

## EXPLORING THE UTILIZATION AND PERSPECTIVES OF DISTANCE LEARNING UNIVERSITY TEACHERS ON OPEN EDUCATIONAL RESOURCES IN PAKISTAN

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### Abstract

*This research aims to assess the utilization of Open Educational Resources (OER), investigate the factors influencing their usage, and explore the perceptions of teachers at the distance learning university/institute (DLI) of Pakistan regarding OER. Data for the study were gathered from a sample of 30 respondents through a questionnaire. The findings reveal that teachers exhibit advanced technological skills and actively engage with digital and OER resources. Additionally, teachers hold positive perceptions regarding the incorporation of various OER as supplementary material in their lectures.*

**Keywords:** use of Open educational resources; perceptions about OER; questionnaire.

### Introduction

Open Educational Resources (OER) are teaching and learning resources that are freely accessible online to educators, students, and self-learners. OER include comprehensive syllabi, lectures, courses, modules, assignments, lab activities, pedagogical materials, quizzes, games, simulations, and a variety of digital resources from global collections.

OER development is a global phenomenon, with countries worldwide participating in the Open Ware Consortium. The increasing adoption of OER by students and teachers not only promotes the concept but also expands the pool of available resources. Particularly in developing nations facing diverse educational challenges, OERs are viewed as a remedy to enhance quality, reduce costs, and broaden access to educational resources (Pagram & Pagram, 2006; Hatakka & Mozelius, 2009; Geith & Vignare, 2008).

The focus of this research is particularly on the material which is available online and this does not delve into open software and tools. These means are mostly openly accessible, licensed contents related to academia. These are normally helpful in teaching, learning, research, and for other academic purposes. These resources include a variety of content types, such as textbooks, lecture notes, lesson plans, quizzes, videos, and interactive simulations. The main characteristics of OER are its open license, allowing users to retain, reuse, revise, remix and redistribute content.

- ◆ Open Licensing: OER are typically released under licenses that allow users to freely use, adapt, and share the materials. Common open licenses include Creative Commons licenses.
- ◆ Cost-Free Access: OER are available at no cost to users. This accessibility is particularly significant in addressing issues of affordability and ensuring equal access to educational resources.
- ◆ Collaborative Development: OER can be collaboratively created and improved by educators, institutions, and experts from around the world. This collaborative nature encourages a culture of sharing and continuous improvement.
- ◆ Flexibility: Users can adapt OER to suit their specific teaching and learning needs. This flexibility promotes customization of educational materials to better align with diverse educational contexts.
- ◆ Global Reach: OER can be shared globally, fostering a global community of educators and learners. This has the potential to enhance the quality of education and facilitate knowledge exchange on a global scale.
- ◆ Diverse Formats: OER come in various formats, including text, audio, video, and interactive multimedia. This diversity accommodates different learning preferences and needs.
- ◆ Support for Pedagogical Innovation: OER usage encourages educators to explore innovative teaching methods and technologies. The open nature of the resources allows for experimentation and adaptation to evolving educational practices.
- ◆ Addressing Educational Inequities: OER can play a role in addressing educational inequities by providing affordable and accessible learning materials to students worldwide, including those in economically disadvantaged areas.
- ◆ OER Repositories: There are dedicated online platforms and repositories that host and organize OER, making it easier for educators to discover and use these resources. Examples include OpenStax, MIT Open Course Ware, and OER Commons.
- ◆ Research and Evaluation: The impact of OER on teaching and learning outcomes is a subject of ongoing research. Studies often assess the effectiveness of OER in terms of student performance, engagement, and satisfaction.

OER can be employed in various ways across educational settings. Here are several common uses of OER:

- Course Materials: OER can serve as primary or supplementary materials for courses. This includes textbooks, lecture notes, presentations, and multimedia content that instructors can integrate into their teaching materials.
- Lecture and Presentation Resources: Instructors can use OER to enhance their lectures and presentations. This may include slides, images, videos, and other multimedia resources freely available for use and modification.

