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Utilization of Open Educational Resources (OERs) among College Students Affiliated to Alagappa University in India

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***Abstract*---**The world is now paralyzed by COVID-19 (2021). UNESCO estimates that there are more than 1.5 billion students in 165 countries and that 87% of the world's students are at risk of contracting the covid-19 pandemics. Open education resources help students continue to study in such situations. This article provides information on what are open education resources, how to use open education resources, and what to do for research. Furthermore, this research report is about how Alagappa University students use open education resources and how it benefits them. What are the barriers they face to obtain OER information? This study aims to provide students with a brief overview of awareness and use of open education resources. A sample of the respondents was prepared from Alagappa University students. Questionnaires were made by Google Forms. A total of 245 Google Forms were sent to students via WhatsApp and Gmail, and 121 students responded. Frequency of use of OER: 72 students use OER daily, 18 students use it twice a week, 27 students use it weekly and 4 students use it monthly.

***Keywords*---**college students, open access, open courseware, open education, open educational resources.

Introduction

The world has become more modern as people share their knowledge with others and improve it. But today people have started to market their knowledge. It has become monetized to get good intellectual information. Open educational resources help students to achieve better learning in this Knowledge Marketing environment and to get good intellectual information for free and in a way that

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suits them. Open Education Resources (OER) means Textbooks, Media, Modules, PDF files, Documents, Podcasts, Case studies, Narrated visuals, articles, lesson-related videos, lesson-related audios, magazines/Journals, photographs, or anything digital or non-digital can be used for free in open educational sources. That any learning and research resources related to teaching are readily available or completely free. Also, keep it to the person who receives it or adjust it to suit them, they have full freedom to enjoy it or give it to another person. India has a large number of illiterate people with infrastructure, cultural and socio-economic factors that prevent equal access to quality education. Due to the rapidly growing technology and internet usage in the country, Open Education Resources (OER) is increasingly being used as an important tool to help overcome the barriers to literacy and to further education. With huge advances in ICTs, today's education system is enriched by various OERs. Optimizing the opportunities offered by technological advances poses a profound challenge to education systems and has serious implications, including cost, access, equity, teaching, and quality. This research will discuss the various opportunities and challenges presented by the use of OERs in today's education system (Ahn et al., 2013; Packer, 1997).

Definition of open educational resources

The definition of OER currently most often used is "digitalized materials that are provided freely and openly to educators, students and self-learners to use, and reuse for teaching, learning and research". The OER includes implementation resources such as software tools and open licenses to create, use and distribute learning content. This statement indicates that "open educational resources" are adjustable to accumulated digital assets and provide benefits without limiting the chances of others enjoying them. Open education resources are teaching, learning and research material 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, adaption, and redistribution by others with no or limited restrictions – UNESCO (Rodriguez et al., 2017; Camiciottoli, 2020).

Open educational resources in 5R

- Retain — Open Educational Resources helps us keep what we have received, it helps us keep and retain the data we have received in different forms and in different ways.
- Reuse — open educational resources enable us to reuse what we have received in various forms and different ways.
- Revise – Open educational resources enable us to correct what we have received, and we can correct them in a manner that suits us.
- Remix – Open Education Resources makes it possible to remix what we have received. We can remix different data together as we see fit.
- Redistribution – Open educational resources distribute what we receive in a different way, generally helping to achieve greater social equality.

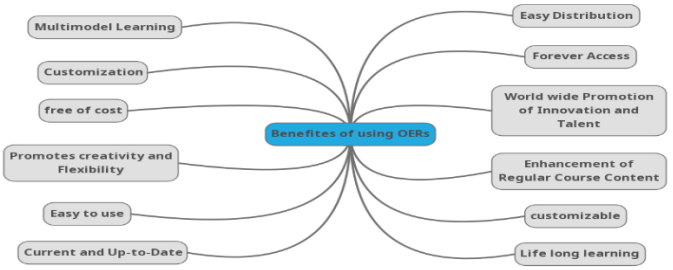

Figure 1. Benefits of OER

Figure 1 Refers to the Benefits of OER, Open Educational Resources are very easy to use free of cost, promote creativity and flexibility, customization, Multimodal learning, current and up-to-date, easy distribution, Forever Access, Worldwide promotion of Innovation and Talent, Enhancement of Regular Course content, and Lifelong learning are the benefits of OER.

