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Use Analysis of Various LIS Open Access Resources in Pandemic Situation in Odisha State. A Survey Include LIS User's Opinion

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ABSTRACT

This study looks at how students and researchers in Library and Information Science in the Indian state of Odisha use Open Access Resources (OARs) and how much they know about them. We used an online questionnaire to get the information we needed, and then we used SPSS V.22 and MS Excel to analyse the information. In this study, a number of Open Access resources, Open Educational Resources (OERs), and Open Course Wares (OCWs) were described, and the level of users' awareness of these resources was also looked at. What are the main factors that encourage students and researchers in Odisha to use open access resources as much as possible? These factors were also brought up in the study. Pearson's correlation was used to find out if there was a link between knowing about open access resources and using them. What are the main ways that people in Odisha found out about open access resources? This study also looked at the things that make people less likely to use open access resources, such

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as OERs and OCWs. It also looked at how satisfied users are with these OERs and OCWs.

KEYWORDS: Open access resources; LIS in Odisha; LIS repositories; LIS archive.

INTRODUCTION

If we look at how our society has grown and changed from the beginning, we can see that information has been a big part of this. The role of data, information, and knowledge is seen as important not only for the development of society as a whole, but also for the development and decision making of the government and other private agencies. We can also say that if someone wants the country to improve, he or she should know how to manage, store, access, and share information properly. For instance, if we think of the whole country as a company that makes steel, then data or information is the raw material for the company. How well the raw material works will affect how well the steel turns out. So, we now call these data and information resources of the society.

Open access resources (OARs) are resources that anyone can use for free. Some of these resources are data, datasets, books, and articles, some of which are scholarly research articles. Here, the resources can be used, shared, and used again. We can also say that this is an effort to make a researcher more productive in their work. According to the Budapest Open Access Initiative from 2002, "open access" means "free availability on the Internet, allowing users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other legal purpose, without financial, legal, or technical barriers other than those that come with getting access to the Internet itself."

On the other hand, Open access is not the same as Open Source or Open Licensed. The main goal of Open access is to read and look at information, whereas the main goal of Open Source is to change and modify the source code.

For example, Linux is an Open-Source operating system, and The Turkish Online Journal of Distance Education is an Open access journal.

RELATED WORK

This chapter represent a review of relevant literature which are significance to this study. A systematic literature review has been conducted by using these three broad outlines;

1. Concept of Open access (OA).
2. Awareness of Open access resources.
3. Use of Open access resources in Odisha.

Concept of Open access (OA)

In the first part of the literature review, we looked at important research papers to figure out what Open Access is and what it means. In this first section, we also talk about some of the things that some international groups have said are important for open access.

Open access (OA) is not an old idea. It is still in its early stages. Bailey Jr. says that C. W. (2007), the idea of "open access" is still changing, and so are the documents on which it is based. So, we can say that the term "open access" doesn't just mean scholarly articles or journals, but also other kinds of documents and information. According to the Budapest Open Access Initiatives (OPAI), there are two strategies that work together to make scholarly journal literature easier to access.

Self-Archiving is a system in which scholars have to put their cited journal articles in an open electronic repository so that anyone can use them.

Open-access journals: Scholars have to send their articles to a new kind of journal that is open and, in some ways, free of charge.

Swan, A., and Brown, S. found that two of the reasons why many authors choose open access journals are that the journal is free and open to all users and that it is published faster. (2004). In this study, the author has divided the authors into two groups: those with open access (OA) and those without (NOA). Bjork, B. C., Welling, P., Laakso, et al. (2010) did research to find the open-access scientific journals that were randomly taken from Web of Science, Scopus, DOAJ, etc. in 2009. Where the author found that OA availability across all fields was about 20% of the total availability. Predatory publishers are one bad thing about open access journals, and they also hurt researchers and authors in different ways, both on purpose and by accident. "Open-access (OA) literature is digital, online, and free of most copyright and licencing restrictions," says Suber (2006). In this study, the author gave a clear explanation of the idea of "open access." Eysenbach, G. did a study on this. (2006) to find out how citations affect Open Access. The author found that the OA (Open Access) groups have more citations than the non-OA groups. To find out how citations affect open access, the authors used adjusted, rough, and secondary analysis. As per Harnad, S. (2015), where he spelled out 8 of the most important OA requirements to meet the open access initiatives. In his study, he found that about 60% of non-OA journals have already agreed to green open access self-archiving, and 20% of the world's journals are gold open access journals. C. W. Bailey Jr. (2008) did a study called "Open access and libraries." In it, the author pointed out some things that open access publishing should have. The author looked at the Budapest Declaration, the Berlin Declaration, and the Bethesda Statement on Open Access Publishing.

