

Usage, Perception, and Attitude of Open Access Resources Among Faculty Members of Madurai Kamraj University – A Study

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This study attempts to observe the use, perception, and attitude of open access resources by the faculty members of Madurai Kamaraj University (MKU). A structured questionnaire was distributed among the faculty members at MKU. The study revealed that most of the faculty members were well-aware of open access resources. The majority of the faculty used open-access resources for their academic activities. The respondents' perceptions and attitudes toward open access resources were also discussed in the study. Nearly half of the faculty members accepted the open access resources for their research and other activities. Awareness about open access resources is involved with journals, libraries, and books. The Shodhganga portal was given priority in the repository categories, the DOAJ portal was given priority in the journals category, and the InTechOpen portal was given priority in the books category. Proximity matrix analyses have been done to measure the relationships between faculty attitudes towards open access resources.

Keywords: *Open Access, Open Access Resources, Perception-OA, Usage-Open Access, User Perception.*

0 INTRODUCTION

In the current era of Information Technology (IT), the format of information resources has dramatically transitioned, and further the way of access to information has also been altered dynamically. There is no doubt that the advancement in information technology has also profoundly impacted the information scenario and users' requirements. Electronic resources are published in an open access environment through this revolution of information technology.

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Open Access is mainly the outcome of stumbling block with non-open access resources. In this connection, the research outputs are mainly distributed online free of cost and use the open access resources in their publications. Suber¹ defines Open Access as “Open Access literature is digital, online, free of charge, and free of most copyright and licensing restrictions”. This definition lucidly states that OA removes the price barrier, some flexibility about which permission barriers to remove and removes the access barriers.

The open access movement focuses mainly on peer-reviewed articles, and the production and maintenance cost of publications can be managed in diverse manners to collect from access tools, such as, subscription, site licenses, or it may be pay-per-view charges, etc. The open access contents include journal articles, book chapters, conference papers, theses.

1 REVIEW OF LITERATURE

Matonkar and Dhuri² studied the level of awareness and the use of open-source information among faculty and students of Ponda Education Society's (PES's) Colleges. The study revealed that 39.6% of the faculty and students are unaware of the open access resources. De and Mondal³ attempted to trace the trend of open access e-books on Big Data. They found that despite having a rising interest in Big Data, a visible gap is seen in the availability of resources found in DOAB. Ukwoma and Onyebinama⁴ surveyed undergraduate students' challenges and opportunities to access and use open access resources in selected federal universities in Southeast Nigeria. The study revealed that the respondents are aware of open access resources and use them daily for their research writing and keep them informed of the present-day trends.

Abdullah-Al-Mahmud and others⁵ revealed that the faculties and students have a positive perception of open access resources in higher education in Bangladesh and faculties were more knowledgeable than students in terms of understanding OA concepts. Chakyarkandiyil (2020) studied the research scholars' attitudes toward open access resources. The study found that about 80% of the research scholars have a positive attitude against open access resources, and 85% of the research scholars strongly believe that it is beneficial to carry out the research and other academic activities. Chinnadurai and Tamizhchelvan⁶ found that the faculty and research scholars of Mother Teresa Women's University and Manonmaniam Sundanar University are well aware of open access resources and contribute their research content to an open access environment. Govindarajan and Dhanavandan⁷ studied the awareness and attitude of open access among teaching staff in higher educational institutions in Tamil Nadu. The study exposed that the majority of the faculty members understood the licensing terms in OA. Most of the faculties were interested in using open access and publishing their research on open access.

Nobes and Harris⁸ (2019) found that although the respondents have a positive attitude about open access, they wish to publish their research in reputed international journals. Bala and Pradap⁹ (2018) studied the awareness and perception of open access resources among PG students and Tilak Raj Chadha Institute of Management Technology (TIMT) faculty. The study found that 82.95% of the respondents are aware of open access resources and use them for their academic purposes.

Padmavathi¹⁰ (2018) analysed the ordeals and prospects in the golden open access publishing in the domain of food science and technology. The study found that the OA movement has opened up worldwide opportunities to the researchers and is thus the platform to showcase their research output. Roy and others (2016) described the growth and development of the open access repository (OAR) movement in India and some of the important initiatives taken by the Government of India toward Open Access movements.

