sharing
2) There is a significant difference in the faculty members' awareness of the knowledge sharing depending on their academic rank.
3) There is a significant difference in the faculty members' attitude towards the knowledge sharing depending on their academic rank.

5. Research methodology and statistical community

The present study is considered to be an applied research in terms of the selected goal and an analytical- survey one in terms of the adopted methodology. The statistical community of the research is comprised of 90 persons from the faculty members who are working at the state-run universities of library and information science affiliated to the Ministry of Sciences, Research and Technology.

6. The research background in Iran

Here, for the purpose of the selected research goals some research projects undertaken inside the country and abroad are mentioned as follows:

In a survey study entitled *The key factors affecting knowledge sharing*, a case study undertaken by the Ferdowsi University Faculty of Educational and Psychological Sciences Gholizadeh Rezvan & Mirkamali (2004) examined the effective factors involved in creating required ground for sharing knowledge within an organization. Based on the findings of the research that nine key factors were identified, which influenced the participants' knowledge sharing. These include *communication, perceived usefulness of the related information systems technology, team working, adopted organizational strategy, confidence, emotional commitment, self-sufficiency, nature of knowledge*. Of these, the organizational strategy, confidence and self-sufficiency of the individuals most strongly influenced the knowledge sharing.

By undertaking a research project entitled *The identification of the requirements of knowledge sharing at the university libraries* Parirokh, Daneshgar and Fattahi (2008) examined the requirements of knowledge sharing at the university libraries based on L.R.K.M model. This research covered thirty reference librarians from the US university libraries, who were the members of the Internet Forum of the Reference and Users Services Association. From the research results it was found that 60% of the total number of the participants consisted of the female librarians at the age of 40. Most of the librarians were aware of the importance of the knowledge sharing and believed that an interest in sharing knowledge was prevailing among the librarians at the libraries in which they were worked. Most part of the participants (60%) were enough ware of the goals and the culture of knowledge sharing and users and, most often, used an informal method (like face-to-face communication) for meeting their and users' need for information.

By preparing an AM thesis Alizadeh (2009, quoted by Dokhtesmati, 2011) made a study on the attitude of the faculty members at both the Tehran University Faculty of Agriculture and Tarbiat Modares University which they held towards the knowledge sharing. For this research, the organizational culture, organizational structure and application of the information technology (IT) served as an *organizational factor* and the social confidence, identification-based trust among the faculty members and interpersonal team working by them as the *individual factor.* The findings of the research indicates that over half of the faculty members at the Trabiat Modares University and most of those from the University of Tehran offered quite a favorable attitude towards the knowledge sharing. With respect to the communication means, the face-to-face communication, telephone calls, participation in group sessions, email and internet facilities were the main means of communication in sharing knowledge at the Tarbiat Modares University. At the University of Tehran Faculty of Agriculture these means also included face-to-face communication, telephone calls, participation in group sessions, email and internet facilities. At both universities the face-to-face communication and personal participation in the group sessions were a priority in the process of knowledge sharing communication among the faculty members. No special priority was given

by the faculty members to the email and internet facilities as the means of creating a link among them at these two separate universities.

7. Research background in other countries

In a survey study by Bartol[9], Srivastava[10] (2002) entitled *Motivating knowledge sharing through a knowledge management system* they investigated the most effective organizational factors in sharing knowledge among the employees of a state-run military organization. Upon examination of two control variables i.e. "easiness of the system utilization and its applicability" they evaluated the impact of two factors i.e. *supervisory control* and *organizational assistance* on the knowledge sharing by the employees. The results from the study indicated that both of these factors motivated the employees to share knowledge among themselves.

A study undertaken by Connelly[11] & Kelloway[12] (2003) about the employees' perception of the knowledge sharing culture show that such organizational factors as employee perception, management's support of the knowledge sharing, organization size and applied knowledge sharing technology can affect the employees' perception of the knowledge sharing culture as equally as the individual factors like age, gender, position.

In a research Macneil[13] (2008) refers to the managers as a factor facilitating the knowledge sharing. Kim & Ju[14] launched a study on the factors affecting the knowledge sharing within the members of the faculty members of a number of faculties in South Korea. They concluded that *employee's perception* and *incentive mechanism* have the highest importance.