Awareness of Open access resources

In the first section, we learned what Open access is, what it means, and what it looks like. In this part, we'll talk about how students, researchers, and authors from all over the world use and know about Open access resources.

A study by Veena, G., et al. (2016), the author found that teachers and research supervisors are the most important people to tell students about open access resources. Some of the most common types of information that can be accessed through open access resources are e-books, e-journals, and databases. When asked why they use open access resources, most respondents said it was for studying, research, and projects. A study also found that the covoid-19 pandemic has a big effect on resources that are open to everyone. Scholar, A. F. A. P., and Scholar, Q. U. A. S. P. (2020) did a study in Pakistan, and the authors pointed out that the government has taken steps to make better use of open access resources during this pandemic. Muthuvennila, S., and Thanuskodi, S., also did a survey. (2018) to find out how PG students in India use open access resources and how well they know about them. They used a questionnaire to get the information, and the results of the study show that all of the people who filled out the questionnaire knew what "open access" meant. In India, the biggest problems for postgraduate students are a lack of internet access, slow internet, and too much information.

An author named Grandbois, J., and Beheshti, J., did a bibliometric study. (2014) to learn about the articles written by LIS authors that are available to the public. From the past to the present, open access publishing has become more popular, and most of the papers that are published in open access are research papers. Sawant, S. (2013) wrote a paper called "Open Access Resources Useful in LIS Education." In it, he described the different kinds of open access resources that are available now. The different types of open access resources are open access library science repositories, a library science dictionary, electronic theses and dissertations, open access course materials, open access search engines, open access journals, open access books, open-source software,

posters and slides, and an open access repository directory. A reader satisfaction survey was done by Thaotip, L., and Nimnoi, R., to find out what effect the new journal in library and information science in Thailand had. (2013). The author chose the Asia Pacific Journal of Library and Information (APJLIS) journal and found that readers and researchers are very interested in publishing their work because it is open. Researchers in library and information science like open access journals, and it's easier for researchers to join the editorial boards of open access journals than other journals.

Chinnadurai, D., and Tamizhchelvan, M. did a study to show off some of the open access resources in the DOAJ, DOAB, and DOAR directories. (2019). The author chose three broad fields: Social Science, Science and Technology, and Medical Science. In Social Science, the author found that more research papers had been submitted than in the other two fields. The most papers are written in English than in any other language. According to Thaotip, L. (2011) wrote a paper called "Impact of Open Access Resources on LIS Scholars in Thailand." In it, he talked about some of the things that researchers in Thailand have that make them interested in open access resources. According to the data that was looked at, the Internet is a major way to let people know about open access resources. As far as open access repositories go, the OCLC research publication repository is the one that Thai universities use the most. To find out what's going on with the Kenya university library written by Wasike, J. M. (2013) wrote an article in which he found that the idea of "open access resources" wasn't fully and explicitly put into practise because people didn't have the right skills, policies for self-archiving, or training. Das, S. Mazumder, and S. Sarkar found that E-Gyankosh, E-PGpathasala, and NIOS are some of the most important Open Educational Resources in the LIS field. (2018), "Impact of Open Access Educational Resources in Library and Information Science Domain: A Study." Obuh, A. O., and Bozimo, D. O., have done some research in Nigeria. (2012), where a descriptive survey method was used and 141 lecturers from 14 universities in south Nigeria were chosen. The results show

that lecturers only send a small number of papers to open access journals, even though most of the people who filled out the survey knew what open access journals were.