2 OBJECTIVES

The objective of the study is listed below,

- To recognize the level of awareness about open access resources among faculty members
- To explore the perception of open access resources among faculty members
- To analyse the attitude toward open access resources among faculty members
- To find out the usage of open access resources among faculty members

3 METHODOLOGY

The study was carried out to measure the use and perception of open access resources among the faculty at Madurai Kamaraj University. Therefore, the survey method was adopted for this study. A well-structured questionnaire was used to collect the data from the respondent. A Likert five-point scale was used to collect the faculties' perceptions and attitudes towards open access resources. A sample of 140 was included in this study. The collected data were analyzed by using SPSS software.

4 ANALYSIS AND DISCUSSION

TABLE-1
41 Demographic Details

S. No.	Description	Frequency	Percentage
Gender			
1	Male	64	45.71
2	Female	76	54.29
Domicile			
1	Rural	69	49.29
2	Urban	71	50.71
Age			
1	Below 30	21	15
2	31-40	55	39.28
3	41-50	39	27.86
4	Above 51	25	17.86

The demographic details of the respondents are shown in Table-1. Out of the 140 respondents, 76 were female faculty, and 64 were the male faculty. Among 140 faculties, 71 were from urban areas and 69 from rural areas. Similarly, out of 140 faculties, 55 faculties were between 31-40 age groups, 39 faculties were 41-50 age groups, 25 faculties were above 51 age group, and 21 faculties were below 30 age group.

TABLE-2
42 Source of Knowing about Open Access Resources

S. No.	Statement	Frequency	Percentage	Cumulative Percentage
1	Website	45	32.1	32.1
2	Seminar/Conference/Workshop	24	17.1	49.3
3	Professional forum	20	14.3	63.6
4	Library Professional	15	10.7	74.3
5	Research Supervisor	10	7.1	81.4
6	Friends and Colleagues	26	18.6	100.0

Table-2 show the source of knowledge about open access resources. Out of 140 respondents, 45 respondents were aware about open access resources through the website. Similarly, 24 respondents knew about open access resources through seminar/conference/workshop, 20 respondents came to know through the concerned professional forum, 15 respondents knew from library professionals, and 10 respondents through their respective research supervisors.

TABLE-3
43 Present Status of Open Access Resources

S. No.	Status	Frequency	Percentage	Cumulative Percentage
1	I have heard about it	5	3.6	3.6
2	I am new to open access resources	29	20.7	24.3
3	I have accessed open access resources	62	44.3	68.6
4	I have contributed to open access resources	28	20.0	88.6
5	I have been using open access resources continuously	16	11.4	100.0

Table-3 reveals the present status of open access resources among the faculty of Madurai Kamaraj University. Out of 140 respondents, 62 respondents have accessed open access resources, followed by 29 respondents who were new to open access, 28 respondents contributed their research content to open access, 16 respondents were continuously using open access resources, and 5 respondents heard about open access resources.

TABLE-4
44 Level of Awareness on Open Access Resources

S. No.	Statement	Not Aware of	Slightly Aware	Some-what Aware	Moderately aware	Fully aware	Mean	SD	Rank
1	Open Access Journal	11 (7.9%)	12 (8.6%)	34 (24.3%)	54 (38.6%)	29 (20.7%)	3.556	1.146	1
2	Open Access Book	7 (5%)	26 (18.6%)	41 (29.3%)	48 (34.3%)	18 (12.9%)	3.314	1.073	2
3	Open Access Repository	21 (15%)	42 (30%)	40 (28.6%)	24 (17.1%)	13 (9.3%)	2.757	1.181	3
4	Open Access Database	29 (20.7%)	30 (21.4%)	45 (21.1%)	24 (17.1%)	12 (8.6%)	2.714	1.219	4

The level of awareness of open access resources is shown in Table-4. Out of 140 respondents, 83 of the respondents were well aware of open access journals and has ranked. First, 66 of the respondents were more aware of open access books and has attained the second rank, 82 respondents were aware of open access repositories, achieving the third rank, and 75 of the respondents were aware of open access databases, and thus ranked fourth.

