

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Library Philosophy and Practice (e-journal)

Libraries at University of Nebraska-Lincoln

7-9-2021

Comparative Study on Information Seeking Behaviour of Research Scholars and Teachers of Selective Science Departments in Burdwan University

Amit Kumar Das

Mankar College, dasamitkumar2007@gmail.com

Sukumar Mandal Dr.

Department of Library and Information Science, The University of Burdwan, sukumar.mandal5@gmail.com

Follow this and additional works at: <https://digitalcommons.unl.edu/libphilprac>



Part of the [Library and Information Science Commons](#)

Das, Amit Kumar and Mandal, Sukumar Dr., "Comparative Study on Information Seeking Behaviour of Research Scholars and Teachers of Selective Science Departments in Burdwan University" (2021). *Library Philosophy and Practice (e-journal)*. 6026.

<https://digitalcommons.unl.edu/libphilprac/6026>

Comparative Study on Information Seeking Behaviour of Research Scholars and Teachers of Selective Science Departments in Burdwan University

Amit Kumar Das* and Dr. Sukumar Mandal**

Abstract

Purpose

The study has been made on selected three departments of pure science research scholar and teachers' information seeking behavior in Burdwan University and to find out the various aspects of information seeking behavior, (i.e., motivation, various library visits and spending times, and resources used, satisfaction level, success rate of seeking information resources etc.).

Methodology

This study encompasses on research scholars and teachers in pure science departments (i.e. Chemistry, Physics and mathematics) of the University Burdwan. The online Google form questionnaires were disseminated to teachers and research scholars in three science departments in Burdwan University. Out of that 186, 154 research scholars and 32 teachers of three pure science departments have returned at the response rate of 63.7%. The received data have deduced through Statistical Package in Social Sciences (SPSS) (Version - 25) and presented in charts.

Findings

In this brief outline, the study reveals the information seeking behavior process of teachers and research scholars of the three science departments (chemistry, physics and mathematics) in Burdwan University. The study finds the various aspects of (motivation, various library visits and spending times, and resources used, satisfaction level, success rate of seeking information resources, etc.) information seeking behavior of the scholars and teachers. Library is the backbone of the University. Results of the study suggest user centric library infrastructure, collection development and services can pivotal decision making for policy makers to help for the betterment of services to the users of the Burdwan University.

Keywords – Information seeking behaviour, Science, Research scholar, Faculty members, Burdwan University

*Librarian, Mankar College, Mankar, Purba Bardhaman, PIN-713144. Email – dasamitkumar2007@gmail.com, Mobile No. - 7001704275

**Assistant Professor, Department of Library and Information Science, The University of Burdwan, Burdwan – 713104, Email - sukumar.mandal5@gmail.com

Introduction

In university like academic libraries, users' information needs and seeking behaviour have studied more extensively to focus on various aspects of the information resources, services and infrastructures, search techniques, and especially methods. The rapid changes in information seeking behaviour and expectations of research scholars and teachers have changed their search techniques with the technological advancement of library services. This study has been considered for evaluation of latest demand from group of users of the University of Burdwan library services and requires careful reconsideration of the role of current university library services and as well as thorough investigation of users behaviour and needs. The study of users' behaviour and needs can rectify and right directions for next generation all around university library enhancement.

Department of Sciences - Burdwan University

The University of Burdwan is the first higher education learning and established in 1960. Pupils were registered in major science disciplines, namely Physics, Chemistry, and Mathematics. Department of physics and mathematics have started in the same year 1960 and chemistry department have started in the next year 1961. Physics, Chemistry, and Mathematics are the main disciplines in Pure Sciences. Pure sciences are one of the most fascinating research oriented fields.

Literature Review

Various studies have been made recently on several aspects on faculties and research scholars' information seeking behaviour (Maron and Smith, 2008; Muench, 2011), user needs (Dallmeier-Tiessen et al., 2010), use of information (Rowlands and Fieldhouse, 2007; Borgman, 2009; Vilar and Zumer, 2011). In addition to this, studies have been made to shape the conceptualizations of information needs and information seeking behaviour models in scientific disciplines (Brown, 1991; Ellis, (1993, 1989a, & 1989b); Ellis & Haugan, 1997; & Ellis, Cox, & Hall, 1993; Kuhlthau, (1999, 1994, 1993, 1991, 1988, & 1983)).

Objectives

The main objectives are to explore the information seeking behaviour teachers and research scholars of three selected pure science departments namely chemistry, mathematics and physics in Burdwan University. The research objectives are as follows:-

- **To investigate the prime information needs of teachers and scholars of pure science departments.**
- **To access the library visit of teachers and scholars of pure science departments.**
- **To find the resources used by research scholars and teachers of pure science departments**
- **To explore the information seeking process adopted by the teachers and scholars of pure science departments**

- **To access the satisfaction level in information seeking process of teachers and research scholars in pure science departments**

Methodology

This study encompass on research scholars and teachers in pure science departments (i.e. Chemistry, Physics and mathematics of the University Burdwan. The online Google form questionnaires were disseminated to teachers and research scholars in three science departments in Burdwan University. Out of that 186, 154 research scholars and 32 teachers of three pure science departments have returned at the response rate of 63.7%. The received data have deduced through Statistical Package in Social Sciences (SPSS) (Version - 25) and presented in charts.

Analysis and Discussion

After collecting the responses, as systematic as well as statistical analysis and interpretation and discussion have been made and the data has been presented in the tabular form as relevant based on the characteristics of responses. It can be said that at the time of distribution of questionnaire the existed scholars and faculty members though considered totally, but at the time of collection of responses the no. of respondents declined and the available responses can be illustrated in the following tables (Table 1.01, 1.02).