Again, the fact that open access is free and online is making more undergrads use it. On the other hand, irrelevant and too much information can be a problem when trying to get information from open access resources. Musa, A. U., et al. (2017) did a study to find out what the pros and cons of open access resources are. Some of the biggest pros are that open access resources are free, give current information, and meet needs. Some of the biggest cons are that gender, age, and marital status are some of the biggest problems with open access resources. Results also show that there was a link between knowing about open access resources and how much research was done. Bala, S., Bansal, S., and Sharma, Y. found that most people use open access resources to find research papers, e-newspapers, and articles. (2018) in his paper "Awareness of Open Access Resources among Researchers at Punjab Agricultural University." Respondents use open access resources every day for class work, research, and other things. Most people learn about open access resources through the Internet and library classes. Kurian, B., & Nagarajan, M. (2018) teach the faculty about open access resources and how to use them. According to the data that was analysed, most of the people who answered the survey use open access resources for research and self-study. Accessing open access resources can be hard because it takes too long, you don't have enough time, and there aren't enough search tools.

Use of Open access resources in Odisha

In the last part of the literature review, there is some well-known writing that has been published as a result of research on open access resources, how people know about them, and how they can be used, with a focus on Odisha, India.

Majhi, S., Baral, S., & Maharana, B. (2018) in their paper "Perceptions of Scholarly Publishing in Open Access Routes: A Survey of LIS Professionals in Odisha" talked about how users are seen when they publish through open access routes. The authors chose library professionals and LIS teachers from all over Odisha to find out what they thought, and they used an online survey to gather information. There is a lot of evidence that shows how important age is for LIS teachers and professionals to know about open access resources. Teachers and professionals who are younger are more aware of the world than those who are older. Citation is the most important reason why research papers are published in open access journals. This means that papers published in open access journals get more citations. The Article Processing Fee (APF) is the main thing that makes authors less likely to publish in open access journals.

Shodh Gangotri is a big open-access database of summaries that people all over India use. Khode, S., did some research. (2019) to figure out how people contribute to this repository. Data shows that, compared to other states, Rajasthan has the most submissions to this open access repository (58.74 percent of the total) and Odisha has the fewest (0.17%) until 2019. Maharana, B., et al. explain the idea of self-archiving by using E-LIS, which is an open access repository. Based on the data that was looked at, India has contributed more to this open access repository than any other country.

METHODOLOGY

This chapter talks about how to collect data, how to sample data, and how to analyse data so that the results of this study are useful. This chapter's subheadings are: Research Design, Population of the Study, Sampling Method and Sample Size, Procedure for Collecting Data, and Method for Analyzing Data. In this study, a self-made online questionnaire and Whats App software are used as tools. The questionnaire was made using a Google form and sent to students and researchers who already know each other. They were asked to send the same questionnaire to other students and researchers using Gmail and Whats

App. After that, they gave other respondents their contact information in the field of LIS. The questionnaire is divided into three parts. The first part is about the respondent's demographics, the second part is about how the respondent knows about and uses OAR, and the last part is about how the respondent knows about and uses specific types of OAR. The survey was sent to all of the Library and Information Science students and research scholars in each university who will graduate in 2021. Students were given 90 questionnaires, and 74 of them (or 82% of them) were filled out and sent back, making them usable.

RESULTS AND DISCUSSION

After collecting data, it is analysed to find out things like its demographic nature, its level of awareness, how it is used, how it sees open access resources, problems it faces, and how satisfied it is with open access resources. For better and clearer understanding, each analysis has a table that explains itself and a figure (Pie Charts, Bar Graphs, etc.). This chapter also talks about the study's findings and what they mean.

Response Rate & Demographic Analysis of Data

In the first analysis, the response rates are looked at, and it was found that 74 (77.89 percent) of the surveys were returned, which is a good number. According to the university-by-university analysis, both Sambalpur University and Fakir Mohan University (FMU) had a high response rate, which was 100%. Only 8 responses came in from the Utkal University, which is 42.10 percent.