Table 1
OER websites and links

OER websites	Links
	Open journal articles
DOAJ	https://doaj.org/
Open Access	https://www.openaccess.nl/en
core	https://core.ac.uk/
Elsevier	https://www.elsevier.com/en-in
JSTOR	https://www.jstor.org/
Springer	https://www.springer.com/in
	Books
wiki Book	https://en.wikibooks.org/wiki/Main_Page
OPENSTAX	https://openstax.org/
Open Oregon	https://openoregon.org/tag/textbooks/
OAPEN	https://www.oapen.org/
Book Boon	https://bookboon.com/
INTECHOPEN	https://www.intechopen.com/
LIBRE TEXTS	https://libretexts.org/
	Open Multimedia
free stock	https://all-free-download.com/free-photos/do.html
	Open Simulation/Virtual Lab
APA online Psychology laboratory	https://opl.apa.org/
MERLOT	https://www.merlot.org/merlot/
PHET	https://phet.colorado.edu/
Lab X change	https://www.labxchange.org/
	Open Courses
MIT open courseware	https://ocw.mit.edu/index.htm
Saylor Academy	https://www.saylor.org/
OERU	https://oeru.org/
Khan Academy	https://www.khanacademy.org/

Open Course Library	https://www.openwa.org/open-course-library/
Open learning Initiate	https://www.openlearning.com/
	OER Repositories
OER Commons	https://www.oercommons.org/
Open Learn	https://www.open.edu/openlearn/
OPENSTAX	https://openstax.org/
OPENUPED	https://www.openuped.eu/
	OER search Engines
cc search	https://search.creativecommons.org/
Mason OER	https://oer.deepwebaccess.com/oer/desktop/en/sea
METAFINDER	rch.html
OASIS	https://sourceforge.net/projects/oasisse/
OER Commons	https://www.oercommons.org/

Sustainability and reflection of OER

Sustainability and Reflection Much of the conversation about the sustainability of open education resource programs focus on looking for a business model that will sustain these programs for the long term. The unspoken belief is that if a project can attack a model that will retain its work, many projects will benefit from using the model or from an adaptation of the model. However, it is important to remember that consistency and reflection are two different things. Finding a sustainable approach to implementing an open education resource program is not necessarily reflected in projects. The best way to reflect is to increase its use (Brander & Taylor, 1998; Cantoni et al., 2004).

Need of the study

The main reason for the current situation of college students is the lack of adequate resources, funding, and manpower. This study will identify how open education resources (OERs) can contribute to higher education and, in particular, what role they can play in increasing higher education enrollment rates. OER provides resources from various educational centers and provides information resources on educational development in India. Many of the students of Alagappa University live in rural areas and facing too many problems. To deal with the daily problem, college students need help to effectively access ICT tools and resources for free to all students through open educational resources. It promises to remove the boundaries of their population, finance, and geographic information, and improve lifelong information and modified knowledge (Schultz, 1988; Heyneman, 2004).

Review of literature

West & Victor (2011), have reported the Objectives by the Community of Non-Business Users for the Open Provision, Advice, Application, and Adaptation of Educational Resources Operated by Information and Communication Technology more detailed definition: 'Digitalized educational resources are available free of charge to educators and learners alike, with no royalties or license fees'. Digitalized resources can be shared using media such as the Internet or disk drives. OER is generally licensed using the Creative Commons license, not exclusively. The original owners of the products and subsequent users should

have a clear understanding of the terms of these agreements (Hunt & Eisenberg, 2010; Cao et al., 2020).

Andrade et al. (2011), examined the study on the use of Open Education Resources (OER) and Open Education Practices (OEP) in higher education and adult learning Institutions, this study is based on the results of an online survey targeting four educational roles: education policy classifiers; Organizational policy classifiers; Educators; and learners. The report consists of five chapters and four appendices. Chapter I present the survey and Chapter II reveals key research questions and models. Chapter III classifies the universe of respondents. Chapter IV progresses with a comprehensive survey analysis including an overview of key statistical data. Finally, Chapter V provides an in-depth analysis of some key issues (Suwija et al., 2019; Alsharif, 2020).

Kalaiyarasan (2019), studied Open Education Resources (OER) are available free of charge, explicitly permitting text, media, and other digital resources to be used for instruction. Open Education Resources (OER) forms have been used for this study with the help of the Internet. The investigator is an assistant to this study, learning through open educational resources in three months. Quarterly scores were used in advance and half-yearly scores were used for post-test scores. Experimental method and single panel design were used in the study. 40 students were taken for this study. A simple random sample was used in the study (Danchikov et al., 2021; Muzyka et al., 2021).

