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## Awareness and Use of Open Access Resources in Higher **Education and Scholarly Research: Faculties versus Students Perspectives**

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# Awareness and Use of Open Access Resources in Higher Education and Scholarly Research: Faculties versus Students Perspectives

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#### Abstract

**Purpose**- The study aims to identify, and to compare the awareness and attitude of faculties and students towards Open Access Resources.

**Design/methodology/approach-** The study employed a mixed method research approach. A survey has been conducted among purposively selected students (52) and faculties (17) through distributing a structured questionnaire(1-5 point likert scale, and open ended). SPSS v.20 and coding method have been used for analyzing quantitative and qualitative data respectively.

**Findings**-Both faculties and students had positive perceptions towards OARs though faculties were more knowledgeable than students in terms of understanding on major OA concepts. Digital format and free availability were considered as motivational factors for using OARs. Both respondents indicatedplagiarism and copyright violation as important vulnerabilities in using OARs.

**Originality/value-**This paper highlights the awareness level of faculties and students towards open access resources in higher education in scholarly research. Apart from purposes, sources, preferable model, and state of publication in open access mode, the study focuses on motivational factor, vulnerabilities, and integration of open access resources in higher education and scholarly research from faculties and students perspectives which demonstrateits originality.

**Implication-** It would generate awareness among the academics, library professionals as well as OA publishers topromote OARs for wider use.

**Keywords-** Open Access Resources (OAR), Open Access (OA), Higher Education, Scholarly Research, Open Access publication.

Paper type-Research paper

#### 1. Introduction

The concept of 'Openness' is based on the idea that knowledge should be disseminated and shared freely through the Internet for the benefit of society as a whole. The two most important aspects of open access are free availability and as few restrictions as possible on the use of the resources, whether technical, legal or price barriers. (Yuan et al.,2008). (Suber, 2011) defines Open Access Resources as "Digital, online, free of charge, and free of most copyright and licensing restrictions". Public Library of Science (PLoS) defines it as "free availability and unrestricted use". (Suber, 2015). However, (Jain, 2012) define open access materials as full text, can be accessed by anybody from anywhere and its contents can be in any format from texts and data to software, audio, video, and multi-media, scholarly articles and their preprints. Open access literature can be applied to all forms of published research output, including scholarly journal articles, conference papers, theses, book chapters and monographs (Schöpfel, 2013; Meredith, 2012).

It all started back in 1960s when the U.S. Department of Education's Office of Educational Research and Improvement and the National Library of Education launched the Educational Resources Information Center (ERIC), an online digital library of education research and information. (Suber, 2009). The rise of the Internet in the 1990smade it widely apparent that research could be shared online at low cost and great speed. (Contreras, 2012). In 1991, The first free scientific online archive arXiv.org was started for distributing physics preprints. In 1998, Wiley coined the term "Open Content". Later in 2000, National Institutes of Health (NIH) released PubMed Central, an open access depository that has grown to almost 6 million articles today. In 2001 "the Creative Commons" was founded. The organization has released several copyright-licenses known as Creative Commons licenses which are free of charge to build and share scholarly works legally. In 2001 MIT announced its "OpenCourseWare initiative". The term "Open Educational Resources" was first adopted at UNESCO's 2002 Forum. The first major international statement on open access was the Budapest Open Access Initiative in February 2002, launched by the Open Society Institute. Two further statements followed: the Bethesda Statement on Open Access Publishing in June 2003 and the Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities in October 2003. In 2003 DOAJ (Directory of Open Access Journals) launched. As of 25th February 2018, the database now contains 11,210 journals. In 2008 the term MOOC was coined by Dave Cormier. The first OA initiative in Bangladeshwas taken by icddr,b back in 1997 by making their research journal (Journal of Diarrhoeal Diseases Research) publicly available. (Uddin et al.,2014).

