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Open Access Information as a Platform for Sustainable Development: Perspectives from Selected Institutions in India

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***Abstract*---**Open Access (OA) literature is digital, online, free of charge, and free of most copyright and licensing restrictions, what makes it possible are the internet and the consent of the author or copyright holder. In most fields, scholarly journals do not pay authors, who can, therefore, consent to OA without losing revenue. In this respect, scholars and scientists are very differently situated from most musicians and movie-makers, and controversies about open access to music and movies do not carry over to research literature. Open access is entirely compatible with peer review, and all the major open access initiatives for scientific and scholarly literature insist on its importance, just as authors of journal articles donate their labor, journal editors, and referees participating in peer review. The study shows that out of 456 respondents considered for the study 203 [44.5%] belongs to Arts, 169 [37.1%] belong to Science, 33 [7.2%] Education and 51 [11.2%] belongs to Management. The findings of the study also show that out of 456 respondents considered for the study among which 81 [17.8%] belong to the M. Phil program, 102 [22.4%] belong to Ph.D. Program and 273 [59.9%] are faculty members.

***Keywords*---**academic library, information need, open access resources, open access, open course ware (OCW), search engine, subject gateway, sustainable development.

Introduction

The term 'open' has become somewhat of a buzzword that currently has positive associations for most people. According to Materu (2004), "the present decade can be called the o-decade (open source, open systems, open standards, open archives, open everything) just as the 1990s were called the e-decade." The two

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most important aspects of openness have to do with free availability over the internet and a few 4 restrictions as possible on the use of the resource, whether technical, legal, or price barriers. Suber (2012), defines open access as "open access literature is digital, online, free of charge, and free of most copyright and licensing restrictions". The concept of open access has emerged in response to the restrictive access to knowledge in scholarly and scientific journals imposed by commercial publishing houses via subscription fees, license fees, or pay-per-view fees (Christian PhD, 2009). Open Access in the form of e-prints archives has now been expanded to include courseware, backfiles of journals articles, subject-specific repositories, conference papers, technical reports, theses and dissertations, and many more institution-specific materials.

Gratics Open Access is online access free of charge with various additional usage rights. These additional usages of rights are often granted through the use of various specific creative commons licenses. Libre open access is equivalent to the definition of open access in the Budapest open access initiative, the Bethesda Statement on open access publishing, and the Berlin Declaration on open access to knowledge in the sciences and humanities (Chin & Jacobsson, 2016; Detlor & Lewis, 2006; Rinartha et al., 2018). There are multiple ways in which the authors can provide open access to their works. One of the ways is to publish it and then self-archive it in a repository where it can be accessed for free, such as their institutional repository or a central repository such as PUBMED central. This is known as "green open access". Some publishers require delays or an embargo, on when a research output in a repository may be made open access (Thanuskodi, 2013; Nielit & Thanuskodi, 2020).

Review of Literature

Massoro & Adewale (2019), conducted a study entitled "Influence of Attitude, Subjective Norms and Personal Innovativeness on Intention to Use Open Access Journals: a case of Agricultural Research Institutes." This study employed the Theory of Reasoned Action by Ajzen & Fishbein (1975), and the data was collected from 121 researchers through a cross-section survey questionnaire. The findings from the study revealed that subjective norm is the strongest predictor of the intention to use OAJ, followed by personal innovativeness. Nonetheless, further analysis showed that attitude has no significant influence on the intention to use open access journals.

Bala et al. (2018), in their study entitled "Awareness of Open Access Resources among the Researchers of Punjab Agricultural University, Ludhiana" showed the objective of this study is to explore the use of open access resources (OARs) by researchers of Punjab Agricultural University, Ludhiana. A structured questionnaire was used to collect data from the researchers. The findings of the study show that research articles, theses, and e-books are extensively used open access resources for course and research work. Training and online tutorials can help overcome the problems faced by researchers in using OARs. One hundred questionnaires were physically distributed to the researchers of various streams of the Punjab Agricultural University, Ludhiana, out of which 87 questionnaires were returned. However, only 83 questionnaires were considered relevant to carry on the study further.

Anunobi & Ape (2018), have researched "Promotional Strategies for Open Access Resources Discovery and Access". The study was conducted to determine the promotional strategies adopted by Nigerian university libraries to enhance open access resources discovery and access, as well as their support and perception on the use of the resources. Data for the research were collected with a survey questionnaire using 50 university librarians in Nigeria through electronic mail and social media platforms.

