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# **Awareness and Use of Open Educational Resources: A study**

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## **Abstract**

Understanding the awareness and use of Open Educational Resources (OER) among the stakeholders of academic libraries is a vital step to support the growth of OER initiatives at the educational institutions. The faculty and students' perceptions of OER often influence their interest in adopting open educational practices and their willingness to seek support from library professionals. To explore the awareness and the utilization of OERs among the faculty and students at St Joseph Engineering College (SJEC), Mangaluru, Karnataka, the author employed a survey to discover the responses to fulfill the study objectives. A total of 250 questionnaires were distributed among the faculty and students and 174 responses which amounts to 69.6% were received. The study found that 46 (26.44%) respondents use open educational resource daily, 38 (21.84%) respondents use open educational resource weekly, 81 (46.55%) respondents open educational resources twice in a week, 9 (5.17%) respondents use open educational resource monthly. The main purpose of using OERs is to enable online education and its ease of use. The study investigated that, the faculty and students who are aware of the OERs through library support services and institutional OERs initiatives are utilizing it more effectively regardless of their prior experience in using electronic resources. Based on the study, it is suggested that academic libraries and faculty should help in promoting the awareness, so that the students fully utilize the OERs freely available online.

## **Keywords**

Open education, OER, barriers, OER initiatives, academic libraries

## **1. Introduction**

The Open Educational Resources is a major revolutionary movement in the field of education. It provides a lot of scope for digital learning by providing access to ample learning materials from across the world. Open Educational Resources (OER) are teaching, learning

and research materials in any medium – digital or otherwise - that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation, and redistribution by with no or limited restrictions (UNESCO, 2021). Open educational resources include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge (Hewlett Foundation, 2016). 5R Concept of OER (i.e.: Retain, Reuse, Revise, Remix and Redistribute) gives the opportunity for the course designers to modify the course as per the course objectives and requirements (Sandanayake, 2019).The Open Educational Resources (OER) movement has empowered educators to become more innovative in their pedagogical practices, through the openness and flexibility in educational resource use permitted by open licensing of materials. (Karunanayake, Naidu, & Mohan, 2016). The purpose of OER is to remove unnecessary barriers to access knowledge and equalize access to education by making high quality educational materials and opportunities more broadly available.

The rapid rise in online classrooms during the COVID-19 pandemic has led to the adoption of more online resources than ever before (Schaffhauser, 2020). Open educational resources (OER) have become an important method of providing access to, and enhancing, the teaching and learning experience for both lecturers and students (Zaid & Alabi, 2020). Open educational resources make students' learning interesting, gets them more engaged and directly improves the quality of their learning experience (Itasanmi, 2020). Generally, OER enables students to learn at their own pace, convenience, helps them prepare for classes, and mainly serves as supplementary materials to their course modules. But despite the increasing popularity, benefits, and the potential of OER to contribute to the educational advancement of developing countries, it has been observed that there is a low level of awareness which is a major obstacle in the use of OER (Zaid & Alabi, 2020).

In view of the importance of accessing open educational resources, the author has provided awareness about the same to its stakeholders during the first phase of lockdown. This survey was developed to explore the awareness and utilization of OERs by the faculty and students of SJEC in August/September 2021.

### **1.1 Objectives of the study**

1. To investigate the types of OERs used by the students and faculty.
2. To know the purpose and pattern of using OERs.
3. To find out the barriers for using open educational resources.

4. To know the suggestions for its effective utilization.

## **2. Literature Review**

Many studies have been conducted to examine the awareness and usage of Open Educational Resources.

Padhi (2018) study indicate that the university teachers are very much aware of the concept of OER. But,they are not yet sure about the usage of OER in teaching and learning. Majority of them have not used OER in teaching but are willing to share their courses as OER.

Arunkumar and Kannan (2020) study found that the use of open educational resources among the PG students was on average.

Shams, Haq, and Waqar (2020) study found that the students had high proficiency in using OER and are aware of different types of OER.

Nyamwembe, Tanui, and Wamutitu (2018) study concluded that the majority of the students were moderately aware of the OER but the usage is still very low.