Hu et al. (2015), study was designed to examine Chinese college students' OER usage and perceived barriers impacting OER diffusion. Data was collected during the 2012–2013 academic year at Zhejiang University. A two-part survey instrument was administered to a sample of students (n = 1239). The results show that a significant number of university students have experienced OER, but there are challenges involved with student, content, interface, and environment-related factors that impacted the rapid diffusion of OER. Mtebe, & Raisamo (2014), the study examined barriers to OER use in 11 Higher Education Institutions (HEI) in Tanzania. Experiential data were generated through semi-structured interviews with random samples of 92 teachers and a review of important documents. Many HEIs also spend thousands of dollars to maintain various ICTs on their premises given these efforts the use of OER. To complete these efforts cannot be ignored. However, companies that benefit from these resources need to find ways to overcome the challenges revealed in this study. In addition, companies need to improve the reliability and speed of the Internet Equip instructors with the skills needed to build and/ or use OER Update appropriate policies to enable smooth operation of OER (Prayoga et al., 2015; Nasution, 2018).

Hassall & Lewis (2017), conducted an online survey in 2016 of academics involved in teaching anatomy and medicine in colleges and universities. An online survey was completed by 209 academics, many of whom (68.4%) reported using OERs. The results suggest that their teaching and almost all (99.5%) minimal awareness are relevant to key issues that prevent educators from blocking OERs in their teaching. Most (81.8%) are academics who are partially, very, or very comfortable with OER, so there is no inherent incentive barrier to adoption. Lack

of training was reported by 13.9% of respondents, and 40% of respondents said there was little or no support from their place (Nielit & Thanuskodi, 2020; Kumar & Raja, 2019).

Panke (2011), this article has the findings of a literature review and a report on an expert survey conducted in December 2010 with a self-selected panel. A total of 19 participants were recruited through the UNESCO OER mailing list and the journal Education Technology and Change. The findings illustrate current issues for discussion, point out potential barriers and benefits of OER, and point to future policy and research agendas. Respondents defined several challenges to the widespread adoption and application of OER similar to the findings of the literature review. These challenges include cultural exchange, consistent corporate policies, and formal recognition. Baskaran & Batcha (2012), they have noticed that D-Space is the only major software installed globally in open source library software, making it highly compatible and user-friendly to access and protect everyone's resources in academic and higher education libraries. OSS should create participation. You can contribute to the OSS in a variety of ways, including an organizational model that allows more people to contribute.

Objectives

- To evaluate the attitude of college students towards open education resources (OER).
- To raise awareness of OERs by college students.
- To identify the purpose of using OER
- To find out the frequency of OERs used by college students
- To understand barriers to the use of OERs.
- To study the usage of Open Education Resources (OER) at Alagappa University.
- To make recommendations to Indian OER providers to reduce the existing gaps in order to meet the educational needs of the country.

Methodology

According to Kothari et al. (2013), the combination of qualitative and quantitative methods in conducting research is accepted; as such an effort generally improves the quality of the results of a study and provides an opportunity for generalization. The target population of this study was college students at Alagappa University. Samples were taken from the total population of university students. And, 245 Alagappa University students have sent research questions through the Google forum via WhatsApp and Gmail, responding to data collected from 121 students and then analyzed that data in this present study. The questionnaire contained open and intimate questions that allowed respondents to express their opinions freely. Quantitative data collected was analyzed using descriptive statistics including average, Standard deviation, and frequency counts. SPSS version 26 Software package of social sciences has been used to encode data and run analytics (Muthuvennila & Thanuskodi, 2019; Nanayakkara, 2017).

Data analysis and interpretation

Table 2
Frequency of using open education resources

Frequency of using OER N=121			Gender				Grand Total	
			Female (F)		Male(M)			
			N	%	N	%	(N)	%
Daily	Age	Below-20	4	3.31	0	0	4	3.31
		21-25	7	5.79	9	7.44	16	13.22
		26-30	21	17.36	21	17.36	42	34.71
		Above 30	5	4.13	0	0	5	4.13
		Total	37	30.58	30	24.79	67	55.37
Weekly	Age	Below-20	2	1.65	0	0	2	1.65
		21-25	6	4.96	3	2.48	9	7.44
		26-30	6	4.96	9	7.44	15	12.40
		Total	14	11.57	12	9.92	26	21.49
Twice in a week	Age	21-25	8	6.61	0	0	8	6.61
		26-30	3	2.48	13	10.74	16	13.22
		Total	11	9.09	13	10.74	24	19.83
Monthly	Age	21-25	2	1.65	0	0	2	1.65
		26-30	2	1.65	0	0	2	1.65
		Total	4	3.31			4	3.31
Grand Total			66	54.55	55	45.45	121	100

