

## Impact of Knowledge Sharing on Quality Education in Bangladesh: A Case Study on the Students of Private Universities

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### Abstract

*The objective of this study is to know the impact of knowledge sharing on quality education in Bangladesh especially the students from the private universities. The study used primary data collected through a specially designed questionnaire, covering a large size of population including all students in the private universities in Bangladesh. Questionnaires were randomly distributed to 100 students in three private universities in Bangladesh; 87 valid responses were collected and analyzed. The data collected were analyzed using descriptive statistics. The study's main findings showed that knowledge sharing has a favorable effect on educational quality when it is believed that the learning environment encourages it and that face-to-face and online forums are the preferred channels for communication. While group assignment, term paper and resolving study related problems were used to share knowledge and ideas with their group members. However, the two most often mentioned barriers to knowledge sharing were the students' tremendous competition to outperform their peers and the shallowness of their relationships. The study recommends that educational institutions, particularly private universities, reassess their methods for assessing students, enforce mandatory presentations, and implement green academic practices to make the learning process less competitive to ensure quality education in Bangladesh.*

**Keywords:** Knowledge Sharing, Private University, Quality Education, Organization.

### 1.1 Background of the Study

The most valuable resource in an organization is knowledge, which must be preserved, developed, and most importantly shared among all members (Cheng et. al., 2009; Bechina and Bommen, 2006). An integral part of a collaborative learning process is knowledge sharing (Majid and Panchapakesan, 2015). Knowledge is a critical resource that organizations can employ in order to survive and acquire a competitive advantage and it can get its values when it is shared (Marouf, 2015). Employees share tacit and explicit information in order to generate new knowledge through a process known as knowledge sharing (Lin, 2007). According to Razmerita et al. (2016), tacit knowledge is the “know how” and abilities that people have picked up via personal experience and exists in their subconscious minds. Explicit knowledge is information that has been recorded in manuals or guides and is intended to be shared or conveyed to other members of the organization so they can acquire it without having to go through the same experience (Newell et al. 2009). Additionally, information sharing occurs through social contact within a company and entails the exchange of employee expertise, experiences, and abilities (Lin, 2007). Academic institutions employ a range of learning strategies to aid students in achieving their learning goals and outcomes. Many educational institutions are now allowing students to be in control of their learning process rather than solely relying on instructor-centric methods. These methods, which are sometimes known as “hybrid” or “blended” teaching strategies, include both the utilization of additional learning and knowledge acquisition tools as well as the delivery of content by teachers (Majid and Panchapakesan, 2015). One such strategy is collaborative learning, which is currently well-established and in use by many academic institutions and teachers. However, student views and attitudes toward knowledge sharing with their classmates have a significant role in the success and efficacy of the collaborative learning technique. Team projects, group presentations, involvement in in-person and online discussions, and group problem solving are a few instances of collaborative learning activities that call for active knowledge sharing. Learning could become more fascinating, dynamic, and engaging with the proper integration of these activities into instructional design (Majid & Wey, 2009). Academics are expected to play a significant role in encouraging their students to share by emphasizing collaborative learning to lessen student competition (Wei et al., 2012). Universities are environments with a high concentration of knowledge, and they are essential for the development of knowledge via research as well as the dissemination of knowledge through research publications. According to Donate and Canales (2012), academics typically participate in knowledge sharing

through collaborating with businesses and other organizations to support advancement and learning through edifying and vestibule training programs. However, there hasn't been much empirical study, specifically into information sharing and the variables that could influence and improve it in academic settings (Fullwood, Rowley, and Delbridge, 2013).

In light of this, the purpose of this paper is to determine how knowledge sharing affects Bangladeshi education standards. In order to improve quality education, particularly for students at private universities, it is necessary to look into the elements and problems that affect them.