	Total no. of participant	No. of response received	Percentage
Faculty members	47	32	68.09
Ph.D. scholar	241	154	63.90
Total	288	186	64.58

Table 1.01 Response rates of pure science departments

Table 1.01 illustrated that out of 47 faculty members, 241 registered Ph. D. research scholars and total of 288 participants of the three pure science departments of the University of Burdwan in this study 68.09%, 63.90% and 64.58% of total responses respectively have been received (shows in Figure 1.01).

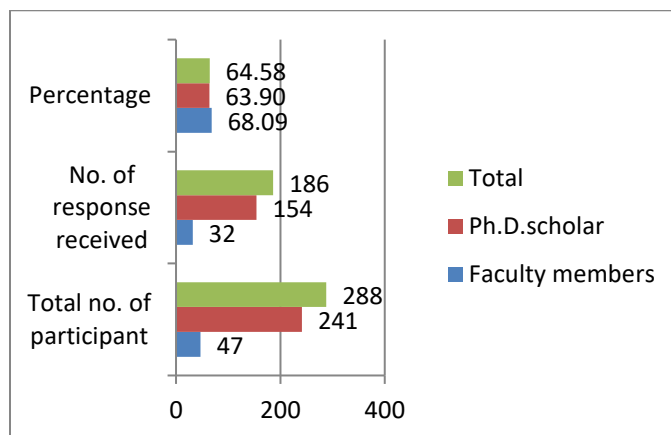


Figure 1.01 Response rates of pure science departments

Total Respondents	Total	Percentage
Male	163	87.63
Female	23	12.37
Total	186	100

Table 1.02 Male – Female ratio of respondents

Table 1.02 describes male – female ratio of the three pure science departments of the University of Burdwan in this study. The study has been made on the response of male and female respondents are 87.63% and 12.37% respectively (Figure 1.02).

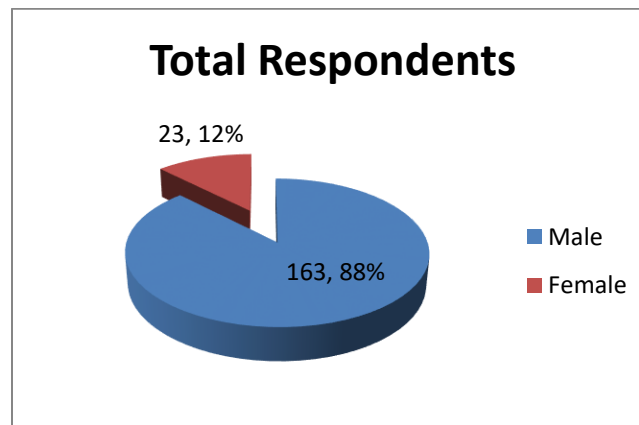


Figure 1.02 Male – Female ratio of respondents

			Group		Total
			Research scholar	Teacher	
Motivation of using library	Self	Count	97	25	122
		% within Group	63.0%	78.1%	65.6%
	Parents	Count	21	3	24
		% within Group	13.6%	9.4%	12.9%
	Teachers	Count	30	4	34
		% within Group	19.5%	12.5%	18.3%
	Friends	Count	6	0	6
		% within Group	3.9%	0.0%	3.2%
Total		Count	154	32	186
		% within Group	100.0%	100.0%	100.0%

Table 1 Motivation of using library

Table 1 depicts that maximum 63% pure science research scholar respondents have self – motivated of using library. 78% pure science faculty respondents ensure self – motivation in using library. Teachers are the second highest library access motivational factor for 19.5% pure science scholar and 12.5% of faculty respondents. The third library motivation factor, parents are 13.6%, 9.4% of research scholar and faculty respondents respectively (Figure – 1).

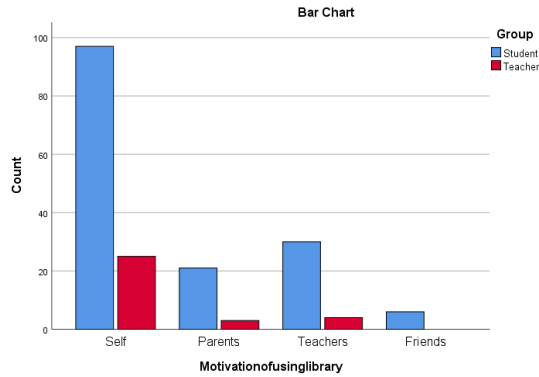


Figure 1 Motivation of using library

			Group		Total
			Research scholar	Teacher	
Library visit at beginning	Public Library	Count	17	4	21
		% within Group	11.0%	12.5%	11.3%
	College Library	Count	65	11	76
		% within Group	42.2%	34.4%	40.9%
	School Library	Count	70	16	86
		% within Group	45.5%	50.0%	46.2%
	University Library	Count	2	1	3
		% within Group	1.3%	3.1%	1.6%
Total		Count	154	32	186
		% within Group	100.0%	100.0%	100.0%

Table 2 Starting of Library use

Table 2 describes that 46.2% access of school library is the highest starting point of all the pure science department respondents. The second highest 40.9% respondents have started from college library system. Interestingly 11.3% pure science respondents have initiated from public library system. Only 1.6% respondents have begun from university library. Among all the scholar respondents, maximum 45.5% accessed school library facilities. Second highest 42.2% research scholar respondents have started from college library. Surprisingly 11% scholar have benefited from public library at the beginning. Only 1.3% scholars have enjoyed accessing from university at starting. In case of faculty members, the highest 50% have accessed school library as beginners. College library facilities are the second highest starting point for 34.4% faculties. Interestingly the third highest is the public library at beginning for 12.5% faculty respondents. Only 3.1% faculties have started accessing university library services. (Figure –2)