TABLE-5: 45 Use of Open Access Portal

S. No	OA Portal	Never	Rarely	Sometimes	Often	Always	Mean	SD	Rank
OA Portal for Journal									
1	DOAJ	20 (14.3%)	21 (15%)	46 (32.9%)	45 (32.1%)	8 (5.7%)	3.000	1.132	1
2	OAJSE	23 (16.4%)	49 (35%)	47 (33.6%)	14 (10%)	7 (5%)	2.251	1.042	4
3	Open Access Library	18 (12.9%)	28 (20%)	58 (41.4%)	23 (16.4%)	13 (9.3%)	2.892	1.117	2
4	ROAD	31 (22.1%)	42 (30%)	42 (30%)	17 (12.1%)	8 (5.7%)	2.493	1.135	3
OA Portal for Book									
1	DOAB	25 (17.9%)	25 (17.9%)	62 (44.3%)	23 (16.4%)	5 (3.6%)	2.700	1.057	3
2	InTech Open	23 (16.4%)	26 (18.6%)	50 (35.7%)	35 (25%)	6 (4.3%)	2.821	1.114	1
3	Book Boon	31 (22.1%)	21 (15%)	52 (37.1%)	26 (18.6%)	10 (7.1%)	2.735	1.203	2
4	Open AccessPEN	26 (18.6%)	53 (37.9%)	33 (23.6%)	23 (16.4%)	5 (3.6%)	2.485	1.083	4
OA Portal for Repository									
1	OpenDOAR	24 (17.1%)	38 (27.1)	44 (31.4%)	17 (12.1%)	17 (12.1%)	3.150	3.800	2
2	Shodhganga	8 (5.7%)	22 (15.7%)	41 (29.3%)	39 (27.9%)	30 (21.4%)	3.435	1.158	1
3	NPTEL	22 (15.7%)	19 (13.6%)	54 (38.6%)	21 (15%)	24 (17.1%)	3.043	1.269	3
4	NDLTD	38 (27.1%)	30 (21.4%)	30 (21.4%)	24 (17.1%)	18 (12.9%)	2.671	1.375	4

As shown in Table-5, out of 140 respondents, most of them used open access resources. Based on the mean value, the usage of the open access portal is ranked, and the study reveals that DOAJ (Directory of Open Access Journal) was placed in 1st rank among journal portals. This was followed by Open Access Library in the second rank, ROAD (Directory of Open Access Scholarly Resources) placed in the third rank, and OAJSE placed in the fourth rank. At the same time, InTechOpen was placed in the 1st rank among book portals. Followed by Book Boon placed in the second rank, DOAB (Directory of Open Access Book) placed in the third rank, and Open AccessPEN placed in the fourth rank. Similarly, Shodhganga was placed in the 1st rank among repositories. Followed by openDOAR placed in the second rank, NPTEL placed in the third rank, and NDLTD (Networked Digital Library of Theses and Dissertations) placed in the fourth rank. Further, the study found that repository portals were used more than other OA portals.

TABLE-6
46 Faculty Perception Towards Open Access Resources

S. No	Statement	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Mean	SD	Rank
1	Ensures faster publication of my research work	5 (3.6%)	5 (3.6%)	29 (20.7%)	60 (42.9%)	41 (29.3%)	3.907	0.981	5
2	A boon for developing country research publications	5 (3.6%)	7 (5%)	26 (18.6%)	58 (41.4%)	44 (31.4%)	3.971	0.936	3
3	Open the door for collaborative research	5 (3.6%)	2 (1.4%)	37 (26.4%)	61 (43.6%)	35 (25%)	3.850	0.936	7
4	Ensures my article is cited more often	9 (6.2%)	8 (5.7%)	29 (20.7%)	50 (35.7%)	44 (31.4%)	3.921	0.914	4
5	Impose extra pressure on authors to maintain the high quality	15 (10.7%)	45 (32.1%)	44 (31.4%)	14 (10%)	22 (15.7%)	2.879	1.214	12
6	It lacks a high quality	17 (12.1%)	24 (17.1%)	38 (27.1%)	50 (35.7%)	11 (7.9%)	3.100	1.152	11
7	It is not yet accepted in society as a platform for research	12 (8.6%)	18 (12.9%)	49 (35%)	26 (18.6%)	35 (25%)	3.386	1.233	8
8	The Editorial board is not as qualified as the subscription journals	9 (6.4%)	20 (14.3%)	56 (40%)	35 (25%)	20 (14.3%)	3.264	1.077	10
9	Not always peer-reviewed	15 (10.7%)	20 (14.3%)	47 (33.6%)	37 (26.4%)	21 (15%)	3.293	1.190	9
10	More scope for open access resources in future	1 (0.7%)	11 (7.9%)	32 (22.9%)	59 (42.1%)	37 (26.4%)	3.857	0.926	6
11	Free of cost for accessing the content	7 (5%)	1 (0.7%)	32 (22.9%)	41 (29.3%)	59 (42.1%)	4.029	1.066	2
12	Time saving	5 (3.6%)	5 (3.6%)	12 (8.6%)	47 (33.6%)	71 (50.7%)	4.279	0.937	1
Group		F/t Value				Sig. Value			
Gender		-4.713				0.000(*)			
Age		1.774				0.155(NS)			
Domicile		2.321				0.130(NS)			