#### 2. Statement of the Problems

Until now the scholarly works are quite inaccessible for the copyright restrictions and subscription charges. This makes researchers especially researchers from developing countries hard to get quality literature to conduct research works. On the other hand, the cost of educational resources is going higher with time. A study in 2013 revealed that the price of textbooks worldwide increased by 82%, roughly triple the price on inflation – which make them difficult to avail for students. (Missingham, 2016). Even though Open Access is a global thinking for several decades, in Bangladesh the concept is new amongst scholarly community. As a developing country, our scholars did take the advantages of open access resources consciously or sub-consciously, but their understanding is still in vague. A study on the faculty members of

University of Dhaka found that only 21% faculties choose only OA journals for their academic and research purpose. (Shuva&Taisir, 2016).

Although so many researches have been conducted on different open access areas, there have been a significant lack of research in the context of awareness and uses of OARs in higher education and scholarly research from faculties' and students' perspectives. This research is also an attempt to make a comparison of faculties and students awareness and uses of OARs.

#### 3. Research Questions

The study has been guided by the following research questions:

- 1. What is the attitude and level of awareness of Open Access Resources (OARs) amongst faculties and students?
- 2. How have Open Access Resources been used in higher education and scholarly research?
- 3. What are the sources of Open Access Resources and how the students and faculties avail these for academic and research purposes?
- 4. What are the benefits of OARs that motivate students and faculties towards using them?
- 5. What are the vulnerabilities in accessing Open Access Resources?
- 6. What are the problems associated with using OARs by the faculties and students?

#### 4. Methodology:

Survey research has been used as research strategy in this study. The study pursued a mixed method i.e. both qualitative and quantitative research approach as research design. The scope of the study was confined within four research institutes of Rajshahi University, Bangladesh. It used purposive sampling technique to select students (52) and faculties (17) from the four research institutes of Rajshahi University, Bangladesh. A structured questionnaire, which includes both close ended (1-5 point Likert scale) and open ended questions, has been employed as data collection technique. The study used both SPSS v.20 and Excel 2016 for analyzing quantitative data. Qualitative data has been coded, categorized and thematically analyzed. For the convenience of analyzing qualitative data, we have used coding system for the respondents i.e. RT1, RT2.....RT17 for faculties, and RS1, RS2......RS52 for students.

#### 5. Literature Review

The following study made an effort to review the related studies on the concepts of Open Access Resources:

#### **Open Access and Open Access Resources**

According to BOAI (Budapest Open Access Initiative, 2002), Open means free for readers, not for publishers. Open access literatures aren't free to produce. But that doesn't close the door for readers to get it free of charge.(Suber, 2015) stated that none of the OA advocates said Open Access literature has no publication cost, though a number of them claimed that the cost to produce open access literature is less expensive than the traditionally published one.

#### Open Educational Resources

Open education can be seen as an umbrella covering a number of concepts such as Open Educational Resources, open source, open access, open science, open archiving and open publishing. (Peters, 2008), (Peter & Deimann, 2013).

The idea of Open Educational Resources (OERs) was mentioned for the first time in 2002 at the UNESCO Forum on Open Coursewere for Higher Education. (Butcher, 2011), (Poposki,

2010). The key purpose of OER is to provide free access to high-quality educational resources on a large scale. Recourses of Open Education are comprising in three areas-learning content, tools and implementation resources. (Yuan, 2008).

#### **Open Data and Research**

Requesting data from other researchers can be a hustle and sometimes unsuccessful process. In a study conducted in 2006, 50.8% US researchers stated that data retention had a negative effect on the progress of their research. (Vogeliet al., 2006). In this context, there is a growing perception that most research data should be open, particularly data from publicly funded project. Research data should be open for two purposes: to provide evidence that the research was conducted properly and to provide data for reuse and the generation of further findings and outputs. (Childset al., 2014).

#### **Open Access Resources and Scholarly Research**

In developing world perspective, open accesssolves two types of problems, 1) it make the research visible for a larger audience and 2) it brings an opportunity to access into quality scholarly outputs. (Suber, 2005).