- **Assignments and Assessments:** OER can be utilized to create assignments, quizzes, and assessments. Instructors can find or adapt existing OER materials to assess students' understanding of the course content.
- **Textbooks and Reading Materials:** OER textbooks and other reading materials provide an affordable alternative to traditional textbooks. Students can access these resources online, download them, or print them at a lower cost.
- **Research and Reference:** OER can be valuable for research purposes. Scholars and students can access openly licensed research articles, books, and other academic publications without cost barriers.
- **Professional Development:** OER can support ongoing professional development for educators. This includes resources for learning new teaching methods, exploring educational technologies, or staying updated on the latest research in their field.
- **Curriculum Development:** OER materials can be used to build or enhance educational curricula. Instructors and curriculum developers can customize OER content to align with specific learning objectives and educational standards.
- **Open Courses and MOOCs:** OER is often used to create open courses and Massive Open Online Courses (MOOCs). These courses are accessible to a global audience, providing an opportunity for widespread learning.
- **Adaptation and Localization:** OER allows for adaptation and localization to cater to diverse cultural contexts. Instructors can modify content to align with the cultural, linguistic, or educational needs of their students.
- **Community Building:** OER fosters collaboration and community building. Educators can share their OER creations, contributing to a global network of educators who freely exchange ideas, resources, and best practices.
- **Accessibility Initiatives:** OER supports initiatives to enhance educational accessibility. By providing free and open resources, institutions can reduce financial barriers to education and make learning materials available to a broader audience.
- **Open Repositories:** Institutions can establish OER repositories to organize and share educational resources. These repositories serve as centralized platforms for storing and disseminating OER materials.

According to UNESCO: “OER are materials “made available by ICT, for consultation, use and adoption by the user community for non-commercial reasons.” Digital materials provided freely and openly for self-learners, students and teachers for using and

reproducing [Bissell (2009)]. OER can also be used in teaching, learning and research. Open courses in particular have made significant contributions to OER with more than 2,200 courses available to learners and teachers (Atkins et al. 2007). Initiatives such as China Open Courseware and NPC also encourage open courses (Dhanarajan & Porter, 2013). OER courses enable learners to take advantage of the benefits of flexible, high-quality resources, and foster opportunities for diverse learning approaches, including learner-centered, self-directed, peer-to-peer, and social/informal learning (Journeys into Educational Practice open).

Addressing the educational challenges in Pakistan, OERs provide a valuable solution by offering freely accessible internet resources, including lecture materials, readings, simulations, experiments, demonstrations, curricula, and teacher guides (UNESCO, 2002). The global effort behind OERs aims to facilitate worldwide access to educational resources (Bissell, 2009). Notably, one of the significant advantages of OER is its ability to provide access to a diverse student population, including those from disadvantaged backgrounds, thereby widening participation (Harsasi, 2015, pg 75). Particularly for developing countries, OERs offer a novel approach to knowledge-sharing that can lead to economic success at both individual and national levels (McDowell, 2010).

The source of learning and teaching is information content [Littlejohn et al. (2008)]. It is useful to evaluate resources related to learning considering their levels of detail and focus on integrating information content into the learning activity.” The impact of OERs differs across different educational subjects, making it difficult to generalize the impact of a particular OER to all similar resources. Studies on the performance of students using open textbooks, such as Hilton and Laman (2012), reveal improved grades and lower withdrawal rates compared to students using traditional textbooks. Likewise, research by Robinson, Fisher, Wylie, and Hilton (2014) showed that students using open science textbooks achieved better grades than those using traditional textbooks.

In higher education institutions, Bliss et al. (2013) conducted a study across eight colleges, involving 58 teachers and 490 students who provided feedback on their experience with OER textbooks. The results indicated that 50% of respondents considered OER textbooks of similar quality to traditional books, and 40% perceived them as of better quality. Cost savings emerged as a significant factor influencing students' choice of OERs.

It is crucial to evaluate the impact of OER on student learning, ensuring that reduced costs do not compromise learning outcomes. A study by compared students enrolled in an OER statistics course with those in a traditional course at Carnegie Mellon University, revealing no significant difference in scores between the two groups.

Another study by Bowen et al. (2014) compared students' performance in a traditional face-to-face class with those using a blended learning approach with OERs. While the blended learning group scored slightly higher, the difference was not statistically significant.

The Organization for Economic Cooperation and Development (OECD) reported over 3000 open access courses from 300 universities worldwide, emphasizing the global availability of OERs. Different countries contribute to this pool, such as the United States, China, Japan, France, Ireland, and the United Kingdom, each offering diverse educational resources through open access initiatives.

“While the benefits of OERs on students in developing countries may vary due to differences in textbooks, teaching quality, examination systems, and pedagogical approaches, it is essential to conduct studies specific to these contexts. Understanding and addressing specific barriers in developing countries will contribute to making education accessible to all, aligning with the belief that "education is a right rather than a privilege.” ( cf. Lovett et al. 2008; Larson and Murray, 2008).

The objective of this study is to determine the extent of Open Educational Resources (OER) utilization, identify the influencing factors, and explore teachers' perceptions regarding the use of OER at the distance learning university/institute in Pakistan.