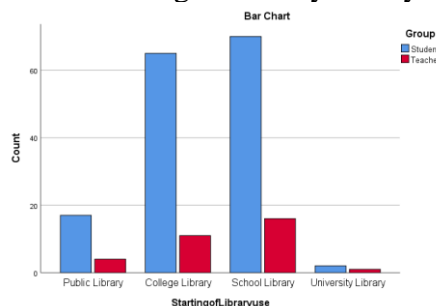


Figure 2 Library visit at beginning

			Group		Total
			Research scholar	Teacher	
Visiting Time in University Library	Daily	Count	65	3	68
		% within Group	42.2%	9.4%	36.6%
	1day/week	Count	22	20	42
		% within Group	14.3%	62.5%	22.6%
	2day/week	Count	13	5	18
		% within Group	8.4%	15.6%	9.7%
	3day/week	Count	33	4	37
		% within Group	21.4%	12.5%	19.9%
	5day/week	Count	5	0	5
		% within Group	3.2%	0.0%	2.7%
According to need	Count	3	0	3	
	% within Group	1.9%	0.0%	1.6%	
4day/week	Count	13	0	13	
	% within Group	8.4%	0.0%	7.0%	
Total		Count	154	32	186
		% within Group	100.0%	100.0%	100.0%

Table 3 Visiting Time in University Library

Table 3 shows that highest 42.2% scholar respondents have accessed university library regularly. 62.5% faculty members have visited university library for 1 day/week as maximum. The second highest 21.4% research scholars have accessed library for 3 days/week. In case of 15.6% teachers have accessed library facilities for 2 days/week as second highest. Third highest visiting hour are 14.3% scholars, 12.5% faculties for 1 day/week, 3 days/week respectively. Only 9.4% faculty members visited for daily. 8.4% researchers each accessed library for 2 days and 4 days in a week. Very few research scholars have accessed for 5 days/week and according to their needs. (Figure –3)

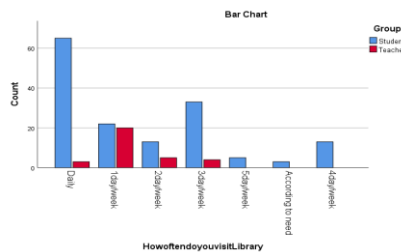


Figure 3 Visiting Time in University Library

			Group		Total
			Research scholar	Teacher	
University library visit hours	30 min	Count	1	0	1
		% within Group	0.6%	0.0%	0.5%
	1hr	Count	10	1	11
		% within Group	6.5%	3.1%	5.9%
	2hr	Count	90	10	100
		% within Group	58.4%	31.3%	53.8%

	3hr	Count	33	13	46
		% within Group	21.4%	40.6%	24.7%
	4hr	Count	19	8	27
		% within Group	12.3%	25.0%	14.5%
	1.3hr	Count	1	0	1
		% within Group	0.6%	0.0%	0.5%
Total		Count	154	32	186
		% within Group	100.0%	100.0%	100.0%

Table 4 University library visit hours

Table 4 describes that maximum 58.4% pure science scholars have expended 4 hours in university library. 21.4% research scholars have visited for 3 hours as second highest. The third highest time spent is four hours in university library by 12.3% scholar respondents. 40.6% pure science faculties have visited for three hours as highest time spending. Second highest time spent is two hours by 31.3% faculty respondents. 25% faculties have spent in library for 4 hours as third highest. Majority of 53.8% pure science departments respondents have accessed university library for two hours. The second highest library visit is three hours by 24.7% respondents. 14.7% respondents have spent 4 hours as third highest response. (Figure –4)

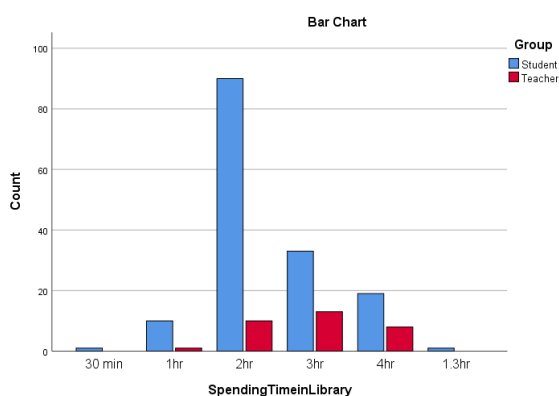


Figure 4 University library visit hours

		Group			
		Research scholar	Teacher	Total	
Use of departmental library	Yes	Count	154	32	186
		% within Group	100.0%	100.0%	100.0%
Total		Count	154	32	186
		% within Group	100.0%	100.0%	100.0%

Table 5 Use of departmental library

Table 5 describes that all the pure science departments respondents have accessed departmental library services. 82.80% pure science departments research scholars and 17.20% faculty respondents among total respondents have accessed the departmental library facilities. (Figure –5)

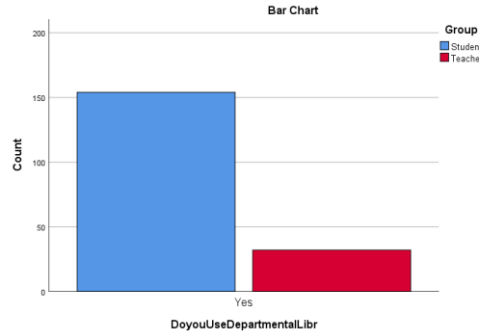


Figure 5 Use of departmental library

			Group		Total
			Research scholar	Teacher	
Visit in other libraries beside University Library	Yes	Count	119	19	138
		% within Group	77.3%	59.4%	74.2%
	No	Count	35	13	48
		% within Group	22.7%	40.6%	25.8%
Total		Count	154	32	186
		% within Group	100.0%	100.0%	100.0%

Table 6 Visit in other libraries beside University Library

Table describes that 74.2% pure science departments' respondents have accessed other libraries beside university library facilities. Maximum 77.3% of pure science scholar respondents have got services of other libraries. Where as in pure science faculties, 59.4% respondents have accessed other library services. (Figure –6)