Anyira & Idubor (2018), have conducted a study entitled "Open access resources: Panacea to improved library resources and services in Nigeria." In the study conducted to the inadequacy of information resources is a common challenge facing libraries in developing countries. The open-access initiative presents the library with the solution to this challenge by providing access to high-quality journals, books and other information bearing resources. This paper considered what constitutes open access resources, reasons why libraries should embrace them, the sources and web addresses where libraries can find them and the barriers to their integration into Nigerian libraries.

Beall (2013), has researched the title "The open-access movement is not really about open access." The study showed that While the open-access movement purports to be about making scholarly content open-access, its true motives are much different. The OA movement is an anti-corporatist movement that wants to deny the freedom of the press to companies it disagrees with. The movement is also actively imposing onerous mandates on researchers, mandates that restrict individual freedom.

Ivwighreghweta & Onoriode (2012), have titled their study as "Use of open access journals by lecturers at Western Delta University, Oghara, Nigeria. " Scholarly communication is the process through which scholars exchange information with each others. It is an important process in fostering the growth of science and technology. This massive increase in the output meant that the societies found it more and more difficult to keep up with publishing research communication of scholars. The study employs a descriptive survey design utilizing the questionnaire to collect data.

Roy et al. (2012), have done their study on the topic "Open Access to scholarly information in India: Trends and Developments." the study showed to the Open Access initiatives and describes some of the current open access channels and the areas where India has made significant progress. Also discusses the significance of those trends for information access in developing countries like India including problems and possible solutions. Analyzes and discusses several successful OA channels mainly in five areas.

Objective of the study

The research is aimed to achieve the following objectives:

- To discover the use and awareness of open access resources by the research scholars and faculty members of affiliated colleges of Alagappa University.

- To identify the purpose of the use of open access resources by the research scholars and faculty members of affiliated colleges of Alagappa University.
- To find out the frequency of open access resources used by the research scholars and faculty members of affiliated colleges of Alagappa University.
- To identify the difficulties encountered by the users while accessing open access resources.
- To suggest improvement measures based on the findings of the study.

Research questions

The study sought answers to the following questions:

- What is the level of awareness of open access resources by research scholars and faculty members?
- What is the level of usage of open access resources by research scholars and faculty members?
- What are the benefits derived from using open access resources by research scholars and faculty members?
- What are the problems militating against the use of open access resources by research scholars and faculty members?

Methodology

The research has adopted the "proportionate Stratified Random sampling method" for this study. In proportionate stratified Random Sampling, the size of each stratum is proportionate to the population size of the strata when examined across the entire population. This means that each stratum has the same sampling fraction. The investigator has selected research scholars and faculty members registered for the 10 affiliated colleges of Alagappa University for the study. The Alagappa University and its affiliated colleges' research scholars and faculty members were found to be 2120. Sample size is estimated based on a proportion, when in p = 0.5, q = 0.5 with a confidence interval 95% or an error value 5 % whose corresponding z value 1.96. The data were collected from the 456 respondents out of the total population 2120 from the area of a population study. The considered populations were found to be 327 based on samples size found using Roasoft calculator and also manually estimated sample size. Therefore, 500 Questionnaires were distributed and received 456, the remaining 44 questionnaires have incomplete and missing data. The response rate is 91.2 Percentages (Nehru, 2016; Kryvylova et al., 2021; Zharova et al., 2021).

Data analysis and interpretation

Data Analysis is the process of systematically applying statistical and/or logical techniques to describe and illustrate, condense and recap, and evaluate data, according to Alagu & Thanuskodi (2018), various analytic procedures " Provide a way drawing inductive inference form the noise (Statistical fluctuations) Present in the data." While data analysis in qualitative research can include statistical procedures, many times analysis becomes an ongoing iterative process where data is continuously collected and analyzed almost simultaneously. Indeed, researchers generally analyze for patterns in observations though the entire data

collection phase the form of the analysis is determined by the specific qualitative approach taken and the form of the data.

Demographic profile

Herein, an analysis was carried to identify the frequency and equivalent percentage of the respondents concerning various categories considered for the study in demographic profile.

