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## Information Seeking Behavior in Digital Environment: A study of Post Graduate and PhD Students of Odisha University of Agriculture and Technology, Bhubaneswar

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# Information Seeking Behavior in Digital Environment: A study of Post Graduate and PhD Students of Odisha University of Agriculture and Technology, Bhubaneswar

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## Abstract

*Information seeking behavior (ISB) is defined as a human habit that entails a conscious search for information in order to fill a gap. In a University, a user visits the university library first when he/she needs information. The information seeking behavior varies for different user categories. Examining the information demands and behaviors of agriculture students, particularly those at OUAT, is the main goal of this study. A well-structured questionnaire was used to collect data for this research. A total of 245 fully completed surveys, representing an 87.5 percent response rate, were returned from 380 surveys distributed to graduate (PG) and doctoral (PhD) students from various colleges and departments. The results indicate that most resources and services are useful, and that the use of ICT in libraries has had a significant impact on the information seeking behavior of PG and PhD students at the Odisha University of Agriculture and Technology in Bhubaneswar.*

**Keywords:** *Information Seeking Behavior; Users Studies; Library Resources & Services; User Satisfaction; OUAT; Odisha*

## Introduction:

It's on pace for the information age. The impact of information and communication technology (ICT) on all facets of life has been referred to as the "Information Age." In the age of ICT infrastructure, knowledge is a vital resource for an individual's or a country's overall development. Information is a basic resource that is an essential component of human activity and is crucial to a nation's growth in science and technology. In both our personal and professional life, information is crucial. Information is becoming more widely available through numerous channels, both formal and informal, and is available in a variety of formats, including primary, secondary, and tertiary. Information has traditionally been regarded as a crucial component of academic and scientific endeavors. In any case, it is generally acknowledged that a person's primary perspective on information demands and information-seeking behavior is essential to their performance in both research and development. This is because finding information sources to satisfy information needs will necessitate the use of information searching, which is a crucial skill(Shaikh & Dodiya, 2021).

Information seeking behavior is the application of mindsets through a series of acts to meet desired information demands. Performance happens when attitudes and deeds are in sync. Based on the level of performance, the satisfaction level with the information acquired is determined. Information seeking behavior is the process through which humans look for and use information. Wilson coined the phrase

in 1981, claiming that the then-prevailing idea of "information needs" was useless as a research topic since "need" could not be observed directly but that "how people behaved in acquiring information" could be observed and investigated. An individual's efforts to express information needs, seek information, access and select information, and then use that information to fulfill those needs are collectively referred to as information seeking behavior. As a result of the digital age, human information behavior and processes are transforming. Because the process is nearly totally focused on information seeking and using, information receiving, a crucial modality of the process, is practically never taken into consideration. As information seeking continues to migrate to the Internet and artificial intelligence advances the analysis of user behavior on the Internet across a range of user interactions, information receiving moves to the center of the process as systems "learn" what users like, want, and need as well as how people look for, analyses, choose, and use information as well as their search habits. University libraries are essential in addressing users' information demands since they serve as a facility for teaching and learning activities. (Biswas, 2021). The university library is an important aspect of the educational process.

#### **About OUAT:**

Odisha University of Agriculture and Technology (OUAT) was established in Bhubaneswar in the year 1962 and is the country's second-oldest agriculture university. It offers courses in agriculture and allied sciences starting from undergraduate to postgraduate and PhD in some of the selected disciplines. Agriculture, Horticulture, Forestry, Agriculture Engineering, Veterinary Science, Home science, Agribusiness management, Computer science, Microbiology, and Bioinformatics are among the disciplines covered. The university has evolved throughout the decades to include eight colleges and one centre for postgraduate study, with a total annual intake capacity of 1459 students. The students and faculty of OUAT rely heavily on the Central Library, which is an integral part of the educational and research system. It provides information assistance and services, and acts as a hub of academic and research activities that contribute to achieving the university's goal. The Central Library serves a diverse group of people, including: undergraduate and postgraduate students, research scholars, scientists, teachers, administrators, and other university staff/employees in the main campus and outlying colleges and research stations(*About University | OUAT*, n.d.).

The Central Library is equipped with resources namely, more than a one lakh print books, subscribing to 85 print journals, 1364 e-books, 38,000 e-Books bundle, CeRA consortium, Krishikosh e-theses repository, etc. and facilities like automation, RFID and remote access, Turnitin—antiplagiarism tool, etc.