8. Findings of the research

8-1.Demographic data

The demographic characteristics of the participants are as described below:

Table 1. The makeup of the research statistical community by gender

Gender	Frequency	Percentage (%)
Male	36	75
Female	12	25
Total	48	100

The Table 1 shows that the male participants accounts for 75% of the statistical community and the remainder (25%) are the female participants.

Table 2. The makeup of the statistical community by age

Age groups	20-30	31-40	41-50	Over 50	Total
Frequency	4	22	14	8	48
Percentage (%)	8.3	45.8	29.2	16.7	100

The age range of the studied statistical community was 20-50. The highest frequency related to the age group of 31-40 with 45.8%.

Table 3: The makeup of the statistical community by highest education degree

Highest education degree	MA	Doctorate/Ph.D	Total
Frequency	20	28	48
Percentage (%)	41.7	58.3	100

58.3% of the total number of the studied statistical community relates to the faculty members holding Doctorate degree and other members have a MA Degree each.

Table 4: The makeup of the statistical community by academic rank

Academic rank	Instructor	Assistant Prof.	Associate Prof.	Full Professor	No response	Total
Frequency	20	17	4	3	4	48
Percentage (%)	41.7	35.4	8.3	6.3	8.3	100

The faculty members at the academic level of "Instructor" with a frequency rate of 20 persons (41.7%) constitute the largest section of the community and those at Full Prof. level have the lowest frequency rate of 3 persons (6.3%).

In this section, the findings extracted based on the received questionnaires and the major questions of the research are examined.

8-2. The degree of the awareness of the knowledge sharing among the faculty members working in the Library and Information Science(lis) educational groups

Table 5: The distribution and frequency percentage of the faculty members by their awareness of the knowledge sharing

Groups	Awareness level of knowledge sharing						Total	
	Low		Mediocre		High		Frequency	%
Faculty members	0	0	23	47.9	25	52.1	48	100

The findings from the Table 5 indicate that most of the faculty members (52.1%) have significantly high degree of awareness of the knowledge sharing.

Table 6: The degree of awareness of the knowledge sharing by the separated constructs

constructs	Very high		High		Mediocre		Low		Very low		Total	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
To what extent are you aware of the expression "knowledge management"?	15	31.3	23	47.9	10	20.8	0	0	0	0	48	10
To what extent are aware of the knowledge sharing as one of the knowledge management stages?	15	31.3	16	33.3	17	35.4	0	0	0	0	48	10

To what extent are you familiar with the knowledge sharing means?	9	18.8	17	35.4	21	43.8	1	2.1	0	0	48	10
To what extent are you aware of the importance of sharing knowledge with your colleagues?	20	41.7	22	45.7	4	8.3	2	4.2	0	0	10	10
To what extent are you aware of the importance of knowledge sharing in organizing your personal knowledge asset?	15	31.3	23	47.9	8	16.7	2	4.2	0		10	10

To what extent can knowledge sharing help you eliminate the professional ambiguities in your specialized profession?	18	37.5	27	56.2	3	6.3	0	0	0	0	48	10
What is the extent to which you attaché importance to knowledge sharing as an organizational goal?	8	16.7	16	33.3	7	14.6	15	31.3	2	4.2	48	10

The conclusion from the Table 6 is that 79.2% of the faculty members are familiar with the expression “knowledge management”, 64.6% with the knowledge management as one of the stages of the knowledge management process, 54.2% with the knowledge sharing means and 87.5% with the importance of sharing knowledge with their fellow members/colleagues, respectively. Just 50% of the participants supported knowledge sharing as an organizational goal, 79.2% attached importance to knowledge sharing in organizing their individual knowledge asset and 93.7% supported it as a helpful hand in overcoming the problems with which they may encounter in their profession and specialization field, respectively.

Table 7: The t-test for determining the faculty members' awareness of the knowledge sharing

Variables (in relation to knowledge sharing)	Average	Standard deviation	T-test				
						Tolerance margin	
			T- statistics	df	p-value	Lowest	Highest
Awareness	3.93	0.62	48.01	47	0	3.75	4.11

Also, the results from the one-sample t-test, as shown in the Table 7, indicate that the average for the faculty members' awareness of the knowledge sharing and the standard deviation are 3.93 and 0.62 respectively (the high score is the indicative of higher degree of awareness of the knowledge sharing); the obtained tolerance margin shows that the average for the degree of awareness of the knowledge sharing among the faculty members ranges from 3.75 to 4.11.