### **Research Objectives**

The objectives of this study is to:

1. determine the degree to which distance learning university or institute instructors utilize Open Educational Resources (OER).
2. identify the primary factors influencing the utilization of OER by instructors in distance learning universities or institutes.

### **Research Questions**

The research questions for this study are:

1. To what extent do teachers in distance learning universities or institutes utilize Open Educational Resources (OER)?
2. What are the primary factors influencing the utilization of OER by teachers in distance learning universities or institutes?

### **Methodology**

#### **Development of Questionnaire**

In this study, data has been collected from a sample of 30 lecturers who are affiliated with a Distance Learning University. The data is collected through a questionnaire that has been created by carefully assessing the questions developed by the OER Asia Study. Following the completion of the pilot study, some revisions have been made to the questionnaires. The validity of the questionnaires was assessed through statistical analysis. The Teachers' Questionnaire focuses on several important topics, including the use of OER, the factors that contribute to or hinder its use, and the potential impact of OER on student learning.

### **Sampled Population**

The target population comprises 30 esteemed teachers from various campuses of the Distance Learning University located across Pakistan. A random sample of 30 teachers was selected, and data was collected using a questionnaire method.

### **Results and Discussion**

Among the 30 teachers who took part in the survey, it was found that 64% were male, while 36% were female. At the beginning of the questionnaire, educators were asked about their proficiency and usage of a wide range of digital tools, including computers, tablets, smartphones, scanners, printers, emails, various software programs, and editing tools. The findings indicate that all the teachers displayed a high level of competence and self-reliance when using computers, smartphones, and tablets. A significant number of teachers demonstrated proficiency in operating scanners, editing tools, multimedia projectors, and printers. Teachers often utilize a variety of digital resources in their instructional practices, including e-books, tutorials, slide presentations, online quizzes, videos, simulations, and audios.

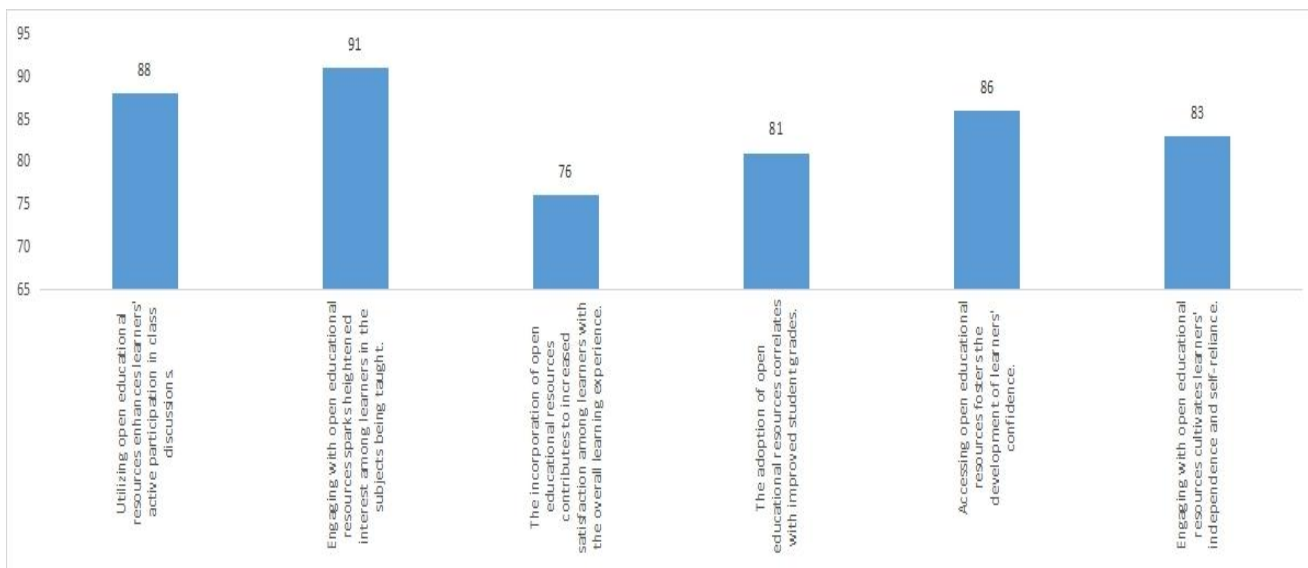
The provided table, labeled 1a & 1b, presents the perspectives of distance learning teachers regarding the various applications of Open Educational Resources.