A study done by (Gul *et al.*,2010) found that one third of the scholars are aware of more than two OA journals. Almost 30 % of them were considered OA journals as source of publishing their works. However, only 10 percent deposit their works in OA repositories. On another study, (Erturk&Kucuk, 2010) revealed that about 50% scholars are aware of open access concepts and 92% of them are willing to place their works into institutional repository. Another study by (Sandhu &Daviet, 2012) indicates that almost 92% of students are familiar with open access journals and use them for their academic purpose. On the other hand, 85% of students arefamiliar with institutional repositories and other 82% had read scholarly papers on personal websites.

#### **Open Access Publication**

One of the achievements of the worldwide OA movement is to persuade 80% of non-OA journals to let their authors deposit the peer reviewed versions of their work in open access repositories. (Suber&Arunachalam, 2005). A study by (Creaser et al., 2010) revealed that authors from disciplines like Medicine, Life Science are likely to associate more with the "gold" road than any other discipline.

Open access is one of the method employed to maximize the impact of scholarly output. Open Access articles are 60% more likely to be cited and once cited, are cited 29% more than non-OA articles. (Greyson et al., 2009). However, in another study, (Norris et al., 2009) found that depending on disciplines, open access work gets 40% to 80% more citation than non-OA one.

#### **Open Access and Copyright**

The only major obstacle standing on the way of open access is copyright. However, a survey made by RoMEO showed that majority of authors find no issue if another researcher sees, save and quote the work that they made available online. (Denicola, 2006).

Open access isn't against copyright rather OA scholarly work is protected through open licensing. Open access isn't against the attribution or ethical rights of author rather it protects authors right through a number of open licenses. (Moscon, 2014). Majority of authors choose to preserve the right to block the distribution of misattributed copies, other might choose to stop commercial re-use of works. These conditions prevent plagiarism, misrepresentation and

sometimes commercial re-use. Open access is about lawful sharing not sharing in disregard of law. (Suber, 2004).

#### **Open Access in Bangladesh**

Even though open access is an aged old concept, in Bangladesh the majority of scholars are yet to positively accept it. A large number of scholarly works done by Bangladeshi scholars hasn't been globalized due to the lack of open accessibility to these resources. The first OA initiatives in Bangladesh was taken by icddr,b (International Centre for Diarrhoeal Disease Research, Bangladesh) back in 1997 by making their research journal (Journal of Diarrhoeal Diseases Research) publicly available.BanglaJOLwas initiated in 2007 to promote awareness and use of Bangladesh-published journals of all discipline by providing full text access to the resources. (Uddin et al., 2014).

A study on the faculty members of University of Dhaka evident that 21% faculties choose only OA journals for their academic and research purpose. Most of the faculty members (50%) are unaware of the author-pay OA publishing model and predatory OA journals. (Shuva&Taisir, 2016).

The most recent addition of OA initiatives in Bangladesh is the launching of Open Access Bangladesh (OAB). The platform starts its journey on February 17, 2017. It is working for popularizing, advocating and promoting Open Access, Open Data and Open Education in Bangladesh.

#### 6. Presentation of results

#### **Level of Research Respondents**

Among 17 faculty members, within our study area, 10 faculties (58.8%) were PhD holder, 1 MPhil, 4 Post-Doc and the rest 2 didn't have any of these. However, out of 52 students, 67.3 % of our students were MPhil fellow and the rest 32.7% were PhD fellow. A chart below might help to understand it better.

I	Level	Facult	ties	Stud	dents
		Frequency	Percent	Frequency	Percent
Valid	MPhil	1	5.9	35	67.3
	PhD	10	58.8	17	32.7
	Post-Doc	4	23.5	0	0
	Total	15	88.2	52	100
M	issing	2	11.8	0	0
	Γotal	17	100.0	52	100

Table 1: Level of Research Respondents

#### **Perception towards Open Access Resources**

The survey data found that the statement "Open Access is the alternative to subscription (paid) mode" is agreed by students and got the highest Mean score=3.8654 from students. Faculties replied neutral on this statement. Faculties were agreed with the statements "Open Access Resources have wider accessibility and larger readership" with highest Mean score=4.0588. However, from students' perspective, it gets neutral feedback with the Mean score= 3.8269.