8-3. The attitude of the Library and Information Science (LIS) faculty members towards the knowledge sharing[15]

Table 8) The distribution and frequency percentage of the faculty members by their attitude towards knowledge sharing

Groups	Attitude towards knowledge sharing						Total	
	Negative		Neutral		Positive			
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Faculty members	0	0	19	39.6	29	60.4	48	100

As the Table 8 shows 60.4% of the faculty members had a positive attitude towards the knowledge sharing and the remaining 39.60% took the midpoint position.

Table 9) The t-test for determining the faculty members' attitude towards the knowledge sharing

Variables (in relation to knowledge sharing)	Average	Standard deviation	T-test				
						Tolerance margin	
			t- statistics	df	p-value	Lowest	Highest
Attitude	4.16	0.56	51.52	47	0	4	4.33

The results from the one-sample t-test, as shown in the Table 9, indicate that the average for the faculty members' attitude towards the knowledge sharing and the standard deviation are 4.16 and 0.56 respectively (the high score is the indicative of a positive attitude towards the knowledge sharing); the obtained tolerance margin shows that the average for the faculty members' orientation towards the knowledge sharing ranges from 4 to 4.33.

Based on the findings from the constructs it can be concluded that 95.8% of the participating faculty members believed that the knowledge sharing is an important and valuable method. 83.4% stated that they can make further additions to their experience and knowledge asset through sharing knowledge with their fellow members. Also, from view point of 87.5% of the participants the knowledge sharing can help them improve their professional specialization. Eventually, 91.71% of the participating faculty members stated that sharing knowledge may help them exchange organizational know-how in a faster way.

8-4. The behavior of the LIS faculty members in relation to the knowledge sharing

Table 10) The distribution and frequency percentage of the faculty members according to their behavior towards the knowledge sharing

Groups	The behavior in relation to the knowledge sharing				Total	
	Passive		Active			
	Frequency	%	Frequency	%	Frequency	%
Faculty members	36	75	12	25	48	100

The findings from the Table 10 indicate that only 25% of the faculty members behave activity towards the knowledge sharing and the remaining 75% show a passive response to it.

Constructs	Very high		High		Mediocre		Low		Very low		Total	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
I do share my knowledge and experiences without my colleagues voluntarily.	10	20.8	23	47.9	14	29.2	1	2.1	0	0	48	100
I do share my knowledge and experiences with only those colleagues who are interested in the reciprocal exchange of knowledge.	16	33.3	23	47.9	7	14.6	2	4.2	0	0	48	100

I do share my knowledge with my colleagues only when they encounter some professional problems.	16	33.3	23	47.9	8	16.7	1	2.1	0	0	48	100
I do share my knowledge with only those colleagues who have a high level of knowledge and experience.	4	8.3	4	8.3	26	54.2	12	25	3	6.3	48	100
I do share my knowledge with only those colleagues who hold high educational degree.	3	6.3	3	6.3	27	56.3	12	25	3	6.3	48	100
I do share my knowledge with others during the internet discussion forums.	3	6.3	12	25	18	37.5	14	29.2	1	2.1	48.00	100

Table 11: The behavior of the faculty members towards the knowledge sharing by the separated constructs

Similarly, the findings from the analysis of the related constructs indicate that 68.7% of the faculty members shared their knowledge with others voluntarily. Most of the faculty members not only were ready for voluntarily sharing their knowledge with those colleagues of theirs who were interested in reciprocal exchange of knowledge (81.2%), but also were interested to do so with

other fellow members who were encountering problems in their profession. Only 16.6% of the participating faculty members expressed their readiness for sharing their knowledge with their colleagues showing a high level of knowledge and experience. The percentage of the faculty members who were interested in sharing their knowledge with their colleagues having a high educational degree was 12.6%. In addition, 31.3% of them showed an interest in sharing their knowledge through the internet discussion forums.

Table 12) T-test for determining the behavior of the faculty members towards the knowledge sharing

Variables (in relation to knowledge sharing)	Average	Standard deviation	T-test				
						Tolerance margin	
			t- statistics	df	p-value	Lowest	Highest
Behavior	3.55	0.46	42.51	45	0	3.41	3.69

Also, the results from the one-sample t-test in the Table 12 indicate that the average for the faculty members' behavior in relation to the knowledge sharing and standard deviation are 3.55 and 0.46 respectively (the high score is the indicative of the more active behavior and involvement in the knowledge sharing); the obtained tolerance margin shows that the average for the faculty members' behavior towards the knowledge sharing ranges from 3.31 to 4.69.