S/N	Universities	Distributed	Received	Response Rate (%)	Cumulative %
1	Fakir Mohan University (FMU)	18	18	100	100
2	Gangadhar Meher University (GMU)	21	20	95	195
3	Sambalpur	19	19	100	295

	University (SU)				
4	Utkal University (UU)	15	8	53	348
5	North Odisha University (NOU)	17	9	53	401
Total		90 (100%)	74 (100%)	82	

[Table – 2 Response rate of the respondents]

The data shows that the number of female respondents is higher than the number of male respondents. Table 3 shows that 29 (39.18%) of the respondents are men and 45 (60.81%) are women.

Gender (n= 74)	**FMU**	**GMU**	**SU**	**UU**	**NOU**	**Total**	**%**
Male	4	9	7	4	5	29	39.18
Female	14	11	12	4	4	45	60.81

[Table – 3 Gender wise respondents]

Awareness towards Open access resources

The linear scale was used to get the information about how well people know about open access resources in general. Based on the level of awareness, it was found that students and researchers at Sambalpur University are more aware of open access resources, with a mean value of 2.6500. After that comes Fakir Mohan University with a mean value of 2.5263 and then North Odisha University with a mean value of 2.5556.

S/N	**Universities (n=74)**	**Mean**	**SD**	**Variance**
1	FMU	2.5263	.77233	.596

2	GMU	2.3810	.74001	.548
3	SU	2.6500	.74516	.555
4	UU	2.5000	.75593	.571
5	NOU	2.5556	.52705	.278

With a p-value of 0.05, Chi-square analysis shows that there isn't a big difference between how aware users are of open access (60.81 percent of female users and 39.81 percent of male users know something about it).

[Table- 4 Awareness about Open access]

Variables		**Total**	**%**	**x^2**
Gender	Female	45	60.81	5.529* Df=2 p = 0.063
	Male	29	39.18	
Total		74	100	

***Significant at 0.05 level**

[Table – 5 Relation between Gender and awareness level]

Analysis of Some Statements with Gender

With a p-value of 0.05, the Chi-square analysis showed that there was no significant relationship between users' attitudes and the fact that most males (32.43%) and females (55.40%) used open access resources for school. With a p-value of 0.05, 24.32% of men and 43.24% of women agreed that the Covid-19 pandemic makes more people use open access resources. When it comes to statement 3, there isn't a big difference between men and women, even though most men (18.92%) and women (31.08%) don't know about the green, gold, white, and other open access publishing models. But most of the men and women who answered the survey said they were familiar with the idea of self-archiving in research publication. Also, when it comes to statements 5 and 6,

there is no significant relationship between how aware users are of pre-print and post-print (with a p-value of less than 0.05). Most male users (17.57%) and female users (35.14%) said they knew what pre-print was, and most male users (20.27%) and female users (33.78%) said they knew what post-print was. But most men and women know about the idea of Sherpa/Juliet and Sherpa/Romeo, according to research publications.

		Gender				
Statement	**Response**	**Male**		**Female**		**Chi-square (p-value) N=74**
		N	**%**	**N**	**%**	
1. Do you use open access resources for academic purpose?	Yes	24	32.43	41	55.40	X^2 at 2df = 1.733* df=2 p = 0.420
	NO	5	6.75	4	5.40	
2. Do you think the use has been increased in Covid-19 situation?	Yes	18	24.32	32	43.24	X^2 at 2df = 0.965* df=2 p = 0.617
	NO	1	1.35	3	4.05	
	May be	5	6.75	5	6.75	
3. Do you know "Open Access Publishing models e.g., gold OA, green OA etc."?	Yes	10	13.51	15	20.27	X^2 at 2df = 0.066* df=2 p = 0.967
	NO	14	18.92	23	31.08	
	May be	5	6.76	7	9.46	
4. Do you know "Self-archiving"?	Yes	15	20.27	22	29.73	X^2 at 2df = 0.638* df=2 p = 0.727
	N0	8	10.81	16	21.62	
	May be	6	8.11	7	9.46	
5. Do you know "Preprint"?	Yes	13	17.57	26	35.14	X^2 at 2df = 1.546* df=2 p = 0.462
	NO	10	13.51	10	13.51	
	May be	6	8.11	9	12.16	
6. Do you know "Post print"?	Yes	15	20.27	25	33.78	X^2 at 2df = 1.691* df=2 p = 0.429
	NO	10	13.51	10	13.51	
	May be	4	5.41	10	13.51	
7. Do you know "Sherpa/Juliet"?	Yes	10	13.51	22	29.73	X^2 at 2df = 1.740* df=2 p = 0.419
	NO	16	21.62	18	24.32	
	May be	3	4.05	5	6.76	
8. Do you know "Sherpa/Romeo"?	Yes	10	13.51	23	31.08	X^2 at 2df = 2.017* df=2 p = 0.365
	NO	16	21.62	18	24.32	
	May be	3	4.05	4	5.41	