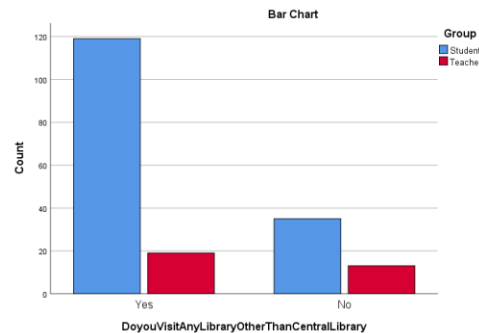


Figure 6 Visit in other libraries beside University Library

			Group		Total
			Research scholar	Teacher	
Other libraries spending time	Not spend	Count	40	11	51
		% within Group	26.0%	34.4%	27.4%
	weekly 1hr	Count	15	3	18
		% within Group	9.7%	9.4%	9.7%

weekly 2hrs	Count	21	12	33	
	% within Group	13.6%	37.5%	17.7%	
weekly 3hrs	Count	5	2	7	
	% within Group	3.2%	6.3%	3.8%	
weekly 4hrs	Count	7	1	8	
	% within Group	4.5%	3.1%	4.3%	
Monthly 2hrs	Count	20	1	21	
	% within Group	13.0%	3.1%	11.3%	
Monthly 3hrs	Count	36	2	38	
	% within Group	23.4%	6.3%	20.4%	
Monthly 4hrs	Count	10	0	10	
	% within Group	6.5%	0.0%	5.4%	
Total		Count	154	32	186
		% within Group	100.0%	100.0%	100.0%

Table 7 Other libraries spending time

Table 7 depicts that majority of 27.4% pure science departments' faculty and scholar respondents never accessed other libraries than university library. 20.4% respondents spent monthly 3 hours, 17.7% have accessed for weekly 2 hours, and 11.3% have visited for monthly 2 hours. Only 9.7% pure science respondents spent weekly one hour in other libraries. In case of pure science research scholar respondents, majority of 26% never accessed other libraries, 23.4% respondents have spent monthly 3 hours, 13.6% take benefited weekly 2 hours, 13% accessed monthly 2 hours and only 6.5% scholar respondents spent monthly 4 hours in other libraries. Whereas majority of 37.5% pure science faculties have got access weekly 2 hours, 9.4% faculty respondents accessed weekly one hour and only 6.3% faculties each have spent weekly 4 % & monthly 3 hours basis. Surprisingly 34.4% faculty respondents never spent in other libraries. (Figure – 7)

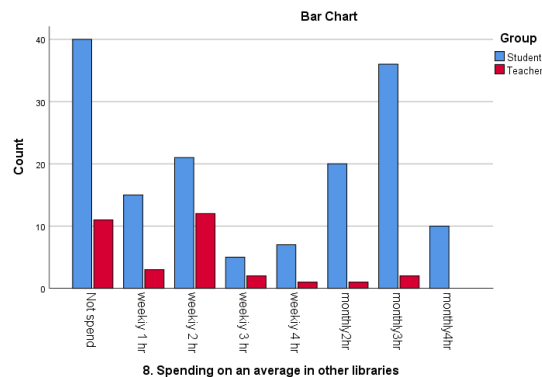


Figure 7 Other libraries spending time

			Group		Total	
			Research scholar	Teacher		
Pure Science Departments Major Information Needs	Professional Purpose	Count	1	0	1	
		% within Group	0.6%	0.0%	0.5%	
	Research	Count	27	2	29	
		% within Group	17.5%	6.3%	15.6%	
	Study	Count	13	5	18	
		% within Group	8.4%	15.6%	9.7%	
	Research and Study		Count	104	25	129

		% within Group	67.5%	78.1%	69.4%
	Others	Count	9	0	9
		% within Group	5.8%	0.0%	4.8%
Total		Count	154	32	186
		% within Group	100.0%	100.0%	100.0%

Table 8 Pure Science Departments Major Information Needs

Table 8 describes that majority of 69.4% scholars and faculty members in pure science department, the prime information need is research and study. Only study is the second highest information needs for 15.6% faculties and scholar respondents. The third major information needs is only study of 9.7% respondents. Only 0.5% respondents accessed for professional purpose. In respect of two groups in pure science departments, majority 67.5% of research scholars' primary information needs is research and study. 17.5% research scholars of pure science departments second basic information needs is only research. Only study, the third most important information needs is of 8.4% pure science scholar respondents. In case of faculties in pure science departments, majority of 78.1% faculties' prime information needs is research and study. The second most information needs is only study of 15.6% faculties. Only research is the third important information needs of 6.3% faculties of pure science faculties. (Figure –8)

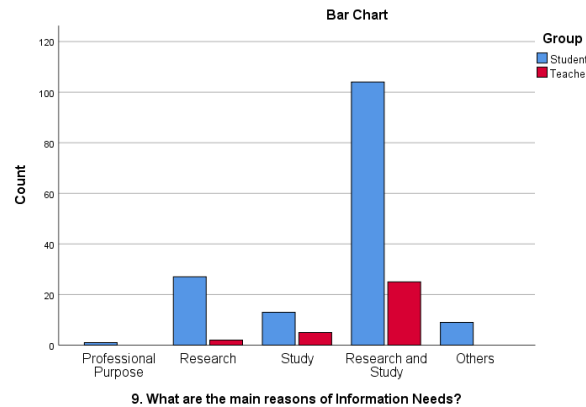


Figure 8 Aspects of Information Needs of Pure Science Departments

			Group		Total
			Research scholar	Teacher	
Access to University library services	Study	Count	1	0	1
		% within Group	0.6%	0.0%	0.5%
	Borrow books	Count	2	1	3
		% within Group	1.3%	3.1%	1.6%
	All of above	Count	151	31	182
		% within Group	98.1%	96.9%	97.8%
Total		Count	154	32	186
		% within Group	100.0%	100.0%	100.0%

