

INFLUENCING FACTORS TO KNOWLEDGE SHARING: A STUDY ON GOVERNMENT ENGINEERING COLLEGE STUDENTS IN THIRUVANANTHAPURAM DISTRICT, KERALA

SHILPA S. P.

Librarian
Prof. N Krishna Pillai Foundation
Thiruvananthapuram-695033
Kerala, India
Email: shilpasp1998@gmail.com

Dr. PRAKASAN P. M.

Assistant Professor
Dept. of Library and Information Science
University of Kerala, Thiruvananthapuram-695034
Email: prakashsumi@gmail.com

ABSTRACT

The study aimed to identify the influencing factors to knowledge sharing among the Government Engineering College students in Thiruvananthapuram District, Kerala, India. It also studied the channels and barriers to knowledge sharing. The data was collected through a structured questionnaire from 258 students of two selected Engineering Colleges. The data was analysed and hypotheses were tested using statistical methods. On the basis of the analysis and interpretation, it is revealed that various factors influence the knowledge sharing of students. Trust, organization policies, motivation, etc., were identified as the major influencing factors, whereas hesitation and lack of social orientation were barriers to knowledge sharing.

Keywords: Knowledge, Knowledge Sharing, Barriers, Influencing Factors, Channels, Organizational factors, Students, Government Engineering College, Thiruvananthapuram, Kerala.

1. Introduction

Knowledge Sharing is a crucial ability in the networked and information-based economy, as much professional work is done in teams with participants who are not geographically co-located and connect with each other through online media (Chong et al., 2014). Tertiary institutions retain knowledge since it is developed to reform individuals, transform paradigms, provide new knowledge, and greatly promote the growth of civil society (Haco-Obasi and Agim, 2020). Knowledge has always been regarded as one of the most important strategic resources for achieving long-term competitive advantage (Omotayo and Salami, 2018). People can freely participate, communicate, and exchange information with others using Web 2.0 technology. People have become increasingly reliant on the Internet to obtain information as a result of its convenience (Wang et al., 2014).

In today's fast-paced and competitive world, performance of educational institutions is primarily determined by their ability to manage knowledge. Academic institutions must have an adequate knowledge management strategy, well-defined knowledge management rules and processes, and an integrated knowledge management culture to achieve this achievement (Eletter et al., 2020). Students are now exposed to a number of tools that might help them strengthen their learning skills. As a result, starting on this information at the same time will lead to Knowledge Sharing (KS) activities, especially when there is a demand in the sphere of education. KS has benefited both individuals and societies over the millennia (Osman et al., 2015).

In any profession, there are numerous ways to convey information. In the case of an organisation, knowledge sharing is required for efficient operation and achievement of the

organization's objectives. Employees in the business may possess a wide range of talents and competencies. These abilities can be put to good use in the development of an organisation. Organizations can do this by holding group discussions, workshops, and interacting with employees at all levels, among other things.

This study is limited to the Under Graduate students of two important Government engineering colleges, Thiruvananthapuram, Kerala (College of Engineering Trivandrum and Government College of Engineering Barton Hill, Thiruvananthapuram). The College of Engineering, Trivandrum, founded in 1939 is the first engineering college in the state. The college today has approximately 4500 students, 311 teaching staff, and 290 non-teaching employees. It has eight full-fledged departments that offer eight undergraduate programmes, 27 postgraduate programmes, and eight doctoral programmes through the APJ Abdul Kalam Technological University (College of Engineering Trivandrum, 2018).

The Government of Kerala established Government Engineering College, Barton Hill in 1999. Since its foundation, the college has made considerable academic progress in a short amount of time. The college was affiliated with APJ Abdul Kalam Kerala Technological University, Kerala. The Director of Technical Education, Government of Kerala, has administrative supervision over it (GEC Barton Hill., 2017).

2. Review of Literature

The main purpose of the study conducted by Safdar et al. (2021) among Pakistani engineering college students was to understand the factors affecting knowledge sharing behaviour of students. Factors that influence knowledge sharing and organisational citizenship behaviours in government employees, with the goal of improving organisational performance through voluntary actions has been studied by Nguyen et al. (2021). Dlamini and Mngwengwe (2020) tried to identify the social

networking sites in scholarly knowledge sharing process. Various factors of knowledge sharing adoption for eLearning communities in Saudi Arabia, as well as the impact of culture as a moderator on the links between these elements and academics' attitudes were detailed by Chandran and Alammari (2020).