Issa et al., (2020) study concluded that the utilization of OERs for learning by undergraduates was on the average.

Itasanmi, (2020) study revealed that OER awareness among ODL students is at an average level, but OER usage is somewhat high. It was further established in the study that there exists a significant relationship between OER awareness and usage among the students.

Ivwhighrehweta and Ambrose (2020) study shows that the students are aware of the concept of OERand their level of usage was high.

Akomolafe and Adegun (2014) study showed that the level of awareness of undergraduates on the availability and usage of OER was moderate.

Nwana, Egbe, and Ugwuda (2017) revealed that the students are aware of majority of the e-learning materials for learning; and in terms usage, that the students do not use majority of the e-learning materials.

Afolabi (2017) revealed that understanding of online learners' skills,acceptability, perception, and competencies is necessary to provide intervention strategy and appropriate support service which could facilitate their understanding and learning of difficult concepts. It was

also discovered that students that have positive perception of OER performed very well in the achievement test administered.

Olufunke and Adigun, (2014) study revealed that usage of OER enhanced sharing of common knowledge, course structure, access to quality learning materials and use of real instructional materials online.

Deshmukh, U.B. (2018) study recommends that, there is a need for Librarians to create awareness among users, teaching and staff, and the general public on the centrality of OER in academic and research endeavors. This can be done through workshops, seminars, conferences and during orientation. Academic libraries should use web pages to host and promote OER for easy access and use by their patrons.

### 3.Methodology

This study employed the questionnaire method to investigate the awareness and use of the Open Educational Resources among the Faculty and Students of St. Joseph Engineering College, Mangaluru. The simple random sampling method was employed. The data was collected using Google platform. The 250 questionnaires were distributed among the faculty and students of postgraduates and final year undergraduates of all disciplines. Out of which 174 (69.6%) responses were obtained from the respondents. The study was carried out during August - September 2021.

### 4.Data Analysis

**Table 1: Category wise Distribution**

Category	Questionnaire Distributed	Reponses	Percentage (%)
Students	200	138	69
Faculty	50	36	72
<b>Total</b>	<b>250</b>	<b>174</b>	<b>69.6</b>

Table 1 shows that, among 174 respondents 72% of them are faculty and 69% are students. The overall responses are 69.6%. The responses from faculty are more compared to students.

**Table 2: Gender wise Distribution**

Gender	Category		Total
	Students	Faculty	

Male	48	08	56 (32.18%)
Female	90	28	118 (67.82%)
<b>Total</b>	<b>138</b>	<b>36</b>	<b>174</b> <b>(100%)</b>

According to Table 2 shows that 67.82% of the respondents are female whereas 32.18% are male. It implies that, majority of the respondents under study were female.

**Table 3: Experience in using Electronic Resources**

Experience	Category		Total
	Students	Faculty	
Less than 5 years	93 (67.39%)	02 (5.56%)	95 (54.60%)
5-10 years	22 (15.94%)	26 (72.22%)	48 (27.59%)
10 years and above	23 (16.67%)	08 (22.22%)	31 (17.81%)
<b>Total</b>	<b>138</b>	<b>36</b>	<b>174</b> <b>(100%)</b>

It is observed from Table 3 that, 67.39% of the students are having less than 5 years of experience in using OERs and 16.67% of them are having 10 years and above experience followed by others..

The majority 72.22% of the faculty having 5-10 years of experience and 22.22% of them are having 10 years and above experience in using electronic resources.

Overall responses show that, majority 54.6% of the respondents having Less than 5 years of experience in using electronic resources, 27.59% are having 5-10 years of experience and 17.81% are having more than 10 years of experience in using OERs.