Table 1
Demographic information

Demographic Profile	Options	Frequency	Percent
Gender wise distribution	Male	178	39
	Female	278	61
	Total	456	100
Nativity wise distribution	Rural	230	50.4
	Urban	226	49.6
	Total	456	100
Age wise Distribution	Below 25 Years	87	19.1
	26 – 30 Years	144	31.6
	31 – 35 Years	114	25
	36-40 Years	80	17.5
	Above 40 Years	31	6.8
	Total	456	100
Institution wise distribution	Alagappa University	163	35.7
	Alagappa Government Arts College	30	6.6
	Raja Doraisingam Government Arts College	28	6.1
	Paramakudi, Government Arts College	29	6.4
	Sethupathy Government Arts College	30	6.6
	Sivaganga, Government Arts College for Women	29	6.4
	Seethalakshmi Achi College for Women	30	6.6
	Arumugam Pillai Seethai Ammal College	28	6.1
	Dr.Zakir Husain College	30	6.6
	Thassim Beevi Abdul Kader College for Women	30	6.6
	Madurai Sivakasi Nadar's Pioneer Meenakshi Women's College	29	6.4
	Total	456	100
Discipline wise distribution	Arts	203	44.5
	Science	169	37.1
	Education	33	7.2

	Management	51	11.2
	Total	456	100
Programme wise distribution	M.Phil	81	17.8
	Ph.D	102	22.4
	Faculty Member	273	59.9
	Total	456	100
Doctoral Degree Programme	part time (Faculty)	19	4.2
	Full time	437	95.8
	Total	456	100
Type of Institution	University	163	35.7
	Govt. College	147	32.2
	Govt. Aided College	86	18.9
	self-financing College	60	13.2
	Total	456	100

Source: (Primary data)

Table 1 shows the distribution of Gender: From the percentage analysis, it was found that out of 456 respondents considered for the study 178 [39%] were male and the remaining 278 [61%] were female. Nativity: From the percentage analysis, it was found that out of 456 respondents considered for the study 230 [50.4%] were from rural and 226 [49.6%] were from urban. Age: From the percentage analysis, it was found that out of 456 respondents considered for the study 87 [19.1%] belong to the age category below 25 years, 144 [31.6%] belong to age category between 26-30 years, 114 [25%] belong to age category between 31-35 years, 80 [17.5%] belong to age category between 36-40 years and 31 [6.8%] belong to age category above 40 years.

Institution: From the percentage analysis, it was found that out of 456 respondents considered for the study Alagappa Govt Arts College has 30 [6.6%], Raja Doraisingam Govt. Arts College has 28 [6.1%], Paramakudi Government Arts College has 29 [6.4%], Sethupathy Govt. Arts College has 30 [6.6%], Sivaganga Government Arts College for Women has 29 [6.4%], Seethalakshmi Achi College for Women has 30 [6.65%], Arumugam Pillai Seethai Ammal College has 28 [6.1%], Dr.Zakir Husain College has 30 [6.6%], Thassim Beevi Abdul Kader College for Women has 30 [6.6%], Madurai Sivakasi Nadar's Pioneer Meenakshi Women's College has 29 [6.4%] and Alagappa University has 163 [35.7%]. Discipline: From the percentage analysis, it was found that out of 456 respondents considered for the study 203 [44.5%] belongs to Arts, 169 [37.1%] belong to Science, 33 [7.2%] Education and 51 [11.2%] belongs to Management. Programme: From the percentage analysis, it was found that out of 456 respondents considered for the study among which 81 [17.8%] belong to M.Phil program, 102 [22.4%] belongs to Ph.D. Program and 273 [59.9%] are Faculty Members.

Doctoral Degree Programme: From the percentage analysis, it was found that out of 456 respondents considered for the study among which 19 [4.2%] are Part time Scholar and 437 [95.2%] are Full time Scholar. Type of Institution: From the percentage analysis, it was found that out of 456 respondents considered for the study 163 [35.7%] were from university, 147 [32.2%] were from Govt. College, 86 [18.9%] were from Govt. Aided College and 60 [13.2%] Self-financing.

Frequency of using open access resources with respect to gender

The Independent Sample test was carried out to identify whether there is a significant difference in the frequency of using OAR with respect to gender.

Null Hypothesis: There is no significant difference in frequency of using OAR with respect to gender

Table 2
Independent sample test: frequency of using open access resources with respect to gender

Independent Samples Test						
Variables		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Frequency of usage of OAR	Equal variances assumed	0.192	0.662	-0.602	454.000	0.548
	Equal variances not assumed			-0.609	391.074	0.543

Group Statistics					
	Gender wise distribution	N	Mean	Std. Deviation	Std. Error Mean
Frequency of usage of OAR	Male	178	3.67	0.88	0.066
	Female	278	3.73	0.925	0.056

Source: (Primary data)

Table 2 shows that the estimated significance value is greater than 0.05 meaning; the null hypothesis is accepted i.e. there is no significant difference in frequency of usage of OAR concerning gender. From the mean score value, it is understood that most of the respondents use OAR “Almost every time”.