## 1.2 Review of Literature

A survey of literature revealed several studies on knowledge sharing among university students. The present study made an endeavor to cover a spectrum of works that transcend discussions about the diversified mechanism in sharing knowledge. In this direction, the relevant literatures related to knowledge sharing are as follows:

<b>Title of the paper</b>	<b>Author(s)</b>	<b>Journal Name</b>	<b>Objectives</b>	<b>Findings</b>
Information and Knowledge Sharing Behavior of Students	Majid, S., and Yuen, T.J.	International Journal of Knowledge Management (2015)	Investigating the attitudes and knowledge-sharing practices of Indian pre-university students.	Students showed a favorable attitude toward sharing knowledge and appreciated its significance in peer learning and also showed that the two biggest barriers to information sharing were students' competition to outperform their peers and the shallowness of peer relationships.
Preference in Knowledge Sharing Tools to Support Learning in Higher Education	Usman, S. H.,	Journal of Advanced Management Science (2015)	How students in higher education prefer knowledge-sharing tools to complement their learning environment.	As instruments for knowledge sharing, the majority of students chose search engines, instant messaging, email, online group discussions, electronic documents (e-books, journals), video conferencing, blogs, and content/lessons.
Knowledge sharing patterns of undergraduate students in Malaysia.	Wei C., Choy C., Chew G., & Yen, Y.,	Library Review (2012)	How participation in group activities could motivate students to share their expertise.	The administration of both public and private universities should offer suitable incentives to promote student knowledge exchange.
Behavioral Mechanism of Knowledge Sharing Pattern	Ali P. M. N. and Khan D.,	ICDL 2016: Enterprise Architecture 2.0	How research academics at AMU, BHU, and AU behave	The findings showed that respondents had a positive attitude toward knowledge sharing, despite the fact

among Research Scholars		(Knowledge Management)	in terms of knowledge sharing conduct.	that there are big disparities in how people share knowledge.
Knowledge sharing behavior influences: A study of ISLM faculties in Bangladesh	Islam Md. A., Ikeda M. and Islam Md. M.,	International Federation of Library Associations and Institutions (2013)	How did they view the practice of sharing knowledge inside their organization?	A substantial correlation between educators' attitudes regarding information sharing and their intentions to do so was discovered by the study.
A study on the knowledge sharing behavior of information management instructors at technological universities in Taiwan	Lou S.J., Yang Y.S. and Shih R.C.,	World Transactions on Engineering and Technology Education (2007)	Examined the connection between the personal goals of information management instructors and their sharing of knowledge.	The findings indicated that information management instructors might face some obstacles when attempting to pass on their knowledge to others. They also indicated that department heads do not take knowledge sharing seriously and that there was a strong consensus among colleagues on issues like individual job security, academic advancement, and intellectual property rights, which discouraged colleagues from passing on knowledge.
Factors affecting motivations to share knowledge among university students in Malaysia.	Mohd S. N. U, Goh G. G. G. and Fathi N. M.,	ICMEF (2012)	This study examined how students shared knowledge while working on assignments, tutorials, laboratory projects, and exams.	The main finding indicated that, in spite of numerous factors that discourage knowledge sharing, undergraduates in Malaysian universities are aware of and have good attitudes toward doing so.
Investigating the Knowledge Sharing among students in Pakistan	Haq M. S., and Haque M.,	European Online Journal of Natural and Social Sciences (2018)	How the effects of ICT use, trust, and attitude on knowledge sharing among degree students at Vehari's institutions	The research found that ICT use, trust, and attitude are the most important elements in fostering student knowledge exchange. The findings demonstrate how very significant and associated

				ICT use is as a predictor of knowledge sharing.
Measuring the Students' Perception towards Changed Knowledge Sharing System during the Pandemic: A Case on Public Universities of Bangladesh	Rahman Md. M., Mamun H. A., Amin M. A. and Islam M. T.,	Open Journal of Social Science (2022)	Student's perception of changes in the knowledge sharing systems during pandemic.	The study found that while online knowledge-sharing platforms throughout the pandemic had improved student technological proficiency, the adverse effects of shifting circumstances on mental health were still present.

There almost different studies have been conducted on knowledge sharing at home and abroad, none of them looked into the impact of knowledge sharing on Bangladeshi education standards especially private universities. So, there is a need to conduct such a study.