#### **Literature Related Review:**

Ali, Asifa and Jan, Sumaira (2020) in their paper "Information Seeking Behavior in Digital Environment : A study of Post Graduate Students at University of Kashmir" studied the purpose of information seeking of the PG students which unfolds that the major purpose of visit to the library was mainly for making notes and preparing for the examination. The students were satisfied with the existing collection of books. However, there was some amount of dissatisfaction regarding the internet facility and collection of subscribed Journals(Ali & Jan, 2020).

In his paper, "Information seeking behavior of professors and students of Allahabad University (AU) and Aligarh Muslim University (AMU): A Comparative Study" Biswas, Tarun (2021) suggested to eliminate an information gap on students' information needs and information-seeking habits. According to the study, AU students and teachers were happier than their counterparts at AMU. They regularly read newspapers and magazines, and they used the internet for professional advancement. The study also found that patrons usually came to the library to brush up on their knowledge, and they were generally pleased with the librarians' help. (Biswas, 2021).

Khan, Shakeel A. (2011) in his paper, "Information Needs and Information-Seeking Behavior: A Survey of College Faculty at Bahawalpur" has described about the various aspects of information seeking of the faculty members at Bahawalpur. To increase the efficiency of searching of information, few things may be taken care of. The college libraries should be updated with better facilities and collection with proper hardware and software, along with online access to related resources. To use such resources, prior training must be given the users. The study also found out that the faculty members were more conversant with books/monographs and face to face discussion with their colleagues and friends instead of the librarians. Hence there was a suggestion for librarians to improve their capability for helping the user community for better guidance(Khan & Shafique, 2011).

Oluwafemi, Emmanuel Sunday et al. (2013) in their paper "Information Seeking Behaviour of Graduate Students of University of Agriculture, Abeokuta, Nigeria: A Qualitative Approach" have discussed that the students' selection of resources was mostly influenced by their accessibility and usability. The obstacles preventing them from finding knowledge were lack of time, ignorance, information overload, and epileptic power supplies. Thus, it was recommended that the librarians to activate their capacity and to verify the information sources the students used to refer. They also have to increase their relevance and to teach the primary researchers to whom the students turn for information(Oluwafemi et al., 2013).

Partap, Bhanu. (2016) in his paper, "Information seeking behavior and satisfaction of library users in digital era: A case study of Chhaju Ram Memorial Jat College, Hisar (HR)" aimed to measure patron satisfaction with the library's information services, staff cooperation, and information resources. The majority of users were found to be satisfied with the library's book collection and services, according to the research. The author did, however, offer several significant recommendations for improving IT infrastructure and expanding the development of online resources, which could result in improved user services and more user happiness. (Partap, 2021).

### **Objectives of the Study:**

The study's major goal was to look at the information demands and information-seeking behavior of OUAT PG and PhD students. While the exact goals were as follows:

- ❖ To learn more about how PG and PhD students seek information.
- ❖ To determine how well PG and PhD students are aware of library resources and how they use them.

- ❖ To gain a better understanding of the information needs of OUAT students.
- ❖ To find out how frequently students visit the library and how they feel about the services offered.
- ❖ Determine how students prefer to access library materials.
- ❖ Determine the level of internet awareness and usage habits among student.
- ❖ To ascertain the difficulties that student's face in obtaining the information that they require.
- ❖ To determine how satisfied OUAT library users are with their information needs and the services provided by the library.
- ❖ To get a sense of the library's popularity among OUAT students.

### Methodology:

Any endeavor that involves doing a systematic analysis of a topic must have a solid foundation in research methodology. The survey method was used to conduct the current inquiry. Following comprehensive consultation with a topic expert, a structured questionnaire was developed for data collection and copies of it were sent immediately through email to the PG and PhD students at the Odisha University of Agriculture and Technology, Bhubaneswar (OUAT). All of the findings were provided in the form of tables and graphs. Microsoft Excel has been utilized to analyze the data. A total of 122 PG and 14 PhD students from various colleges and departments at OUAT were given the questionnaire. A total of 115 people out of 136 questionnaires returned with their views with an overall response rate of 84.55%. Following that, the obtained data was statistically evaluated in order to get insight into the objectives of the study.