Furthermore, for perceptions such as "Open access can be ensured even with protecting copyright" both faculties and students showed agree standpoint.

Opinions	Faculties		Students	
opinions	M	SD	M	SD
Open Access is the alternative to subscription (paid) mode	3.4118	1.17574	3.8654	.84084
OARs are high in quality and easily available	3.3529	.93148	3.4231	.95684
Open Access Resources have wider accessibility and larger readership	4.0588	.74755	3.8269	.87942
Open access limits authors interest	3.2353	1.09141	3.4038	.93431
Open access can be ensured even with protecting copyright	3.5882	.87026	3.6923	.94014

Table 2: Perception towards Open Access Resources

#### **Understanding on Open Access Concepts**

The following table showed that amongst different concepts of open access the faculties have high understanding on "Open Access Repositories/ Database" (M=4.2941). In terms of "Open Access Principles", both faculties (M=4.1765) and students (M=4.0577) showed high understanding on this concept. On theother hand, both types of respondents were having low understanding with concepts like Sherpa/Juliet (M=1.9412, 1.8824) and Sherpa/RoMEO (M=2.2115, 2.0577).

OA Concepts	Fac	Faculties		Students	
O'l Concepts	M	SD	M	SD	
Open Access Principles	4.1765	.72761	4.0577	.82637	
Open Access Publishing models e.g. gold OA, green OA etc.	2.9412	1.24853	2.9423	1.14470	
Self-archiving	3.5294	1.00733	3.0192	1.16300	
Preprint	3.5882	1.06412	3.3269	.92294	
Post print	4.1176	.69663	3.2115	.91473	
Open Access Journals	4.1176	.60025	3.7885	.82454	
Open Access Repositories/ Databases	4.2941	.68599	3.6346	.86385	
Creative Commons and other public copyright licenses	2.5882	1.00367	2.5769	1.22628	
Sherpa/Juliet	1.9412	1.14404	2.2115	1.09072	
Sherpa/RoMEO	1.8824	.99262	2.0577	.97846	

Table 3:Understanding on Open Access Concepts

#### **Ways to Get Updates on Open Access Resources**

The following table exposed that most of the faculties (M=3.6471) often used "Academic or professional Platforms like LinkedIn, ResearchGate, Academia.edu etc" to get updates on OARs. Whereas, a large of the students (M=3.7500) often get updates on OARs from their research supervisor. Social networking sites i.e. Facebook, twitter etc. didn't get much attention from both respondents on this purpose.

Opinions	Faculties		Students	
opinions	M	SD	M	SD
From Seminar/ Conference / Workshop	2.8824	1.36393	3.0192	1.29085
From Academic/ research/ professional Platforms like LinkedIn, ResearchGate, Academia.edu etc.	3.6471	1.05719	3.5000	1.05719
From open access blogs like PLOS blog, Creative commons blog etc	2.5882	1.27764	2.5385	1.09296
From library professionals	2.8824	1.49509	2.6923	1.26085
From my research supervisor	3.5294	1.12459	3.7500	1.18611
From Facebook, twitter and other social media	2.4706	1.37467	3.1538	1.37747

Table 4: Ways to Get Updates on Open Access Resources

#### **Yearly Experience with OARs**

The study found that, majority of the faculties have 11-15 years of experience with Open Access Resources. Only 2 faculties (RT8, RT12) were familiar with it for over 20 years. On the other hand, a majority number of students were familiar with OARs for 1-5 years. The study found only 4 students (RS23, RS30, RS31, RS34) who have been using OARs for 10 years.

#### **Preferable Model of Open Access Publication**

A majority number of faculty respondents (52.9%) preferred Gold Road of Open Access Publication. For student respondents, their preference is Green Road of Open Access Publication (40.4%). Hybrid mode appeared to be less popular OA publication route.

