Embracing the Promise of Open Educational Resources: Faculty Insights and Implications in Higher Education

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Received: June 2, 2024 Accepted: July 5, 2024 Online Published: July 26, 2024

doi:10.5430/wje.v14n3p12 URL: https://doi.org/10.5430/wje.v14n3p12

Abstract

This study examines faculty perceptions, awareness, and utilization of Open Educational Resources (OER) in higher education and identifies barriers hindering their adoption. The research encompasses multiple perspectives, including demographic information, teaching practices involving technology, familiarity and opinions regarding OER, types of OER utilized by faculty, ease of searching for OER, a comparison between open and traditional resources, intentions to use OER in the future, and factors deterring the adoption of OER. The study employed a quantitative approach using an online survey questionnaire to gather data. A random sample of faculty members from the University of Jeddah in Saudi Arabia was recruited (n = 139). Using descriptive and MANOVA tests, the findings highlight a preference for blended teaching styles, significant awareness of OER, ease in searching for OER, and a strong intention to use OER in the future. The results emphasize the importance of addressing concerns related to institutional support, intellectual property policies, recognition of contributions, and creating a supportive environment to enhance faculty engagement with OER. The study implications suggest comprehensive and targeted approaches to support faculty members in adopting and utilizing OER effectively, including promoting gender equity, enhancing ease of adoption, considering workload impact, recognizing differences based on teaching experience, tailoring support based on teaching style, and actively promoting the benefits and opportunities of OER.

Keywords: open educational resources, OER, OER adoption, faculty, higher Education

1. Introduction

Since the introduction of Open Educational Resources (OER) in 2002 by UNESCO, it has gained increasing attention among academia, especially in higher education (Hodgkinson-Williams & Arinto, 2017). The value and significance of OER have been further recognized and appreciated, particularly during the Covid-19 pandemic, as it provides a viable solution for overcoming limitations in accessing traditional education (Contrada & Good-Schiff, 2021; Marín et al., 2020). In line with this, OER can be a catalyst for sustainable higher education and provide access to quality education (Ponzini, 2021). Van Allen and Katz (2020) propose that "increasing the use of OER, which are globally available, may help to lessen these disparities and work to close the achievement gap not only in today's collective crisis but also beyond the pandemic" (p. 210). Further, the emergence of OER, particularly in higher education is driven by the widespread use of technology and the availability of internet access (Abri & Dabbagh, 2018). This trend has gained momentum as educators and institutions recognize the potential of OER to revolutionize teaching and learning (Marín et al., 2020).

OER has experienced widespread adoption among numerous organizations and foundations since its inception. One of the most significant approaches toward OER is the concept of 5Rs (Retain, Reuse, Revise, Remix, and Redistribute). This concept of openness was first proposed by David Wiley in 2007 as a framework and a way to describe the permissions and freedoms associated with OER (David, 2014). The 5Rs framework has since become widely recognized and adopted within the open education community as a guiding principle for the use and sharing of OER. The 5Rs refer to the permissions granted by open educational resources and stress the openness and flexibility of OER, allowing educators and learners to freely access, customize, and share educational materials to support teaching and learning (David, 2014).

In terms of definition, OER refers to the "educational materials made freely and legally available on the Internet for

anyone to reuse, revise, remix and redistribute" (Wickline, 2016: no page number). Accordingly, OER has the potential to address barriers to access, enhance student achievement, and foster pedagogical innovation (Tillinghast, 2020; Todorinova & Wilkinson, 2020). By providing free and openly licensed educational resources, OER can lower financial obstacles that limit students' access to learning materials (Wickline, 2016). This accessibility can contribute to improved student outcomes and academic success. In addition, OER encourages educators to explore innovative teaching approaches, as they have the freedom to adapt, remix, and customize the resources to meet their specific instructional needs. This flexibility promotes pedagogical innovation and supports the development of engaging and learner-centred educational experiences (Todorinova & Wilkinson, 2020).

While OER hold promise in breaking down barriers, enhancing student achievement, and promoting innovative teaching practices, research indicates that their full implementation in higher education has not yet been fully realized (Abri & Dabbagh, 2018; Hoosen & Butcher, 2019; Marín et al., 2020; Otto, 2021). To expand the reach and impact of OER, it is crucial to recognize the value of OER for students and gain a deeper understanding of the faculty experience (Lantrip & Ray, 2021: 897). Exploring faculty perspectives on OER adoption is vital for encouraging widespread use. By addressing this knowledge gap, we can inform decision-making processes and promote the adoption of OER.

This study aims to examine faculty perceptions, awareness, and utilization of OER in higher education, as well as the barriers hindering their adoption. The research encompasses various dimensions, including demographic information, teaching practices involving technology, familiarity and opinions regarding OER, types of OER utilized by faculty, ease of searching for OER, a comparison between open and traditional resources, intentions to use OER in the near future, and factors deterring the adoption of OER. Through a comprehensive exploration of these factors, the study seeks to provide valuable insights into the role of OER in higher education and inform strategies for promoting their use while addressing adoption barriers. The following research questions guides this investigation:

- RQ1: How do faculty perceptions of value, relevance, and benefits of OER affects to what extent technology and OER are incorporated in teaching practices?

- RQ2: What is the extent of institutional support for faculty utilizing OER, and what are the primary deterrents that prevent faculty from adopting OER?

- RQ3: How does the perceived quality and effectiveness of specific types of OER, compared to traditional educational resources, affect the frequency of use and utilization of OER in practice?

- RQ4: How do faculty characteristics impact on their engagement with OER?