### 1.3 Objectives of the Study

The major objective of the study is to measure the impact of knowledge sharing on Bangladeshi students, especially these are from the private universities. The specific objectives of the study are:

- i. to know how information sharing affects the quality of education in private universities in Bangladesh;
- ii. to identify the mechanisms by which students at private universities can share knowledge;
- iii. to determine the driving forces behind knowledge sharing and any potential obstacles; and
- iv. to make some recommendations for enhancing student knowledge sharing.

### 1.4 Scope of the Study

The research review mentioned above made the case that university students' personality development and learning process both benefit from active information sharing. Therefore, it is vitally desired that teachers, educational planners, administrators, and other academic stakeholders fully comprehend students' knowledge-sharing behavior and the obstacles they face. In consideration of the likelihood that students in this age group will begin to mature their perceptions of and attitudes toward knowledge sharing and continue to demonstrate this behavior throughout their university days and even at their places of employment, it is desirable to further broaden the scope of such studies to other academic institutions.

### 1.5 Methodology of the Study

#### *Research Design*

This study adopted a descriptive research and employed both a qualitative and quantitative approach using a specially designed questionnaire.

#### *Population and Sampling Size*

Population refers to the entire group of people, events, or things of interest that the researcher wishes to investigate. The present study is conducted on the students in the private university only. The sample size (n) is

calculated based on standard deviation of the population, acceptable magnitude of error and confidence level. According to Zikmund (2003), the sample size can be calculated as follows:

Assuming the maximum variability, which is equal to 50% ( $p=0.50$ ), taking confidence level of 95% and 10% desired level of precision, the sample size  $n$  is

$$n = p(1 - p) \left( \frac{Z}{E} \right)^2 \quad \text{Here, } n = \text{sample size}$$

$$n = .5(1 - .5) \left( \frac{1.96}{0.10} \right)^2 = 96.04$$

So, the required sample size is 100. Random sampling method was applied to collect data from respondents under this study. A convenience sample technique was used to choose 100 respondents from various private universities, and 87 completed questionnaires were returned, yielding an 87% response rate. Both primary and secondary data were used in this study. Primary data were gathered through a questionnaire survey. Secondary data has been gathered from several articles, books, magazines, websites, and other sources.

### ***Reliability of the Data***

On a 46-item survey, the Cornbach's alpha reliability test was used. The estimated Cornbach's alpha for all variables was 0.782. The value of Cornbach's alpha is acceptable and sufficient for the analysis, as per Clark and Watson's criteria.

**Table 1: Reliability Statistics**

<b>Cronbach's Alpha</b>	<b>N of Items</b>
.782	46

Source: Field Survey

### ***Data Analyses and Presentation***

To examine the data from the study's respondents, descriptive statistics like frequency tables, sample percentages, mean scores, standard deviation, and correlation were used. The data was analyzed using Microsoft Word and IBM SPSS (version 22).

### **1.6 Analyses and Findings**

Tables 1 through 11 show the findings of the current investigation. The researcher looked at the respondents' gender, program of study, year of study, and demographic variables in relation to how well they understood the idea of information sharing.

Out of the 87 responses, it was found that 44(50.6%) were male and 43(49.4%) were female students. The largest group of students 70(80.5%) were studying in graduation level and 17(19.5%) in post-graduation level. As a result, 33(37.9%) of the respondents were studying in first year and 47(47.1%) in fourth year. Results showed that 47 (54%) of the respondents were familiar with knowledge sharing and 40 (46%) respondents were not.

**Table 2: Respondents Profile**

<b>Gender</b>	<b>Frequency</b>	<b>Percentage</b>
Male	44	50.6%
Female	43	49.4%
Total	87	100%
<b>Program</b>		
Graduate	70	80.5%
Post Graduate	17	19.5%
Total	87	100%
<b>Year of Study</b>		
1 <sup>st</sup> Year	33	37.9%
2 <sup>nd</sup> Year	6	6.9%
3 <sup>rd</sup> Year	7	8%
4 <sup>th</sup> year	41	47.1%
Total	87	100%
<b>Familiarity</b>		
Yes	47	54.0%
No	40	46.0%
Total	87	100.0%

Source: Field Survey

**1.6.1 Purpose of Knowledge Sharing**

Respondents were asked to point out the possible reasons for sharing knowledge among them. Table 5 shows the reasons for knowledge sharing in the private university students.