Frequency of using open access resources with respect to nativity

The Independent Sample test was carried out to identify whether there is a significant difference in the frequency of using OAR concerning nativity.

Null Hypothesis: There is no significant difference in the frequency of using OAR with respect to the nativity.

Table 3
Independent sample test: frequency of using open access resources with respect to nativity

Independent Samples Test		
Variables	Levene's Test for	t-test for Equality of Means

		Equality of Variances				
		F	Sig.	t	df	Sig. (2-tailed)
Frequency of usage of OAR	Equal variances assumed	1.329	0.25	-1.698	454.000	0.090
	Equal variances not assumed			-1.698	453.482	0.090

Group Statistics					
Variables	Nativity wise distribution	N	Mean	Std. Deviation	Std. Error Mean
Frequency of usage of OAR	Rural	230	3.63	0.928	0.061
	Urban	226	3.78	0.882	0.059

Source: (Primary data)

Table 3 shows that the estimated significance value is greater than 0.05 meaning; the null hypothesis is accepted i.e. there is no significant difference in frequency of usage of OAR concerning nativity (Duran et al., 2015; Zu, 2021; Perez et al., 2017). From the mean score value, it is understood that most of the respondents use OAR “Almost every time”.

Frequency of using open access resources with respect to degree

The Independent Sample test was carried out to identify whether there is a significant difference in frequency of using OAR with respect to degree.

Null Hypothesis: There is no significant difference in the frequency of using OAR with respect to degree.

Table 4
Independent sample test: frequency of using open access resources with respect to degree

Variables		Independent Samples Test Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Frequency of usage of OAR	Equal variances assumed	4.443	0.036	-1.141	454.000	0.254
	Equal variances not assumed			-0.891	18.922	0.384

Group Statistics

	Doctoral Degree Programme	N	Mean	Std. Deviation	Std. Error Mean
Frequency of usage of OAR	part time (Faculty Members)	19	3.47	1.172	0.269
	Full time	437	3.72	0.894	0.043

Source: (Primary data)

Table 4 shows that the estimated significance value is greater than 0.05 meaning; the null hypothesis is accepted i.e. there is no significant difference in frequency of usage of OAR concerning a degree. From the mean score value, it is understood that most of the Part-time respondents use "Occasionally" and Full-time respondents use OAR "Almost every time".

Frequency of using open access resources with respect to age

The ANOVA test was carried out to identify whether there is a significant difference in the frequency of using OAR with respect to age.

Null Hypothesis: There is no significant difference in the frequency of using OAR with respect to age.

Table 5
Independent sample test: frequency of using open access resources with respect to age

ANOVA					
Frequency of usage of OAR	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.935	4	1.484		
Within Groups	368.688	451	0.817	1.815	0.125
Total	374.623	455			

Descriptive		
Frequency of usage of OAR	N	Mean
Below 25 Years	87	3.9
26 – 30 Years	144	3.7
31 – 35 Years	114	3.7
36-40 Years	80	3.7
Above 40 Years	31	3.4
Total	456	3.7

Source: (Primary data)

Table 5 shows that the estimated significance value is greater than 0.05 meaning; the null hypothesis is accepted i.e. there is no significant difference in frequency of usage of OAR with respect to age. From the mean score value, it is understood that most of the respondents belonging to Below 25 Years, 26 – 30 Years, 31 – 35 Years, and 36-40 Years age category uses OAR "Almost every time" but, respondents above 40 years uses "Occasionally".

Frequency of using open access resources with respect to institutions

The ANOVA test was carried out to identify whether there is a significant difference in the frequency of using OAR with respect to institutions.

Null Hypothesis: There is no significant difference in the frequency of using OAR with respect to institutions.