**Table 4: Awareness on Open Educational Resources**

Awareness	Category		Total
	Students	Faculty	
National Repository of Open Educational Resources (NROER)	0	16 (44.44%)	16 (9.20%)
SWAYAM – NPTEL	138 (100%)	34 (94.44%)	172 (98.85%)
National Digital Library of India	105 (76.1%)	28 (77.78%)	133 (76.44%)
Khan Academy	20 (14.49%)	26 (72.22%)	46 (26.44%)
Open Textbook Library	20 (14.49%)	12 (33.33%)	32 (18.4%)

COURSERA	138 (100%)	34 (94.44%)	172 (98.85%)
TED	78 (56.51%)	22 (61.11%)	100 (57.47%)
MIT Open Courseware	20 (14.49%)	18 (50%)	38 (21.84%)
OER COMMONS	0	0	0
DOAJ	52 (37.68%)	14 (38.89%)	14 (8.04%)
DOAB	0	10 (27.78%)	10 (5.75%)
SAKSHAT	0	0	0
Shodhganga-E-thesis Repository	5 (3.62%)	30 (83.33)	40 (23%)
eGyanKosh	0	08 (22.22%)	08 (4.6%)
e-PG Pathshala	0	06 (16.66%)	06 (3.45%)
MERLOT	0	04 (11.11%)	04 (2.3%)
Open Education Network	20 (14.49%)	06 (16.66%)	26 (14.94%)
Open Access India	20 (14.49%)	08 (22.22%)	28 (16.1%)
OASIS	0	04 (11.11%)	04 (2.3%)
Virtual Labs	40 (29%)	28 (77.78%)	68 (39.1%)
EdX	40 (29%)	26 (72.22%)	66 (37.93%)
OpenStax	0	04 (11.11%)	04 (2.3%)

It is found from Table 4 that, all (100%) students are aware of SWAYAM-NPTEL and COURSERA Open Educational Resources followed by National Digital Library India (76.1%) and TED (56.1%).

Whereas (94.44%) of the faculty are aware of SWAYAM-NPTEL and COURSERA Open Educational Resources followed by Shodhganga E-Thesis Repository (83.33%), National Digital Library India and Virtual Labs (77.78%) respectively, Khan Academy and EDx (72.22%) OpenEducational Resources respectively.

Overall responses show that, the majority 98.85% of the respondents are aware of SWAYAM NPTEL and COURSERA Open Educational Resources respectively followed by National Digital Library India 76.44%.

**Table 5: Frequency of using Open Educational Resources**

Frequency	Category		Total
	Students	Faculty	
Daily	40 (29%)	06 (16.66%)	46 (26.44%)
Weekly	20 (14.49%)	18 (50%)	38 (21.84%)
Twice in a week	73 (52.9%)	08 (22.22%)	81 (46.55%)
Monthly	5 (3.62%)	04 (11.11%)	9 (5.17%)
<b>Total</b>	<b>138</b>	<b>36</b>	<b>174</b> <b>(100%)</b>

It is found from Table 5 that, the majority 52.9% of the students use open educational resources twice in a week, 29% of them use daily and 14.49% use weekly. Whereas 50% of the faculty uses OERs weekly, 22.22% use twice in a week and 16.66% use OERs daily.

Overall, 46.55% of the respondents use open educational resources twice in a week.

**Table 6: Purpose of using Open Educational Resources**

Purpose	Category		Total
	Students	Faculty	
Customizable	78 (56.52%)	20 (55.56%)	98 (56.32%)
Easy to reuse	98 (71%)	24 (66.67%)	122 (70.11%)
Enable online education	118 (85.5%)	34 (94.44%)	152 (87.36%)
Innovative resources	60 (43.48%)	30 (83.33%)	90 (51.72%)
Above All	60 (43.48%)	20 (55.56%)	80 (45.98%)

Table 6 shows that 85.5% of the students' purpose of using OERs is to enable online education, 71% find it easy to use, 56.52% use it because it is customizable and 43.38% found they are innovative resources.

Whereas 87.36% of the faculty purpose of using OERs is to enable online education and 70.11% find it easy to use and 56.32% use because it is customizable.

Overall responses show that, 87.36% of the respondents' purpose of using OERs is to enable online education and its ease to use 70.11%.