**Table 3: Frequency distribution showing respondents' reasons for KS under study**

<b>Reasons for Knowledge Sharing</b>					
		<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
Valid	For own sake	15	17.2	17.2	17.2
	For mentoring others	28	32.2	32.2	49.4
	Self-Satisfaction	44	50.6	50.6	100.0
	Total	87	100.0	100.0	

Source: Field Survey

The above table shows that 15 (17.2%) of the respondents were sharing knowledge for own sake, 28 (32.2%) were sharing knowledge for mentoring others and 44 (50.6%) were sharing knowledge for self-satisfaction under study.

**1.6.2 Knowledge sharing for study-related purposes**

The respondents were asked to rate the relevance of 7 statements regarding knowledge sharing for study related purposes on a scale of 1 to 5. Table 4 shows the results of the findings.

**Table 4: Respondents rating on various KS activities for study related purposes**

		Statistics						
		Study1	Study3	Study2	Study4	Study5	Study6	Study7
N	Valid	87	87	87	87	87	87	87
	Missing	0	0	0	0	0	0	0
Mean		4.4828	4.4368	4.3333	4.2989	4.2299	3.6667	3.5632
Std. Deviation		.66231	.60427	.60361	.61218	.71041	1.23577	1.30028

Source: Field Survey

The majority of respondents from private universities (with a mean score of 4.48) claimed that when working on group or projects or assignments they shared ideas with their own group members. It was noted that discussing or elaborating on the specifications of projects, term papers, or tutorial assignments, as well as confronting or resolving study-related questions, came in second and third place in the ranking (with mean scores of 4.43 and 4.33). The fourth and fifth places in the ranking (with a mean score of 4.22), respectively, were attributed to talking about exam-related topics and talking about in-class concepts. The sharing of ideas with classmates while working on individual projects or assignments, as well as the sharing of ideas with students from other groups while working on group projects or assignments, was also indicated by the mean scores of 3.66 and 3.56. Majid and Yuen (2006) identified more instances where intragroup information sharing predominated over intergroup sharing.

### 1.6.3 Types of Materials Shared for Study Related Purposes

The respondents were asked to rate the relevance of 6 categories regarding types of material shared on a scale of 1 to 5. Table 5 shows the results of the findings.

**Table 5: Respondents rating on types of material shared for study related purposes**

		Statistics					
		Material1	Material5	Material6	Material2	Material3	Material4
N	Valid	87	87	87	87	87	87
	Missing	0	0	0	0	0	0
Mean		4.1264	3.9195	3.7356	3.7241	3.6782	3.5747
Std. Deviation		.80413	.86560	.86884	1.24536	1.05096	1.06348

Source: Field Survey

The majority of respondents from private universities (mean score: 4.12) said that using class notes and handouts for academic purposes was common practice. The second place finisher (with a mean score of 3.91) demonstrated the usage of books and photocopies of book chapters for material sharing. However, the most frequently used tools for content exchange were the URLs of helpful websites (mean score 3.73), followed by power point presentations (mean score 3.72). For study-related purposes, respondents only used previously completed assignments (mean score 3.67) and copies of publications (mean score 3.57). Majid and Yuen (2006) also discovered that undergraduate students prefer to share the URLs of helpful websites with their classmates rather than books and copies of publications.

### 1.6.4 Classroom Activities for Encouraging Knowledge Sharing

The respondents were asked to rate the relevance of 6 matters regarding the classroom activities encouraging knowledge sharing among the JnU students on a scale of 1 to 5. Table 6 shows the results of the findings.