Table 6
Independent sample test: frequency of using open access resources with respect to institutions

ANOVA					
Frequency of usage of OAR					
Variables	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	99.902	10	9.99		
Within Groups	274.721	445	0.617	16.182	0.000
Total	374.623	455			

Descriptive		
Frequency of usage of OAR	N	Mean
Alagappa University	163	4
Alagappa Govt Arts College	30	3
Raja Doraisingam Govt. Arts College	28	3.8
Paramakudi, Government Arts College	29	3.8
Sethupathy Govt. Arts College	30	3.6
Sivaganga, Government Arts College for Women	29	3.6
Seethalakshmi Achi College for Women	30	4.2
Arumugam Pillai Seethai Ammal College	28	2.4
Dr.Zakir Husain College	30	3.6
Thassim Beevi Abdul Kader College for Women	30	3.4
Madurai Sivakasi Nadar's Pioneer Meenakshi Women's College	29	4.1
Total	456	3.7

Source: (Primary data)

Table 6 shows that the estimated significance value is 0.000, which is less than0.05. Hence the null hypothesis is rejected. i.e. there is a significant association between infrequency of usage of OAR with respect to the institution. From the mean score value, it is understood that most of the respondents from Raja Doraisingam Govt. Arts College, Paramakudi, Government Arts College, Sethupathy Govt. Arts College, Sivaganga, Government Arts College for Women, Seethalakshmi Achi College for Women, Arumugam Pillai Seethai Ammal College, Dr.Zakir Husain College, Madurai Sivakasi Nadar's Pioneer Meenakshi Women's College, Alagappa University use OAR “Almost every time” but, respondents from Alagappa Govt Arts College and Thassim Beevi Abdul Kader College for Women use “Occasionally”.

Frequency of using Open Access Resources with respect to Disciplines

The ANOVA test was carried out to identify whether there is significant difference in frequency of using OAR with respect to disciplines.

Null Hypothesis: There is no significant difference in frequency of using OAR with respect to disciplines.

Table 7
Independent sample test: frequency of using open access resources with respect to disciplines

ANOVA					
Frequency of usage of OAR	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	17.561	3	5.854		
Within Groups	357.062	452	0.79	7.41	0.000
Total	374.623	455			

Descriptive		
Frequency of usage of OAR	N	Mean
Arts	203	3.5
Science	169	3.9
Education	33	3.9
Management	51	3.8
Total	456	3.7

Source: (Primary data)

Table 7 shows that the estimated significance value is 0.000, which is less than 0.05. Hence the null hypothesis is rejected i.e. there is a significant relationship between frequency of usage of OAR and discipline. From the mean score value, it is understood that most of the respondents from various disciplines use OAR "Almost every time".

Frequency of using open access resources with respect to programme

The ANOVA test was carried out to identify whether there is a significant difference in the frequency of using OAR with respect to the program.

Null Hypothesis: There is no significant difference in frequency of using OAR with respect to programme.

Table 8
Independent sample test: frequency of using open access resources with respect to programme

ANOVA					
Frequency of usage of OAR	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7.102	2	3.551		
Within Groups	367.521	453	0.811	4.377	0.013
Total	374.623	455			

Descriptive		
Frequency of usage of OAR	N	Mean
M.Phil	81	3.5
Ph.D	102	3.7

Faculty Member	273	3.8
Total	456	3.7

Source: (Primary data)

Table 8 shows that the estimated significance value is 0.013, and it table value is less than 0.05 meaning, the null hypothesis is accepted hence, there is significant difference in frequency of usage of OAR with respect to the programme. From the mean score value it is understood that most of the the respondents belonging to various programs uses OAR "Almost every time".

Frequency of using open access resources with respect to type of institution

The ANOVA test was carried out to identify whether there is significant difference in frequency of using OAR with respect to the type of institution.

Null Hypothesis: There is no significant difference in frequency of using OAR with respect to type of institution

Table 9
Independent sample test: frequency of using open access resources with respect to type of institution

ANOVA					
Frequency of usage of OAR	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	27.546	3	9.182		
Within Groups	347.077	452	0.768	11.958	0.000
Total	374.623	455			

Descriptive		
Frequency of usage of OAR	N	Mean
University	163	4
Govt. College	147	3.5
Govt. Aided College	86	3.4
self-financing College	60	3.7
Total	456	3.7

Source: (Primary data)

Table 9 shows that the estimated significance value of 0.000 is less than 0.05 meaning, the null hypothesis is rejected hence, there is a significant difference in frequency of usage of OAR with respect to the type of institution (Janowski et al., 2018; Wang et al., 2019; Raju, 2014). From the mean score value, it is understood that most of almost all the respondents from University, Govt. College and self-financing College uses OAR "Almost every time" but respondents from Govt. Aided College uses "Occasionally".

Contribution of open access resources

Herein analysis was carried to understand the Document Contributed adopted by the respondents.