2. Literature Review

2.1 The Potential of OER

Higher education worldwide is witnessing an increasing inclination towards exploring the diverse advantages offered by OER. This exploration encompasses not only the financial advantages but also the potential pedagogical benefits that OER can bring (Nusbaum et al., 2020; Tillinghast, 2020; Todorinova & Wilkinson, 2020). OER is recognized as a vital component in driving positive transformations in both affordability and pedagogy within education (Lantrip & Ray, 2021). Given the assumption that faculty are unlikely to select OER of lower quality compared to traditional resources, there are compelling arguments supporting the adoption of OER (Contrada & Good-Schiff, 2021). These include the affordability and equity that OER offers, as well as the flexibility it provides in terms of customization and adaptation to diverse learning needs. Additionally, the easy digital access to OER resources further enhances their appeal for educators and learners (Contrada & Good-Schiff, 2021; Martin & Kimmons, 2019).

Further, OER has the potential to revolutionize access to educational materials by allowing individuals from all backgrounds to access, adapt, and personalize resources that were previously limited to students at prestigious universities. In this regard, "disparities in student access to resources can be lessened through OER" (Van Allen & Katz, 2020: 215). Also, "a college education is becoming increasingly expensive, and the burden of this cost is often felt disproportionately by marginalized students" (Nusbaum et al., 2020: 1). Further, OER have the potential to empower women by providing them with a platform to express their thoughts, facilitating their access to valuable information and educational resources (Perryman & Arcos, 2016; Saadat et al., 2022). The democratization of education has the power to catalyse career opportunities and stimulate economic growth in underprivileged communities (Wickline, 2016). Faculty are now more conscious of the cost impact on students, leading to greater consideration of affordable alternatives and increased adoption of OER (Spilovoy et al., 2020). OER addresses issues

of social justice by reducing the financial burden on students and promoting access to educational materials (Lantrip & Ray, 2021).

2.2 Understanding OER

It seems clear that a common understanding is established regarding the definition of OER as "the idea behind Open Educational Resources (OER) is simple but powerful" (Wickline, 2016: no page number). Most definitions share the same notion of openness of online educational materials that can be modified and purposefully reused. For instance, OER "are learning, teaching and research materials in any format and medium that reside in the public domain or are under copyright that have been released under an open license, that permit no-cost access, re-use, re-purpose, adaptation and redistribution by others" (UNESCO, 2023: no page number). Similarly defined, OER are "educational resources that are offered freely, are openly available to anyone, and, under some licenses, allow others to reuse, adapt, and redistribute the resources with few or no restrictions" (Hoosen & Butcher, 2019: 9). Also, OER are "teaching, learning, and research materials that are either (a) in the public domain or (b) licensed in a manner that provides everyone with free and perpetual permission to engage in the 5R activities (retain, reuse, revise, remix, redistribute)" (Green & Vézina, 2020: no page number).

Licensing procedures "provide legal mechanisms to ensure that people retain acknowledgement for their work while allowing it to be shared and which enable copyright holders, if they so wish, to restrict commercial activity or prevent people from adapting the work" (Hoosen & Butcher, 2019: 9). Hence, the open license is a type of license that respects the intellectual property rights of the copyright owner while granting the public certain permissions to access, reuse, repurpose, adapt, and redistribute educational materials (UNESCO, 2023).

The increasing demand for integrating OER in higher education calls for a better understanding of faculty motivation to adopt OER. Particularly, the role of incentives in encouraging faculty adoption remains unclear (Nagashima & Hrach, 2021). By assessing the impact of incentives on faculty willingness to use OER, institutions can identify effective strategies to promote OER adoption and overcome existing barriers (Nagashima & Hrach, 2021). From another perspective, there is a need to shed light on the complexities and barriers that institutions and individuals encounter when adopting and integrating OER. The study of Marín et al. (2020) recognizes and addresses the challenges associated with the infrastructure and adoption of OER at various levels including the availability and development of OER infrastructure, policy considerations, ensuring quality of resources, and managing the process of change. Sustainable support structures and processes are essential for wide-scale OER implementation as it involves more complexity than traditional textbook adoption and requires ongoing assistance for faculty (Lantrip & Ray, 2021). However, there is limited evidence of supportive policies around OER (Hoosen & Butcher, 2019). Academic publishers are responding to this by adapting their marketing strategies, embracing digital materials, and exploring new approaches like "inclusive access" models (Spilovoy et al., 2020).

2.3 Prior Work on OER in Higher Education

Several studies were conducted in relation to the promise and implementation of OER in the context of higher education. For example, Todorinova and Wilkinson (2020) found that there were significant variations among faculty in their knowledge of and engagement with OER, as well as their interest in creating open textbooks. Tillinghast (2020) found that several factors such as attitude, performance expectancy, effort expectancy, self-efficacy, and facilitating conditions significantly influence faculty adoption of OER. Moreover, Abri and Dabbagh (2018) found that there is limited awareness among faculty and students. Furthermore, they identify various challenges hindering OER adoption, including the difficulty in finding suitable OER materials and concerns regarding the quality of available resources.

The study of Nagashima and Hrach (2021) examined faculty motivation and experiences in adopting OER. The results revealed that faculty were motivated by both traditional factors such as cost reduction and improved student learning. Also, faculty reported various benefits and challenges associated with OER adoption. Similarly, the study of Martin and Kimmons (2019) suggests that faculty are driven to adopt and develop OER to lower expenses and enhance their teaching methods. However, they frequently encounter challenges that impede their progress such as concerns regarding the quality of available resources, anxieties related to copyright issues, technical complexities, and uncertainties about the long-term viability of OER initiatives. Furthermore, Otto (2021) observed that individuals' intentions and behaviours regarding the adoption of OER are strongly influenced by their emotional connection to the core ideas and values of OER. Beliefs about OER are more abstract and less focused on specific benefits, and there is a lack of belief in OER at the level of knowledge about OER. Nevertheless, the actual usage of OER is positively associated with individuals' knowledge about OER.