### Analysis and Interpretation

#### Distribution of respondents:

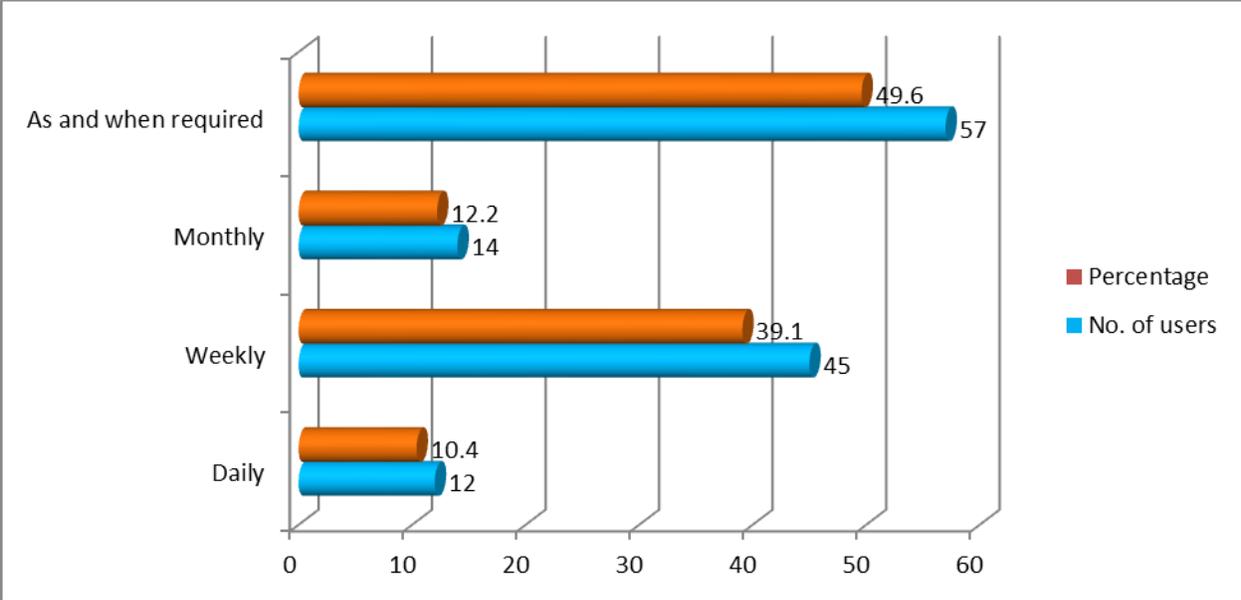
The survey which includes PG and PhD students is mentioned in Table 1. According to the data above, 136 questionnaires were sent out randomly to PG and PhD students, and 115 of them were received. Among the 115 respondents, there were 105 master's students and 10 doctoral students. The table above also displays the respondents' gender distribution. 84.55% of respondents overall responded.

Respondents	Questionnaire Distributed		Questionnaire Received		Response (%)
	Male	Female	Male	Female	
Post-Graduation	50	72	43	62	105 (91.30435%)
PhD Scholar	5	9	1	9	10 (8.695652%)
Total	136		115		84.55882

**Table 1: Distribution of respondents**

#### Frequency of visit to the library:

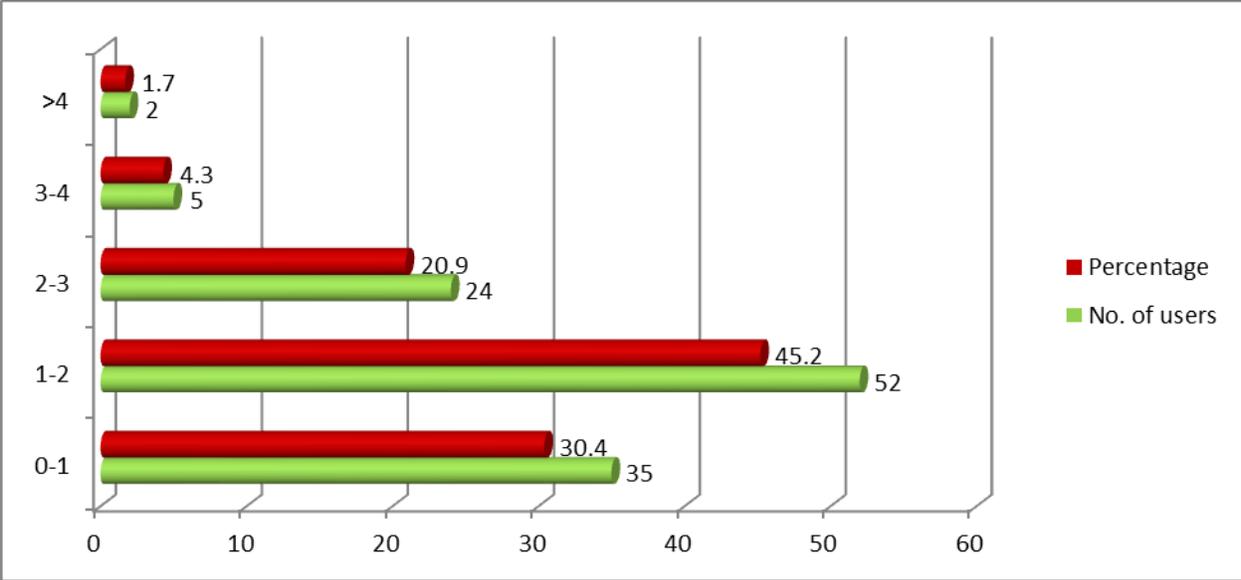
Figure 1 (Frequency of library visits) shows that the majority of users (49.6%) visit the library as and when required, followed by (39.1%) users who visit weekly, (12.2%) users who visit monthly and (10.4%) users daily. According to figure mentioned below, the frequency of library visits is highly related to students' information seeking behavior.