* Significant at 5% level

The faculty's perception of open access resources is shown in Table-6. Based on the mean value, the variables were ranked. Accordingly, Time Saving has the first rank with a mean value of 4.279, and it is followed by free of cost for accessing the content has the second rank with a mean value of 4.029, a boon for developing country research publications has the third rank with a mean value of 3.971. Similarly, the editorial board is not as qualified as the subscription journals. Having the tenth rank with a mean value of 3.264 and followed by open access resources that lack a high quality has the eleventh rank with a mean value of 3.100. It imposes extra pressure on authors to maintain the high quality has twelfth rank with a mean value of 2.879.

Further, the study reveals that the P-value of the gender (0.000) is less than 0.05. Hence, there is a significant difference in the mean scores of the respondents in the groups. At the same time, the P-value of the age (0.155) and domicile (0.130) is greater than 0.05. Therefore, there is no significant difference between the groups. It could be concluded that the majority of the faculty have a good perception of open access resources.

It is observed that there are three clusters that were formed in the perception of open access resources. The cluster is named Fully Capitalized, Fail-to-Fully capitalises and Exceptional effort. The first cluster consists of fully capitalised such as Ensures faster publication of my research work, A boon for developing country research publications, Time Saving, Open the door for collaborative research, Ensuring my article is cited more often, More scope for open access resources in future, and Free of cost for accessing the content. Whereas the second cluster Fails to fully capitalise, such as Lacking a high quality, It is not yet accepted in society as a platform for research," Editorial board is not as qualified as the subscription journals, and Not always peer-reviewed. The third cluster consists of "Impose extra pressure on authors to maintain the high quality".

It is observed that the cluster analysis confirms that the respondents have a good perception of open access resources.

TABLE-7
47 Faculty Attitude towards Open Access Resources

S. No	Statement	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Mean	SD	Rank
1	Open access drives innovation in research	5 (3.6%)	7 (5%)	20 (14.3%)	74 (52.9%)	34 (24.3%)	3.942	0.871	4
2	Open Access Journals are cited increasing than subscription journals	5 (3.6%)	3 (2.1%)	10 (7.1%)	75 (53.6%)	47 (33.6%)	4.136	0.858	2
3	I like to read open access resources	5 (3.6%)	4 (2.6%)	39 (27.9%)	63 (45%)	29 (20.7%)	3.793	0.896	6
4	I like open access resources because they are seamless	5 (3.6%)	8 (5.7%)	40 (28.6%)	50 (35.7%)	37 (26.4%)	3.850	0.894	5
5	I can access it from anywhere without any restriction	9 (6.4%)	30 (21.4%)	60 (42.9%)	39 (27.9%)	2 (1.4%)	4.428	4.773	1
6	I like to publish an article on the open access platform	5 (3.6%)	6 (4.3%)	37 (26.4%)	71 (50.7%)	21 (15%)	3.693	0.905	8
7	I feel that open access resources are more beneficial to the academic and research community	7 (5%)	31 (22.1%)	19 (13.6%)	45 (32.1%)	38 (27.1%)	3.950	0.834	3
8	I feel that some open access journals are not peer-reviewed	9 (6.4%)	33 (23.6%)	59 (42.1%)	19 (13.6%)	20 (14.3%)	3.057	1.098	9
9	Open access journals have low Impact Factor	13 (9.3%)	28 (20%)	60 (42.9%)	25 (17.9%)	14 (10%)	2.992	1.076	10
10	I feel that articles are frequently cited from open access resources	5 (3.6%)	4 (2.9%)	39 (27.9%)	61 (43.6%)	31 (22.1%)	3.779	0.945	7
11	Articles published in open access platforms do not get recognition from the scholarly community	13 (9.3%)	38 (27.1%)	58 (41.4%)	18 (12.9%)	13 (9.3%)	2.857	1.063	11
12	Many Predatory journals in the open access environment	15 (10.7%)	56 (40%)	50 (35.7%)	8 (5.7%)	11 (7.9%)	2.600	1.023	12
Group		F/t Value				Sig. Value			
Gender		3.073				0.082(NS)			
Age		3.538				0.016(*)			
Domicile		2.216				0.139 (NS)			

