Satisfaction of disability students through OERs in the inclusive education setting of Alagappa University and Bharathidasan University

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Abstract - *The study's aim was to identify see how satisfied disability students were using Open Education Resources at Alagappa University and Bharathidasan University in an inclusive education context. In academic context, accessibility for disabled students means that the learning experience, including its learning material and teaching process, should be changed according to students' requirements, including their disability, in order for all to have equitable learning experiences. For this research, the survey method had been used. In such an inclusive educational setting, the investigator took a study sample of 54 disability subtends. The satisfaction level was discovered by descriptive analysis by the investigator (Percentage, Mean, Standard Deviations). Finally, the findings suggest that disabled students in Alagappa University and Bharathidasan University inclusive education setting had a high level of satisfaction with OERs.*

Key words: Open Educational Resources, Disability, Inclusive, Satisfaction, Learners.

1. INTRODUCTION

People with disabilities continue to be impeded from taking advantage of OER due to issues with accessibility and usability in OER environments [4]. The growing availability of Open Educational Resources (OER) has considered to be a valuable tool for globalizing access to training and education opportunities at all educational levels [5]. UNESCO recognized this fact in the "2012 World Open Educational Resources (OER) Conference," which promotes the use of OER to increase social inclusion [6]. OER is an umbrella term for educational collaborative environments supported by technology that connect not only formal academic institution programmers but also self-learners and teachers all over the world [7]. Users with disabilities can use OER, but only under certain conditions, such as the website meet and greet accessibility principles and the resources being accessible in their various formats [8][9][10]. Despite the growing online

availability of OER, not all OER websites are accessible, and thus they are unable to serve all learners, including those with disabilities, on an equal basis. Furthermore, only a few websites provide openly accessible OER. Fig-1 shows that the OER's process [11].
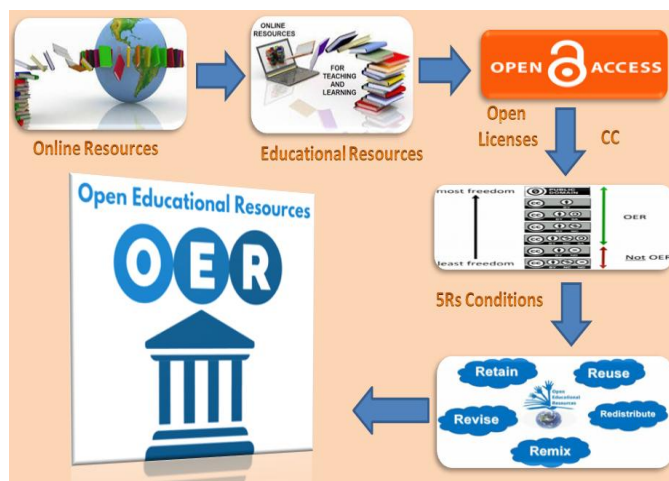

Fig -1: OER'S process

Education is a critical issue in the 2030 Agenda for Sustainable Development, as it is both directly related to the agenda's 17 goals and at the heart of the Sustainable Development Goal, which aims to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all [12][13][14]. In educational contexts, accessibility for disabled students means that, in order for all students to have equitable learning experiences, [15] the learning experience, including its learning content and teaching process, should be adjusted to meet the needs of the students, [16] including their disabilities [17]. Open Educational Resources created by people who are not necessarily ICT specialists to aid in the process of increasing accessibility [18][19][20] for people with learning disabilities [22]. The Collection of Educational Resources, Bilingual Hybrid books, and online videos with interactive text navigation primarily meet the needs of Deaf students in elementary school [23].

The growing proportion of learners who declare disabilities reflects society's changing attitude toward disability [24]. The OU is also a major provider of Open Educational Resources (OER), and the proportion of declared disability among OER users is higher than in the registered student population, accounting for 19 percent of Open Learn Platform users [29]. According to the World Health Organization, more than a billion people worldwide are disabled today [30]. There is a growing global awareness of the rights of people with disabilities, one of which is access to educational opportunities [31]. This study focuses on web-based learning, and as a result, web accessibility is an important issue for users with disabilities [32][33] in this context. This study investigates some of the most representative following research question:

RQ1: Determining the Satisfaction Level of Open Education Resources for disability Students at Alagappa University and Bharathidasan University.

RQ2: To analyze students with disabilities in the inclusive education setting of Alagappa University and Bharathidasan University.

2. RELATED LITERATURE REVIEW

John Elkins et al. (2003) investigated the attitudes of 354 Australian parents who have a disabled child who attends a Queensland state school. The children's disabilities were broadly consistent with accepted prevalence figures, with the exception of a higher number reported as having autistic spectrum disorder and fewer students with a learning difficulty/attention deficit hyperactivity disorder. Then they discovered that the majority of parents preferred inclusion, some would if additional resources were provided, and a small group of parents preferred special placement [3].