[16.] Here we will discuss only the intensity of the limiting factor's impact on the knowledge sharing

8-5. The factors limiting the knowledge sharing among the LIS faculty members in Iran[16]

Table 13) The distribution pattern and frequency percentage of the faculty members according to the degree of the intensity of the limiting factor's impact on the knowledge- sharing activities.

Groups	The impact of the limiting factor on the knowledge-sharing activities						Total	
	Low		Mediocre		High			
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Faculty members	3	6.25	35	72.9	10	20.8	48	100

As it can be seen from the Table 13 above 72.9% of the total participating faculty members believe that the impact of the limiting factors on the knowledge sharing is of an average degree and 20.8% stated that the degree of such impact is high.

Table 14) The factors limiting the knowledge-sharing activities by the faculty members by the separated constructs

Construct	Very high		High		Mediocre		Low		Very low		Total	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Dissimilarity of the experiences or knowledge level among the faculty members	3	6.3	13	27.1	20	41.7	10	20.8	2	4.2	48	100
The absence of identification-based trust among the faculty members which is required for sharing knowledge by them all	11	22.9	15	31.3	11	22.9	10	20.8	1	2.1	48	100

The faculty members' inadequacy of interaction skill to enable them to communicate with each other	3	6.3	11	22.9	13	27.1	13	27.1	8	16.7	48	100
The faculty members' inadequacy of specialization in the Library and Information Science field	5	10.4	11	22.9	9	18.8	15	31.3	8	16.7	48	100
The faculty members' disinterest to get engaged in the debate sessions about the specialized fields of the Library and Information Science	4	8.3	10	20.8	10	20.8	12	25	12	25	48	100
Insufficient support from the management	10	20.8	17	35.4	14	29.2	4	8.3	3	6.3	48	100

Inadequate organizational structures	14	29.2	17	35.4	14	29.2	1	2.1	2	4.2	48	100

Based on the findings from the Table 14 it can be concluded that the factors limiting the knowledge-sharing activities among the faculty members are as given below:

- The absence of knowledge-sharing culture at the organizational level
- The lack of adequate structure/infrastructure within the organization
- Insufficient supports from the management, which is required for knowledge sharing
- The absence of identification-based trust among the faculty members to share their knowledge
- The dissimilarity of the level of knowledge and/or experience between the faculty members
- The lack of enough knowledge among the faculty members about the specialized fields of the Library and Information Science
- The faculty members' inadequacy of interaction skill needed for communicating with each other
- The faculty members' disinterest to get engaged in the debate sessions about the specialized fields of the Library and Information Science

In other words, the degree of the impact from the organizational limiting factors has had more importance than the IT-related and personal factors in sharing knowledge by the faculty members.

The Table 15 offers a brief presentation of the findings from the paired comparison of the averages for the rankings of the limiting factors, which shows the priority order of the limiting factors from viewpoint of the faculty members.

Table 15) The paired comparison in brief of the averages for the rankings of the limiting factors

Lowest impact level	----------→		Highest impact level
"The dissimilarity of the level of knowledge and experiences between the colleagues", " the faculty members' inadequacy of interaction skill to communicate with other", "The faculty members' inadequacy of specialization in the Library and Information Science" field, "The faculty members' disinterest to get engaged in the debate sessions about the specialized fields of the Library and Information Sciences", " the faculty members' low level of familiarity with the methodology of knowledge sharing and application of the available tools"	"Insufficient support from the management, which is required for knowledge sharing", "The absence of identification-based trust among the faculty members to share their knowledge"	"The lack of adequate structure/infrastructure within the organization"	"Inadequacy of the knowledge-sharing culture at the organizational level"

8-6. The factors motivating the knowledge-sharing activities among the LIS faculty members

In this section, we will deal with the degree of the intensity of the factors that motivate knowledge sharing among the faculty members.

Table 16) The distribution and frequency percentage of the faculty members according to the intensity of the motivating factors' impact on the knowledge-sharing activities

Groups	The impact of the motivating factor on the knowledge-sharing activities						Total	
	Low		Mediocre		High			
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Faculty members	12	25	27	5.25	9	18.75	48	100

The findings from the Table 16 indicate that 56.25% of the total participating faculty members stated that the degree of the motivating factors' impact on the knowledge-sharing activities by the faculty members is mediocre, 25% believed that such an impact is of a low degree and 18.75% assigned a high rate to it.