**Fig 1: Frequency of visit the library**

**Time spent in the library per day (in hours):**

Figure 2 shows that 45.2% of respondents spent 1-2 hours each day in the library, followed by 30.4% who spent 0-1 hour, 20.9% who spent 2-3 hours, 4.3% who spent 3-4 hours, and 1.7% who spent only >4 hours.



**Fig 2: Time spent in the library per day (in hours)**

### Purpose of Library Visit:

Table 2 shows that a large number of respondents, i.e. 77.40% were using the library to prepare for research work while 76.50% respondent's main purpose for using the library is to borrow the study material related to their course curriculum, 35.70% respondents using the library to use e-resources (databases, e-books, etc.), 26.10% were using the library to Know the new arrivals, 23.50% students were using the library for availing Internet services and 15.70% were using the library for other purposes respectively.

Purpose	Respondents (n= 115)	Response (%)
Borrow study materials	88	76.5
Prepare for research work	89	77.4
Know the new arrivals	30	26.1
Availing Internet services	27	23.5
Use e-resources (databases, e-books, etc.)	41	35.7
Any other	18	15.7

**Table 2: Purpose of Library Visit**

### Information Seeking Source (primarily):

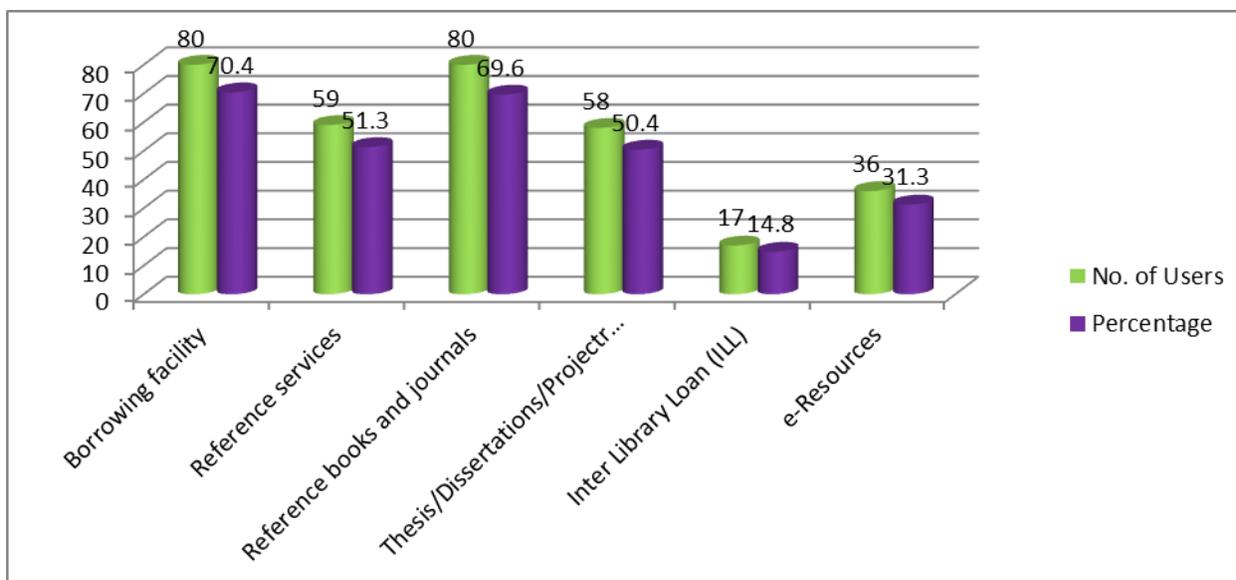
Users come to libraries for a variety of reasons. Respondents informed that their information-gathering methods were different from one another. Table 3 shows that the OUAT Library is the most popular information source (79.10%), followed by the Internet (53.90%), Research Guide (43.50%), Friends and Colleagues (29.6%), and Other Library (4.30%). (s).