The study carried out among students of Bangladesh university by Rahman and Mustafiz (2020) identified students share knowledge through each of three channels such as the Internet, group discussion and social networks and found that knowledge sharing is not plagiarism, but it helps to solve academic problems, the study suggested that the University authority should provide adequate knowledge resources and IT enabled learning environment. The paper by Fattah et al. (2020) aims to investigate how students' knowledge sharing intention can contribute to the enhancement of knowledge sharing behaviour among students at higher institutions in Oman.

The survey by Rafique and Anwar (2019) explored the factors that hinders the knowledge sharing of medical students with fellow students as the lack of knowledge sharing culture and appreciation. The research by Usman (2015) aimed to find out the knowledge sharing tools that were preferred by students in higher education, and identified as Search engine, Instant Messaging and e-mail, Online Group Discussion etc.

Knowledge sharing behaviours of electrical engineering technology students in a university at Edo state, Nigeria has been studied by Kalu et al. (2019). Chen et al. (2017) explored the factors influencing knowledge sharing among International students at a Chinese university.

3. Objectives of the Study

1. To find out the factors influencing Knowledge Sharing among selected engineering college students in Thiruvananthapuram district.

2. To find out the preferred channels for Knowledge Sharing among engineering college students.
3. To find out the barriers in Knowledge Sharing among engineering college students.

4. Hypotheses

H1: There exists significant difference in factors influencing Knowledge Sharing among students by level of organizational factors.

H2: There exist significant difference in the level of barriers in Knowledge Sharing among students by gender.

5. Methodology

The population chosen was the under graduate students of Govt. Engineering colleges located in Thiruvananthapuram District, they are College of Engineering Trivandrum (CET) and Government Engineering College Barton Hill- (GECBH), Thiruvananthapuram, which are affiliated to the APJ Abdul Kalam Technological University (initially Kerala Technological University-KTU), Kerala. There are 6 disciplines from the 2 colleges, such as Civil Engineering, Computer Science Engineering, Electrical and Electronics Engineering, Electronics and Communication Engineering, Information Technology and Mechanical Engineering. A total of 258 responses obtained were selected for analysis. The total population were 3360 (Table 1).

Table 1
Distribution of Population

Discipline	Number of Students		Total
	CET	GECBH	
Computer Science Engineering	480	-	480
Mechanical Engineering	480	240	720
Civil Engineering	480	240	720
Electronics and Electrical Engineering	480	240	720
Electrical and Communication Engineering	240	240	480
Information Technology	-	240	240
Total	2160	1200	3360

Sample size was determined by the formula by Cochran (1977) at 5% margin error with confidence level of 90% and response distribution at 50%.

Cochran's Formula for Sample Size:

$$n_0 = \frac{z^2 pq}{e^2}$$

$$= \frac{1.645^2 \times 0.5 \times 0.5}{0.05^2} = 271$$

Z = Statistic for a level of confidence (e.g., 1.645 for 90%)

p & q = Expected proportion (0.5 used for sample needed)

e = Desired level of precision (0.05 for sample needed)

$$n = \frac{n_0}{1 + \left[\frac{n_0 - 1}{N} \right]}$$

$$= \frac{(271)}{1 + \frac{1}{3360}(271-1)} = 251$$

Thus the sample size calculated was 251.

A structured questionnaire is prepared based on the objectives of the study, with both open and close ended questions to collect data, close ended questions in particular are used to facilitate quantification and analysis of data. The close ended questions used both five- and three-point scales. Twenty four questions were included in the questionnaire, that covers information such as personal details, awareness of KS, factors influencing, barriers of KS etc. Gender of the students were selected as the dependent variable in the study.

The questionnaire was created in Google Forms. Due to the COVID-19 pandemic situation

in India, the questionnaire was distributed via google forms through personal email and WhatsApp following Simple Random Sampling Method. Thus, questionnaires were distributed among UG students in both colleges including all disciplines and all year of study. 258 responses were obtained from the population and selected for analysis.