OA Publication Routes	Faculties		Students		
			%	Frequency	%
	Gold Open Access	9	52.9	17	32.7
Valid	Green Open Access	4	23.5	21	40.4
, 4316	Hybrid Open Access	2	11.8	14	26.9
	Total	15	88.2	52	100.0

Missing	2	11.8	0	0
Total	17	100.0	52	100

Table 5:Preferable Model of Open Access Publication

#### **Publications Available on Open Access Mode**

The study found the majority of faculties (52.9%) had their publication available on Open Access mode. On the other hand, only 17.3% of students had their work openly available.

In response to using open access platform for making research work available, ResearchGateremarked as highly used platform among the other platforms by faculties (RT3, RT4, RT7, RT11, RT16) to make their scholarly works openly available while DOAJwas used by 3 faculties (RT3, RT8, RT4) to serve this purpose. Simultaneously, faculties like RT4 and RT16 used JSTORin this regard. Remarkably, the study found that ERIC and ResearchGate is the most preferable OA platform for students to make available their work.

#### **Establishing a Countrywide Central Open Access Digital Repository**

When it comes to establishing a countrywide central Open Access Repository for thesis and dissertation, most of the faculties (94%) and students (88.5%) were agreed with the idea.

#### **Purpose of Using Open Access Resources**

In terms of the purpose of using Open Access Recourses, faculties were Strongly Agree towards "Updating subject knowledge" (M=4.6471), "Teaching/ learning purpose" (M=4.5882) and "Research work (i.e. MPhil, PhD)" (M=4.6471). Whereas, students' feedback was Agree on these purposes.

Opinions	Faculties		Students	
Opinions	M	SD	M	SD
Updating subject knowledge	4.6471	.49259	4.4231	.57210
Teaching/ learning purpose	4.5882	.61835	4.1538	.69690
Research work (i.e. MPhil, PhD)	4.6471	.49259	4.4231	.87102
For conducting research projects	4.4118	.71229	4.1154	.78350
Writing research papers/articles	4.3529	.60634	4.2115	.80041

Table 6:Purpose of Using Open Access Resources

#### **Categories of Information Resources Usually Searched**

For types of searchedinformation resources, the faculty respondents marked most often for "Journal Articles" (M=4.7647), however, student's standpoint was often (M=4.3077) on this regard. Both faculties and students were often searched for "Research Reports" (M=4.1176, 4.0577), "Review Papers" (M=4.0000, 3.6346), "Book/ book chapters" (M=3.6471, 3.7308) and "MPhil/ PhD Thesis/ Dissertation" (M= 3.7059, 3.9423). "Conference/ Seminar Paper" and "Bibliographic information" got neutral attention from both respondents.

Options	Faculties	Student

	M	SD	M	SD
Journal Articles	4.7647	.43724	4.3077	.87534
Research reports	4.1176	.99262	4.0577	1.05558
Review papers	4.0000	.79057	3.6346	1.18865
Book/ book chapters	3.6471	1.22174	3.7308	1.03119
MPhil, PhD Thesis/ Dissertation	3.7059	1.04670	3.9423	1.09210
Conference/ Seminar Paper	3.2353	1.20049	3.0962	1.24080
Bibliographic information	3.0588	1.51948	2.8654	1.31401

Table 7: Categories of Information Resources Usually Searched

#### **Integration of OAR More in Higher Education and Scholarly Research**

A large number of faculty and student respondents emphasized on generating awareness and motivating researchers through seminars and workshops to integrate OARs more in higher education and scholarly research. 5 faculties (RT9, RT2, RT3, RT15, RT6, RT14) and 2 students (RS3, RS38) opined in making resources more accessible. Only one faculty respondent (RT4) suggested "updated information of OARs" in connection to integrate OARs in higher education and scholarly research. However, 'embedding OARs to classroom exercise' is remarked by one faculty (RT14) and one student (RT14) for integrating OARs.

## Familiarities with Different Open Access Resources *OA Repositories*

The study found that faculties were quite familiar with the options like DOAJ, DOAB and JSTOR, whereas students showed neutral attitude on these databases.