Sources	Respondents (n= 115)	Response (%)
OUAT Library	91	79.1
Research Guide	50	43.5
Internet	62	53.9
Friends/colleagues	34	29.6
Other Library (s)	05	4.3

**Table 3: Information Seeking Source (primarily)**

### Use of the Library sources and services:

Users go to libraries to get the information they require. To meet their information demands, various users employ diverse sources of information and services. Figure 3 clearly shows that when it comes to using library sources and services, the majority of users (70.40%) choose Borrowing, followed by (69.60%) users who use reference books and journals, and (51.30%) users who utilize Reference Services. It is also discovered that just a small percentage of user use the borrowing service.



**Fig 3: Use of the Library sources and services**

#### **Purpose of Seeking Information:**

Table 4 makes it quite clear that users purpose of seeking information of a big majority of the respondents, i.e. 74.80% were using the library to write an article/thesis/project whereas 67.80% respondent's main purpose for using the library is To keep up-to-date on course subject, 38.30% respondents using the library for Solving the problem, followed by general Awareness (34.80%) respectively.

<b>Purposes</b>	<b>Respondents (n=115)</b>	<b>Response (%)</b>
To keep up-to-date on course subject	78	67.8
To write an article/thesis/project	86	74.8
Solving the problem	44	38.3
General awareness	40	34.8

**Table 4: Purpose of Seeking Information**

#### **Search Tools Used by Users:**

Libraries are valuable resource centre for meeting people' information demands. Libraries have a variety of methods for obtaining publications, such as library catalogue, OPAC, Print Card Catalogue, indexing and abstracting journals, and personal assistance from library staff, etc. To access required documents, users most commonly used search tools are presented in Table 5. The data show that the majority of OUAT users (53.90%) utilize both the OPAC and personal assistance from library staff, while (26.10%) use the Print Card Catalogue.

Purposes	Respondents (n=115)	Response (%)
OPAC	62	53.9
Print Card Catalogue	30	26.1
Personal help of library personnel	62	53.9

**Table 5: Search Tools Used by Users**

**Time of using e-Library of Central Library:**

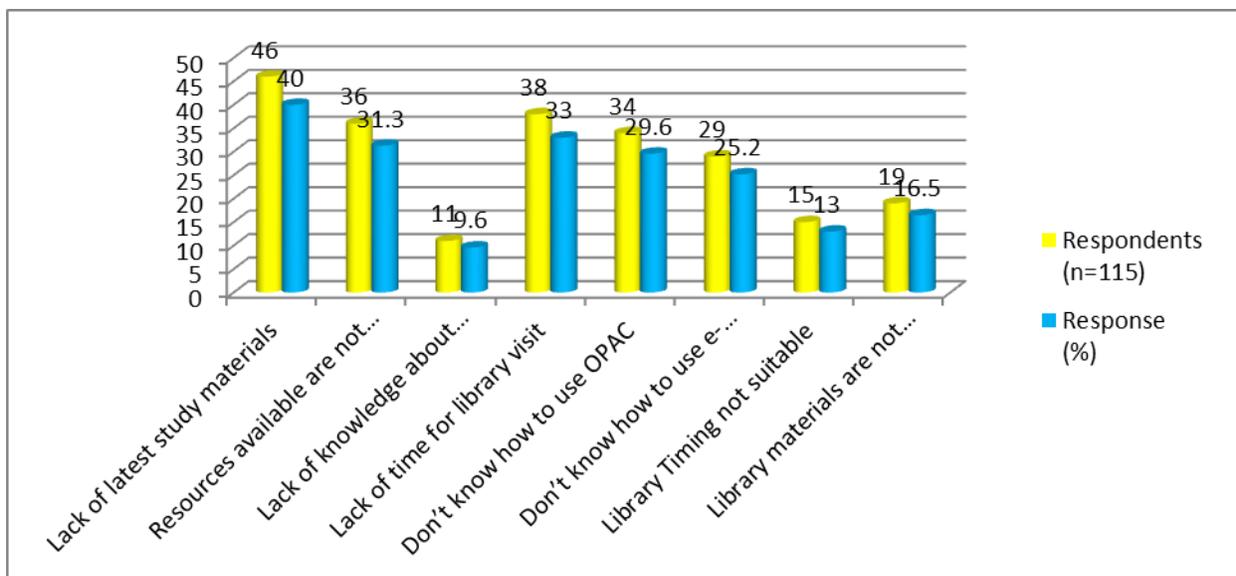
The e-Library of Central Library is well equipped with the required infrastructure and e-resources. It provides access to all e-resources through the computer systems available. Depending on their information demands and the goal of finding information, users spend varying amount of time browsing desired content within e-libraries. Table 6 shows that the majority of students (50.40%) spend less than 0.30 hours per day searching for information, followed by (41.70%) who spend 1 hour, and (12.20%) who spend 2 hours per day.