Table 10
Percentage analysis–contribution of open access resources

S. No	Documents Contributed	National Open Access (%)	National Paid Access (%)	International Open Access (%)	International Paid Access (%)	Total (%)
1	Conference/ Seminar Papers	10(2.2)	116(25.4)	242(53.1)	88(19.3)	456 (100)
2	Journal Articles	18(3.9)	96(21.1)	230(50.4)	112(24.6)	456 (100)
3	Preprints	21(4.6)	101(22.1)	219(48.0)	115(25.2)	456 (100)
4	Project Reports	33(7.2)	130(28.5)	219(48.0)	74(16.2)	456 (100)
5	E-Books	21(4.6)	124(27.2)	225(49.3)	83(18.9)	456 (100)
6	Book Chapters	9(2.0)	123(27.0)	221(48.5)	103(22.6)	456 (100)

Source: (Primary data)

Table 10 shows that the Contribution of Open Access Resources From the percentage analysis, it was found that out of 456 respondents considered for the study; International Open Access in 242(53.1) most of the respondents uses Conference / Seminar papers, 116(25.4) most of the respondents in national paid access in conference/seminar papers, National paid access in 96(21.1) most of the respondents in used in the journal Articles, International open access 230(50.4) used in the Journal Articles, Preprints in 101(22.1) National Paid Access, 219(48.0)International open Access, Project Reports in 130(28.5) National Paid Access, 219(48.0)International open Access, E-Books 124(27.2)National Paid Access, 225(49.3)International open Access, Book Chapter 123(27.0) National Paid Access, 221(48.5)International open Access,

Reason for not contributing to open access resources

Percentage analysis was carried to identify the major reasons for not contributing to OAR.

Table 11
Percentage analysis - reason for not contributing to open access resources

S. No	Variables	Frequency	Percent
1	No proper guidelines are available	15	3.3
2	I don't want anyone to use my information without my knowledge	32	7
3	I use my own website to publish materials	56	12.3
4	It takes much time to contribute	58	12.7
5	I don't know how and what to contribute	66	14.5
6	I don't have any document to contribute	49	10.7
7	Contribution to OAR are likely to be misused or plagiarized	79	17.3
8	Low quality is the reason for not contributing to OAR	54	11.8
9	The information may not available later	47	10.3

Total	456	100

Source: (Primary data)

Table 11 shows that the percentage analysis carried with 456 respondents data, the major reason for not contributing to OAR was found to be Contribution to OAR are likely to be misused or plagiarized 79 (17.3%) followed by 2. I don't know how and what to contribute 66 (14.5%), 3. It takes much time to contribute 58 (12.7%), 4. I use my website to publish materials 56 (12.3%), 5. Low quality is the reason for not contributing to OAR 54 (11.8%), 6. I don't have any document to contribute 49 (10.7%), 7. The information may not available later 47 (10.3%), 8. I don't want anyone to use my information without my knowledge 32 (7%), 9. No proper guidelines are available 15 (3.3%).

Barriers to open access resources with respect to gender

Herein rank analysis was carried out to identify the important barriers to OAR with respect to gender.

Table 12
Rank analysis: barriers to open access resources with respect to gender

S. No	Variables	Male	Rank	Female	Rank
1	Retrieval of too much of irrelevant information	3.51	11	3.41	14
2	Unavailability of Internet connection	3.44	13	3.82	3
3	Downloading is delay	3.66	6	3.71	7
4	Lack of search skills	3.62	8	3.59	10
5	The information is not constantly available on the same URL	3.93	1	3.85	1
6	Lack of uniform standard in open access journal publishing	3.66	6	3.64	9
7	Lack of online help	3.26	14	3.46	12
8	Access instructions are not clear	3.61	9	3.66	8
9	Slow internet speed	3.68	4	3.75	5
10	Lack of ICT Knowledge	3.59	10	3.46	12
11	No proper guidance and training	3.8	2	3.83	2
12	Lack of information literacy	3.48	12	3.56	11
13	Lack of awareness of open access Resources	3.72	3	3.75	5
14	Server down is a major problem in open access Resources	3.68	4	3.8	4

Source: (Primary data)

Table 12 shows that the Male respondents while using OAR are facing problems such as The information is not constantly available on the same URL, No proper guidance and training, Lack of awareness of open access Resources, Slow internet speed, and Server down is a major problem in open access Resources. Female respondents while using OAR are facing problems such as The information is not constantly available on the same URL, No proper guidance and training, Unavailability of Internet connection, Server down is a major problem in open

access Resources, Lack of awareness of open access Resources and Slow internet speed (Wiley, 2007; Brander & Taylor, 1998; Mebratu, 1998).