Table 17) The results from the Friedman Test for comparing the averages for the rankings of the factors motivating faculty members' knowledge sharing

Factors motivating faculty members' knowledge-sharing	Average for rankings	Intermediate index	Chi-Square Statistics	Degree of freedom	Level of significance
Enjoyment in helping others	5.02	5	103.075	5	0
Higher academic status given by others	3.70	3.5			
Improved organizational performance	4.34	4			
Incentives and reward from the management	1.92	2			
Participation/membership in internet discussion forums	2.44	3			
Saving time	2.57	4			

As the Table 17 shows the assumption of the equality of the averages for rankings of the knowledge-sharing motivating factors is not supported (ρ – value < 0.05); In other words, there is a significant difference in the averages for the rankings of the knowledge sharing motivating factors.

The examination of the averages of the rankings shows that *enjoyment in helping others* and the *offered incentives* have the highest and lowest ranks among the knowledge sharing motivating factors respectively.

The brief findings from the carried out paired comparison of the averages for the motivating factors have been shown in the Table 18 below:

Motivation level (Lowest)	----------→		Motivation level (highest)	
Incentives and reward from the management	Participation/membership in internet discussion forums	Higher academic status given by others & saving time	Improved organizational performance	Enjoyment in helping others

Therefore, the factors motivating the faculty members' knowledge sharing in the order of their importance are as given follows:

Enjoyment in helping others, *improved organizational performance*; *improved scientific status*; *time saving*; *participation in internet discussion forums*; *offered incentives*.

In other words, the individualized motivating factors is considered to be more important than the organizational factors in the knowledge-sharing activities.

8-7. What kind of tools the LIS faculty members use in sharing knowledge among themselves?

The intended goal in this section is the extent to which the faculty members employ knowledge-sharing tools. We need to have necessary means for motivating the individuals to share their

knowledge. Having in hand the required tools and an appropriate guideline an individual will be able to share his/her knowledge with others most effectively.

For the purpose of our research the tools include any means like face-to-face communication, e-mail messages, group debate sessions, formal meetings, conferences, scientific presentations, telephone calls, etc which the faculty members may utilize in sharing knowledge.

Table 19) The distribution and frequency percentage of the faculty member according to the extent of the application of knowledge sharing tools

Groups	The extent of knowledge sharing tools application						Total	
	Low		Average		High			
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Faculty members	3	6.3	44	91.6	1	2.1	48	100

As it can be seen from the Table 19 above 91.6% of the total participating faculty members believed that the extent to which the knowledge sharing tools are used is mediocre, 2.1% stated that they are used widely and 6.3% gave it a low rate.

Table 20) The extent of the application of the knowledge sharing tools among the faculty members by separation of the constructs

construct	Very high		High		Mediocre		Low		Very low		Total	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Face-to-face communication	23	47.9	21	43.8	4	8.3	0	0	0	0	48	100
Telephone calls	8	16.7	15	31.3	16	33.3	9	18.8	0	0	48	100
Internet debate	2	4.2	12	25	17	35.4	11	22.9	6	12.5	48	100

e-mail message	18	37.5	14	29.2	15	31.3	0	0	1	2.1	48	100
Intranet facilities	3	6.3	6	12.5	7	14.6	13	27.1	5	10.4	48	100
Individual member blog	3	6.3	6	12.5	4	8.3	16	33.3	17	35.4	48	100
Internet discussion forums	5	10.4	8	16.7	17	35.4	6	12.5	12	25	48	100
Formal meetings	4	8.3	22	45.8	16	33.3	3	6.3	3	6.3	48	100
Scientific conferences and lectures	6	12.5	18	37.5	15	31.3	5	10.4	4	8.3	48	100
Videoconferencing	1	2.1	2	4.2	4	8.3	12	25	29	60.4	48	100

Based on the Table 20 above it can be concluded that the knowledge sharing tools used by the faculty members in the order of their application frequency are as given below:

1. Face-to-face communication
2. E-mail messages
3. Formal meetings
4. Scientific conferences and lectures

5. Telephone calls
6. Internet discussion
7. Individual member blog
8. Intranet facilities

Table 21) The results of the Friedman's Test for comparing the averages for the rankings of the knowledge sharing tools