6. Analysis and Interpretation

The collected data were analysed using various techniques, and the following outcome were obtained.

6.1. Profile of Sample

The total response obtained were from the selected e colleges are given in Table 2.

Table 2
Characteristics-wise Distribution of Respondents

Characteristics		Number of Respondents	Percentage
Gender	Female	128	49.61
	Male	130	50.39
Age	18	33	12.79
	19	56	21.71
	20	46	17.83
	21	59	22.87
	22	44	17.05
	23	10	3.88
	24	10	3.88
Place of residence	Rural	137	53.10
	Urban	121	46.90
Name of institution	College of Engineering, Trivandrum	144	55.81
	Govt. College of Engineering Barton Hill	114	44.19
Discipline	Civil Engineering	60	23.26
	Computer Science Engineering	42	16.28
	Electrical and Electronics Engineering	50	19.38
	Electronics and Communication Engineering	39	15.12
	Information Technology	15	5.81
	Mechanical Engineering	52	20.16
Total		258	100.00

6.2. Influencing Factors of Knowledge Sharing

Knowledge sharing is a process of acquiring, sharing, and values to the knowledge possessed by someone. There may be various factors that affect KS process. The

factors can affect KS positively as well as negatively. The study discloses the evaluation of factors that influence KS. Those factors are evaluated using five-point scale. The influencing factors were chosen from the study by Ashwini (2018). Table 3 portrays the factors that influence KS.

Table 3

Factors Influencing Knowledge Sharing

Influencing Factors		Strongly Agree	Agree	Not Decided	Disagree	Strongly Disagree	Total
Social Commitment	n	98	117	40	3	0	258 (100)
	%	37.98	45.35	15.50	1.16	0.00	
Trust is for knowledge sharing	n	84	122	35	14	3	
	%	32.56	47.29	13.57	5.43	1.16	
Trust on knowledge of colleagues	n	76	137	34	9	2	
	%	29.46	53.10	13.18	3.49	0.78	
Personal satisfaction and rewards	n	64	101	61	29	3	
	%	24.81	39.15	23.64	11.24	1.16	
Reduces competitiveness	n	46	100	54	47	11	
	%	17.83	38.76	20.93	18.22	4.26	
Time wasting factor	n	13	26	37	76	106	
	%	5.04	10.08	14.34	29.46	41.09	

Almost half (47.29%) respondents agreed and 32.56% respondents strongly agreed that "Trust is important for KS". "Trust on knowledge of colleagues is important" is an important factor influencing KS was identified by 53.10% "agreed" and 29.46% "strongly agreed". Whereas 3.49% disagreed about it, and only 0.78% strongly disagree with it. 17.83% "strongly agree", 38.76% "agree", 20.93% "not decided", 18.22% "disagree", and 4.26% "strongly disagree" responses were obtained for the factor "Knowledge sharing reduces competitiveness".

From the 258 responses 41.09% strongly disagree with the statement "Knowledge sharing is time wasting factor", 29.46% disagree with it. "Intrinsic and extrinsic motivation" was

identified as vital by 39.15% (agree) of respondents and 24.81% strongly agree with it.

6.3. Organisational Factors Influencing Knowledge Sharing

Knowledge sharing in an institution helps in satisfying organizational goals. In an academic institution KS among students can be possible only through the support of the authority. The authority is responsible to take suitable measures to enable Knowledge Sharing. There are various measures that adopted by the management for KS to happen. The management's support towards KS makes the process easier and smoother. The various supportive factors and the level of agreement were examined in the following analysis (Table 4).

Table 4

Level of agreement on organisational factors influencing knowledge sharing

Organisational factors		Strongly Agree	Agree	Not Decided	Disagree	Strongly Disagree	Total
Policies in the organization	n	67	158	25	8	0	258 (100%)
	%	25.97	61.24	9.69	3.10	0.00	
Organizational structure	n	51	172	25	9	1	
	%	19.77	66.67	9.69	3.49	0.39	
Experienced staff	n	41	142	62	11	2	
	%	15.89	55.04	24.03	4.26	0.78	

The support of management towards knowledge sharing (KS) was effectively evaluated. The “There are policies that encourage knowledge sharing in the organization” were agreed by majority of the respondents. Sixty seven percentage of respondents strongly agree with the same and 25% stand with the neutral view.