**Table 6: Respondents rating on classroom activities for encouraging knowledge sharing**

		Statistics					
		Activaties4	Activities3	Activities1	Activities6	Activities5	Activities2
N	Valid	87	87	87	87	87	87
	Missing	0	0	0	0	0	0
Mean		4.3793	4.3563	4.2759	4.2414	4.1034	3.9310
Std. Deviation		.73519	.69845	.88514	.74655	.77811	.87329

Source: Field Survey

The majority of respondents from private universities reported that group projects, class discussions, and student presentations were heavily utilized in the classroom for both knowledge generation and sharing (mean scores 4.37, 4.35, and 4.27, respectively). However, there were few opportunities to share expertise through various seminars, workshops, and invited speakers.

### 1.6.5 Different Communication Channels for Knowledge Sharing

On a scale of 1 to 5, the respondents were further questioned about the aspects they frequently take into account while using various communication platforms to share information and knowledge with their peers. Table 7 shows the results of the findings.

**Table 7: Respondents rating on channel used in knowledge sharing**

Statistics									
		Channel2	Channel6	Channel7	Channel11	Channel15	Channel8	Channel3	Channel4
N	Valid	87	87	87	87	87	87	87	87
	Missing	0	0	0	0	0	0	0	0
Mean		4.5862	4.0115	4.0575	4.0115	3.9540	3.9540	3.9425	3.7471
Std. Deviation		.63889	.92125	.81206	.90854	.86142	1.16047	.79762	1.11249

Source: Field Survey

For the low message distortion, the personal touch, and the warmth that can be conveyed through this communication channel, the majority of respondents from private universities reported that face-to-face communication (mean score 4.58) was heavily employed in communication. However, the primary justifications for using email, an online forum, and an online chat room (mean scores of 4.0, respectively) were their easy accessibility and low degree of message distortion during transmission. The fact that short message service (SMS), messenger/imo/WhatsApp, and phone/mobile were initially convenient or accessible, and then because there was no reaction lag, was an interesting fact.

### 1.6.6 Factors Inhibiting Information and Knowledge Sharing on Quality Education

On a scale of 1 to 5, the respondents were asked to list the variables that were most likely to prevent students from sharing information and expertise. The outcomes of this discovery are shown in Table 8.

**Table 8: Respondents rating on factors inhibiting knowledge sharing**

Statistics												
		F11	F10	F3	F7	F2	F4	F8	F9	F6	F1	F5
N	Valid	87	87	87	87	87	87	87	87	87	87	87
	Missing	0	0	0	0	0	0	0	0	0	0	0
Mean		3.7586	3.7356	3.7356	3.7241	3.6552	3.6437	3.5172	3.4943	3.4828	3.4023	3.3678
Std. Deviation		1.0226	1.0615	1.1955	1.0194	.96240	1.0340	1.2090	1.1701	1.0327	.90810	1.0128

Source: Field Survey

The majority of respondents from private universities claimed that the four most likely explanations (mean score 3.37) were the students' tendency to only share with people who reciprocate, their lack of appreciation, their lack of initiative, and their concern over sharing inaccurate information. A further barrier to knowledge and information exchange was the absence of close relationships and the scant opportunities for face-to-face interaction (mean score: 3.6) with other students. The least probable reasons to prevent sharing, on the other hand, were those that would cause a conflict of opinion or make someone feel like a "show-off" in the eyes of



their peers. Similar barriers to information sharing have been highlighted in a number of other studies, including a lack of time (Ikhsan & Rowland, 2004), a lack of trust and intimacy in relationships (Riege, 2005), and a lack of a culture that values knowledge sharing (Smith & McKeen, 2003).

### 1.6.7 Suggestions for Improving Quality Education using Knowledge Sharing

The respondents were asked to offer suggestions for actions to promote knowledge sharing among students in an open-ended inquiry. From the responses, seven major categories of proposals were assessed, and relevant suggestions were grouped together. The results of these recommendations are shown in Table 9. About 40 respondents thought that encouraging students to actively share their knowledge through online tools and environmentally friendly academic methods would be very helpful. Then, 38 respondents agreed that information sharing would benefit from a lessened focus on grades or academic results. Additionally, they believed that sharing should be required academically, such as with an award grade, and that presentations should be compulsory in every subject. Additionally, respondents supported creating an informal environment to promote information sharing and strengthening the collaborative culture for it.