Purposes	Number of Users(n=115)	Number of Users (%)
0.30 hour	58	50.4
1 hour	48	41.7
2 hours	14	12.2
3 hours	4	3.5
4 hours plus	1	0.9

**Table 6: Time of using e-Library of Central Library**

**Problem faced while using the library:**

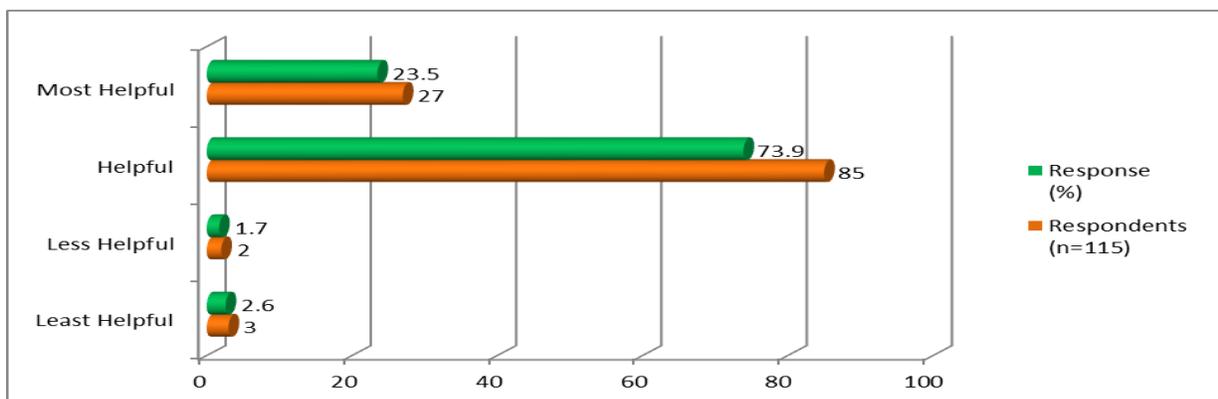
Figure 4 depicts the difficulties that respondents had when accessing the library. The majority of respondents (40.00%) were dissatisfied with the results, as seen in the figure below. Users complain about lack of current study resources, as well as lack of time to visit the library (33%). There are (29.60%) users who don't know how to use OPAC, (25.20%) users said they don't know how to use e-resources, (16.50%) users said library materials aren't correctly structured, and (13.00%) users claimed library timing isn't appropriate, and so on.



**Fig 4: Problem faced while using the Library**

#### How do you find the library staff?:

Figure 5 presents the nature of library staff towards the library users while using the library. It is clear from the table below that majority of the respondents (73.90%) said helpful, whereas (23.50%) users said most helpful, (2.60%) users are said least helpful and (1.70%) users said less helpful.



**Fig 5: How do you find the library staff?**

#### Use of e-resources/e-library and type of information source/channel preferably used:

The use of e-resources/e-library is highlighted in Table 7. The resources which are having highest usage are Krishikosh with (31.30%), followed by Plagiarism tool (turnitin) with (17.39%) and J-Gate Plus with (16.52%) respectively. Table 8 shows the types of information sources/channels that users choose to use. It illustrates that the majority of users prefer to read books (46.90%).

Resources	No Use	%	Basic Use	%	Moderate Use	%	High Use	%
AGRICOLA	26	22.61	44	38.26	38	33.04	7	6.09
Agriculture Science Database	17	14.78	45	39.13	42	36.52	11	9.57
BioOne Complete	29	25.22	47	40.87	37	32.17	2	1.74
CAB Direct	26	22.61	45	39.13	40	34.78	4	3.48
Environmental Science Database	17	14.78	49	42.61	46	40.00	3	2.61
Publication Finder	16	13.91	52	45.22	37	32.17	10	8.70
ASAPglobe	29	25.22	45	39.13	34	29.57	7	6.09
EBSCO eBooks	25	21.74	47	40.87	36	31.30	7	6.09
ProQuest eBooks	25	21.74	45	39.13	37	32.17	8	6.96
Taylor&Francis	26	22.61	43	37.39	39	33.91	7	6.09
J-Gate Plus	17	14.78	44	38.26	35	30.43	19	16.52
Krishikosh	7	6.09	33	28.70	39	33.91	36	31.30
Plagiarism Tool	12	10.43	39	33.91	44	38.26	20	17.39
Remote Xs	24	20.87	47	40.87	36	31.30	8	6.96