Out of the survey, 66.67% respondents agree with the organizational structure among the department allows for ease of knowledge sharing, with 19.77% respondents strongly agreeing to the statement. A total of 9.69% and 3.49% responses were obtained against not decided and disagree respectively.

The parameter “institute has a system in place to ensure that knowledge from experienced staff, who either resign or retire, is retained” were gained agree responses the

most with 55.04%. Strongly agreed by the 15.89% respondents out of 258. Only 4.26% disagree the statement and a 0.78% strongly disagree the same.

6.4. Variation in the Influence of Factors

The factors influencing KS are of different types. Further these factors may also depend on the organizational factors in each institution. The respondent’s opinion may vary according to the organizational structure. To assess the influence of factors on KS among students by level of organizational factor, a research hypothesis was formulated as, **H1: There exists significant difference in the factors influencing Knowledge Sharing among students by level of organizational factors.** Table 5 depicts Mean score of influence of organizational factors on Knowledge Sharing.

Table 5

Influence of Organizational Factors

Parameter	Mean	SD
Policies in the organization	4.10	0.69
Organizational structure of the department	4.02	0.69
Knowledge from experienced staff	3.81	0.78
Overall influence	3.98	0.57

The study revealed that the overall influence of organizational factors on KS has mean score 3.98 and standard deviation 0.57. The policies adopted by each organization for KS has greatest influence on KS with mean score 4.10. The lowest influencing factor is that the organization's system in place to

ensure that knowledge from experienced staff has experienced staff with score 3.98.

Overall influence is categorised into three groups namely, low medium and high. Scores below 3.69 is taken as low, scores between 3.70 and 4.26 is taken as medium, and scores 4.27 and above as high.

Table 6
Level of Organizational Factors

Level	Number	%
Low	81	31.40
Medium	102	39.53
High	75	29.07
Total	258	100.00

From the total respondents (Table 6), a majority of responses were obtained for medium response, about 31.40% of them are provided low

for level of influence of organizational factors, and 29.07% was obtained for high.

Table 7
Influence of Factors by Level of Organizational Factors

Influencing Factors	Low		Medium		High		F	Sig.
	Mean	SD	Mean	SD	Mean	SD		
Trust for KS	4.11	1.05	3.92	0.86	4.31	0.87	3.749	0.025
Trust on knowledge of colleagues	4.17	0.82	3.86	0.75	4.24	0.79	6.078	0.003
Reduces competitiveness	3.30	1.20	3.50	0.92	3.67	1.23	2.192	0.114
Time wasting factor	1.90	0.94	2.06	1.16	2.37	1.48	3.107	0.046
Intrinsic and extrinsic	3.86	0.89	3.52	1.01	3.95	1.01	4.922	0.008
Social Commitment	4.22	0.79	4.06	0.67	4.37	0.73	4.079	0.018

Results given in Table 7 explains Mean Score of influence of factors on knowledge sharing among students by level of organizational factors. By analysing “mean score of influence of organizational factors on knowledge sharing” and “level of organizational factors”, both of them clubbed and resulted “mean score of influence of factors on knowledge sharing among students

by level of organizational factors”. The significance level of above analysis shows highest at “KS reduces competitiveness” and in other’s significance is less than 0.05 (for “trust is important for KS” $p=0.025<0.05$, for “trust on knowledge of colleagues is important” $p=0.003<0.05$, for “KS is time wasting factor” $p=0.046<0.05$, for “intrinsic and extrinsic is vital” $p=0.046<0.05$ and for “Social Commitment” $p=0.018<0.05$).