Knowledge sharing tools	Average for rankings	Intermediate index	Chi-Square Statistics	Degree of freedom	Level of significance
Face-to-face communication	8.53	4	207.31	9	0
Telephone calls	6.29	3			
Internet discussion	5.15	3			
e-mail messages	7.65	4			
Intranet facilities	3.44	2			
Individual member blog	3.35	2			

Internet discussion forums	4.94	3			
Formal meetings	6.64	4			
Scientific conferences and lectures	6.41	3.5			
Videoconferencing	2.61	1			

As it can be seen from the Table 21 the assumption of the similarity of the averages for the rankings of the knowledge sharing tools is not supported (ρ – value < 0.05); In other words, there is a significant difference between the averages for, at least, two rankings of the knowledge sharing tools. The examination of the averages of the rankings shows that the constructs *face-to-face communication* and *videoconferencing* have the highest and lowest ranks among the knowledge sharing tools respectively.

The brief findings from the carried out paired comparison of the averages for the knowledge sharing tools have been shown in the Table 22 below:

Table 22) A brief presentation of the paired comparison of the averages for the rankings of the knowledge sharing tools

Application level (Lowest)	---------→			Application level (highest)	
" Videoconferencing"	" Intranet facilities" and " individual member blog"	"Internet discussion forums" and " Internet discussion forums"	"Telephone calls", " Formal meetings" and " Scientific conferences and lectures"	" E-email messaging"	" Face-to-face communication"

8-9.Testing of the first hypotheses:

"*There is a significant difference in the behavior of the male and female faculty members towards the knowledge sharing*."

Table 22) The results of the t-test for comparing the averages for the behavior of the male and female LIS faculty members in relation to the knowledge sharing activities.

Variables (in relation to knowledge sharing)	Females		Males		T-test					
	Average	Standard deviation	Average	Standard deviation	T- statistics	df	Significance level	Average margin	Tolerance margin	
									Lowest	Highest
Behavior		0.60	3.481	0.551	- 0.55	44	0.954	- 0.011	- 0.403	0.380

As it can be seen from the Table 23 the research **hypotheses** of the similarity of the averages for the variable of *male and female faculty members' behavior towards the knowledge sharing* is supported (ρ – value > 0.05); In other words, there is no significant difference between the averages for the intended variable among the male and female faculty members. Therefore, the first **hypotheses** of the research is not supported, rather it can be said that there is no difference among the male and female faculty members with respect to their behavior towards the knowledge sharing.

8-10.Testing of the second hypotheses:

"*There is a significant difference in the awareness of the knowledge sharing among the faculty members with different academic ranks*".

Table 24) The variance analysis of the awareness of the faculty members with different academic ranks of the knowledge sharing.

Variable		Total of squares	Degree of freedom	Mean square	Fisher information	Significance level
Awareness	Intergroup	1.737	3	0.579	0.534	0.221
	Intra-group	15.095	40	0.377		
	Total	16.831	43			

Based on findings from the variance analysis, as shown in the Table 24 above, it can be concluded that the research **hypotheses** of the similarity of the averages for the awareness of the faculty members with different academic ranks of the knowledge sharing is supported (ρ – value > 0.05); In other words, there is no significant difference between the averages for the faculty members' awarness of knowledge sharing irrespective of their academic rank. Therefore, the second **hypotheses** of the research is not supported too, leading to the conclusion that there is significant difference between the faculty members' awareness of the knowledge sharing.

8-13.Testing of the third hypotheses:

There is a significant difference between the attitudes of the faculty members with different academic rank towards the knowledge sharing.

Table 25) The variance analysis of the attitudes of the faculty members with different academic rank towards the knowledge sharing.

Variable		Total of squares	Degree of freedom	Mean square	Fisher information	Significance level
Attitude towards knowledge sharing	Intergroup	1.328	3	0.443	1.514	0.226
	Intra-group	11.692	40	0.292		
	Total	13.020	43			

Based on findings from the variance analysis, as shown in the Table 25 above, it can be concluded that the research **hypotheses** of the similarity of the averages for the attitude of the faculty members with different academic ranks towards the knowledge sharing is supported (ρ – value > 0.05); In other words, there is no significant difference between the averages for the faculty members' attitude towards knowledge sharing irrespective of their academic rank. Therefore, the second **hypotheses** of the research is not supported, meaning that there is significant difference between the faculty members' attitude of the knowledge sharing.