Table 9 Access to University library services

Table 9 describes that majority of 97.8% of pure science respondents have utilised all the burdwan university services. Only 1.6% and 0.5% respondents have accessed reading room service and borrow books respectively. According to groups point of view, maximum 98.1% research scholars of pure science departments have taken all types of university library facilities

to fulfill their information needs. Only 1.3% scholar respondents of pure science departments have borrowed only books and 0.6% have for only reading room services. In case of faculty respondents in pure departments, 96.9% have used all the library facilities. Only 3.1% faculty respondents have accessed only books. (Figure –9)

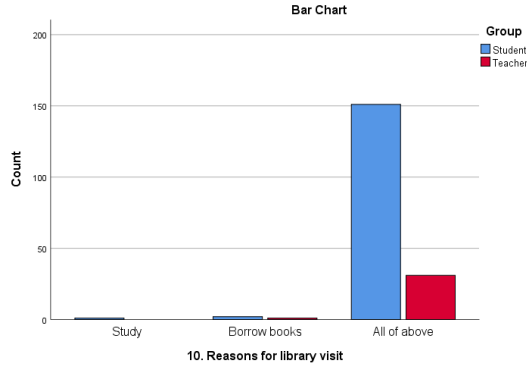


Figure 9 Access to University library services

			Group		Total
			Research scholar	Teacher	
Key Purposes of Information needs	New knowledge	Count	1	1	2
		% within Group	0.6 %	3.1%	1.1%
	Study/research work	Count	2	1	3
		% within Group	1.3%	3.1%	1.6%
	All of above	Count	151	30	181
		% within Group	98.1%	93.8%	97.3%
Total		Count	154	32	186
		% within Group	100.0%	100.0%	100.0%

Table 10 Key Purposes of Information needs

Table 10 describes that maximum 93.3% faculties and scholars of pure science departments’ information needs are research, study, current awareness service, career guidance services, seminars / conferences etc., syllabus oriented, etc. Only 1.6% and 1.1% respondent information needs are only study/ research and latest information respectively. In respect of two group of respondents, majority of 98.1% research scholar and 93.8% faculties of pure science departments key information need are all of the above. Study and research is one second key information need of 1.3% scholars and 3.1% faculty members of pure science departments. (Figure – 10)

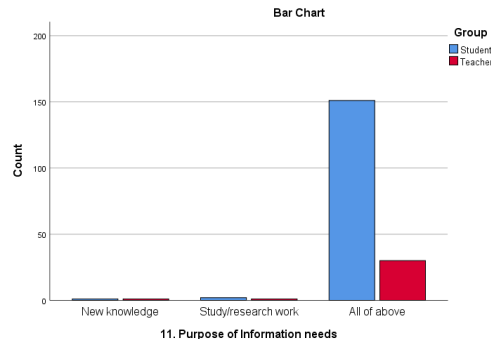


Figure 10 Key Purposes of Information needs

			Group		Total
			Research scholar	Teacher	
Exchange of knowledge with Faculty	Yes	Count	151	29	180
		% within Group	98.1%	90.6%	96.8%
	No	Count	3	3	6
		% within Group	1.9%	9.4%	3.2%
Total		Count	154	32	186
		% within Group	100.0%	100.0%	100.0%

Table 11 Exchange of knowledge with Faculty

Table 11 illustrates that majority of 96.8% research scholars and faculty members in pure science departments have always discussed their views with their faculties. In case of two groups, 98.1% scholars and 90.6% teachers in pure science departments have exchange of knowledge with faculty members. (Figure –11)

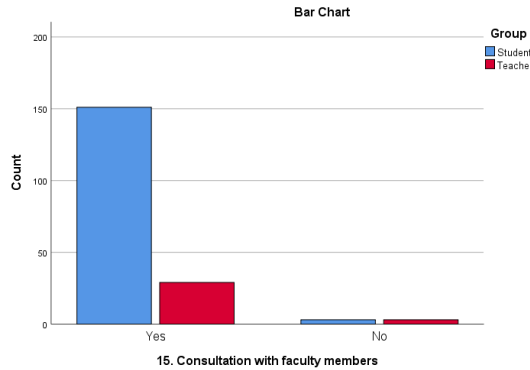


Figure 11 Exchange of knowledge with Faculty

			Group		Total
			Research scholar	Teacher	
Record History Information seeking	Yes	Count	140	31	171
		% within Group	90.9%	96.9%	91.9%
	No	Count	14	1	15
		% within Group	9.1%	3.1%	8.1%
Total		Count	154	32	186
		% within Group	100.0%	100.0%	100.0%

Table 12 Record History Information seeking

Table 12 describes that majority of 91.7% scholars and teachers in pure science departments have always kept records of information seeking in daily basis. It is found that maximum 80.9% scholars and 96.9% teachers have recorded the history of information searching details. In this two groups faculties are most active on record keeping behaviour of information that research scholars. (Figure –12)

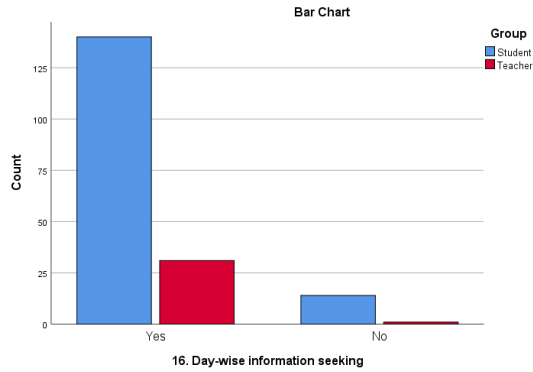


Figure 12 Record History Information seeking

		Group			
		Research scholar	Teacher	Total	
Approach in information seeking behaviour	Search engine	Count	2	0	2
		% within Group	1.3%	0.0%	1.1%
	Documentary, Non Documentary, Library services used, ICT infrastructure used	Count	3	0	3
		% within Group	1.9%	0.0%	1.6%
	All	Count	148	30	178
		% within Group	96.1%	93.8%	95.7%
	Using key terms for finding	Count	1	2	3
		% within Group	0.6%	6.3%	1.6%
Total		Count	154	32	186
		% within Group	100.0%	100.0%	100.0%