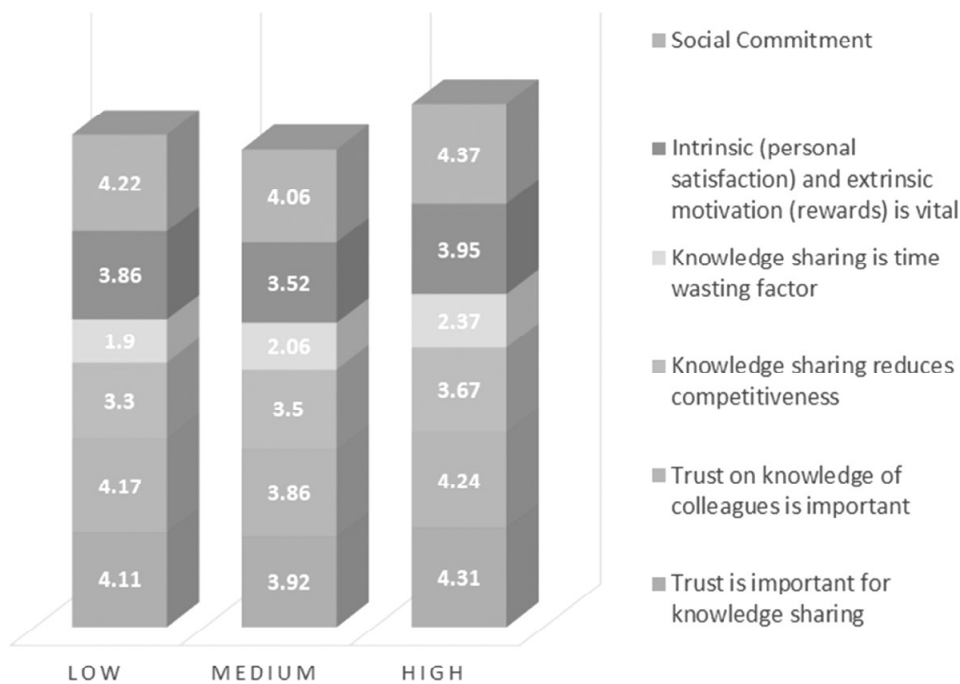


Fig.1. Influence of Factors by Level of Organizational Factors

From the study, it is evident that there is significant difference in the factors influencing respondents by level of organisational factors. Hence the result **rejects the null hypothesis that there exists no significant difference in the factors influencing Knowledge sharing among students by level of organizational factors and accepts the alternative hypothesis that there exists significant difference in the factors influencing Knowledge sharing among students by level of organizational factors.**

6.5. Channels for Knowledge Sharing

The KS is the process of sharing

knowledge. So that there should be a medium for the sharing process. While communicating we try to share some message or knowledge to the audience, that process need any medium. The KS process also need some medium or channel to transfer knowledge. In the emerging world there arise a variety of tools and technologies to share knowledge with other.

The tools and technologies/ channels (adopted from Ashwini, 2018) used for the purpose of knowledge sharing was evaluated in the below examination (Table 8). Different kinds of tools and technologies are subjected to the respondents.

Table 8

Tools and Technology in Knowledge Sharing

Tools and Technology		Strongly Agree	Agree	Not Decided	Disagree	Strongly Disagree	Total
Face to Face	N	150	97	11	0	0	258 (100%)
	%	58.14	37.60	4.26	0.00	0.00	
Brainstorming sessions, meeting	N	143	103	12	0	0	
	%	55.43	39.92	4.65	0.00	0.00	
Workshops, seminars, Trainings, Induction training, smart classes	N	129	123	5	1	0	
	%	50.00	47.67	1.94	0.39	0.00	
Knowledge Festivals	N	102	131	22	3	0	
	%	39.53	50.78	8.53	1.16	0.00	
Mobile Apps, Instant Messaging and group messaging	N	98	137	21	2	0	
	%	37.98	53.10	8.14	0.78	0.00	
Computer Conferencing	N	89	150	15	4	0	
	%	34.50	58.14	5.81	1.55	0.00	
Publications, Newsletters, written and oral visual reports	N	88	151	17	1	1	
	%	34.11	58.53	6.59	0.39	0.39	
Social networking sites and Social Medias	N	86	153	18	1	0	
	%	33.33	59.30	6.98	0.39	0.00	
Discussion Forums, Communities of practice	N	83	148	24	3	0	
	%	32.17	57.36	9.30	1.16	0.00	
Learning centres, Fairs, Expos, informal meeting rooms	N	77	139	41	1	0	
	%	29.84	53.88	15.89	0.39	0.00	
Specialist Chat Rooms	N	61	142	49	6	0	
	%	23.64	55.04	18.99	2.33	0.00	
Intranet	N	57	135	55	10	1	
	%	22.09	52.33	21.32	3.88	0.39	
Staff rotation/Duty rotation	N	52	113	59	34	0	
	%	20.16	43.80	22.87	13.18	0.00	
E-mails	N	35	135	64	22	2	
	%	13.57	52.33	24.81	8.53	0.78	