Christine Hockings et al. (2012) presented an overview of how the Learning to Teach inclusively open educational resource (OER) is addressing this concern by facilitating understanding of the concepts and principles underlying these professional values. Then they demonstrate how they support not only the resource's content, but also its design, development, and embedding. They then argue that, while these principles were developed through research in face-to-face teaching, they are equally relevant and applicable to learning, teaching, and curriculum design in distance learning and virtual contexts. Finally, they describe three models for embedding OER and propose a model for embedding inclusive practise in higher education through OER [5].

R. David Black et al., (2015) conducted an analysis that is inclusive of different learning preferences and learners, and aids in the reduction of barriers for students with disabilities. Then they assess university students with disabilities' perspectives on teaching methods and strategies that promote their learning, as well as how their perspectives align with UDL/UDI. The students were then described in a variety of ways that supported the principles of universal design in higher education in order to improve the learning of students with disabilities. Finally, they completed this study, which revealed that there are learning barriers for students with disabilities [1].

Rosa Navarrete and Sergio Luján-Mora (2015) investigated the Open Educational Resources (OER) initiative, which is being promoted by governments and educational organizations all over the world in order to improve and equalize access to high-quality educational content for all. Then they examined OER, which are digital contents for teaching-learning purposes that are available via websites and are released under an open intellectual property license to allow free use by self-learners and educators. Finally, they discovered that OER-based learning is involved in both formal and non-formal education, and that it can be included in a variety of educational environments, including E-Learning [21].

Mavropalias Tryfon et al. (2019) investigate the perspectives of parents of children with intellectual disabilities (ID) on the effectiveness of inclusive education in Greek mainstream schools. Participants included 83 parents whose children had varying degrees of ID and were all enrolled in mainstream schools at the time of the study. The participants were 83 parents whose children had varying degrees of ID and were all attending mainstream schools at the time of the study. Finally, the results showed that the majority of parents of children with ID would like their child to attend a mainstream class with co-teaching [27].

Lisa Stevens and Gerald Wurf (2020) investigated the perceptions of 44 Australian parents, eight of whom had disabled children and 36 of whom had typically developing children. Then they discovered that all parents agreed that inclusive education benefits their children. Finally, they completed Parents valued well-coordinated, consistent, and individualized educational programmes. Parents believe that resource allocation is unproductive and unreadable [25].

Xiangling Zhang et al.,(2020) presented a systematic review of the literature on accessibility in open educational resources and practices for disabled learners. The researchers then conducted a systematic review of 31 papers in order to gain insight into functional diversity within OER and OEP. The researchers then highlighted that accessibility is still in its infancy within OER and that when providing OER, researchers should focus more on the four accessibility principles — perceivable, operable, understandable, and robust. Furthermore, while several researchers have focused on various issues related to accessibility within OER, little attention has been paid to assistive technologies that use OER. Finally, they make a number of recommendations to improve accessibility within

OER and to assist in the design of more accessible OER for students with functional diversity [28].

Brian Stone et al.,(2020) investigated whether students with blindness or visual impairment face learning barriers in a typical higher education classroom where much information is conveyed visually. They then finalised strategies for accommodating such students and making visually presented information accessible. Then they discuss the advantages and logistics of a promising new technology, 3D printing, which can help visually impaired students. Then they asked us to describe our experiences with a 3D printed learning object in an introductory statistics course with a blind student, as well as our teaching an interdisciplinary service-learning course [26].

Rafael Carballo et al., (2021) investigated the evolution of faculty conceptions of disability following participation in an inclusive education and disability training programme. They were then taken. The programme was evaluated using qualitative methodology, which included semi-structured group and individual interviews, open questionnaires, and observation. The results show the impact of the training on participants' knowledge about disability, supports and barriers encountered by students, existing university resources, and educational approaches such as inclusive education and Universal Design for Learning. Finally, they discuss the findings in relation to previous research, emphasising the importance and benefits of inclusive education training for faculty members, as well as how it improves their perceptions and knowledge of disability [2].

Angela Page et al.,(2021) discussed a qualitative study conducted in Australia to identify key challenges and approaches for fostering school connectedness when students with special educational needs are suddenly required to be educated at a distance. Then they talked about how school connectedness is encouraged, which includes connecting with supportive adults, having a sense of belonging, having positive peer relationships, engaging in learning, and having the experience of a positive online climate. Finally, they conclude that, despite educators' best efforts, students with special educational needs can fall through the cracks and risk losing connection both academically and emotionally [23].

3. METHODOLOGY

The disabled students at Alagappa University and Bharathidasan University is chosen as the random sampling technique. As those universities belong to the State Universities of Tamil Nadu in India. Approximately 60 disabled students in the present academic year at Alagappa University and Bharathidasan University in the inclusive education setting. 54 disabled students have been randomly chosen from Alagappa University and Bharathidasan University to carry out a paper survey between 23/01/2022

and 26/01/2022. At the same time, the survey was performed on the internet, so that the online version of this questionnaire was completed by any student involved. Thus, both printed hard copy and soft copy surveys were included in the final figure.