**Table 7: Pattern of Use of Open Educational Resource**

Pattern	Category		Total
	Students	Faculty	
Text/Print	40 (29%)	24 (66.66%)	64 (36.78%)
Visual/Photograph	36 (26.1%)	14 (38.88%)	50 (28.73%)
Audio	20 (14.49%)	10 (27.77%)	30 (17.24%)
Video/Audio Visual	138 (100%)	26 (72.22%)	164 (94.25%)
Animation	40 (29%)	06 (16.66%)	46 (26.44%)

It is found from table 7 that, the majority 94.25% of the respondents prefer the Video/Audio Visual pattern of Open Educational Resources followed by 36.78% prefer the text/print pattern and 28.73% prefer visual/photograph pattern.

**Table 8: Type of Open Educational Resources you use currently**

Type	Category		Total
	Students	Faculty	
Open Access Journal Articles	20 (14.49%)	20 (55.55%)	40 (23%)
YouTube Videos	118 (85.50%)	30 (83.33%)	148 (85.1%)
Links to Internet-based web pages	98 (71.01%)	32 (88.88%)	130 (74.71%)
Public Domain materials (primary resource in archives for example)	40 (29%)	14 (38.88%)	54 (31.03%)
Open Textbooks	78 (56.52%)	22 (61.11%)	100 (57.47%)
Government websites	20 (14.49%)	12 (33.33%)	32 (18.39%)
Creative Commons licensed resource	5 (3.62%)	08 (22.22%)	13 (7.47%)
I do not use OER in my teaching / Learning	20 (14.49%)	02 (5.55%)	22 (12.64%)

It is observed from Table 8 that, most of the students refer to YouTube Videos 85.50%, Links to Internet based web pages 71.01% and Open Textbooks 56.52% followed by others.

Whereas majority 88.88% of the faculty browse Internet based web pages, YouTube Videos 83.33%, Open textbooks 61.11% and Open Access Journal Articles 55.55% followed by others.

Overall, 85.1% of the respondents refer YouTube Videos followed by Links to Internet based web pages (74.71%) and Open Textbooks (57.47%).

**Table 9: Barriers for using Open Educational Resources**

Barriers	Category		Total
	Students	Faculty	
Limited understanding of copyright law and open licensing initiatives	40 (29%)	20 (55.55%)	60 (34.48%)
Authenticity of the Information Retrieved	60 (43.48%)	10 (27.77%)	70 (40.23%)
Difficulty finding or accessing relevant Open Educational Resources	61 (44.20%)	18 (50%)	79 (45.40%)
Resistance of educator participation in OER use and creation	0	02 (5.55%)	02 (1.15%)
Due to institutional policies	20 (14.49%)	0	20 (11.49%)

It is observed from Table 9 that, the majority 44.2% of the students opine that it is difficult to find and access relevant OERs and 43.48% opine authenticity of the information retrieved are the major barriers for using OERs.

Whereas (55.55%) of the faculty members opine that Limited understanding of copyright law and open licensing initiatives followed by difficulty in finding and accessing relevant OERs (50%) are the major barriers for using OERs.

Overall responses show that difficulty in finding and accessing relevant OERs (45.40%) followed by authenticity of the information retrieved (40.23%) and 34.48% opine that limited understanding of the copyright law and open licensing initiatives are the major barrier for using Open Educational Resources.

## 5. Conclusion and Recommendations

The present study has tried to identify the awareness and usage of Open Educational Resources among the faculty and students of SJEC. The results of the study indicate that majority of the respondents are having less than 5 years of experience in using Open Educational Resources. Though the respondents are aware of most of the OERs, majority of them are more aware of SWAYAM NPTEL, COURSERA followed by National Digital Library India. The main purpose of using OERs is to enable online education and its ease of use. Most of the respondents prefer the Video/Audio Visual pattern followed by the text/print

pattern and visual/photograph pattern of OERs. The most referred OERs are YouTube Videos followed by Links to Internet based web pages and Open Textbooks. The major barriers for accessing OERs are difficulty in finding and accessing relevant OERs; authenticity of the information retrieved and limited understanding of the copyright law and open licensing initiatives. Based on the study, it is suggested that library professionals and faculty should provide adequate awareness on the OERs, and faculty should support students in using OERs effectively.

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