#### **Insert Table 1a Here:**

From table 1a we can see that the Perceptions about Benefits of OERs Usage is measured on the five point likert scale. The 79 % of the respondents say that it is important that access to the finest available resources is facilitated by the use of open educational resources. Whereas 2% respondents says it is not important that the access to the finest available resources is facilitated by the use of open educational resources. 68% of the respondents says it is important that Open educational resources contribute to the advancement of scientific research and education by making these activities publicly accessible. Whereas 3 % respondents says it is not important that Open educational resources contribute to the advancement of scientific research and education by making these activities publicly accessible. Similarly, we can observe that more than 60% of the respondents agree that the given statements are important:

The costs for students are reduced through the use of open educational resources; the utilization of open educational resources lowers the costs associated with developing instructional materials for the institution; Open educational resources empower institutions to extend their reach to disadvantaged communities; the use of open educational resources serves as a form of support for developing countries; Open educational resources provide institutions with the means to achieve independence from publishers.

Insert Table 1b Here:



**Figure 1: General Perceptions of Distance Learning University Teachers about OERs (%)**

From Table 1b and figure 1we can observe that 88% respondents agreed that Utilizing open educational resources enhances learners' active participation in class discussions. 91% respondents agreed that Engaging with open educational resources sparks heightened interest among learners in the subjects being taught. 76% respondents agreed that the incorporation of open educational resources contributes to increased satisfaction among learners with the overall learning experience. 81% respondents agreed that the adoption of open educational resources correlates with improved student grades. 86% respondents agreed that Accessing open educational resources fosters the development of learners' confidence. 83% respondents agreed that Engaging with open educational resources cultivates learners' independence and self-reliance. 75% respondents agreed that Leveraging OER enables me to better address the diverse needs of learners. 75% respondents agreed that Integration of open educational resources augments learners' involvement with the lesson. 86% respondents agreed that Exploring open educational resources encourages learners to experiment with novel learning approaches. 75% respondents agreed that Utilizing open educational resources promotes collaboration and peer support among learners. 76% respondents agreed that Engaging with open educational resources heightens learners' enthusiasm for future studies.

The majority of teachers in the distance learning institution (DLI) express a favorable attitude towards the utilization of OER. Approximately more than 40% of teachers provide positive feedback, citing various advantages such as enhanced access to high-quality resources, promotion of scientific research and education as open activities, cost reduction for students, decreased expenses in instructional materials development for DLI

campuses, outreach to disadvantaged communities, support for developing countries, and fostering independence from publishers. Nevertheless, teachers encounter obstacles that impede the effective use of OER, as outlined in Table 2 and illustrated in Figure 2 below.

Insert Table 2 Here:

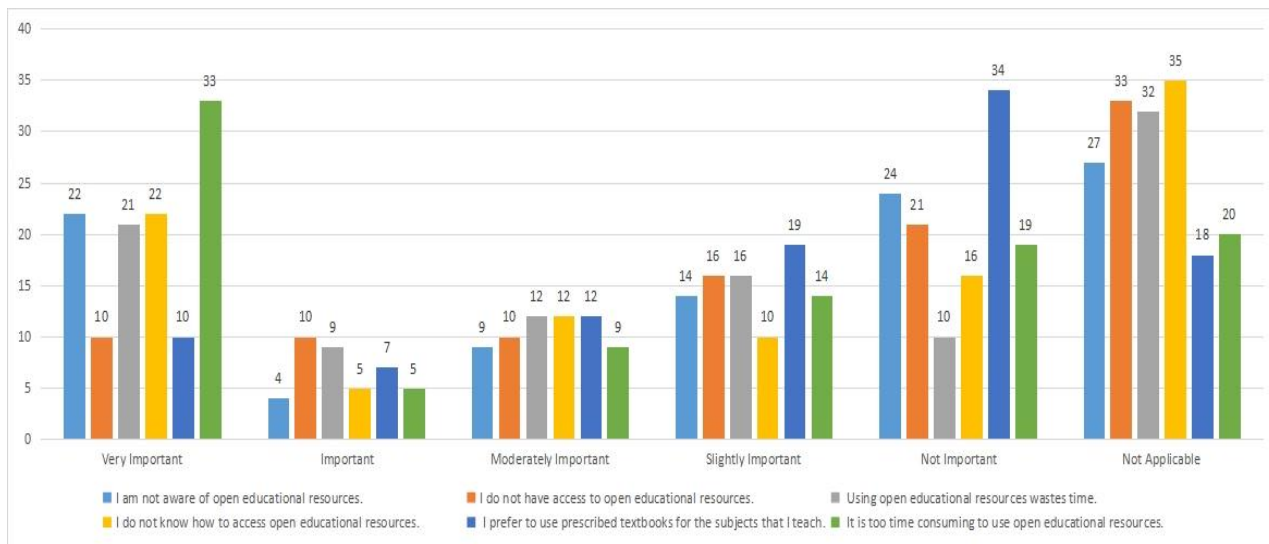


Figure 2: Personal barriers for not using OERs (%)