[Table – 6 Comparison of statement with gender]

Specific Purpose of using Open access resources

Most of the people who answered the survey (40.54 percent) use open access resources to learn new things every day. After that, some of the respondents (32.43%) use it for school-related activities. Then, 29.72% use it to prepare for class assignments, and so on. Only 4% of the people who answered the survey use open access resources to do research.

S/N	Variables (n=74)	FMU	GMU	SU	UU	NOU	Total (%)
1	To Update my knowledge	9	10	4	5	2	30(40.54%)
2	To meet my need for the curriculum	6	6	5	4	3	24(32.43%)
3	For preparing Class assignment	4	7	6	2	3	22(29.72%)
4	For doing Research Project	5	3	1	1	2	12(16.21%)
5	Updating subject knowledge	1	5	1	2	1	10(13.51%)
6	Teaching/ learning purpose	1	2	0	2	0	5(6.75%)
7	Research work (i.e., M.Phil.., Ph.D.)	1	1	1	1	1	5(6.75%)
8	Writing research papers/articles	1	0	2	0	1	4(5.40%)
9	Any other	1	0	1	0	1	3(4.05%)

[Table - 7 Specific purpose of using Open access resources]

Frequency of Using Open access resources

Here, the data show that most of the people who answered the survey (27.07%) use open access resources every single day. Secondly 18 (24.32 percent) of the respondents uses open access resources more than 3 times in a week followed by 17 (22.97 percent) respondents uses 2 times in week.

Time taken	FMU	GMU	SU	UU	NOU	Total	%
Every Day	9	5	4	2	5	20	27.07
2 times in a Week	4	6	4	2	1	17	22.97
3 times in a Week	3	0	6	1	3	13	17.56
More than 3 times in a Week	2	9	5	3	0	18	24.32

[Table – 8 Time spent for using Open access resources]

4.3.7 Kinds of information searched and used in open access resources

Table 9 shows that journal articles are the most used resource, and that most respondents (52.70%) use open access resources to get them. After that, 35.13 percent of respondents use it for web pages or blogs, 31.08 percent use it for book chapters, and only 9.45 percent use it for conference or seminar papers.

Kinds	FMU	GMU	SU	UU	NOU	Total (%)	Rank
Journal Articles	12	11	9	4	3	39(52.70%)	1
Web pages/Blogs	7	7	4	5	3	26(35.13%)	2
Research reports	7	5	5	3	2	22(29.72%)	4
Review papers	5	2	3	1	4	15(20.27%)	5
Book/ book chapters	10	8	1	2	2	23(31.08%)	3
M.Phil., Ph.D. Thesis/ Dissertation	4	5	2	3	1	15(20.27%)	5
Conference/ Seminar Paper	4	1	1	1	0	7(9.45%)	7
Bibliographic information	6	3	0	1	1	11(14.86%)	6

[Table – 9 Kinds of resources searched by using open access resources]

Awareness & Use Analysis of OERs (Indian Origin)

According to the Pearson Correlation analysis, there is a statistically significant linear relationship between the use of and awareness of different OERs and OCWs with Indian roots (r=0.882, p0.01). Data shows that most of the respondents from the state of Odisha (72.97 percent) use eGyanKosh as opposed to other. e-PG Pathshala came in second, with 53 (71.62 percent) respondents backing it. NIOS Open Educational Resources came in third, with 43.24 percent of respondents backing it. Finally, 25.67 percent of respondents use Consortium for Educational Communication (CEC).