**Table 7: Use of e-resources/e-library**

Resources	No Use	%	Basic Use	%	Moderate Use	%	High Use	%
Books	1	0.87	32	27.83	28	24.35	54	46.96
Journals	3	2.61	36	31.30	45	39.13	31	26.96
Magazines	3	2.61	45	39.13	46	40.00	21	18.26
Newspapers	8	6.96	43	37.39	47	40.87	17	14.78
Encyclopedias/ Reference sources	6	5.22	52	45.22	36	31.30	21	18.26
Theses/reports	1	0.87	35	30.43	46	40.00	33	28.70
Online databases/e-books	8	6.96	38	33.04	43	37.39	26	22.61
Internet	9	7.83	33	28.70	37	32.17	36	31.30

**Table 8: Type of Information Source/channel preferably used**

**Satisfaction level towards different sections and adequacy of e-library (facilities/e-resources):**

Figure 6 shows how many users are satisfied and at what level in relation to certain sections. The study establishes six-section parameters and five satisfaction levels such as Very Dissatisfied, Dissatisfied, Okay, Satisfied, and Very Satisfied in this part. More than 80% of users express satisfaction with all sections, with only a small fraction expresses dissatisfaction with the Very dissatisfied levels. Overall,

Reference, Current Journal, e-library, and Thesis & Reports receive the highest level of satisfaction. Like that, Figure 7 clearly demonstrates the different twelve e-library facilities or services in the context of Satisfaction level towards adequacy of e-library (facilities/e-resources). More than (80%) of users express satisfaction with all e-library facilities/e-resources, whereas just a small number (less than 2%) express dissatisfaction with very dissatisfactory levels, similarly, more than (75%) expressing satisfaction with OKAY.