DATA ANALYSIS, RESULT AND DISCUSSION

Table -1: Distribution of Participats Alagappa University and Bharathidasan University Disability students

Demographic Profile		Sample	Percentage (%)	Total (%)
Gender	Male	34	66.6	100%
	Female	17	33.3	
University	Alagappa	29	56.8	100%
	Bharathidasan	22	43.1	
Discipline	PG	38	74.5	100%
	Research scholar	13	25.4	
Type of disability	Physical impairment	38	74.5	100%
	Hearing impairment	9	17.6	
	Vision impairment	4	7.84	

Table: 1 show the details of participant's distributions in terms of demographical variables of Gender, University, Discipline, Type of disability. Gender different responded from the analysis interpreted that among 51 disability students 34 (66.6%) were male and 17 (33.3%) were female; university different responded from the analysis interpreted that among 51 disability students 29 (56.8%) were Alagappa and 22(43.1%) were Bharathidasan; Discipline university different responded from the analysis interpreted that among 51 disability students 38 (74.5%) were PG and 13 (25.4%) were research scholar; Type of disability different responded from the analysis interpreted that among 51 disability students 38 (74.5%) were physical impairment and 9 (17.6%) were hearing impairment 4 (7.84%) were Vision impairment.

Table -2: Level of Satisfaction

Sl.No	Level of Satisfaction	Mean	SD
1	Free online teaching-learning method through OER	4.49	0.579
2	Using institution Wi-Fi, broad band, DSL and cable connection for getting OER materials.	4.09	0.692
3	Faculty members encourage using OER.	3.92	0.868
4	OER related news or information in my university websites.	3.49	0.731
5	OER repository updates and quality.	4.04	0.871
6	Time consuming to utilize and download OER resources.	3.75	0.771
7	OER is suitable for disability students.	3.35	1.146
8	Using OER has little impact on my learning outcome.	4.24	0.551
9	Navigation of OER repository is time consuming and user – friendly.	3.51	0.731
10	OER quality is verified through experts and authentic.	3.96	0.692
11	OER is very adoptive tool for disability students.	3.20	1.114
12	Disability students can use OER in anywhere, anyplace, and anytime.	4.53	0.644

Table 2 shows the mean, standard deviation, level of satisfaction disability students answered. With regards to this the disability students have indicated that, free online teaching-learning method through OER (M= 4.43, SD= 0.579), they using institution Wi-Fi, broad band, DSL and cable connection for getting OER materials (M= 4.09, SD= 0.692), they faculty members encourage using OER (M= 3.92, SD= 0.868), they OER related news or information in my university websites (M= 3.49, SD= 0.731), they OER repository updates and quality (M= 4.04, SD= 0.871), they time consuming to utilize and download OER resources (M= 3.75, SD= 0.771), they OER is suitable for disability students (M= 3.35, SD= 1.146), they using OER has little impact on my learning outcome (M= 4.24, SD= 0.551), they navigation of OER repository is time consuming and user – friendly (M= 3.51, SD= 0.731), they OER quality is verified through experts and authentic (M= 3.96, SD= 0.692), they OER is very adoptive tool for disability students (M= 3.20, SD= 1.114), they Disability students can use OER in anywhere, anyplace, and anytime (M= 4.53, SD= 0.644).

CONCLUSION AND FUTURE STUDIES

While these principles were derived from research in face-to-face teaching, we contend that they are just as relevant and applicable to learning, teaching, and curriculum design in distance learning and virtual contexts.

According to the findings of this study, implementing the model has the potential to support teacher retention, self-efficacy, and job satisfaction when given opportunities to interact positively within a PLC that includes students, parents, educators, and government ministries in a vision of creating compassionate, inclusive learning communities. Although parents of disabled children and parents of typically developing children had similar, positive attitudes toward inclusive education, it was also clear that parents of disabled children struggled with additional school-related issues.

We can conclude that training on inclusive education and disability can change people's perceptions of what disability is and raise awareness of the realities that these university students face. The research could be done at the secondary or higher secondary level. An experimental study of the same type can be carried out. In the future, to determine the open educational resources of different levels of students in an inclusive school setting. The study could also be done as a case study. To determine the teacher's open educational resources on disability with inclusive school setting at a different level in the future. Only samples from Alagappa University and Bharathidasan University were collected. The study's sample size is limited to 54 disabled students. The

responses of the disabled students are gathered solely through a questionnaire, not through an interview or any other form of direct observation. The questionnaire items are all closed-ended, so there is no room for other ideas to be expressed.

CONFLICTS OF INTERESTS

The authors declare that there is no conflict of interest.

CONTRIBUTIONS

Each author contributed evenly to this paper. All authors read and approved the final manuscript.

ACKNOWLEDGMENT

AVAILABILITY OF DATA AND MATERIALS

The datasets generated and analyzed during the current study are not publicly available due to privacy reasons but are available from the corresponding author on reasonable request.

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