Table 13 Approach in information seeking behaviour

Table 13 describes that approaches of information seeking behaviour such as all types of search techniques like print, web documents, humanr resources, internet, search engine, database, keywords for searching information are applied for maximum of 95.7% scholars and teachers of pure science departments. Only each of 1.6% pure science scholars and faculties has applied keyword and documentary and non-documentary approaches in information seeking trechniques. In the views of two categories, majority of 96.1% research scholars and 93.8% teachers utilised all the techniques form information seeking. Only 1.9% and 0.6% scholars of pure science departments have used keywords and “documentary, non documentary” approches respectively. (Figure –13)

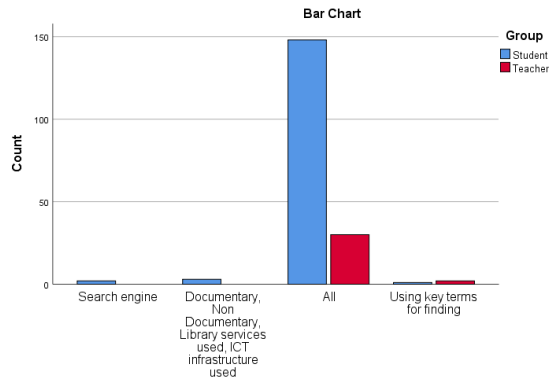


Figure 13 Approach in information seeking behaviour

			Group		Total
			Research scholar	Teacher	
Information search time	1hr	Count	76	18	94
		% within Group	49.4%	56.3%	50.5%
	2hr	Count	71	12	83
		% within Group	46.1%	37.5%	44.6%
	3hr	Count	7	2	9
		% within Group	4.5%	6.3%	4.8%
Total		Count	154	32	186
		% within Group	100.0%	100.0%	100.0%

Table 14 Information search time

Table 14 shows that majority of 50.5% faculty and research scholars of pure science departments have searched one hour to satisfy their information needs. 44.6% spent 2 hours and only 4.8% spent 3 hours for information seeking. In case of research scholars of pure science departments, 49.4% have searched for 1 hour, 46.1% respondents have accessed 2 hours. Minimum of 4.5% scholar respondents of pure science access time is 3 hours for information seeking. Whereas maximum 56.3% teachers of pure science have expensed 1 hour for searching their required information. 37.5% and only 6.3% faculties have spent 2 and 3 hours respectively. (Figure –14)

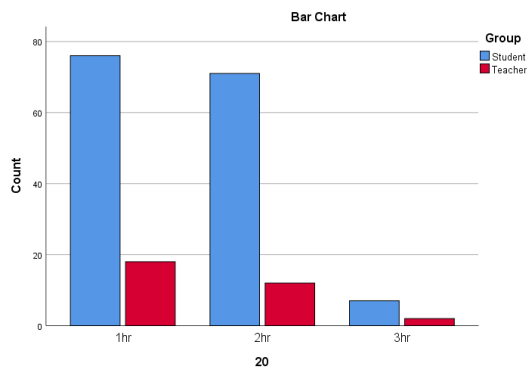


Figure 14 Rate of Success in Information seeking

	Group	Total
--	-------	-------

			Research scholar	Teacher	
Information seeking attainment rate	100%	Count	27	1	28
		% within Group	17.5%	3.1%	15.1%
	90%	Count	27	6	33
		% within Group	17.5%	18.8%	17.7%
	80%	Count	60	15	75
		% within Group	39.0%	46.9%	40.3%
	70%	Count	35	9	44
		% within Group	22.7%	28.1%	23.7%
60%	Count		1	6	
	% within Group	3.2%	3.1%	3.2%	
Total		Count	154	32	186
		% within Group	100.0%	100.0%	100.0%

Table 15 Information seeking attainment rate

Table 15 describes that maximum 40.3% scholars and teachers of pure science departments have accessed information at 80% attainment as highest rate. 23.7%, 17.7% and 15.1% pure science scholars and teachers have retrieved information from university library at rate of attainment of 60%, 90% and 100% as 2nd, 3rd, and 4th highest respectively. Only 3.2% have the lowest rate of attainment in information seeking. In the comparison of between two categories of pure science departments, majority of 39% scholars and 46.9% faculties have 80% attainment rate in information seeking as highest. 22.7% research scholars and 28.1% teachers have attained of 70% rate as 2nd highest. Each of 17.5% research scholars of pure science have got success in information seeking at the rate of 90% and 100%. Whereas 90%, is the third highest rate of attainment in seeking information of 18.8% faculties. (Figure –15)

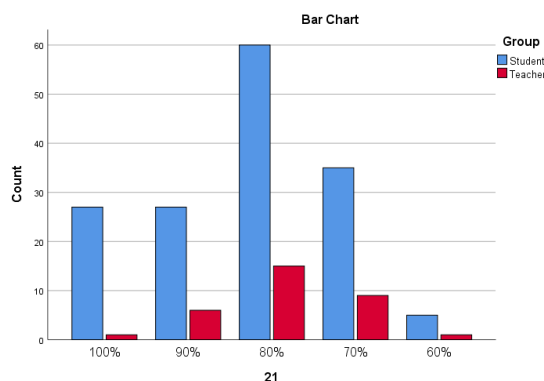


Figure 15 Information seeking attainment rate

		Group			
		Research scholar	Teacher	Total	
Unwillingness of University library access	No dissatisfaction	Count	36	15	51
		% within Group	23.4%	46.9%	27.4%
	No comments	Count	16	4	20
		% within Group	10.4%	12.5%	10.8%
	Need more resource	Count	102	13	115
		% within Group	66.2%	40.6%	61.8%