9. Discussion, Conclusion and suggestions:

Most organizational theories have mentioned the importance of the knowledge management. One of the key factors in the knowledge management field is the capability of any specified organization to share knowledge and transfer it. From this perspective, the knowledge is clearly considered as an essential element in the present ever-changing and complicated environment and provides a valuable source for the organization when it starts restructuring its strategy. For this reason, the knowledge management is taken as a fundamental applied tool through which the individuals, through the effectively utilizing and transferring the knowledge, help the organization achieve a competitive advantage. Through sharing their knowledge, exchanging views and utilizing the feedback they receive as a result of such process, the faculty members can improve their ability to undertake educational and research projects and hence play an important role in creating novel ideas. Here, we have studied the status of the knowledge sharing among the LIS faculty members, including their attitude, behavior and awareness level in relation to the matter and identified the factors that motivate and/or prohibit the willingness of the faculty members to share knowledge. Also, the tools

and the grounds through which the faculty members transfer and share their knowledge were discussed.

The findings of the research indicate that the faculty members' awareness of the knowledge sharing is ranked higher than the average level.

In respect of their attitude, most of the faculty members showed a positive attitude towards the knowledge sharing, with 39.6% who expressed on special opinion about the matter by taking a neutral position. This means that the attitude of the faulty members towards the knowledge sharing was generally positive. From the viewpoint of the LIS faculty members, sharing knowledge with others is an important measure which leads to an improved personal knowledge asset, experience, professional progress as well as more effective performance of the professional duties. It has been also proved that it creates reciprocal respect and trust among the involved faculty members.

Also, the findings related to the faculty members' behavior show that 75% of the faculty members behave passively towards the knowledge sharing and the remaining 25% show an active response to it. Also, other findings indicate that the male faculty members' behavior in relation to the knowledge sharing is similar to that shown by the female fellows.

The findings from the research as relate to the factors prohibiting the faculty members' knowledge sharing is indicative of the participants' contention that in terms of the intensity of the knowledge sharing deterring effect *inadequacy of the knowledge-sharing culture within the organization* and *Inadequate administrative structures within the organization* are placed in the first (highest deterrence effect) and second ranks respectively. In the next ranks are *insufficient support from the management* and *identification-based trust* and the last rank (lowest deterrence effect) goes for *dissimilarity of empirical knowledge/experience* followed by *inadequacy of interaction skill*, *inadequacy of specialization in the library and information science field*, *disinterest to discuss the specialized fields of the library and information science*, and *inadequacy of the master of using available tools* respectively.

Based on the results from the research it seems that the participating faculty members are not a suitable position in both terms of *the organizational culture* and *the administrative structures* for knowledge sharing activities and, as discerned by the pacemakers and policy makers in the field, requires more research.

The research found that according to the faculty members the constructs *enjoyment in helping others, higher academic status given by others, reward from management, membership in internet discussion forums* and *time saving* do not equally motivate the faculty members' willingness to share their knowledge. On the other hand, given that *the enjoyment in helping others* has been offered as the strongest factor motivating the faculty members' knowledge sharing activity the role played by individual motives in the knowledge sharing process gains more prominence.

The findings of the research about the applicable knowledge sharing tools support the participating faculty members' view that the constructs face-*to-face communication*, *telephone call*, *internet*

discussion forums, *emails messaging*, *intranet facilities*, *individual member blog*, *internet discussion forums*, *formal meetings*, *scientific conferences and lectures*, *videoconferencing* in the knowledge sharing are not applied to the equal extent, rather there is a significant difference in their application level. In our research, the *face-to-face communication* and *videoconferencing* were given the highest and lowest priority respectively. So, considering the information overload the faculty members clearly need other tools than non-formal tools, notably the electronic facilities. From the findings it can be concluded that all participating faculty members placed the email messaging method in the second rank when it comes to use the available technologies. This is because, today, the tools and technologies offer a way for developing and enhancing knowledge at both the national and international levels. So, it is clearly the matter of necessity to move towards the further utilization of such technologies.