Concerning OER awareness and actual implementation, Spilovoy et al. (2020) argue that while increased awareness and acceptance of OER among faculty is observed, many still lack familiarity with OER and how to utilize them. Also, faculty awareness of OER initiatives positively correlates with adoption, and institutional-level initiatives boost faculty awareness. Awareness of OER drives adoption as required course materials and indicates future adoption potential. Moreover, the study of Lantrip & Ray (2021) found that faculty modified OER during adoption and adjusted instructional practices accordingly. Faculty also reported positive benefits for students, such as cost savings, increased access, and greater engagement. Therefore, sustained support structures, including training, time for reflection, and resources, were crucial for successful adoption.

Senn et al. (2022) noted that trends in OER usage include instructors searching and evaluating materials based on course alignment, quality, and ease of implementation. Instructors often customize the materials to suit their classroom context and utilize them in various course environments. Additionally, Hilton's (2020) study shows that students achieve comparable or even better learning outcomes when using OER while saving substantial amounts of money. Moreover, the majority of faculty and students who have utilized OER report positive experiences and express a willingness to continue using them in the future.

Recently, Marín et al. (2022) investigated faculty perspectives and usage of OER and their repositories in various countries by employing a multiple case study approach to examine similarities, differences, and the influence of institutional policy and quality on individual views of OER. In this study, faculty had low awareness and utilization of OER repositories, with external platforms like YouTube being more popular. There was a lack of awareness and frameworks for quality assurance procedures. Therefore, higher education institutions need to implement measures to encourage faculty to use OER, with an emphasis on co-creation, remixing, and sharing.

3. Methodology

The research design employed a quantitative approach to address the research questions. This approach was chosen due to its ability to collect numerical data, analyse relationships between variables, compare data across groups, and enhance replicability. It provides a systematic and objective means to address the research questions and obtain meaningful insights (Mertens, 2005).

The study utilized an online survey questionnaire that was developed and tailored to align with the specific aims, scope, and context of the current study. The questionnaire consisted of two main sections. The first section focused on collecting demographic information from participants, including their gender, workload, teaching experience, teaching style, awareness of OER, ease of searching for OER, and intentions to use OER in the next three years. The second section used a 5-point Likert scale, ranging from "strongly agree" (5) to "strongly disagree" (1), to explore participants' perspectives and attitudes towards OER. This section covered various aspects such as teaching with technology, institutional support, perceptions, beliefs, use and types of OER, adoption deterrents, and a comparison between OER and traditional resources (3-point Likert scale: 3 = OER as superior, 2 = similar, and 1 = traditional resources as superior). The Appendix 1 provided further details on the questionnaire.

3.1 Sampling Strategy and Participants

The study utilized a random sample of faculty members from the University of Jeddah, which is a public university, in Saudi Arabia. To recruit participants, invitations were sent through university and personal emails, and personal contacts were leveraged to extend the reach of the study. The researcher's affiliation with the university facilitated the data collection process. The total number of participants in the study was 139.

3.2 Validity and Reliability

To ensure the validity of the questionnaire, it was piloted with three experts in the field of educational technology. Their feedback and insights were taken into consideration, leading to necessary changes and refinements to enhance the questionnaire's content and construct validity.

To assess the reliability of the questionnaire, Cronbach's alpha coefficient was calculated, resulting in a value of $\alpha = .86$. This indicates a good level of internal consistency among the questionnaire items.

3.3 Data Analysis

The collected data is analysed using SPSS v.22 (Pallant, 2007). Descriptive statistics, including frequency and percentage, were employed to describe the participants' demographics and backgrounds. Furthermore, means and standard deviations were used to gain insights into research questions RQ1, RQ2, and RQ3. Multivariate Analysis of Variance (MANOVA) was finally implemented to investigate RQ4.

4. Findings

4.1 Demographics and Background

Table 1 provides an overview of the demographics and background of the respondents. In terms of gender, 52.5% of the respondents identified as male, while 47.5% identified as female. Regarding workload, 51.8% of the respondents reported being involved in teaching only, while 48.2% reported teaching with an administrative role. The respondents had varied teaching experience, with 38.1% reporting having 5 to less than 15 years, and 37.4% reporting having more than 15 years of experience. In terms of teaching style, the majority, 66.9%, preferred blended or hybrid teaching. When it comes to awareness of OER, the majority of faculty were aware (38.1%) and very aware of OER (27.3%). Regarding the ease of searching for OER, the majority of faculty found it easy (54.0%) and very easy (32.8%). Looking at the intention to use OER in the next three years, the vast majority of faculty (82.0%) indicated that they would consider using OER.

Table 1. Demographics and Background (n= 139)

Groups			N	%
Gender	1.	Male	73	52.5
	2.	Female	66	47.5
Workload	1.	Teaching only	72	51.8
	2.	Teaching with administrative role	67	48.2
Teaching experience	1.	Less than 5 years	34	24.5
	2.	From 5 to less than 15 years	53	38.1
	3.	More than 15 years	52	37.4
Teaching style	1.	Face-to-face	42	30.2
	2.	Blended or Hybrid	93	66.9
	3.	Fully online	4	2.9
Awareness of OER	1.	I am not aware of OER	3	2.2
	2.	I have heard of OER	25	18.0
	3.	I am somewhat aware of OER	20	14.4
	4.	I am aware of OER	53	38.1
	5.	I am very aware of OER	38	27.3
Ease of searching for OER	1.	Very Difficult	4	2.9
(*Missing =2, Valid = 137*)	2.	Difficult	14	10.2
	3.	Easy	74	54.0
	4.	Very Easy	45	32.8
Use of OER in the next three years	1.	I am not interested in using OER	1	0.7
	2.	I might consider using OER	24	17.3
	3.	I will consider using OER	114	82.0

RQ1: How do faculty perceptions of value, relevance, and benefits of OER affects to what extent technology and OER are incorporated in teaching practices?

4.2 Teaching with Technology

Table 2 presents faculty ratings on their agreement levels regarding various aspects of teaching with technology using a Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Faculty show a high level of agreement with using social media for interaction, engaging in digital scholarship, and assigning books available in both eText and traditional formats. However, the level of agreement is slightly lower when it comes to using digital materials in course presentations and assigning material exclusively available in eText book format. The findings suggest that faculty members are generally open to integrating technology into their teaching practices.