Table 2 gives brief details of the frequency of using OER. The frequency of using OER is visible to the cross table of Age and Gender: 37 (30.58%) Females and 30 (24.78%) males are using OER Daily, 14 (11.56%) Females and 12 (9.92%) Male are using OER Weekly, 11 (9.09%) Females and 13 (10.73%) males are using OER twice a week, and only 4 (3.31%) Female candidates are using OER by Monthly. Age variation is 6 (4.96%) Female candidates were below -20, 23 (19.00%) Female, and 12 (9.92%) Male candidates were 21-25, 32 (26.45%) Female, and 43 (35.54%) Males are in 26-30 and lost 5 (4.13%) Females are above 30. The total number of Female of 66 (30.58%) and male are 55 (30.58%) that for N=121.

Table 3
Awareness of using OER

S.No	Awareness of using OER	Frequency	% of 121	Mean	Std. Deviation
1	Aware of free access to learning materials online	101	83.5	.83	.373
2	Aware of the massachusetts institute of technology (mit) open courseware	34	28.1	.28	.451
3	Aware that teaching-learning video sessions could be watched online	69	57.0	.57	.497

4	Aware of open courseware (ocw) consortium online	58	47.9	.48	.502

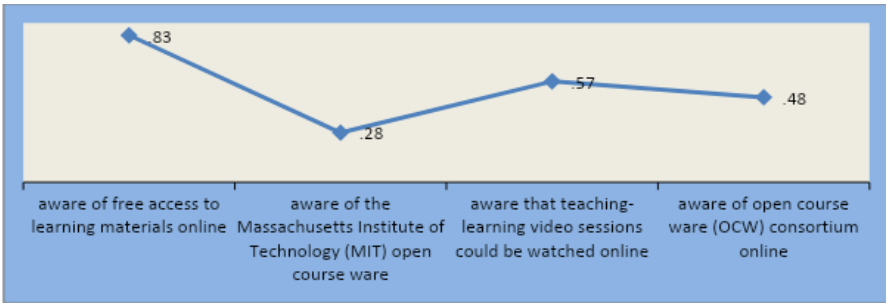

Figure 2. Awareness of using OER

An attempt was made here to find out the awareness of using OER. Shown in table 3 and figure 2, provides the details of the mean and standard deviation for the awareness of using OER. The 'aware of free access to learning materials online' is the highest mean value is .83 and SD is .373, followed by 'aware that teaching-learning video sessions could be watched online', 'aware of open courseware (OCW) consortium online', and 'aware of the Massachusetts Institute of Technology (MIT) open course ware' within the mean value of 0.57, and.28 their respective SD is .497, 502 and 451. The table indicates that 'aware of free access to learning materials online' is the highest mean value is .83 and SD is .373 and 'aware of the Massachusetts Institute of Technology (MIT) open course ware' has the last position of the mean value is.28 and SD is 0.451.

Table 4
Purpose of using OER

S.No	Purpose of using OER	Frequency	% of 121	Mean	Std. Deviation
1	Get relevant learning materials online	100	82.6	.83	.380
2	Use of OER in assignments	31	25.6	.26	.438
3	Online learning materials have been of immense assistance in the study	35	28.9	.29	.455
4	Watch teaching and learning sessions, on online video	57	47.1	.47	.501
5	Visit MIT open courseware web site to get access to free online learning resources	29	24.0	.24	.429
6	To assist personal learning	64	52.9	.53	.501
7	To get to know the content in areas outside one's major	39	32.2	.32	.469
8	To view international prestigious scholars presentation	21	17.4	.17	.380