Of the 258 respondents more than half of them (58.14%) strongly agreed 'face to face' as a tool in KS. Out of 258, 22.09% of respondents strongly agreed, and 52.33% of respondents agreed intranet as a channel for KS. No one suggested it as strongly disagree. Half (50%) of respondents strongly agreed that workshops, seminars, Trainings, Induction training, smart classes as a part of knowledge sharing.

Majority of respondents strongly agreed brainstorming sessions, meeting as an effective tool for KS, and 39.92% agreed with it. Numerous researchers noted that the ability of people to

share knowledge depends first and foremost on their communication skills.

6.6. Barriers in Knowledge Sharing

Several factors can act as barriers that may hinder students to share knowledge. In order to determine the barriers faced by respondents in KS, the following were provided to the respondents, that was identified by Ashwini (2018) and they were asked to rate the following barriers as 'strongly agree', 'agree', 'not decided', 'disagree' and 'strongly disagree'. The barriers were disclosed in the study as follows. The barriers are traced using the following table (Table 9).

Table 9
Barriers in Knowledge Sharing

Barriers		Strongly Agree	Agree	Not Decided	Disagree	Strongly Disagree	Total
Hesitation to share knowledge	N	74	111	45	27	1	258 (100%)
	%	28.68	43.02	17.44	10.47	0.39	
Lack of Human resource/ Expertise	N	73	139	26	19	1	
	%	28.29	53.88	10.08	7.36	0.39	
Lack of Social Orientation	n	62	131	58	6	1	
	%	24.03	50.78	22.48	2.33	0.39	
Lack of technological resources	N	60	141	22	32	3	
	%	23.26	54.65	8.53	12.40	1.16	
Motivation as barrier	N	56	89	52	40	21	
	%	21.71	34.50	20.16	15.50	8.14	
Lack of monetary benefits as barrier	N	47	103	82	24	2	
	%	18.22	39.92	31.78	9.30	0.78	
Cultural barrier	N	37	95	65	52	9	
	%	14.34	36.82	25.19	20.16	3.49	

Lack of Human resource/Expertise as a barrier to KS was agreed by more than half (53.88%) and strongly agreed by 28.29%. Lack of technological resources were identified as a barrier with 23.26% strongly agreement, 54.65% agreement, 8.53%

neutral, 12.40% disagreement, and only 1.16% strongly disagreement. .

Of the 258 respondents 14.34% strongly agreed, 36.82% agreed, 25.19% not decided,

20.16% disagreed, and 3.49% strongly disagreed that cultural as a barrier in KS process. 2.33% disagree with the statement and 0.39% strongly disagree with it. Rest of the barriers and their opinion level are given in table 9.

6.7. Variation in Barriers

In order to assess the variation in barriers

for KS among respondents by gender, research hypothesis is formulated as **H2: There exist significant difference in the level of barriers in Knowledge Sharing among students by gender.** To identify the variation in gender-wise difference in level of barriers faced by students t-test was conducted, and sketched in Table 10.

Table 10
Variation in Barriers for KS among Respondents by Gender

Influencing Factors	Medium		High		t	Sig.
	Mean	SD	Mean	SD		
Lack of Human Expertise/Resources	3.96	0.849	4.11	0.800	-1.430	0.154
Lack of Technological resources	3.90	0.905	3.90	0.905	-0.350	0.972
Hesitation to share knowledge	3.80	0.918	4.00	0.948	-1.691	0.092
Cultural Barrier	3.44	0.990	3.51	0.978	-0.582	0.561
Motivation as barrier	3.45	1.034	3.91	0.948	-1.558	0.090
Lack of monetary benefits as barrier	3.55	0.888	3.80	0.860	-1.262	0.325
Lack of social orientation	3.92	0.762	4.02	0.736	-1.007	0.315

As the significant levels of all factors are greater than 0.05, there is no significant difference in the opinion of sample by gender about barriers. From the mean score it is clear that the highest mean score is obtained for lack of human resources with 3.96 (female) and 4.11 (male). The least mean score is obtained for cultural barrier with score 3.44(female) and 3.51(male). The mean score for lack of technological resources is 3.90 for both male and female respondents.