4.3 Faculty Perception of OER

Table 2 presents faculty ratings regarding their perception of OER using a Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The ratings indicate that participants generally agreed with the following characteristics of OER: availability for free (M=4.21), ease of combining with other course materials (M=4.21), ability to remix and repurpose (M=4.09), and being more up to date than textbooks (M=3.97). Participants also

expressed a moderate level of agreement that OER is provided with a Creative Commons license (M=3.86), easy to modify (M=3.56), and of high quality (M=3.53).

4.4 Faculty Believes about OER

Table 2 presents faculty's beliefs regarding OER using a Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The findings indicate that faculty members have positive beliefs about the impact and benefits of OER. They strongly believe that OER can contribute to equitable access, improved student performance, critical reflection by educators, and different usage patterns compared to other online resources. Faculty members also hold a moderate to strong belief that OER can enhance student satisfaction and lead to financial benefits at the institutional level.

Table 2. Teaching with Technology, Perception of OER, and Believes about OER

Items	M	SD
Teaching with Technology		
1. Used social media to interact with colleagues	4.56	0.66
2. Used social media to interact with students	4.22	1.19
3. Published digital scholarship work	4.06	0.99
4. Assigned books for which eText books and traditional formats are both available	4.04	1.08
5. Used digital materials such as simulations and videos in course presentations	3.99	1.15
6. Assigned material available only in eText book format	3.91	1.24
Faculty Perception of OER		
1. Is available for free	4.21	0.81
2. Is easy to combine with other course materials	4.21	0.84
3. Has the ability to remix and repurpose	4.09	0.79
4. Is more up to date than textbooks	3.97	1.12
5. Is provided with a Creative Commons license	3.86	0.97
6. Is easy to modify	3.56	1.15
7. Is of high quality	3.53	1.13
Faculty Believes about OER		
1. OER lead to more equitable access and serve a broader base of learners than traditional education	4.47	0.58
2. Use of OER leads to improvement in student performance	4.47	0.59
3. Use of OER leads to critical reflection by educators, with evidence of improvement in their practice	4.37	0.69
4. The open aspect of OER creates different usage and adoption patterns than other online resources	4.29	0.75
5. Use of OER leads to improvement in student satisfaction	4.29	0.73
6. OER adoption at an institutional level lead to financial benefits for students and/or institutions	4.12	0.89

RQ2: What is the extent of institutional support for faculty utilizing OER, and what are the primary deterrents that prevent faculty from adopting OER?

4.5 Institutional Support

Table 3 presents participants' opinions about the nature of support they receive from their institution using a Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The ratings indicate that participants leaned towards agreement regarding the institution's respect for teaching with OER (M=3.57). However, for the remaining items, participants leaned towards neutrality, indicating that they did not strongly agree or disagree with the institution's support and policies regarding intellectual property and rewarding contributions to digital pedagogy (M=2.81 and M=2.73, respectively). Participants also expressed a neutral stance on the institution's policies for protecting intellectual property rights for digital work (M=2.62). This suggests that while faculty members perceive some level of institutional support for teaching with OER, there are areas where the support could be improved.

4.6 Deterrents to the Adoption of OER

Table 3 presents the most important deterrents identified by faculty regarding the use of OER. Using a Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree), several key findings emerged. The deterrents with the highest mean ratings were lack of support from the institution (M=3.82), not used by other faculty known to participants (M=3.72), and absence of a comprehensive catalogue (M=3.57). These findings indicate that participants

perceive institutional support, peer adoption, and the availability of comprehensive resources as important factors influencing their decision to adopt OER.

The ratings for deterrents 4 to 11 indicate that participants generally held a neutral stance on these factors. The deterrents mean ratings ranged from 2.51 to 3.35. This suggest that participants do not strongly lean towards agreement or disagreement with any particular deterrent.

For the last two items, the ratings indicate that participants generally disagreed with the deterrents, as they fell within the range of disagreement (i.e., 2). Specifically, participants disagreed that integrating OER into their existing technology was too difficult (M=2.35), and they disagreed that OER was not effective in improving student performance (M=2.20). These findings suggest that participants did not perceive these factors as significant barriers to adopting OER in their courses.

Table 3. Institutional Support and Deterrents to Adopting OER

Items	M	SD
Institutional Support		
1. Respects teaching with OER (in person or online)	3.57	1.27
2. Provides support and flexibility in understanding and choosing intellectual property policies	2.81	1.29
3. Has a fair system of rewarding contributions made to digital pedagogy	2.73	1.40
4. Has strong policies to protect intellectual property rights for digital work	2.62	1.26
Deterrents to adopting OER		
1. Lack of support from my institution	3.82	1.26
2. Not used by other faculty I know	3.72	1.23
3. No comprehensive catalogue	3.57	1.44
4. Not enough resources for my subject	3.35	1.36
5. Too hard to find what I need	3.14	1.33
6. Too difficult to change or edit	2.96	1.51
7. Not knowing if I have permission to use or change	2.91	1.35
8. Not current, up to date	2.62	1.32
9. Too difficult to use	2.61	1.33
10. Not relevant to my local context	2.53	1.36
11. Not high-quality	2.51	1.17
12. Too difficult to integrate into technology I use	2.35	1.36
13. Not effective at improving student performance	2.20	1.17

RQ3: How does the perceived quality and effectiveness of specific types of OER, compared to traditional educational resources, affect the frequency of use and utilization of OER in practice?

4.7 OER Compared to Traditional Resources

Table 4 presents faculty ratings on the quality of OER compared to traditional resources. The ratings were provided on a 3-point scale, with 3 indicating OER as superior, 2 indicating similarity, and 1 indicating traditional resources as superior. The ratings indicate that faculty members recognize several advantages of OER, including up-to-date content, widespread usage, availability across various subjects, a diverse range of materials, cost-effectiveness, and compatibility with Learning Management System (LMS) platforms. These aspects were rated as superior to traditional resources. However, certain factors such as alignment with desired learning outcomes, user-friendliness, ease of access and selection, proven effectiveness, and trusted quality were considered to be on par with traditional resources, falling into the category of similarity.