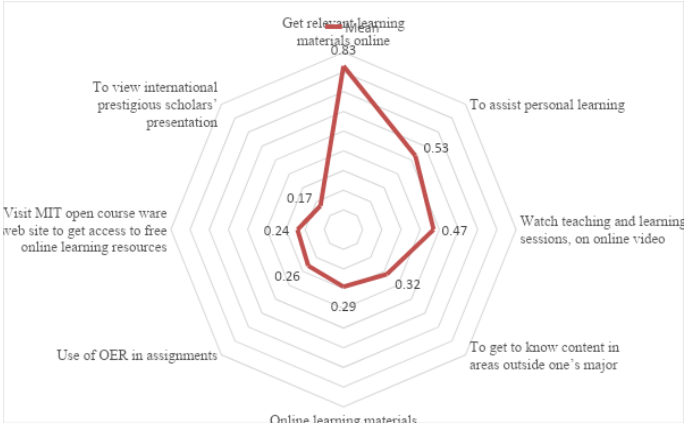

Figure 3. Purpose of using OER

In table 4 and Figure 3 is shown the details of the mean and standard deviation values for the purpose of using OER are shown. 'Get relevant learning materials online' is the highest mean value is .83 and SD is .380 followed by 'To assist personal learning" Watch teaching and learning sessions, on online video' 'To get to know the content in areas outside one's major' 'Online learning materials have been of immense assistance in the study' 'Use of OER in assignment' 'Visit MIT open courseware web site to get access to free online learning resources' 'To view international prestigious scholars presentation' within the mean value of 0.53, 0.47, 0.32, 0.29, 0.26, and 0.24, their respective SD is 0.501,0.501, 0.469, 0.455, 0.438, 0.429, and 0.380 In the table indicate that 'To view international prestigious scholars presentation' has the last position of the mean value is 0.24 and SD is 0.380.

Table 5
Usage of open educational resources

S.No	How do use OER	Frequency	% 121	Mean	Std. Deviation
1	Download the entire course	51	42.1	.42	.496
2	Download the chapters as needed	68	56.2	.56	.498
3	Download relevant videos, audios, photos, pictures, and documents	48	39.7	.40	.491
4	Direct online learning	83	68.6	.69	.466
5	Direct printouts for learning	56	46.3	.46	.501
6	Provide the links to students and let them learn the courses as needed	9	7.4	.07	.07

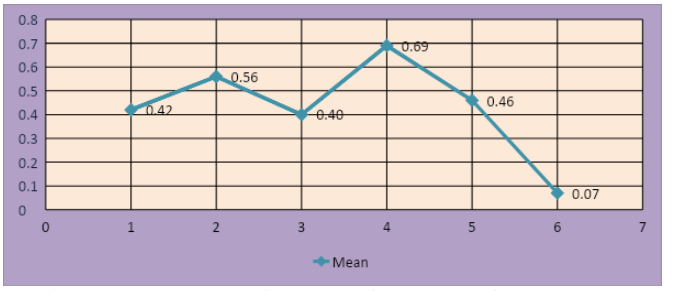

Figure 4. Usage of open educational resources

The details of the mean and standard deviation values are exposed in table 5 and figure 4 for How to use OER. Are displayed “Direct online learning” is the highest mean value is 0.69 and SD is .466 followed by 'Download the chapters as needed' 'Direct print outs for learning' 'Download the entire course' 'Download relevant video, audios, photos, picture, and documents, 'provide the links to students and let them lean the courses as needed' within mean value of .56, .46, .42, .40, and .07 their respective SD is .498, .501, .496, .491, and .07. The table indicates that 'provides the link to the students and let them learn in the courses as needed' is the last position.

Table 6
Most frequently used in OER

S.No	Most frequently used in OER	Frequency	Percentage Value of 121	Mean	Std. Deviation
1	Open courses	53	43.8	.44	.498
2	Open e-books	59	48.8	.49	.502
3	Open videos	43	35.5	.36	.481
4	Open audios	33	27.3	.27	.447
5	Open photos and pictures	63	52.1	.52	.502
6	Open-source Software	53	43.8	.44	.498
7	Open community forums	21	17.4	.17	.380