From the study, it is evident that there is no statistical similarity among barriers of KS faced by male and female respondents. Hence the result accepts the null hypothesis that there exists no significant difference in the level of barriers in knowledge sharing among students by gender.

7. Findings

- The majority of the engineering students are aware about the policies in their organisation to encourage knowledge sharing. More than half of the students argued that the organizational structure of the department allows for ease of knowledge sharing among all students. Half of the students mentioned that the institute has a system in place to ensure that knowledge from experienced staff.
- Nearly half of UG students of engineering college identified that trust is an essential factor in KS, and also, trust in the knowledge of colleagues is vital. One-third of the students argued

knowledge sharing reduced competitiveness.

- Only one-third of the total suggested that intrinsic and extrinsic factors influence KS. The social commitment was identified as an influencing factor by approximately half of the engineering students.
- More than half of students use face-to-face and e-mails as a tool to share knowledge. Specialist Chat Rooms were identified as a tool by nearly three-quarters of students.
- Most engineering students suggested social networking sites and social media as technologies for KS. More than half of students prefer intranet, mobile apps, and discussion forums as a channel to share knowledge.
- Nearly half of UG students suggested staff rotation/Duty rotation helps knowledge. A half of the students have an opinion that workshops, seminars, training, Induction training, and smart classes as a part of knowledge sharing. Brainstorming sessions and meetings are identified as a channel by nearly three-quarters of students.
- Lack of human resources/expertise and lack of technological resources were identified as a barrier by half of the students. More than a quarter of students hesitated to share knowledge and identified it as a hindrance to the KS process. Cultural, motivation, and monetary benefits are the hindrances that occurred in the KS process for a third of engineering students. Half of the students suggested a lack of social orientation as a hindrance to the KS process.

8. Conclusion

Knowledge is a relevant factor or backbone of an academic institution. The workflow of an educational institution depends upon knowledge creation and sharing. In the education field, providing students and staff with relevant and up-to-date knowledge is necessary; for this purpose, an institution adopts organizational factors. The organizational factors and the other factors that influence the knowledge sharing process were identified through this study. Trust, social commitments, policies in an organization etc., are recognised as the factors for the KS process.

The process of sharing knowledge needs some medium, and there are different platforms to share the same. In the era of advancement there arise tools or channels both include traditional and technological. Face-to-face is one of the most commonly used tools for sharing knowledge. The respondents also identified that emails, chatrooms, brainstorming sessions, the internet, workshops, etc., are channels to share knowledge. The study also tried to identify the barriers to the KS process. There arise various obstacles such as lack of human resources, hesitation, lack of social orientation etc. if the respondent doesn't trust the colleagues or colleagues' knowledge, then it is a hindrance to the process of knowledge sharing. The findings of the study can help to identify the influencing factors, channels and barriers in the KS process. Through this, we can improve the policies that are adopted by an organization to undertake smooth sharing of knowledge.

References

1. **Ashwini, K.** (2018). *Knowledge Sharing among Medical Practitioners: a Study*. PhD thesis in Library and Information Science submitted to University of Mysore. <http://hdl.handle.net/10603/260286>
2. **Chandran, D., and Alammari, A. M.** (2020). Influence of culture on Knowledge Sharing attitude among academic staff in eLearning virtual communities in Saudi Arabia. *Information Systems Frontiers*,