4.8 Faculty Use and Type of OER

Table 4 provides information on the types of Open Educational Resources (OER) used by faculty members, rated on a Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The ratings for the first 9 items, ranging from 3.50 to 4.65, indicate that faculty members predominantly utilize class presentations and images as OER. This is followed by the usage of videos, open textbooks or chapters from textbooks, infographics, tests and quizzes, eBooks, homework exercises, and interactive games or simulations. The ratings for items 10 to 13 show slightly lower usage of other types of OER. These findings demonstrate a diverse range of OER integration, highlighting that

faculty members actively incorporate various types of OER into their teaching practices.

Table 4. OER Compared to Traditional Resources, Use and Type of OER

Items	M	SD
OER compared to traditional resources (3-point scale)		
1. Current	2.79	0.44
2. Wide adoption	2.77	0.46
3. Range of subjects	2.68	0.50
4. Range of materials for each subject	2.63	0.54
5. Cost	2.61	0.68
6. Works with LMS	2.53	0.59
7. Mapped to learning outcomes	2.49	0.58
8. Ease of Use	2.49	0.74
9. Easy to find and select	2.42	0.74
10. Proven efficacy	2.40	0.66
11. Trusted quality	2.29	0.70
Faculty Use and Type of OER (5-point scale)		
1. Class presentations	4.65	0.75
2. Images	4.29	1.00
3. Videos	4.04	1.23
4. Open textbooks, chapters from textbooks	3.96	1.22
5. Infographics	3.94	1.21
6. Tests and quizzes	3.94	1.17
7. eBooks	3.93	1.22
8. Homework exercises	3.76	1.25
9. Interactive games or simulations	3.50	1.33
10. Audio podcasts	3.38	1.35
11. Video lectures/tutorials	3.36	1.50
12. Whole course	3.35	1.40
13. Elements of an existing course	3.25	1.35

4.9 Faculty Characteristics Impact on Engagement with OER

RQ4: How do faculty characteristics impact on their engagement with OER?

To examine how faculty characteristics impact their engagement with OER, the study initially computed total mean scores for each dependant variable and presented in Table 5 (faculty believes about OER, teaching with technology, faculty perceptions of OER, faculty use and type of OER, deterrents to the adoption of OER, institutional support, OER vs. traditional resources).

Table 5. Totals for Faculty Perspectives on OER

Totals	M	SD
Faculty believes about OER	4.34	0.52
Teaching with technology	4.13	0.76
Faculty perceptions of OER	3.92	0.62
Faculty use and type of OER	3.80	0.91
Deterrents to the adoption of OER	2.94	0.93
Institutional support	2.93	1.16
OER vs. traditional resources (3-points scale)	2.55	0.40

Subsequently, a Multivariate Analysis of Variance (MANOVA) test was conducted. This statistical test allowed for the examination of the combined effects of multiple independent variables (faculty characteristics) on the dependent variables (presented in Table 5). The MANOVA test provided insights into whether there were statistically significant

differences in engagement with OER based on different faculty characteristics. See Table 6.

Table 6. Multivariate Tests

Effect		Value	*F*	Hypothesis df	Error df	*Sig.*	ηp^2
1. Gender	Wilks'	.630	5.807	9.000	89.000	.000	.370
2. Ease of OER	Lambda	.098	11.764	27.000	260.568	.000	.540
3. Workload		.624	5.969	9.000	89.000	.000	.376
4. Teaching Experience		.398	5.793	18.000	178.000	.000	.369
5. Teaching Style		.340	19.213	9.000	89.000	.000	.660

Table 7. Tests of between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	*df*	Mean Square	*F*	*Sig.*	ηp^2
1. Gender	1. Institutional support	7.700	1	7.700	13.902	.000	.125
	2. Faculty perceptions of OER	1.735	1	1.735	10.145	.002	.095
	3. Faculty use and type of OER	0.986	1	0.986	3.951	.050	.039
	4. OER Awareness	4.141	1	4.141	12.298	.001	.113
2. Ease of OER	1. Teaching with technology	7.617	3	2.539	8.502	.000	.208
	2. Institutional support	22.277	3	7.426	13.408	.000	.293
	3. Faculty perceptions of OER	3.778	3	1.259	7.364	.000	.186
	4. Faculty believes about OER	5.348	3	1.783	24.770	.000	.434
	5. Faculty use and type of OER	17.969	3	5.990	24.011	.000	.426
	6. OER compared to traditional resources	3.056	3	1.019	29.029	.000	.473
	7. Deterrents to the adoption of OER	10.841	3	3.614	12.795	.000	.284
	8. OER Awareness	4.190	3	1.397	4.148	.008	.114
	9. Use of OER in the Next Three Years	1.844	3	0.615	9.291	.000	.223
3. Workload	1. Institutional support	4.460	1	4.460	8.053	.006	.077
	2. Faculty believes about OER	0.559	1	0.559	7.772	.006	.074
4. Teaching Experience	1. Teaching with technology	2.906	2	1.453	4.866	.010	.091
	2. Institutional support	5.182	2	2.591	4.678	.011	.088
	3. OER compared to traditional resources	0.448	2	0.224	6.384	.002	.116
	4. OER Awareness	5.002	2	2.501	7.426	.001	.133
	5. Use of OER in the Next Three Years	1.498	2	0.749	11.325	.000	.189
5. Teaching Style	1. Institutional support	5.381	1	5.381	9.715	.002	.091
	2. Faculty believes about OER	0.698	1	0.698	9.692	.002	.091
	3. Faculty use and type of OER	1.139	1	1.139	4.564	.035	.045
	4. OER compared to traditional resources	0.265	1	0.265	7.545	.007	.072
	5. Deterrents to the adoption of OER	2.629	1	2.629	9.308	.003	.088
	6. OER Awareness	23.666	1	23.666	70.274	.000	.420
	7. Use of OER in the Next Three Years	2.335	1	2.335	35.303	.000	.267

The summary of significant effects follows:

1. Gender: Gender had a significant effect (Wilks' Lambda = 0.630, $F = 5.807$, $p < 0.001$) with a moderate Partial Eta Squared (ηp^2) of 0.370, indicating that it influenced the dependent variables.