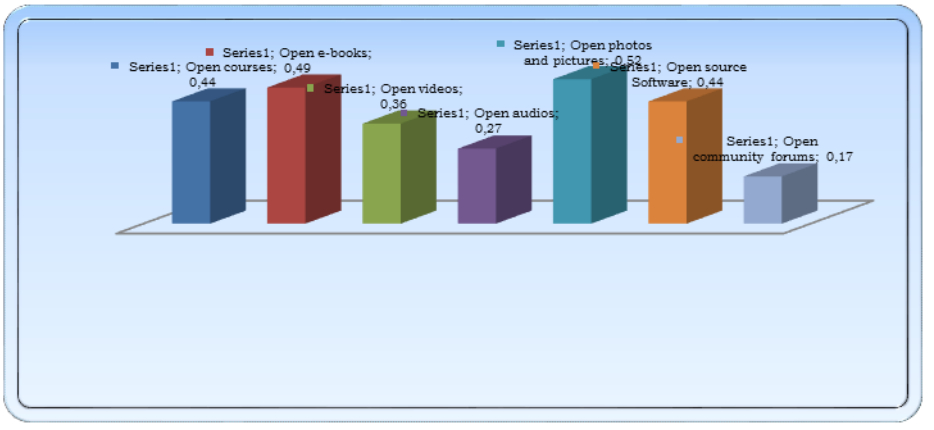

Figure 5. Most frequently used in OER

In table 6 and figure 5 there are exposed the details of the mean and standard deviation value for the most frequently used in OER. Are displayed 'Open photos and pictures' is the highest mean value is .52and SD is .502 ,followed by 'Open e-books' 'Open courses' 'Open source Software' 'Open videos' 'Open audios', and 'Open community forums' within mean value of .49, .44, .44, .36,.27 and .17 their respective SD is .502,.498, .498, .481, .447, and .380. The table indicates that 'Open community forums' is the last position.

Table 7
Factors of barriers using OER

(SD=Strongly Disagree; D= Disagree; N=Neutral; A= Agree; SA=Strongly Agree)

S. No	Usage Satisfaction	SD	D	N	A	SA	Mean	Median	Mode	Std. Deviation
					Student-related factor					
1	I am not familiar with OER	7 5.8%	59 48.8%	38 31.4%	14 11.6%	3 2.5%	2.56	2.00	2	.865
2	I do not have time to use OER	5 4.1%	63 52.1%	40 33.1%	13 10.7%	0 0%	2.50	2.00	2	.743
3	I do not like to learn using online method	7 5.8%	62 51.2%	37 30.6%	12 9.9%	3 2.5%	2.52	2.00	2	.848
4	I am not used to learning online.	12 9.9%	44 36.4%	35 28.9%	27 22.3%	3 2.5%	2.71	3.00	2	1.004
5	Using OER has little impact on my learning outcome	5 4.1%	30 24.8%	60 49.6%	24 19.8%	2 1.7%	2.90	3.00	3	.821
Content-related factor										
6	OER covers limited subjects and disciplines.	3 2.5%	20 16.5%	50 41.3%	40 33.1%	8 6.6%	3.25	3.00	3	.897
7	OER repository has limited content that I am interested in.	2 1.7%	25 20.7%	33 27.3%	54 44.6%	7 5.8%	3.32	4.00	4	.924
8	Contents of OER repository are not high quality	5 4.1%	32 26.4%	29 24.0%	55 45.5%	- -	3.11	3.00	4	.938
9	OER repository is	3 2.5	24 19.8%	34 28.1%	57 47.1%	3 2.5%	3.27	3.00	4	.894

	not updated frequently									
Interface-related factor										
10	Navigation of OER repository is not user-friendly and time-consuming	6 5.0%	27 22.3%	30 24.8%	55 45.5%	3 2.5%	3.18	3.00	4	.975
11	It is time-consuming to download OER resources	2 1.7%	25 20.7%	24 19.8%	62 51.2%	8 6.6%	3.40	4.00	4	.945
12	It is difficult to visit the Websites of OER.	- -	16 13.2%	24 19.8%	68 56.2%	13 10.7 %	3.64	4.00	4	.845
13	There are no suitable platforms for communication and interaction on the websites of OER	- -	11 9.1%	33 27.3%	69 57.0%	8 6.6%	3.61	4.00	4	.746
Environment-related factor										
14	No faculty members introduced OER to me	9 7.4%	19 15.7%	37 30.6%	53 43.8%	3 2.5%	3.18	3.00	4	.983
15	No faculty members encouraged me to use OER	8 6.6%	25 20.7%	35 28.9%	53 43.8%	- -	3.10	3.00	4	.952
16	There is no OER-related news or information on my university website.	6 5.0%	18 14.9%	29 24.0%	63 52.1%	5 4.1%	3.36	4.00	4	.956
17	There are no OER-related links available on our university website.	9 7.4%	24 19.8%	30 24.8%	55 45.5%	3 2.5%	3.16	3.00	4	1.017

Table 7 Shows that the statement of barriers is divided into four factors. The first one is student-related factors. There were five questions that were adapted there are 'I am not familiar with OER' 'I do not have time to use OER' 'I do not like to learn using an online method' 'I am not used to learning online.' All these questions indicate the high value of mode is 2 mode values 2 indicate disagree, and the 'Using OER has little impact on my learning outcome' has the mode value of 3, mode value of 3 indicates Neutral. The second factor is the Content-related factor. There were four questions that were adapted. 'OER covers limited subjects and disciplines' 'The OER repository has limited contents that I am interested in' 'The contents of the OER repository are not of high quality' 'The OER repository is not updated frequently'. Here 'OER covers limited subjects and disciplines' is the high mode value of 3 is indicates Neutral, and 'OER repository has limited contents that I am interested in' 'The contents of the OER repository are not of high quality', and 'OER repository is not updated frequently' have the high mode value of 4. A mode value of 4 indicates Agree (Alagu & Thanuskodi, 2018; Muthuvennila & Thanuskodi, 2018).