Suggestions

- People are not fully aware of these open access resources. Research scholars and faculty members have to improve more about these Open Access Resources (OAR) and use it in a good way.
- Bring awareness among all sort of teaching / learning people about open access resources. There is a lack of awareness regarding open access resources.
- Many Research scholars and faculty members were not aware of academic and research purposes such as reference management tools, open archives, open access publishing, plagiarism detection tools, open access management tools, lack of awareness of open access resources.
- The faculties may be advised to maintain their own institutional repositories using open access tools such as higher education institutions for more visibility and greater impact of their publications on the society.
- Research scholars and faculty members are need to be informed about library new technology.
- Promote library groups and activities that might create interest among research scholars and faculty members.

Conclusion

The study identifies that many courses are available for research scholars and faculty members to learn about open access resources and online programs. For research scholars and faculty members, open-access resources programs need to be conducted by the Library and the institutions (Battleson et al., 2001; Devine & Egger-Sider, 2004). Open access resources are available on online, many research scholars and faculty members can easily use the online resources at any time and anywhere. It is found that Alagappa University and its affiliated colleges' research scholars and faculty members faced problems while using OAR concerning nativity. Retrieval of too much of irrelevant information, unavailability of internet connection, downloading is a delay, lack of search skills, the information is not constantly available on the same URL, lack of uniform standard in open access journal publishing, lack of online help, access instructions are not clear, slow internet speed, lack of ICT Knowledge, no proper guidance and training, lack of information literacy, lack of awareness of Open Access Resources, server down are major problems in Open Access Resources are problems faced while using OAR concerning the nativity (Thanuskodi & Subramaniyan 2013; West & Victor, 2011).

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References

Ajzen, I., & Fishbein, M. (1975). A Bayesian analysis of attribution processes. *Psychological bulletin*, *82*(2), 261.

Alagu, A., & Thanuskodi, S. (2018). Assessment of information literacy skills among students of Alagappa University, India. *Library Philosophy and Practice*.

Anunobi, C. V., & Ape, R. (2018). Promotional Strategies for Open Access Resources Discovery and Access. *Webology*, *15*(1).

Anyira, I., & Idubor, I. (2018). Open access resources: Panacea to improved library resources and services in Nigeria. *International Journal of Advance Research, Ideas and Innovations in Technology*, *4*(4).

Bala, S., Bansal, S., & Sharma, Y. (2018). Awareness of open access resources among the researchers of Punjab Agricultural University, Ludhiana. *International Journal of Library Information Network and Knowledge*, *3*(1), 139-145.

Battleson, B., Booth, A., & Weintrop, J. (2001). Usability testing of an academic library web site: a case study. *The journal of academic librarianship*, *27*(3), 188-198. https://doi.org/10.1016/S0099-1333(01)00180-X

Beall, J. (2013). The open-access movement is not really about open access. *tripleC: Communication, Capitalism & Critique. Open Access Journal for a Global Sustainable Information Society*, *11*(2), 589-597.

Brander, J. A., & Taylor, M. S. (1998). Open access renewable resources: Trade and trade policy in a two-country model. *Journal of International Economics*, *44*(2), 181-209. https://doi.org/10.1016/S0022-1996(97)00029-9

Chin, A., & Jacobsson, T. (2016). TheGoals. org: mobile global education on the Sustainable Development Goals. *Journal of Cleaner Production*, *123*, 227-229. https://doi.org/10.1016/j.jclepro.2015.08.061

Christian PhD, G. (2009). Issues and challenges to the development of open access institutional repositories in academic and research institutions in Nigeria. *Available at SSRN 1323387*.

Detlor, B., & Lewis, V. (2006). Academic library web sites: current practice and future directions. *The Journal of Academic Librarianship*, *32*(3), 251-258. https://doi.org/10.1016/j.acalib.2006.02.007

Devine, J., & Egger-Sider, F. (2004). Beyond Google: the invisible web in the academic library. *The Journal of Academic Librarianship*, *30*(4), 265-269. https://doi.org/10.1016/j.acalib.2004.04.010

Duran, D. C., Gogan, L. M., Artene, A., & Duran, V. (2015). The components of sustainable development-a possible approach. *Procedia Economics and Finance*, *26*, 806-811. https://doi.org/10.1016/S2212-5671(15)00849-7

Ivwighreghweta, O., & Onoriode, O. K. (2012). Open access and scholarly publishing: opportunities and challenges to Nigerian researchers. *Chinese Librarianship: an International Electronic Journal*, *33*.