2. Ease of OER: Ease of OER had a significant effect (Wilks' Lambda = 0.098, $F = 11.764$, $p < 0.001$) with a relatively high ηp^2 of 0.540, suggesting its impact on the dependent variables.

3. Workload: Workload had a significant effect (Wilks' Lambda = 0.624, $F = 5.969$, $p < 0.001$) with a moderate ηp^2 of 0.376, indicating its influence on the dependent variables.

4. Teaching Experience: Teaching Experience had a significant effect (Wilks' Lambda = 0.398, $F = 5.793$, $p < 0.001$) with a moderate ηp^2 of 0.369, suggesting its impact on the dependent variables.

5. Teaching Style: Teaching Style had a significant effect (Wilks' Lambda = 0.340, $F = 19.213$, $p < 0.001$) with a high ηp^2 of 0.660, indicating its influence on the dependent variables.

The Tests of Between-Subjects Effects are conducted to examine the impact of independent variables on dependent variables in a between-subjects design (Table 7).

4.9.1 Gender

Gender differences were observed in various aspects related to faculty perspectives on OER, although the effect sizes were modest. The findings indicate that male faculty members perceived higher institutional support for OER compared to their female counterparts. Males also had slightly stronger perceptions of OER, higher engagement with OER, and greater awareness of OER compared to females.

4.9.2 Ease of OER

The ease of using OER was found to be influenced by various factors according to the study. Participants reported different levels of difficulty or ease in teaching with technology using OER, indicating that the perceived ease varied depending on the specific technologies involved. Institutional support was also found to have a significant impact on the perceived ease of OER adoption, suggesting that participants' experiences of adopting OER were influenced by the level of support provided by their institutions.

Additionally, faculty perceptions, beliefs about OER, and the type of OER used were all factors that influenced the perceived ease of OER adoption. Participants reported different levels of difficulty or ease in adopting OER based on their perceptions, beliefs, and the specific type of OER they engaged with.

Furthermore, participants' comparison of using OER to traditional resources also played a role, with varying levels of difficulty or ease reported. Overcoming deterrents to OER adoption was perceived differently among participants, indicating that some individuals found it more challenging to overcome barriers to OER adoption than others.

The level of OER awareness also had an impact, as participants reported different levels of difficulty or ease in adopting OER based on their awareness of the resources.

Lastly, the perceived ease of using OER in the future was found to vary among participants. This suggests that individuals had different expectations and anticipated different levels of difficulty or ease in utilizing OER in the coming years.

4.9.3 Workload

The workload of faculty members was found to have a significant impact on various aspects related to institutional support and beliefs about OER. Specifically, workload significantly affected institutional support, indicating that faculty members solely involved in teaching perceived lower support compared to those with a teaching role and administrative responsibilities who had a slightly higher perception of support.

Furthermore, workload was found to have a significant impact on faculty beliefs about OER. Faculty members solely involved in teaching exhibited stronger beliefs about OER, indicating a higher level of belief in the benefits and value of OER, compared to those with a teaching role and administrative responsibilities who had slightly lower beliefs about OER.

4.9.4 Teaching Experience

The study revealed that teaching experience has a notable impact on several aspects related to the use of technology in teaching and the perception of OER. First, participants with more teaching experience perceived teaching with technology to be more challenging, with those having over 15 years of experience finding it the most difficult. This suggests that familiarity and adaptability to new technologies may vary among faculty members based on their teaching experience.

Furthermore, teaching experience influenced the perception of institutional support for utilizing OER. Participants with longer teaching experience generally had a slightly higher perception of support compared to their less-experienced counterparts. This indicates that faculty members with more experience may have established stronger support networks and resources within their institutions, which could facilitate their adoption and integration

of OER.

Moreover, the perception of OER compared to traditional resources was also influenced by teaching experience. Participants with more teaching experience tended to hold a slightly more positive view of OER, potentially indicating their recognition of the benefits and value that OER can bring to their teaching practices. Conversely, those with less experience displayed a slightly lower perception of OER, suggesting a potential need for further awareness and education about the advantages of OER among this group.

Teaching experience also impacted the awareness of OER, with participants having 5 to less than 15 years of experience exhibiting the highest level of awareness. This suggests that faculty members in the mid-career stage may have been exposed to OER initiatives and resources and thus possess a better understanding of their availability and potential benefits.

Lastly, teaching experience influenced the intention to use OER in the future. Participants with more experience expressed a higher intention to adopt OER, indicating their readiness to incorporate these resources into their teaching practices. This aligns with the notion that teaching experience can contribute to the openness and willingness to embrace innovative pedagogical approaches.

4.9.5 Teaching Style

Teaching style emerged as a significant factor influencing various aspects related to the use of OER and perceptions of institutional support. Participants teaching in different settings, namely fully online, blended or hybrid, and face-to-face, displayed distinct patterns in their perceptions and behaviors regarding OER.

First, teaching style had a notable impact on the perceived level of institutional support. Faculty members teaching in a fully online setting reported the highest perception of support, indicating that the online teaching environment may offer more resources and assistance for OER implementation. In contrast, those teaching in a blended or hybrid setting had a slightly lower perception of support, and individuals teaching in a face-to-face setting reported the lowest perception of support. This suggests that the type of teaching setting can influence the level of institutional support available to faculty members, which in turn may affect their engagement with OER.