* *Significant at 5% level*

Table-7 depicts the attitude of the faculty towards open access resources and the value of the variables ranks it. OA can be accessed from anywhere without any restrictions and have accomplished the first rank with a mean value of 4.428. OA journals follow it are more cited than subscription journals and have the second rank with a mean value of 4.136. It is found that the faculty feels that open access resources are more beneficial to the academic and research community catching the third rank with a mean value of 3.950. Similarly, OA journals have a low impact factor and have the tenth rank with a mean value of 2.992. Articles published on open access platforms that do not get recognition from the scholarly community have the eleventh rank with a mean value of 2.857. Many predatory journals in open access environment have the twelfth rank with a mean value of 2.600.

Further, the study reveals that the age (0.016) P-value is less than 0.05. There is a significant variation in the mean scores of the respondents in the

groups. At the same time, the P-value of the gender (0.082) and domicile (0.139) is greater than 0.05. Therefore, there is no significant difference between the groups.

Proximity matrices contain measurements of relations or proximities between variables. The measurements in a proximity matrix express how close things are to each other. Table-8 reveals that the Attitude of open access resources such as Citation increasing, Seamless Like to read, Publish articles in open access platforms and More beneficial to the academic and research community are similar with the squared value of 65, 80, 85, 88 and 100. Whereas; they do not get recognition from the scholarly community, Many Predatory journals in open access environment, Not peer-reviewed and Low Impact factors are dissimilar cases with the squared value of 3940, 3874, 3372 and 3347.

TABLE-8

48 Attitude of Users Towards Open Access Resources- Proximity Matrix

S. No.	Attitude	1	2	3	4	5	6	7	8	9	10	11	12
1	Innovation in research	0											
2	Citation increasing	65	0										
3	Like to read	85	126	0									
4	Seamless	111	120	80	0								
5	Access anywhere without any restriction	3190	3145	3183	3181	0							
6	Publish an article on the open access platform	101	130	100	128	3195	0						
7	More beneficial	113	88	138	120	3487	122	0					
8	Not peer-reviewed	472	495	417	359	3372	427	431	0				
9	Low Impact Factor	401	446	378	366	3347	372	394	127	0			
10	Frequently cited from open access resources	111	98	192	182	3169	116	88	455	446	0		
11	Do not get recognition from the scholarly community	496	557	451	411	3874	441	437	186	139	499	0	
12	Many Predatory journals in the open access environment	594	675	539	527	3940	525	567	272	257	579	138	0

* 1 – Open access drives innovation in research, 2 – Open access journals are cited increasing than subscription journals, 3 – I like to read open access resources, 4 – I like open access resources because they are seamless, 5 – I can access it from anywhere without any restriction, 6 – I like to publish an article in open access platform, 7 – I feel that open access resources are more beneficial to the academic and research community, 8 – I feel that some open access journals are not peer-reviewed, 9 – Open access journals have low Impact Factor, 10 – I feel that articles are frequently cited from open access resources, 11 – Articles published in open access platform do not get recognition from the scholarly community, 12 – Many predatory journals in the open access environment

5 CONCLUSION

Electronic resources are available in the openaccess domain in the information technology world. Awareness and use of the openaccess resources in higher educational institutions have usual in the IT world. E-books, e-journals and e-database are freely available on various openaccess platforms. Even the

openaccess resources help the management of the academic institution, which cannot afford to meet the subscription cost of journals, databases, etc. The study reveals that most respondents use open access resources for their academic activities. They have a positive perception of open access resources, and they wish to publish their research content in open access.

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