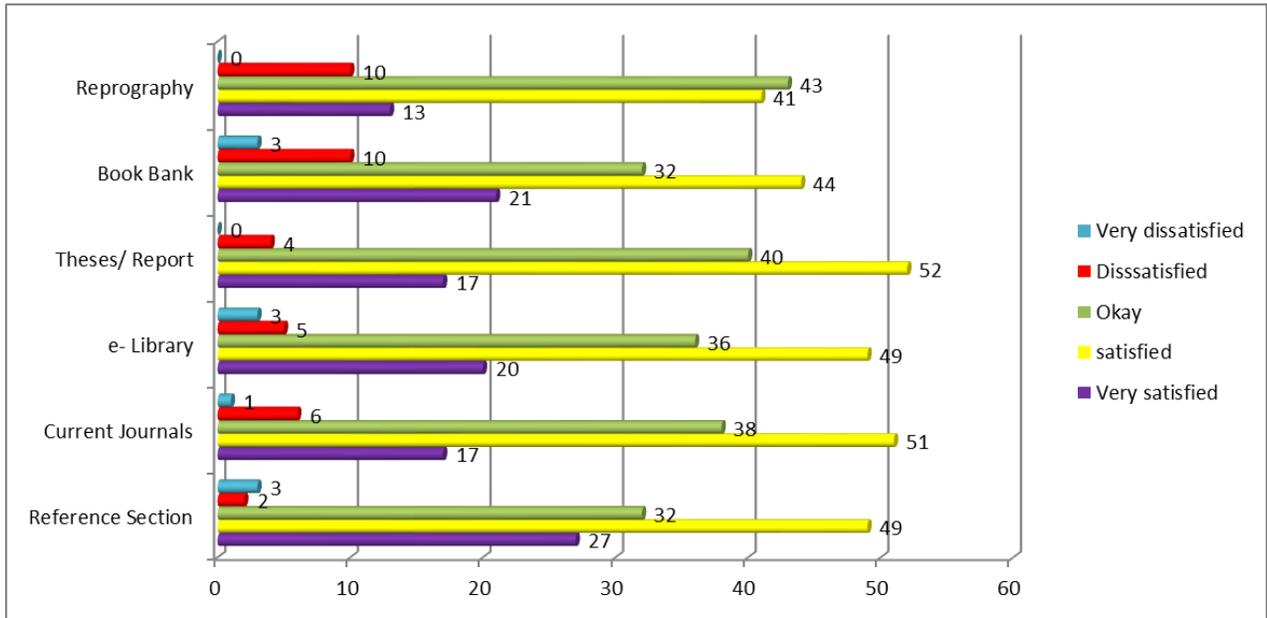


Fig 6: Satisfaction level towards different sections

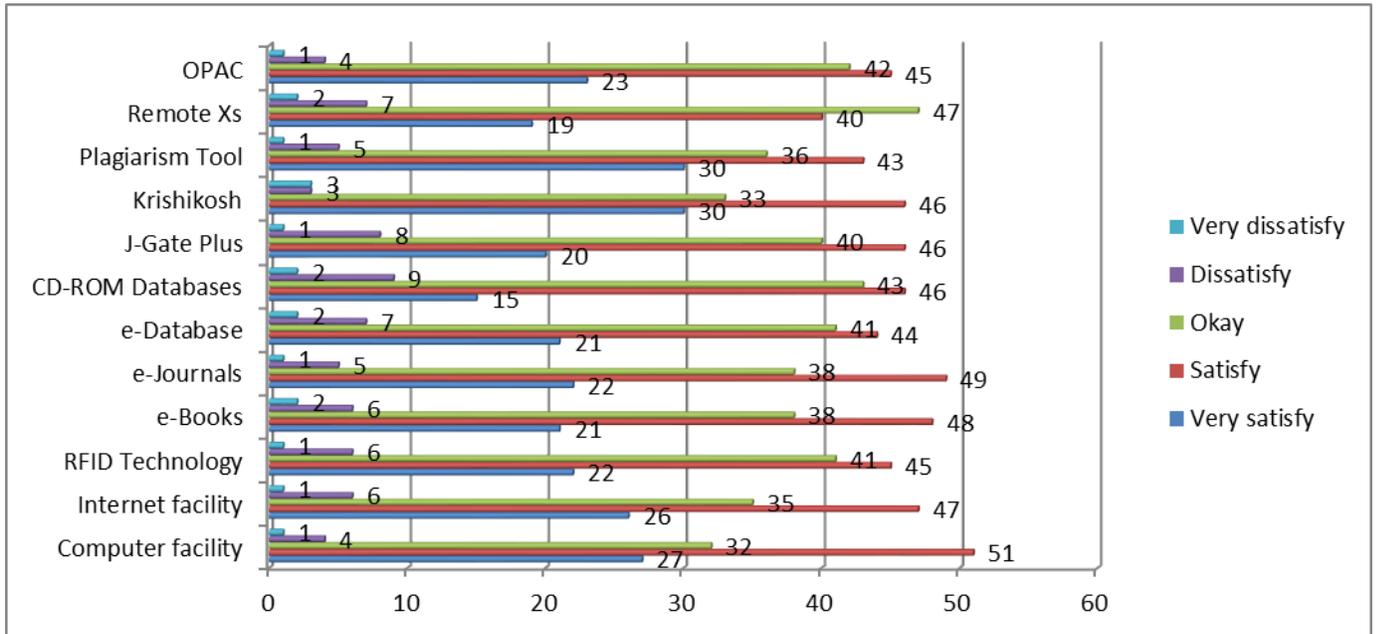


Fig 7: Satisfaction level towards adequacy of e-library (facilities/e-resources)

### **Finding:**

The central library serves the needs of the PG and PhD students at OUAT, Bhubaneswar, and does its best to provide necessary study material in a wide range of formats. The survey found that both PG and PhD students rarely visit the library, but that female students visit the library less frequently than male students. The maximum number of students visits the library to borrow books, read reference books and journals, periodicals, thesis and use reference material, according to the findings. In terms of satisfaction, central library did not receive the Very Satisfying response, but it did receive more than (50%) satisfaction level. In the context of e-library resources, Krishikosh, Plagiarism tools services, AGRICOLA, Agricultural Science Database, and J-Gate Plus are more often utilized, and users are happier with these resources than with others.

### **Suggestions:**

On the basis of the study's findings, the following suggestions could be made:

- ✓ The library's ICT infrastructure, as well as print and electronic resources and services, should be upgraded on a regular basis.
- ✓ The University/library management should have a proper collection development policy in place.
- ✓ Purchases of new edition books should be prioritized in the library.
- ✓ To guide and help students, library employees must be well-trained in handling current developments in library tools.
- ✓ Regular training / orientation programmes on information search technique, Library Orientation, and other topics should be provided so that library patrons to understand how to use the resources.

### **Conclusion:**

The research revealed certain key facts and data regarding information demands, information seeking behavior, library resource utilization, and services provided by the Central Library of Odisha University of Agriculture and Technology (OUAT). To effectively encourage the use of information/library resources, it is necessary to improve the physical infrastructure for readers, provide computers and easy access to the Internet, and create an appropriate web page for the university library with links to need-based e-resources/data. These actions would improve student satisfaction with library materials and services and increase the frequency of library visits.

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