Total	Count	154	32	186
	% within Group	100.0%	100.0%	100.0%

Table 16 Unwillingness of University library access

Table 16 depicts that majority of 61.8% pure science faculties and research scholars have demanded for enrichment of resources in library. The second highest 27.4% users are happy with university library system. 10.8% pure science respondents have silent on library access willingness. The result reveals the issues of staff pattern, arrangements of orientation programme and seminars/conference, awareness programme, etc. in university library system infrastructure and services. According to two groups in pure science departments, majority of 66.2% scholars have demanded for enriching of university library resources. 23.4% pure science scholars have keen to visit university library. Only 10.4% pure science scholars have not tendered any comments. In case of pure science faculties, 46.9% are happy to access library. A handsome amount of 40.6% pure science teachers suggested for enrichment of resources in university library. 12.5% faculties also have silent on satisfaction of university library visiting. (Figure –16)

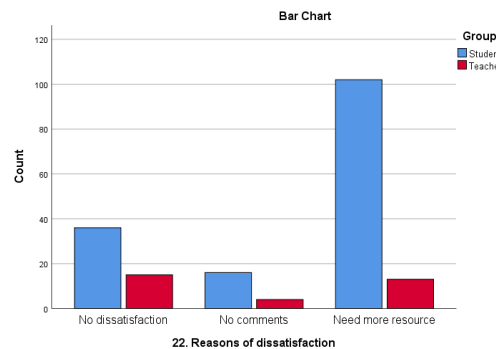


Figure 16 Unwillingness of University library access

			Group		Total
			Research scholar	Teacher	
Up-gradation of University library infrastructure	Yes	Count	128	29	157
		% within Group	83.1%	90.6%	84.4%
	No	Count	12	0	12
		% within Group	7.8%	0.0%	6.5%
	No comments	Count	14	3	17
		% within Group	9.1%	9.4%	9.1%
Total		Count	154	32	186
		% within Group	100.0%	100.0%	100.0%

Table 17 Up-gradation of University library infrastructure

The table illustrates that 84.4% pure science users have agreed with over all university library extension. 9.1% respondents have silent and 6.5% have disagreed on upgradation. Comparative study between research scholars and faculties of pure science deartments, 90.6% teachers and 83.1% scholar respondents have demanded on university extensions. “No comments” on upgradation in university infrastructure have suggested by 9.1% scholars and 9.4% teachers of pure science departments. Only 7.8% pure science research scholars have disagreement on over all library upgradation. (Figure –17)

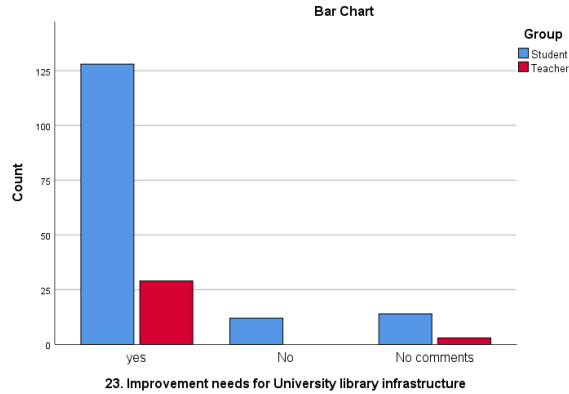


Figure 17 Up-gradation of University library infrastructure

			Group		Total
			Research scholar	Teacher	
University library services Up-gradation	Yes	Count	124	28	152
		% within Group	80.5%	87.5%	81.7%
	No	Count	18	1	19
		% within Group	11.7%	3.1%	10.2%
	No Comments	Count	12	3	15
		% within Group	7.8%	9.4%	8.1%
Total		Count	154	32	186
		% within Group	100.0%	100.0%	100.0%

Table 18 University library services Up-gradation

Table 18 illustrated that maximum 81.7% pure science departments’ faculties and research scholars have relied on the advancement in university library services. 10.2% respondents have felt that there is no need of advancement in library services. Only 8.1% pure science users have approved “no comments” regarding the upliftment of library facilities. In respect of two categories of respondents in pure science departments, 87.5% teachers and 80.5% scholars have trusted to university library enhancement. 11.7% scholars have disagreed and 7.8% have kept on silent. On the other hand, 9.3% faculties have remained silent and only 3.1% have disapproved for the library facilities development. (Figure – 18)

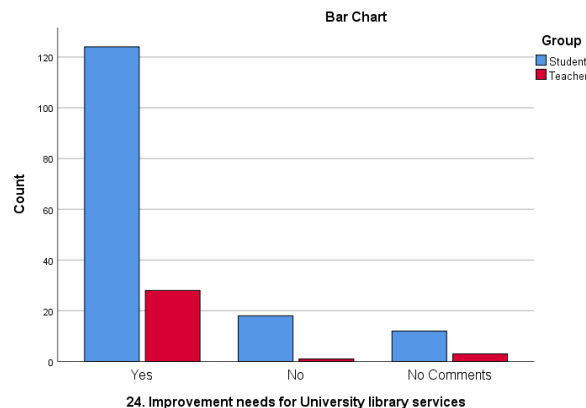


Table 18 University library services Up-gradation

Conclusion & Suggestion

The study has been made on users' needs and information seeking behaviour of scholars and teachers in Burdwan University. It reveals that this study was better understanding of pure science departments' scholars and teachers' information seeking behavior. 63% pure science research scholar respondents have self – motivated of using library. 78% pure science faculty respondents ensure self – motivation in using library. 46.2% access of school library is the highest starting point of all the pure science department respondents. Approaches of information seeking behaviour such as all types of search techniques like print, web documents, human resources, internet, search engine, database, keywords for searching information are applied for maximum of 95.7% scholars and teachers of pure science departments. 40.3% scholars and teachers of pure science departments have accessed information at 80% attainment as highest rate. 81.7% pure science departments' faculties and research scholars have relied on the advancement in university library services.