Furthermore, teaching style influenced faculty beliefs about OER. Faculty members teaching in a fully online setting exhibited stronger beliefs about OER compared to their counterparts in blended or hybrid and face-to-face settings. This finding suggests that the nature of the teaching environment may shape faculty members' understanding and appreciation of OER, with online instructors being more inclined to recognize the value and benefits of OER.

The use and type of OER also varied according to teaching style. Faculty members teaching in a fully online setting reported a higher use of OER, followed by those in a blended or hybrid setting, and individuals teaching in a face-to-face setting had the lowest OER usage. This indicates that online instructors may have more opportunities and incentives to incorporate OER into their teaching practices compared to their counterparts in traditional face-to-face classrooms.

Teaching style also influenced the perception of OER compared to traditional resources. Faculty members teaching in a fully online setting had a more positive view of OER, followed by those in a face-to-face setting, while individuals teaching in a blended or hybrid setting had a slightly lower perception. This suggests that the unique characteristics and affordances of different teaching environments may shape faculty members' perceptions of OER's value and relevance compared to traditional resources.

Moreover, the deterrents to OER adoption varied based on teaching style. Faculty members teaching in a fully online setting reported fewer deterrents, indicating that the online teaching environment may offer more facilitative conditions for OER adoption. In contrast, those in a blended or hybrid setting had more perceived deterrents, and individuals teaching in a face-to-face setting reported a slightly higher level of deterrents. This finding suggests that the teaching setting can influence the challenges and barriers faced by faculty members when considering OER adoption.

Teaching style also had a significant impact on the awareness of OER. Faculty members teaching in a blended or hybrid setting exhibited the highest awareness, followed by those in a face-to-face setting, while individuals teaching in a fully online setting had the lowest awareness. This finding suggests that faculty members in blended or hybrid settings may have been exposed to OER initiatives and resources more prominently compared to their counterparts in other teaching settings.

Lastly, teaching style influenced the intention to use OER in the future. Faculty members teaching in a fully online setting expressed a higher intention to use OER, followed by those in a blended or hybrid setting, while individuals

teaching in a face-to-face setting had a lower intention. This suggests that the teaching style can influence faculty members' openness and readiness to embrace OER in their future teaching practices.

5. Discussion and Implications

The study findings reveal a diverse gender distribution among the respondents, with participants representing a combination of teaching roles and administrative responsibilities. Furthermore, the respondents varied in their levels of teaching experience and expressed a preference for blended or hybrid teaching styles. The study also highlighted the respondents' significant awareness of OER, their ease in searching for OER, and a strong intention to use OER in the future.

The results underscore faculty members' willingness to embrace technology in different aspects of teaching. However, the study also emphasizes the need for further exploration and support in specific areas of technology integration (Lantrip & Ray, 2021; Marín et al., 2020; Spilovoy et al., 2020). Institutions should address concerns such as providing support and flexibility in understanding and selecting intellectual property policies, establishing fair systems for recognizing contributions to digital pedagogy, protecting intellectual property rights, and creating a supportive environment that encourages faculty engagement with OER (Hoosen & Butcher, 2019; Lantrip & Ray, 2021; Marín et al., 2020; Spilovoy et al., 2020; UNESCO, 2023).

The study findings highlight key attributes that faculty members associate with OER, including affordability, flexibility, remixing potential, and open licensing (Hoosen & Butcher, 2019; UNESCO, 2023). To promote and support the use of OER, institutions and educators should address concerns related to timeliness, licensing, and ease of modification, in order to enhance faculty confidence and engagement (Lantrip & Ray, 2021; Marín et al., 2020; Spilovoy et al., 2020).

Contrary to the findings of Abri and Dabbagh (2018), this study's results demonstrate that faculty members actively engage with OER across different formats, indicating their readiness to explore and leverage the potential of OER in their teaching practices. Faculty members are receptive to incorporating various types of OER into their instructional approaches, aligning with the flexible and adaptable nature of OER resources (e.g., Lantrip & Ray, 2021; Marín et al., 2022; Spilovoy et al., 2020).

The study findings shed light on the challenges and barriers that faculty members encounter when considering OER adoption. These include lack of institutional support, limited peer models using OER, absence of comprehensive OER catalogs, resource scarcity, difficulty in finding required materials, challenges in modifying OER materials, uncertainties regarding permissions for use and modification, concerns about the currency and quality of OER, and difficulties in integrating OER into existing technology platforms and systems (Hoosen & Butcher, 2019; Lantrip & Ray, 2021; Tillinghast, 2020). To overcome these barriers and facilitate effective integration of OER into teaching and learning practices, institutions should address these deterrents through providing institutional support, developing comprehensive catalogs, ensuring resource availability, offering user-friendly tools, and implementing quality assurance measures (Hoosen & Butcher, 2019; Lantrip & Ray, 2021; Marín et al., 2020; Spilovoy et al., 2020; UNESCO, 2023).

The study findings also highlight gender differences, with male participants receiving higher institutional support for OER and reporting higher engagement with OER, while female participants had slightly higher perceptions of OER. These differences highlight the need for promoting gender equity in terms of institutional support, perceptions, use, and awareness of OER among faculty members (Perryman & De Los Arcos, 2016; Saadat et al., 2022).

The findings emphasize the multidimensional nature of the ease of using OER, which is influenced by factors such as technology, institutional support, perceptions, beliefs, deterrents, awareness, and future expectations. Understanding these factors can inform efforts to enhance the ease of adopting and utilizing OER in educational settings (Hoosen & Butcher, 2019; Lantrip & Ray, 2021; Otto, 2021; Tillinghast, 2020).

The study findings suggest that the workload of faculty members can influence their perceptions of institutional support and their beliefs about the effectiveness and importance of OER. Faculty members with administrative responsibilities, in addition to their teaching roles, may have slightly different perspectives due to the additional workload they bear. Understanding the impact of workload on institutional support and beliefs about OER can be valuable in addressing the needs and concerns of faculty members and providing appropriate support to enhance their engagement with OER (Hoosen & Butcher, 2019; Lantrip & Ray, 2021; Tillinghast, 2020).