The third factor is the Interface-related factor. There were four questions adapted there. 'Navigation of the OER repository is not user-friendly and time-consuming' 'It is time-consuming to download OER resources' 'It is difficult to visit the websites of OER.' 'There is no suitable platform for communication', and 'interaction on the websites of OER' all this have a high value of Mode is 4, values of four indicate the statement is Agree. The fourth factor is the environment-related factor. There were four questions adapted there. 'No faculty members introduced OER to me,' 'No faculty members encouraged me to use OER' 'There is no OER-related news or information on my university website.' 'There are no OER-related links available on our university website.' All this has a high value of Mode is 4; values of four indicate the statement is Agree (Thanuskodi, 2013; Thanuskodi & Subramaniyan, 2013; Wiley, 2007).

Conclusion

The pandemic of COVID-19 has changed the working environment around the world. This opportunity helps students to interact with ICT knowledge, which will enable students to get their academic needs online. More open education resources help students get their educational materials or anything for free. In this research, we analyze the awareness and use of OER and explore barriers to the use of OER for Alagappa University students.66 (54.55%) female students and 55 (45.45%) male students contribute their knowledge to this research. 83.5% of students are aware of free access to online learning materials. 82.6% of students receive online-related learning materials and 68.6% of students support direct online learning. And barriers are classified into four factors: 1. Student-related factor, 2. Content-related factor, 3. Internet-related factor, 4. Environmental factor. These factors were helpful in clearly identifying the real barriers for students using OER. Table 6 shows the value of the above 4 factors, and this table shows that factor 2. Content-related factor, 3. Internet-related factor and 4. Environmental factors are widely known as OER Barriers. This means the students are ready to adopt OER, but the Content-related factor, Internet-related factor, and environmental factors are not reliable to adopt OER, because they do not know the specific factors, students can learn if the Organization contacts the

orientation program and then consider how to progress with an OER for those factors. This will help the students to avail the benefits of COVID-19 pandemic environment.

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References

Ahn, R., Alpert, E. J., Purcell, G., Konstantopoulos, W. M., McGahan, A., Cafferty, E., ... & Burke, T. F. (2013). Human trafficking: review of educational resources for health professionals. *American journal of preventive medicine*, *44*(3), 283-289. https://doi.org/10.1016/j.amepre.2012.10.025

Alagu, A., & Thanuskodi, S. (2018). Awareness and Use of ICT among Undergraduate Students of Rural Areas in Dindigul District: A Study. *Library Philosophy and Practice*, *2018*.

Alagu, A., & Thanuskodi, S. (2018). User Perception of Electronic Information Resources: A Case Study of Alagappa College of Arts and Science, Tamilnadu, India. *Library Philosophy & Practice*.

Alsharif, H. (2020). Phonology, phonetic and phonological aspects. *Macrolinguistics and Microlinguistics*, *1*(1), 52–68. Retrieved from https://mami.nyc/index.php/journal/article/view/5

Andrade, A., Ehlers, U. D., Caine, A., Carneiro, R., Conole, G., Kairamo, A. K., ... & Holmberg, C. (2011). Beyond OER–shifting focus to open educational practices: OPAL report 2011.

Baskaran, C., & Batcha, M. S. (2012). Publications pattern and author Collaboration of cardiology research. *SRELS Journal of information management*, *49*(2), 199-207.

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

Camiciottoli, B. C. (2020). The OpenCourseWare lecture: A new twist on an old genre?. *Journal of English for Academic Purposes*, *46*, 100870. https://doi.org/10.1016/j.jeap.2020.100870

Cantoni, V., Cellario, M., & Porta, M. (2004). Perspectives and challenges in e-learning: towards natural interaction paradigms. *Journal of Visual Languages & Computing*, *15*(5), 333-345. https://doi.org/10.1016/j.jvlc.2003.10.002

Cao, W., Fang, Z., Hou, G., Han, M., Xu, X., Dong, J., & Zheng, J. (2020). The psychological impact of the COVID-19 epidemic on college students in China. *Psychiatry research*, *287*, 112934. https://doi.org/10.1016/j.psychres.2020.112934

Danchikov, E. A., Prodanova, N. A., Kovalenko, Y. N., & Bondarenko, T. G. (2021). The potential of online learning in modern conditions and its use at different levels of education. *Linguistics and Culture Review*, *5*(S1), 578-586. https://doi.org/10.21744/lingcure.v5nS1.1442

Hassall, C., & Lewis, D. I. (2017). Institutional and technological barriers to the use of open educational resources (OERs) in physiology and medical education. *Advances in Physiology Education*, *41*(1), 77-81.