After studying the focal research content as stated in the title as well as the thorough presentation of research process, the following important suggestions have been opined:-

That the university library should develop collection according to the needs of every user. Research scholars are important and exhaustive users of the library. They need some specific sources for their research work. Libraries should focus on their demand at the time of accessing information sources in the library. Integrated university library services should be very crucial for the research scholars. Without user education and special training users are unable to take optimum use of library services and library collection. Users need some special skills to acquire needed information from IT based information sources. University libraries should make a time schedule for users' orientation programme. It is very essential to arrange some special training programs for the users in the period of ICT. University library should regularly conduct the user awareness programs, orientation programme, seminars, workshop to enrich and marketing university library services to the vast users. University library times should be increases as per requirement of users. Libraries should subscribe consortia based resources, abstracting/ indexing database, full text database, citation database on several subjects as per the assessment of users' requisition. Library and information science professional staff should be increase in university library for the content developments of library as well as for various services. The university library should conduct the staff training programme regularly in respect of advancement of library technology. Library staff also needs special training for marketing of effective library services and bridge the gap between users and the resources. In the 21st century supersonic age univesity library should make good feel arrangements of infrastructures to the users. The integration between University publication division and university library should achieve the marketing and archiving of university as well as library resources and services for the benefit of users.

Bibliographical References

Borgman, C.L. (2009) "Scholarship in the Digital Age: Blurring the Boundaries between the Sciences and the Humanities (Keynote Talk)" Digital Humanities Conference. College Park, MD. Jun. 2009. Available at: <http://works.bepress.com/borgman/216>

- Brown, M. E. (1991). A general model of information-seeking behavior. Proceedings of the 54th American Society for Information Science, Annual Meeting, 28, 9-14.
- Dallmeier-Tiessen, S., Goerner, B., Darby, R., Hyppoelae, J., Igo-Kemenes, P., Kahn, D., Lambert, S., Lengenfelder, A., Leonard, C., Mele, S., Polydoratou, P., Ross, D., Ruiz-Perez, S., Schimmer, R., Swaisland, M., van der Stelt, W. (2010). "Open Access Publishing - Models and Attributes", The SOAP Consortium, 2010. Available at 16 <http://edoc.mpg.de/get.epl?fid=71514&did=478647&ver=0>
- Das, A. K. and Mandal, S. (2021). Information needs and Information Seeking Behaviour of Faculty and Research Scholars of the Department of Mathematics under the University of Burdwan – An Appraisal" (2021). Library Philosophy and Practice (e-journal). 5277. <https://digitalcommons.unl.edu/libphilprac/5277>.
- Ellis, D. (1989a). A behavioural approach to information retrieval system design. Journal of Documentation, 45 (3), 171-212.
- Ellis, D. (1989b). A behavioural model for information retrieval system design. Journal of Information Science, 15 (4-5), 237-247.
- Ellis, D. (1993). Modeling the information-seeking patterns of academic researchers: A Grounded Theory approach. Library Quarterly, 63 (4), 469-486.
- Ellis, D. and Haugan, M. (1997). Modeling the information seeking patterns of engineers and research scientists in an industrial environment. Journal of Documentation. 53(4). Pp. 384-403
- Ellis, D., & Haugan, M. (1997). Modeling the information seeking patterns of engineers and research scientists in an industrial environment. Journal of Documentation, 53 (4), 384-403.
- Ellis, D., Cox, D., & Hall, K. (1993). A comparison of the information seeking patterns of researchers in the physical and social sciences. Journal of Documentation, 49 (4), 356-369.
- Kuhlthau, C. C. (1983). The library research process: Case studies and interventions with high school seniors in advanced placement English classes using Kelly's theory of constructs. Unpublished doctoral dissertation, Rutgers, The State University of New Jersey.
- Kuhlthau, C. C. (1988). Perceptions of the information search process in libraries: A study of changes from high school through college. Information Processing & Management, 24 (4), 419-427.
- Kuhlthau, C. C. (1994). Impact of the information search process model on library services. RQ, 34 (1), 21-36.

- Kuhlthau, C. C. (1999). Accommodating the user's information search process: Challenges for information retrieval system designers. *Bulletin of the American Society for Information Science*, 25 (3), 12-16.
- Kuhlthau, C. C. (1991). Inside the search process: Information seeking from the user's perspective. *Journal of the American Society for Information Science*, 42 (5), 361- 371.
- Kuhlthau, C. C. (1993). *Seeking meaning: A process approach to library and information services*. Norwood, NJ: Ablex Publishing Corp.
- Leckie, G. J., Pettigrew, K. E., & Sylvain, C. (1996). Modeling the information seeking of professionals: A general model derived from research on engineers, health care professionals, and lawyers. *Library Quarterly*, 66 (2), 161-193.
- Maron, N. and Smith, K.K. (2008). "Current Models of Digital Scholarly Communication: Results of an Investigation Conducted by Ithaka Strategic Services for the Association of Research Libraries", available at: <http://www.arl.org/bm~doc/current-modelsreport.pdf>
- Muench, V. (2011). "Open Access shaking the basics of academic publishing", Online, Jul/Aug 2011, pp. 18-21.
- Rowlands, I. and Fieldhouse, M. (2007), "Information behaviour of the researcher of the future", Work Package I: Trends in Scholarly Information Behaviour, available at: www.jisc.ac.uk/media/documents/programmes/reppres/ggworkpackagei.pdf
- Vilar, P. and Žumer, M. (2011), "Information searching behaviour of young Slovenian researchers", *Program: electronic library and information systems*, Vol. 45 No. 3, pp. 279-293. <https://doi.org/10.1108/00330331111151593>