Based on how often Indian-origin OERs are used, data shows that E-PG Pathshala is used the most. This is supported by 50 (67.56%) of the respondents. After that, 54.05 percent of respondents chose eGyanKosh, 29.72 percent chose NIOS Open Educational Resources, and 18.91 percent chose Consortium for Educational Communication (CEC).

Variables	**OERs (Indian Origin)**	**FMU**	**GMU**	**SU**	**UU**	**NOU**	**Total (%)**	**Correlation ®**
Awareness	E-PG Pathshala	11	18	13	6	5	53(71%)	
	eGyanKosh	14	17	14	4	5	54(72%)	
	NIOS Open Educational Resources	6	11	9	3	3	32(43%)	
	Consortium for Educational Communication (CEC)	3	7	5	2	2	19(25%)	r = 0.882 Sig. (2-tailed).000
Uses	E-PG Pathshala	12	14	13	6	5	50(67%)	

	eGyanKosh	10	11	9	4	6	40(54%)	
	NIOS Open Educational Resources	5	7	4	2	4	22(29%)	
	Consortium for Educational Communication (CEC)	6	5	2	1	0	14(18%)	

[Table- 10 Awareness and uses of Indian OERs]

**. Correlation is significant at the 0.01 level (2-tailed).

Awareness & Use Analysis_of Various OERs and OCWs (Non-Indian Origin)

According to the Pearson Correlation analysis, the number of uses and the number of people who know about different non-Indian OERs and OCWs have a linear relationship that is statistically significant (r=0.747, p0.01). Based on awareness, LISSA (LIS Scholarship Archive) was the OEC that 51.35 percent of respondents knew the most about. This was followed by Open Education Consortium (OEC) with 36.48 percent, NIOS Open Educational Resources with 29.72 percent, and Open Michigan with 20.27 percent.

Based on how they are used, 47.29% of respondents use OEC, followed by 41.89% who use LISSA (LIS Scholarship Archive), 28.37% who use NIOS Open Educational Resources, and 20.27% who use Open Michigan.

Variables	**OERs & OCWs (Non-Indian Origin)**	**FMU**	**GMU**	**SU**	**UU**	**NOU**	**Total (%)**	**Correlation®**
Awareness	LISSA (LIS Scholarship Archive)	12	10	5	6	5	38 (51%)	
	Open Education Consortium (OEC)	5	8	7	3	4	27 (36%)	
	NIOS Open Educational Resources	4	2	9	1	6	22 (29%)	

	Open Michigan	5	6	2	1	1	15 (20%)	
Uses	LISSA (LIS Scholarship Archive)	7	9	4	6	5	31 (41%)	r = 0.747 Sig. (2-tailed) .000
	Open Education Consortium (OEC)	5	8	12	6	4	35 (47%)	
	NIOS Open Educational Resources	5	2	10	1	3	21 (28%)	
	Open Michigan	2	6	5	1	1	15(20%)	

[Table- 11 Awareness & use of non-Indian origin of OERs & OCWs]

**. Correlation is significant at the 0.01 level (2-tailed).

Awareness & Uses of Open access LIS Repositories/Archives/Digital Libraries

Again, correlation analysis shows that there is no statistically significant linear relationship between how people use and know about different LIS repositories and archives (r=0.414, p0.01). Out of the common LIS repositories and archives that were chosen, 36.48 percent of respondents knew about the OCLC research publications repository. This was followed by Repositories of Electronic theses and dissertations (ETD)-Shodhganga, DLIST, E-LIS, Librarian's digital library (LDL), and Networked Digital Library of Theses and Dissertations (NDLTD), which were known to 31.08 percent, 27.02 percent, 25.

Based on how they are used, the data shows that Librarian's digital library (LDL) is the most popular (used by 28.37%), followed by DLIST (19 respondents, 25.67%), OCLC research publications repository (18 respondents, 24.32%), and so on.