Janowski, T., Estevez, E., & Baguma, R. (2018). Platform governance for sustainable development: Reshaping citizen-administration relationships in the digital age. *Government Information Quarterly*, *35*(4), S1-S16. https://doi.org/10.1016/j.giq.2018.09.002

Kryvylova, O., Sosnickaya, N., Oleksenko, K., Oleksenko, R., & Khavina, I. (2021). The aqmeological framework for modern higher education as a step towards sustainable development of society. *Linguistics and Culture Review*, *5*(S3), 55-64. https://doi.org/10.21744/lingcure.v5nS3.1369

Massoro, Z. Z., & Adewale, N. T. (2019). Influence of attitude, subjective norms and personal innovativeness on intention to use open access journals: a case of agricultural research institutes. *Library Philosophy and Practice*, 1-13.

Materu, P. N. (2004). Open source courseware: A baseline study.

Mebratu, D. (1998). Sustainability and sustainable development: historical and conceptual review. *Environmental impact assessment review*, *18*(6), 493-520. https://doi.org/10.1016/S0195-9255(98)00019-5

Nehru, R. (2016). Corporate social responsibility & education for sustainable development. *International Research Journal of Engineering, IT & Scientific Research*, *2*(3), 72-81. Retrieved from https://sloap.org/journals/index.php/irjeis/article/view/490

Nielit, S. G., & Thanuskodi, S. (2020). E-discovery components of E-teaching and M-learning: An overview. *Mobile Devices in Education: Breakthroughs in Research and Practice*, 928-936.

Perez, A. V., Gamez, M. R., Viteri, C. G. V., & Quiroz, A. M. V. (2017). Community power as a driving force for sustainable local development. *International Research Journal of Engineering, IT & Scientific Research*, *3*(4), 8-19. Retrieved from https://sloap.org/journals/index.php/irjeis/article/view/546

Raju, J. (2014). Knowledge and skills for the digital era academic library. *The Journal of academic librarianship*, *40*(2), 163-170. https://doi.org/10.1016/j.acalib.2014.02.007

Rinartha, K., Suryasa, W., & Kartika, L. G. S. (2018). Comparative Analysis of String Similarity on Dynamic Query Suggestions. In *2018 Electrical Power, Electronics, Communications, Controls and Informatics Seminar (EECCIS)* (pp. 399-404). IEEE.

Roy, B. K., Biswas, S. C., & Mukhopadhyay, P. (2012). Open access to scholarly information in India: trends and developments. *International Research: Journal of Library and Information Science*, *2*(1).

Suber, P. (2012). Open access overview.

Thanuskodi, S. (2013). Students' attitudes towards library facilities and information resources of university libraries in Tamil Nadu: A survey. In *Challenges of academic library management in developing countries* (pp. 1-15). IGI Global.

Thanuskodi, S. (Ed.). (2013). *Challenges of academic library management in developing countries*. IGI Global.

Thanuskodi, S., & Subramaniyan, S. (2013). Awareness and use of e-resources among library and information science distance learners at Alagappa University: A study. In *Advancing Library Education: Technological Innovation and Instructional Design* (pp. 264-272). IGI Global.

Wang, X., van Dam, K. H., Triantafyllidis, C., Koppelaar, R. H., & Shah, N. (2019). Energy-water nexus design and operation towards the sustainable development goals. *Computers & Chemical Engineering*, *124*, 162-171. https://doi.org/10.1016/j.compchemeng.2019.02.007

West, P. G., & Victor, L. (2011). Background and action paper on OER. *Report for The William and Flora Hewlett Foundation. Menlo Park, CA: The William and Flora Hewlett Foundation*.

Wiley, D. (2007). On the sustainability of open educational resource initiatives in higher education.

Zharova, L., Raksha, N., Spitsyna, A., Karolop, O., & Mirzodaieva, T. (2021). After-covid development of services in the framework of sustainable

development. *Linguistics and Culture Review*, *5*(S4), 1693-1706. https://doi.org/10.21744/lingcure.v5nS4.1850

Zu, Z. (2021). The right contextual information determining the success of communication on translation. *Applied Translation*, *15*(1), 39–43. Retrieved from https://appliedtranslation.nyc/index.php/journal/article/view/1423