When queried about the challenges encountered in utilizing OER, nearly half of the teachers highlighted issues related to inadequate access to OERs and a lack of familiarity with these resources among their students. Other barriers identified by teachers include: 90% expressing concerns about their ability to locate OERs, and 10% perceiving that using OERs is time-consuming and inefficient. In summary, the study's findings indicate that students possess the capability to use digital devices and software programs, engaging with specific digital resources. While teachers generally hold positive views about OER and its potential impact, more than half of them exhibit a preference for textbooks over OERs. Commonly cited barriers include insufficient access, limited student familiarity, challenges in locating OERs, and concerns about the perceived time-consuming nature of OER utilization.

### Conclusion

Data for this study was gathered from DLI campuses. The study's findings reveal that teachers possess fundamental technological skills, with the majority expressing positive attitudes toward the use of OER. Notably, issues related to technology, infrastructure, access, and non-familiarity do not impede the utilization of OERs in the computer labs of DLI. This research holds significance as it delves into the utilization of OER by DLI teachers and examines their perceptions of OER materials. The identified barrier of proper access, as mentioned by teachers, encompasses a range of factors limiting their



access to OER resources. Additionally, teachers express positive perceptions regarding various aspects of OER use, including enhanced access to high-quality resources, the promotion of scientific research and education as open activities, cost reduction for students, decreased expenses in instructional materials development for DLI campuses, outreach to disadvantaged communities, support for developing countries, and the potential for DLI to achieve independence from publishers.

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**Annexure 1:**

**Table 1a: General Perceptions of Distance Learning University Teachers about Benefits of OERs Usage(%)**

Perceptions about Benefits of OERs Usage	very Important	Important	Moderately Important	Slightly Important	Not Important	Not Applicable
Access to the finest available resources is facilitated by the use of open educational resources.	42	30	6	2	2	18
Open educational resources contribute to the advancement of scientific research and education by making these activities publicly accessible.	33	22	13	4	3	25
The costs for students are reduced through the use of open educational resources.	33	31	5	1	6	24
The utilization of open educational resources lowers the costs associated with developing instructional materials for the institution.	35	25	4	2	7	26
Open educational resources empower institutions to extend their reach to disadvantaged communities.	42	28	11	1	3	14
The use of open educational resources serves as a form of support for developing countries.	26	36	2	3	10	22
Open educational resources provide institutions with the means to achieve independence from publishers.	50	32	3	1	3	11

**Table 1b: General Perceptions of Distance Learning University Teachers about OERs Usage (%)**

<b>Perceptions of Distance Learning University Teachers about OERs Usage</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>	<b>Not Applicable</b>
<b>Utilizing open educational resources enhances learners' active participation in class discussions.</b>	36	52	2	4	6
<b>Engaging with open educational resources sparks heightened interest among learners in the subjects being taught.</b>	38	53	1	1	8
<b>The incorporation of open educational resources contributes to increased satisfaction among learners with the overall learning experience.</b>	23	53	4	3	17
<b>The adoption of open educational resources correlates with improved student grades.</b>	29	52	3	5	11
<b>Accessing open educational resources fosters the development of learners' confidence.</b>	28	58	1	1	15
<b>Engaging with open educational resources cultivates learners' independence and self-reliance.</b>	33	50	0	4	13
<b>Leveraging open educational resources enables me to better address the diverse needs of learners.</b>	31	44	8	5	12
<b>Integration of open educational resources augments learners' involvement with the lesson.</b>	19	56	4	4	17
<b>Exploring open educational resources encourages learners to experiment with novel learning approaches</b>	31	55	1	3	9
<b>Utilizing open educational resources promotes collaboration and peer support among learners.</b>	28	47	10	2	13

<b>Engaging with open educational resources heightens learners' enthusiasm for future studies.</b>	29	47	8	2	14
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**Table 2: Personal barriers for not using OERs (%)**

	Very Important	Important	moderately Important	Slightly Important	Not Important	Not Applicable
<b>I am not aware of open educational resources.</b>	22	4	9	14	24	27
<b>I do not have access to open educational resources.</b>	10	10	10	16	21	33
<b>Using open educational resources wastes time.</b>	21	9	12	16	10	32
<b>I do not know how to access open educational resources.</b>	22	5	12	10	16	35
<b>I prefer to use prescribed textbooks for the subjects that I teach.</b>	10	7	12	19	34	18
<b>It is too time consuming to use open educational resources.</b>	33	5	9	14	19	20