**Table 12: Respondents' opinions for improving knowledge sharing culture**

SL	Suggestions	No. of Responses
1	Encourage sharing using internet tools and environmentally friendly academic approaches.	40
2	Lessen your focus on academic performance and grades.	38
3	Presentations have to be made by the students as a requirement.	32
4	Give praise or make sharing a subject-specific requirement, like a letter grade.	30
5	Enhancing the culture of collaboration for information exchange.	29
6	Create relaxed environments to promote information sharing.	17
7	Encouraging student contact, dialogue, or collaboration.	12

Source: Field Survey.

## 1.7 Conclusions and Recommendations

The purpose of this present study is to know the impact of knowledge sharing on quality education in Bangladesh especially the students from the private universities. Effective knowledge sharing is essential for not only academic institutions but also every organization to benefit from the knowledge in order to facilitate knowledge sharing. Through this study, the finding has shown that private universities students in Bangladesh are aware and have positive attitudes towards sharing knowledge for quality education despite of many factor inhibits for sharing their knowledge. Positive attitudes towards knowledge sharing build a strong basis for private universities students to serve their academic life in a better way. It was found that students avoid sharing information and knowledge for those assignments, student projects, and academic activities that were to be graded. It is also true that teachers must differentiate students based on their performance by using a variety of assessment methods. Even though this study has provided some valuable and insightful insights into the processes for information sharing that support high-quality student education, some of the results may have been impacted by Bangladesh's current cultural norms and educational structure.

In a similar vein, it is crucial to emphasize that students' knowledge-sharing habits do not always correspond to those of the private universities that were questioned. There are other unique groups in universities besides students, including professors, researchers, and administrative and management staff, and their work circumstances are frequently very different from those of students. The results of this study therefore cannot be applied to the entire university community as a whole.