Variables	LIS repositories/archieve	FMU	GMU	SU	UU	NOU	Total (%)	Correlation ®
Awareness	DLIST	2	8	6	3	1	20(27%)	
	E-LIS	4	1	7	2	5	19(25%)	
	Librarian's digital library (LDL)	5	3	3	1	3	15(20%)	
	OCLC research publications repository	9	6	1	0	2	27(36%)	
	Repositories of Electronic theses and dissertations (ETD)- Shodhganga	4	5	8	5	1	23(31%)	
	Networked Digital Library of Theses and Dissertations (NDLTD)	5	2	2	1	0	10(1.5%)	
Uses	DLIST	7	5	4	2	1	19(25%)	r = 0.414 Sig. (2-tailed).023
	E-LIS	6	1	5	1	4	17(22%)	
	Librarian's digital library (LDL)	8	4	6	1	2	21(28%)	
	OCLC research publications repository	5	6	4	2	1	18(24%)	
	Repositories of Electronic theses and dissertations (ETD)- Shodhganga	2	4	2	3	0	11(14%)	
	Networked Digital Library of Theses and Dissertations (NDLTD)	4	5	0	4	4	17(22.97%)	

[Table- 11 Awareness and uses of LIS repository/archive]

**. Correlation is significant at the 0.05 level (2-tailed).

Most Commonly Used OAR

Out of the three major Open access directories, Directory of Open access Journals (DOAJ) was used the most by 30 respondents, or 40.54 percent. This was followed by Directory of Open access (DOAB), which was used by 23

respondents, or 31.08 percent, and Directory of Open access Repository (DOAR), which was used by 11 respondents, or 14.86 percent.

Variables		**FMU**	**GMU**	**SU**	**UU**	**NOU**	**Total**	**Rank**
Directory of Open access Journals (DOAJ)	N	7	8	9	1	5	30	1
	%	9.5	10.8	12.2	1.4	6.8	40.54	
Directory of Open access Repository (DOAR)	N	6	3	1	0	1	11	3
	%	8.1	4.1	1.4	0.0	1.4	14.86	
Directory of Open access (DOAB)	N	5	6	3	5	4	23	2
	%	6.8	8.1	4.1	6.8	5.4	31.08	

[Table- 12 Commonly use Open access resources]

Source to Know About Open access resources

Table 13 shows that 47.3% of respondents agree that teachers are the most important way to get the word out about different open access resources. After that, 35.2% of those who answered realised that links and library portals on the WWW are also the most important way to spread information.

Sources		**FMU**	**GMU**	**SU**	**UU**	**NOU**	**Total**	**Rank**
From the Links, available in the library portal	N	5	8	4	4	5	26	2
	%	6.7	10.8	5.4	5.4	6.7	35.2	
From teachers in the class	N	9	10	8	5	3	35	1
	%	12.2	13.5	10.9	6.7	4.1	47.3	
Searching through the Web	N	4	4	5	3	1	17	3
	%	5.4	5.4	6.7	4.1	1.3	23	
Any other……	N	3	5	2	4	2	16	4

	%	4.1	6.7	2.7	5.4	2.7	21.7	

[Table- 13 Sources for making aware about Open access resources]

Obstacles Faced While Accessing Open access resources

Obstacles and barriers are the main things that make it hard for people to share information. Because of this, information that is available through open access resources also has some barriers. These problems could be technical, related to the Internet, have to do with training, or be something else. All of these obstacles make it harder to share information about the Oar. In this section, we looked at the different kinds of barriers and found out which ones LIS students face most often.

Obstacles	**FMU**	**GMU**	**SU**	**UU**	**NOU**	**Total (%)**	**Rank**
Lack of Awareness	5	7	10	2	4	28(37.83%)	1
Inadequate Knowledge	6	5	9	4	1	25(33.73%)	2
Slow Internet Connectivity	3	6	1	6	1	17(22.97%)	5
Overload of information	4	6	8	0	0	18(24.32%)	4
Lack of search skills	5	2	1	1	4	13(17.56%)	6
No training Available	1	1	0	2	2	6(8.10%)	7
Always Right Information Not Found	6	4	5	3	1	19(25.67%)	3

[Table - 14 Obstacle faced by respondents]

Most LIS users have trouble because they don't know enough about open access resources and related terms. This was agreed upon by 37.83% of respondents. The second biggest problem was that people didn't know enough about the different open access points. This was agreed upon by 33.73 respondents. Table 8 shows that respondents also had problems with not having the right

information, having too much information, not having a training programme, and having a slow internet connection.