Heyneman, S. P. (2004). Education and corruption. *International Journal of Educational Development*, *24*(6), 637-648. https://doi.org/10.1016/j.ijedudev.2004.02.005

Hu, E., Li, Y., Li, J., & Huang, W. H. (2015). Open educational resources (OER) usage and barriers: a study from Zhejiang University, China. *Educational Technology Research and Development*, *63*(6), 957-974.

Hunt, J., & Eisenberg, D. (2010). Mental health problems and help-seeking behavior among college students. *Journal of adolescent health*, *46*(1), 3-10. https://doi.org/10.1016/j.jadohealth.2009.08.008

Kalaiyarasan, G. (2019). A Study On Usage Of Open Educational Resources (Oer) Format To Enhancing The Academic Performance Of Higher Secondary School Students In Ramanathapuram Educational District.

Kothari, S., Phan, J. H., Stokes, T. H., & Wang, M. D. (2013). Pathology imaging informatics for quantitative analysis of whole-slide images. *Journal of the American Medical Informatics Association*, *20*(6), 1099-1108.

Kumar, G. P., & Raja, M. V. (2019). A study on awareness and attitude towards Open Educational Resources in higher education students.

Mtebe, J. S., & Raisamo, R. (2014). Investigating perceived barriers to the use of open educational resources in higher education in Tanzania. *International Review of Research in Open and Distributed Learning*, *15*(2), 43-66.

Muthuvennila, S., & Thanuskodi, S. (2018). Impact of open access resources on library and information science students in India. *Library Philosophy and Practice*, 1.

Muthuvennila, S., & Thanuskodi, S. (2019). User Perception on Open Access Resources among College Students in India: A Survey. *Library Philosophy and Practice*, 1-18.

Muzyka, O., Lopatiuk, Y., Belinska, T., Belozerskaya, A., & Shvets, I. (2021). Modern aesthetic education and its further directions. *Linguistics and Culture Review*, *5*(S4), 12-21. https://doi.org/10.21744/lingcure.v5nS4.1537

Nanayakkara, S. (2017). Impact of free and open-source software paradigm for environmental sustainability-case study in higher education sector. *International Journal of Research in Electronics and Computer Engineering*, *5*(4), 174-188.

Nasution, S. N. (2018). Spirit of nationalism, education and moral religion: nation character building portrayed in Si Bulus-Bulus Si Rumbuk-Rumbuk written by Willem Iskander. *International Journal of Linguistics, Literature and Culture*, *5*(1), 24-31. https://doi.org/10.21744/ijllc.v5n1.478

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.

Packer, L. E. (1997). Social and educational resources for patients with Tourette syndrome. *Neurologic clinics*, *15*(2), 457-473. https://doi.org/10.1016/S0733-8619(05)70326-1

Panke, S. (2011). An Expert Survey on the Barriers and Enablers of Open Educational Practices.

Prayoga, I. A., Ratminingsih, N., & Budasi, I. (2015). The effect of scripted song as a teaching on english competence: 4th Grade Student of Primary School SD Saraswati Tabanan in Academic Year 2013/2014. *International Journal of Linguistics, Literature and Culture*, *1*(1), 9-17. Retrieved from https://sloap.org/journals/index.php/ijllc/article/view/55

Rodriguez, G., Pérez, J., Cueva, S., & Torres, R. (2017). A framework for improving web accessibility and usability of Open Course Ware sites. *Computers & education*, *109*, 197-215. https://doi.org/10.1016/j.compedu.2017.02.013

Schultz, T. P. (1988). Education investments and returns. *Handbook of development economics*, *1*, 543-630. https://doi.org/10.1016/S1573-4471(88)01016-2

Suwija, N., Suarta, M., Suparsa, N., Alit Geria, A.A.G., Suryasa, W. (2019). Balinese speech system towards speaker social behavior. Humanities & Social Sciences Reviews, 7(5), 32-40. https://doi.org/10.18510/hssr.2019.754

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.

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.