## References

- Ali P. M. N. and Khan D., (2016), Behavioural Mechanism of Knowledge Sharing Pattern among Research Scholars, ICDL 2016: Enterprise Architecture 2.0 (Knowledge Management), Retrieved from: <https://www.academia.edu>, Date: 19/10/19, Time: 11.08 pm.
- Bechina, A. A., and Bommen, T., (2006), Knowledge sharing practices: Analysis of a global Scandinavian consulting company, the electronic Journal of knowledge management, Volume 4, No. 2, pp. 109-116.
- Cheng M. Y., Ho J. S. Y., & Lau P. M., (2009), Knowledge sharing in academic institutions: a study of Multimedia University Malaysia, Electronic Journal of Knowledge Management, Volume 7, No. 3, pp. 313-324.
- Chong, C., Teh, P., and Tan, B. (2014), Knowledge sharing among Malaysian universities' students: Do personality traits, class room, and technological factors matter? Educational Studies, Volume 40, No. 1, pp. 1-25.
- Donate M. J. and Canales, J. I. (2012), A new approach to the concept of knowledge strategy, Journal of Knowledge Management, Volume 16, No. 1, pp. 22-44.
- Fullwood R., Rowley, J., and Delbridge R., (2013), Knowledge sharing amongst academics in UK universities, Journal of Knowledge Management, Volume 17, No. 1, pp. 123-136.
- He, J. (2009), Examining factors that affect knowledge sharing and students' attitude toward their Learning experience within virtual teams (Ph.D. dissertation). University of Central Florida, Orlando, FL, Electronic Theses and Dissertations, 3864, pp. 1-128.
- Haq M. S., and Haque M., (2018), Investigating the Knowledge Sharing among students in Pakistan, European Online Journal of Natural and Social Sciences, Vol. 7, No.1(s), pp. 32-39.
- Islam Md. A., Ikeda M. and Islam Md. M., (2013), Knowledge sharing behavior influences: A study of Information Science and Library Management faculties in Bangladesh, International Federation of Library Associations and Institutions, Volume 39, No.3, pp. 221-234.
- Kim SH and Ju B (2008), An analysis of faculty perceptions: Attitudes toward knowledge sharing and collaboration in an academic institution, Library and Information Science Research Volume 30, pp. 282-290.
- Lin C. A., and Chen, M. C., (2009), Factors Affecting Teachers' Knowledge Sharing Behaviors and Motivation: System Functions that Work, e-LAC, pp. 1-8.
- Lin, H. (2007), Knowledge sharing and firm innovation capability: An empirical study, International Journal of Manpower, Volume 28, No. (3/4), pp. 315-332.
- Lou S.J., Yang Y.S. and Shih R.C. (2007) A study on the knowledge sharing behavior of information management instructors at technological universities in Taiwan, World Transactions on Engineering and Technology Education, Volume 6, No.1, pp. 143-149.
- Mallasi H. and Ainin S., (2015), Investigating Knowledge Sharing Behavior in Academic Environment, Journal of Organizational Knowledge Management, pp. 1-20.
- Majid S. and Wey S. M. (2009), Perceptions and knowledge sharing practices of graduate students in Singapore, International Journal of Knowledge Management, Volume 5, No. 2, pp. 21-32.
- Majid S. and Panchapakesan C., (2015), Perceptions and Knowledge-Sharing Behavior of Pre-University Students, Journal of International Information & Library Review, Volume-47, pp. 30-38.
- Majid, S., & Yuen, T.J. (2006), *Information and knowledge sharing by undergraduate students in Singapore*. In M.K. Pour (Ed.), IRMA International Conference: Proceedings of the 17th IRMA International Conference. Hershey, PA: Idea Group Publishing.
- Marouf, L. (2015), Employee Perception of the Knowledge Sharing Culture in Kuwaiti Companies: Effect of Demographic Characteristics, Library and Information Science Research Electronic Journal, Volume 25, No. 2, pp. 103-118.
- Mohd S. N. U, Goh G. G. and Fathi N. M. (2012), Factors affecting motivations to share knowledge among university students in Malaysia, International Conference on Management, Economics and Finance (ICMEF 2012) Proceeding.
- Newell S., Robertdon M., Scarbrough H., and Swan J. (2009), Managing Knowledge Work and Innovation, Palsgrave Macmillan, Hampshire, England, pp. 188-195.
- Razmerita L., Kirchner K. and Sudzina F. (2009). Personal Knowledge Management: The Role of Web 2.0 tools for managing knowledge at individual and organizational level, Online Information Review, Vol. 33, No.6, pp. 21-39.
- Rahman Md. M., Mamun H. A., Amin M. A. and Islam M. T., (2022), Measuring the Students' Perception towards Changed Knowledge Sharing System during the Pandemic: A Case on Public Universities of Bangladesh, Open Journal of Social Science, Vol. 10, pp. 403-430.
- Riege, A. (2005), Three-dozen knowledge-sharing barriers managers must consider. Journal of Knowledge Management, 9(3), pp. 18-35.
- Skrabanek B., (2017), why Creating a Knowledge Sharing Culture is Key for Growth, Retrieved from: <https://blog.smarp.com/why-creating-a-knowledge-sharing-culture-is-key-for-growth>, Date: 19/10/19, Time: 10.08 pm.
- Smith H. A. and McKeen J. D. (2003), Knowledge Transfer: Can KM Make it Happen?, Queens University, Ontario, Retrieved from: <https://www.researchgate.net/publication/267717631>, Date: Oct. 16, 2021, Time; 9.30pm.

- Usman, S. H., (2015), A Survey on Students' Preference in Knowledge Sharing Tools to Support Learning in Higher Education. *Journal of Advanced Management Science*, Volume 3, No. 4, pp. 350-353.
- Wei C., Choy C., Chew G., & Yen, Y. (2012), Knowledge sharing patterns of undergraduate students. *Library Review*, Volume 61, No. 5, pp. 327–344.
- Zikmund W. G. (2003), *Business Research Methods*, Thomson Learning Inc, 7th Edition, ISBN: 81-315-00029-2, pp. 420-428.