OA Repositories/ Databases	Faculties		Students	
STITE POSITORIES, Builded	M	SD	M	SD
arXiv	1.9412	1.24853	1.8654	1.02954
DOAJ: Directory of Open Access Journals	3.5882	1.41681	2.9615	1.38566
DOAB: Directory of Open Access Books	3.5294	1.37467	2.8077	1.38675
PubMed Central	3.2941	1.40378	2.1538	1.27394
Open DOAR	2.3529	1.36662	1.9615	1.15405
Shodhganga (E – Thesis Database)	2.2353	1.43742	2.1538	1.36317

Table 8:Familiarities with OA Repositories

#### Search Engine

From the following table, it is clear that 'Google Scholar' is the most familiar open access search engine amongst faculties (M=4.8235), whereas student respondents were familiar (M=4.3269) with it.

OA Search Engines	Faculties		Students	
Of Figures Engines	M	SD	M	SD
CiteSeerX	2.0000	1.06066	1.9038	1.03393
Google Scholar	4.8235	.39295	4.3269	1.09761
Google Patent	3.3529	1.53872	2.7308	1.44325
Microsoft Academic Search	3.0000	1.65831	2.4423	1.39204
Open Access Journals Search Engine (OAJSE)	3.0588	1.63824	1.9231	1.09984

Table 9:Familiarities with Search Engine

#### Open Courseware/ MOOC

Surprisingly, the survey data found that the acquaintance on Open Courseware or MOOC (Massive Open Online Course) amongst faculties and students were miserable. Both categories of respondents were less familiar with popular MOOC providers like EdX and Coursera.

Open Courseware/ MOOC providers	Facı	Faculties		Students	
Open Courseware/ MOOC providers	Mean	SD	Mean	SD	
MIT Open Courseware (OCW)	2.5294	1.54587	2.4808	1.48839	
Open Yale Courses	2.2941	1.40378	1.7692	1.11347	
Harvard OpenCourseWare	2.4706	1.41940	2.1154	1.39542	
Coursera	1.8824	1.45269	2.3077	1.39380	
EdX	2.1765	1.46779	2.4423	1.55189	
EuropeanMoocs	1.7059	1.21268	1.8462	1.16121	

Table 10:Familiarities with Open Courseware/ MOOC providers

#### **Motivational Factors of Using OARs in Research Purposes**

The study found that respondents from both categories were agreed with the statements like "Resources are in digital format and freely available for all" and "Free of most copyright and licensing restrictions" as their motivational factors to use OARs for research purpose. Students were agreed (M=3.7308) and faculties were neutral (M=3.4706) with thequestion of quality and reliability.

Opinions Facul	ies Students
----------------	--------------

	M	SD	M	SD
Resources are in digital format and freely available for all	4.2941	.77174	4.3077	.67267
Free of most copyright and licensing restrictions	4.1176	.69663	3.8077	.76795
Information is OA mode has quality and quite reliable	3.4706	.79982	3.7308	.88817
Most open access resources are available in full-text	3.1765	1.07444	3.3654	1.12073
Easy to gather information from open access resource then non open access one	4.0588	.55572	4.1346	.81719

Table 11:Motivational Factors of Using OARs in Research Purposes

#### **Vulnerabilities of Using OARs**

Student respondents were strongly agreed about "Fear of plagiarism and copyright infringement" (M=4.6154) among all other vulnerabilities, while faculties were simply agreed with this issue. The study revealed that both faculties and students were agreed with all types of stated vulnerabilities associated with OARs.

Opinions	Faculties		Students	
	M	SD	M	SD
Information gathered from Open Access Resources aren't always comprehensive and up-to-date	3.7647	.97014	3.7692	.85441
Some open access resources might not exceed quality margin	3.8824	.78121	3.6923	.78061
Fear of plagiarism and copyright infringement	3.8824	.69663	4.6154	5.63655
OAR might get less recognition from scholarly community	3.7059	1.04670	3.7308	.76991

Table 12: Vulnerabilities of Using OARs

#### **Suggestions to Overcome the Vulnerabilities**

A significant number of faculties(RT8, RT11, RT16, RT2) and students (RS4, RS49 RS3, RS5) emphasized on checking plagiarism and copyright infringement to overcome these vulnerabilities. Ensuring quality through the formation of a comparable rating system was considered as another mentionable suggestion of faculties (RT11, RT16, RT4, RT11, RT5) and students (RS42, RS49, RS44, RS4, RS8) to over come the vulnerabilities associated with OARs. A few of the respondents from student category (RS44, RS48) proposed that continuation of making scholarly publication open access through OARs is important to get up-to-date information for the users which is considered another recommendation to lessen vulnerabilities.