- 23, 6, 1563–1572. <https://doi.org/10.1007/s10796-020-10048-x>
3. **Chen, Zhe et al.** (2017). Exploring factors influencing knowledge sharing of International students at Chinese university. *International Conference on Cross Cultural design*, 521-530.
 4. **Chong, C. W. et al.** (2014). Knowledge sharing among Malaysian universities' students: do personality traits, class room and technological factors matter? *Educational Studies*, 40, 1, 1–25. <https://doi.org/10.1080/03055698.2013.825577>
 5. **Cochran, W. G.** (1977). *Sampling Techniques, 3rd Edition* (3rd ed.). John Wiley & Sons.
 6. **College of Engineering Trivandrum.** (2018, October 9). *The College*. Retrieved May 7, 2021, from <https://www.cet.ac.in/the-college/>
 7. **Dlamini, P. P. N. and Mngwengwe, S. M.** (2020). The Use of social media tools to support scholarly knowledge among students at the University of Zululand. *Library Philosophy and Practice (e-Journal)*, not provided. <https://digitalcommons.unl.edu/libphilprac/3941/>
 8. **Eletter, S. et al.** (2020). The impact of knowledge sharing enablers on knowledge sharing behaviour: an empirical study. *VINE Journal of Information and Knowledge Management Systems*, 52, 1, 102–119. <https://doi.org/10.1108/vjikms-04-2020-0065>
 9. **Fattah, Fadi Abdel Muniem Abdel et al.** (2020). Determinants of knowledge sharing behaviour among students at higher educational institutions in Oman: a planned behaviour theoretical perspectives of knowledge sharing. *Global Knowledge, Memory and Communication*, 70, 6/7, 611-636.
 10. **GEC Barton Hill.** (2017). *GEC Barton Hill*. Retrieved May 7, 2021, from <http://www.gecbh.ac.in/about/>
 11. **Haco-Obasi, F. C., and Agim, N. C.** (2020). Assessment of Knowledge Sharing patterns among university and polytechnic students in Imo State. *Asian Journal of Information Science and Technology*, 10(1), 31–40. <https://www.trp.org.in/wp-content/uploads/2020/09/AJIST-Vol.10-No.1-January-June-2020-pp.-31-40.pdf>
 12. **Kalu, Chidi Onuoha et al.** (2019). Knowledge sharing behaviours and patterns among academic students: A case study of electrical engineering technology students of National Institute of Construction Technology, Uromi, Edo state, *Library Philosophy and Practice (e-journal)*. 4183.
 13. **Nguyen, T. T. T. et al.** (2021). Role of trust and team culture in Knowledge Sharing and OCBs among government officials. *Asian Journal of Business and Management*, 9, 5. <https://doi.org/10.24203/ajbm.v9i5.6792>
 14. **Omotayo, F. O., and Salami, O. M.** (2018). Use of social media for Knowledge Sharing among students. *Asian Journal of Information Science and Technology*, 8,2, 65–75. <https://doi.org/10.51983/ajist-2018.8.2.174>
 15. **Osman, S. et al.** (2015). Knowledge Sharing patterns among undergraduate students in Universiti Teknologi MARA (UiTM) Johor, Malaysia. *International Journal of Management, Accounting and Economics*, 2, 3, 167–178. http://www.ijmae.com/article_115468_3c4db3dd0c64c1fa3314ac30eaf4338e.pdf

16. Rafique, G. M., and Anwar, M. A. (2019). Barriers to Knowledge Sharing among medical students in Pakistan. *Journal of Hospital Librarianship*, 19, 3, 235–247. <https://doi.org/10.1080/15323269.2019.1628566>
17. Rahman, M. M. and Mustafiz, M. (2020). Students' Perception, Using Channels and Factors Influencing Sharing of Knowledge in Learning Environment in Bangladesh. *Asian Journal of Information Science and Technology*, 10, 2, 7–14. <https://www.trp.org.in/wp-content/uploads/2021/01/AJIST-Vol.10-No.2-July-December-2020-pp.-7-14.pdf>
18. Safdar, M. et al. (2021). Fostering Knowledge Sharing behavior among Pakistani engineering students: Role of individual and classroom related factors. *Libri*. <https://doi.org/10.1515/libri-2020-0153>
19. Usman, S. H. (2015). A Survey on students' preference in Knowledge Sharing Tools to support learning in higher education. *Journal of Advanced Management Science*, 3, 4, 350–353. <https://doi.org/10.12720/joams.3.4.350-353>
20. Wang, G. A. et al. (2014). Mining Knowledge Sharing Processes in Online Discussion Forums. *2014 47th Hawaii International Conference on System Sciences*. <https://doi.org/10.1109/hicss.2014.483>