10. Suggestions:

Based on the results from the research following suggestions are offered:

1. Increase the responsible authorities' awareness about the research results and their information on the factors motivating the individual's willingness to share knowledge, including the institutionalization of the mechanisms which may encourage the knowledge sharing activities.
2. Pay more attention to both *Inadequacy of the knowledge-sharing culture within the organization* and *Inadequacy of administrative structures within the organization* in order to prevent the waste of the faculty members' knowledge when they leave their academic position.
3. Encourage managers and decision makers to launch a flexible organizational structure in order to allow for both the top-down and bottom-up flow of information and, hence, the knowledge sharing and exchange activities between the colleagues could be enhanced through the academic rank and job promotion prospects and material and non-material rewards.
4. The managers and information authorities' more stress on the IT education and training in order for encouraging and providing suitable grounds for the better utilization of the communication means by the faculty members.

References

1. Bartol, K.M., Srivastava, A. (2002). *Encouraging knowledge sharing: the role of organizational reward systems*. Journal of Leadership and Organizational Studies, 9 (1), 64-76. Retrieved September 23, 2010, fromhttp://www.hkbu.edu.hk/~vwschow/lectures/ism3620/3620g6.pdf
2. Connelly, C. E., Kelloway, K. (2003). *Predictors of employees' perceptions of knowledge sharing cultures*. Leadership & Organizational Development Journal, 24(5), 294-301. Retrieved September 06, 2010, fromhttp://www.emeraldinsight.com/journals.htm?articleid=1410695&show=abstract

3. Delavar Ali (2006) *The statistical methods in psychology and educational sciences* (fourth edition). Virayesh Press, Tehran – Iran

4. Dokhtesmati Mohadese (2011) *Evaluating the application of knowledge sharing in creating and developing the websites of the academic libraries in Tehran and the world and the role of librarians and information specialists in the process.* A proposed model. Master of Art thesis. Islamic Azad University (I.A.U) of Iran, Tonekabon Branch, Tonekabon – Iran
5. Dulaimi, M. F.(2007). *Case studies on knowledge sharing across cultural boundaries. Engineering, Construction and Architectural Management*, 14(6), 550-567. Retrieved September 05, 2010, fromhttp://www.emeraldinsight.com/journals.htm?articleid=1637532
6. Gholizade Rezvan Husain; Mirkamali Mohammad (2010) *The key factors affecting knowledge sharing*: A case study undertaken by the Faculty of Psychology and Educational Science of Ferdowsi University of Mashhad. Iran Ministry of Science, Research and Technology. (1)3, 1982-1999
7. Ghorbani Bosari Roghaye (2011). *Examining the status of knowledge sharing among the member librarians of the triple internet discussion forums of American, Australian and Iranian Library Associations.* Master of Art thesis at Islamic Azad University (I.A.U) of Iran, Tonekabon Branch, Tonekabon – Iran
8. Hatamianfar Parisa (2007) *Examining the status, methods and factors affecting knowledge sharing across the libraries, museums and documents center of Astan-e Ghods Razavi Foundation*. Master of Art Thesis at Ferdowsi University of Mashhad, Mashhad – Iran
9. Hermans, J., Castiaux, A. (2007). *Knowledge Creation through University-Industry Collaborative Research Projects*. The Electronic Journal of Knowledge Management, 5(1), 43-54. Retrieved September 26, 2011http://www.ejkm.com/front/search/index.html
10. Keshavarzi A (2007) *The factors encouraging and hindering knowledge sharing across organizations.* The first national conference of knowledge management, Tehran – Iran
11. Kim, S., Ju, B. (2008). *An analysis of faculty perceptions: Attitudes toward knowledge sharing and collaboration in an academic institution*. Library & Information Science Research, 30, 282–290. Retrieved January10, 2011, from http://www.sciencedirect.com/science/article/pii/S0740818808000777
12. Parirokh, M., Daneshgar, F. & Fattahi, R. (2008). *Identifying knowledge-sharing requirements in academic libraries*. Library Review. 57(2). 107-124.
13. Sarmad Zohre; Bazargan Abbas; Hejazi Elahe (2007). *Research methodology in the behavioral science*. Agah Press, Tehran – Iran
14. Yang, J.T. (2007a). *Knowledge sharing: investigating appropriate leadership roles and collaborative culture. Tourism Management*, 28 (2), 530–543. Retrieved January 04, 2011, from http://www.sciencedirect.com/science/article/pii/S0261517706001476