However, only one faculty member (RT14) suggested "Developing information literacy" as a way to alleviate vulnerabilities form OARs.

#### **Problems Faced by Faculties and Students While Accessing OARs**

The study evident that faculties often (M=3.8235) faced the problem like "Inadequate advocacy and misconceptions" to avail OARs. However, from student's standpoint they often (M=3.9423) considered "Lack of guidance and training" as a problem to access. Both faculties and students showed neutral attitude in terms of "Lack of ICT knowledge".

Opinions	Faculties		Students	
	M	SD	M	SD
Lack of guidance and training on using Open Access Resources	3.4706	1.54587	3.9423	.95821
Inadequate advocacy and misconceptions	3.8235	1.23669	3.5769	.93612
Incomplete subject coverage	3.0588	1.08804	3.5769	.93612
Lack of ICT knowledge	2.7059	1.57181	3.2308	1.24641

Table 13:Problems Faced by Faculties and Students While Accessing OARs

#### 7. Discussion of the Findings:

The study showed that a large number of faculties and students were claimed to have positive perceptions towards Open Access Resources. However, in terms of understanding on major OA concepts, faculties were more knowledgeable than students.

Most often faculties used OARs for updating subject knowledge, teaching/learning purpose and for conducting their research works. Students were also agreed with these purposes. 'Journal Articles' were the most searched while 'conference paper', 'bibliographic information' were the least searched OARs.

Generating awareness through seminars and workshops, ensuring qualities of OARs, updated information, embedding OARs in classroom exercise were some suggestion to integrate OARs more in higher education and scholarly research.

DOAJ and DOAB were often used OA repositories by faculties. Both respondents have poor experience with MOOC/ Open Courseware. Google Scholar is the highly used OA search engine for academic and research purposes. Both faculties and students found the digital format, free availability, free of copyright and licensing restrictions of OARs as the motivational factors to use them. In accessing open access resources, both respondents indicate the vulnerabilities like fear of plagiarism and copyright violation, non-peer-reviewed less reliable resources, incomprehensive and retrospective information and less recognition from scholarly community. However, the study found that majority (52.9%) of faculties have their works available on OA databases or research platforms. However, only 17.3% of students had their work available on Open Access platforms.

The study evident that faculties often faced problems like inadequate advocacy and misconceptions to access OARs, whereas, students often faced problems such as lack of guidance and training on using OARs.

#### 8. Conclusion

Knowledge are generated for the welfare of larger community. Every scholarly output has a contribution to its study area. However, scholarly works confined within monetary and copyright boundary has less communication with readers.

To bring the fundamental strength in higher education and scholarly research the use and awareness of OARs is inevitable. To fulfil the objectives of higher education and scholarly research the use and awareness of OARs is must.

The aim of this study was to find out the level of awareness and usage of OARs by faculties and students for higher education and scholarly research purpose.

The study revealed a mixed feedback from respondents. In spite of having a little perception on different OA concepts like OA publication models, open public licenses, a large number of faculties were well familiar with OA repositories/ directories like DOAJ, DOAB. Despite the fear of vulnerabilities of using OARs i.e. low quality, fear of plagiarism and less reliability, most of the respondents found OARs effective for their digital format and freely available feature.

The study urgesthat as the usage of OARs are growing, concern bodiesshould come forward to generate awareness to overcome open access relatedmisconceptions, universities should reform their policies to adopt open access for its scholarly outputs and academia university communities should be more welcoming in embracing open access.

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