Satisfaction Level Toward Open access resources

The level of satisfaction has been divided into five sections: 5 = Extremely Satisfied (ES), 4 = Very Satisfied (VS), 3 = Moderately Satisfied (MS), 2 = Not Satisfied (NS), and 1 = Not Satisfied at All (NSA). Overall, 51.35 percent of those who answered were very satisfied, 33.78 percent were somewhat satisfied, and 8.10 percent were not at all satisfied. Based on the average score, FMU was the most satisfied (mean score: 3.6111), followed by GMU (3.6000), and so on.

Variables (n = 74)	**ES**	**VS**	**MS**	**NS**	**NSA**	**Mean**	**SD**	**Variance**
FMU	4	8	3	1	2	3.6111	1.24328	1.546
GMU	6	5	5	3	1	3.6000	1.23117	1.516
SU	5	2	8	1	3	3.2632	1.36797	1.871
UU	2	3	1	1	1	3.5000	1.41421	2.000
NOU	3	2	2	1	1	3.5556	1.42400	2.028
Total	38	20	25	13	6			
%	51.35	27.02	33.78	17.56	8.10			

[Table – 15 Satisfaction level towards Open access resources]

Major Findings

- Based on the analysis of the data, this section talked about some of the most important results of this study. The research question is used to

decide the order of the points that make up the findings. Some important results of this study are;

- Most of the people who answered know about open access resources in some way or another. Because they are aware, they also use some of the open access resources.
- It also found that most LIS students and researchers in the state of Odisha use open access resources for schoolwork.
- Users use open access resources for three main reasons: to update their knowledge in their field, to prepare for curriculum activities, and to prepare for assignments for class.
- Students and research scholars used the WWW every day and several times a week to search for and access open resources.
- Most state-run university libraries don't have remote access, which could be a game-changer for using open-access materials.
- According to the opinions of the respondents (n=74), the Covid-19 pandemic has an effect on the use of Open access resources. Most of the people who answered said that use has gone up because of the pandemic.
- Journal articles, web pages/blogs, book chapters, research reports, and review papers are the most common types of information that respondents looked for in Open Access resources.
- e-E-PG Pathshala and eGyanKosh are two major open access resources with roots in India that are used several times a week and are known by most of the people who answered the survey.
- LISSA (LIS Scholarship Archive) and Open Education Consortium (OEC) are two major non-Indian open access resources that are used several times a week and are known by most of the respondents.
- The OCLC research publications repository, Repositories of Electronic theses and dissertations (ETD)-Shodhganga, DLIST, and E-LIS are some of the most important OA repositories.
- Except that the major open access (OA) repositories are the Directory

of Open Access Journals (DOAJ), the Directory of Open Access Repository (DOAR), and the Directory of Open Access (DOAB).

- Students and researchers in library and information science (LIS) mostly learned about the different open access resources from links on different LIS web pages, from their teachers in class, and by randomly browsing the internet.
- The biggest problem people have when using Open access resources is that they don't know about them. Except for the fact that some people don't know enough about open access resources, they don't know how to search well enough, and their internet connection is slow.

CONCLUSION

From the research we've done so far, we can say that open access resources are one of the most important places to look for research, curriculum, and up-to-date news. Like other resources, open access resources are growing in many different ways right now. Because of this, it's hard to learn about all the different open access resources without help from other sources. So, to solve these kinds of problems, libraries and other information-giving institutions and agencies should take steps to make sure users know about open access resources, open educational resources (OERs), and other open access repositories (OA repositories).

Researchers have already found that students and researchers in fields other than Library and Information Science also use open access resources a lot. They don't even learn anything in school. They only find out about things with the help of the library and the internet. So, at the organisation level, every public and private organisation or institution should give their users some kind of awareness-related pregame.

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