The study findings also underscore the influence of teaching experience on various factors related to teaching with

technology and the adoption of OER. Recognizing the differences in perceptions and attitudes among faculty members based on their teaching experience can inform targeted strategies to provide appropriate support, training, and resources for different cohorts of educators. By addressing the specific needs and challenges associated with teaching experience, institutions can effectively promote the integration of technology and OER, ultimately enhancing the overall teaching and learning experience (Hoosen & Butcher, 2019; Lantrip & Ray, 2021; Spilovoy et al., 2020; Tillinghast, 2020).

Furthermore, the study findings highlight the influence of teaching style on faculty perceptions, beliefs, behaviors, and intentions regarding OER. Understanding the unique characteristics and demands of different teaching environments can inform targeted support, professional development, and resources to facilitate OER adoption and integration. By addressing the specific needs and challenges associated with teaching style, institutions can foster a more favorable environment for faculty members to explore (Abri & Dabbagh, 2018; Contrada & Good-Schiff, 2021; Hoosen & Butcher, 2019; Lantrip & Ray, 2021; Martin & Kimmons, 2019; Spilovoy et al., 2020; Tillinghast, 2020).

All in all, the study findings emphasize the importance of creating awareness and fostering positive intentions toward OER among faculty members. Efforts should be made to ensure that faculty members are well-informed about the benefits, opportunities, and resources available in relation to OER. Promoting awareness and intention can help cultivate a culture of OER adoption and utilization among faculty, leading to increased collaboration, sharing of resources, and ultimately improving the quality and accessibility of education. Considering factors such as gender distribution, workload considerations, teaching experience, and teaching styles can enable institutions to develop targeted strategies and initiatives to support faculty members in adopting, integrating, and utilizing OER effectively, thereby promoting a more inclusive, innovative, and accessible educational environment.

The study implies that institutions have a crucial role in fostering an equitable environment that supports and empowers all faculty members, regardless of their gender. The gender gap highlights the need for institutions to promote gender equity in terms of institutional support, perceptions, use, and awareness of OER. Efforts should be made to ensure that all faculty members, regardless of gender, receive equal opportunities and support to engage with OER effectively.

Further, efforts should be made to enhance the ease of adopting and utilizing OER by providing appropriate resources, training, and support to faculty members. Additionally, institutions should consider the impact of workload when providing support and resources for OER adoption, particularly for faculty members with administrative responsibilities.

Recognizing the differences among faculty members based on their teaching experience, institutions should provide targeted support, training, and resources to meet their specific needs and address the challenges they may encounter. Moreover, institutions should understand the unique characteristics and demands of different teaching environments and tailor support, professional development, and resources to facilitate OER adoption and integration based on individual teaching styles.

To foster a culture of OER adoption and utilization among faculty, institutions should actively promote the benefits, opportunities, and available resources related to OER. By doing so, they can encourage widespread engagement and create an environment where faculty members feel supported and empowered to embrace OER as a valuable pedagogical approach.

6. Conclusions

The study shed light on faculty perspectives, awareness, and utilization of OER in higher education. Faculty members demonstrate a willingness to embrace technology in their teaching practices, but specific areas of technology integration require further exploration and support. Institutions should address concerns regarding intellectual property policies, recognition of contributions to digital pedagogy, and creating a supportive environment that encourages faculty engagement with OER. Faculty members associate OER with attributes such as affordability, flexibility, remixing potential, and open licensing.

However, concerns related to timeliness, licensing, and ease of modification should be addressed to promote their use effectively. The study also revealed barriers to OER adoption, including lack of institutional support, limited peer models, resource scarcity, difficulties in finding and modifying materials, concerns about permissions and quality, and challenges in integrating OER with existing technology platforms.

Gender differences were observed, with males receiving higher institutional support and engagement with OER,

while females had slightly higher perceptions of OER. Efforts should be made to promote gender equity in institutional support and awareness of OER. The ease of using OER was found to be influenced by factors such as technology, institutional support, perceptions, beliefs, deterrents, awareness, and future expectations. Workload and teaching experience also impacted faculty perceptions and beliefs about OER.

Therefore, targeted strategies should address the specific needs and challenges associated with workload and teaching experience. Additionally, teaching style influenced faculty perceptions, behaviours, and intentions regarding OER, highlighting the need for tailored support and resources. Creating awareness and fostering positive intentions toward OER among faculty members are vital for promoting a culture of OER adoption and utilization. By considering these findings, institutions can develop targeted strategies, support systems, and initiatives to effectively integrate OER into higher education, thereby enhancing the quality and accessibility of education.

7. Limitations and Future Directions

Firstly, it is important to acknowledge that the small sample size and specific demographics of the participants may limit the generalizability of the findings to a broader population. To overcome this limitation, future research could involve larger and more diverse samples, including faculty from various disciplines, institutions, and geographic locations. This would enhance the representativeness of the findings and allow for a more comprehensive understanding of the factors influencing OER adoption and utilization.

Secondly, while the study predominantly utilized quantitative methods, future research could benefit from incorporating qualitative approaches. Interviews or focus groups could provide valuable insights into faculty experiences, motivations, and challenges related to OER adoption. Qualitative methods can offer a deeper understanding of the nuances and complexities surrounding faculty engagement with OER, allowing for a more comprehensive exploration of their perspectives and experiences.

Thirdly, the current study focused primarily on faculty perceptions of OER. Future research could extend the investigation by exploring the pedagogical impact of OER adoption on student learning outcomes, engagement, and satisfaction. This would provide a more holistic assessment of the effectiveness and benefits of OER, incorporating perspectives from both faculty and students. Understanding the impact of OER on student success and learning experiences would further inform educational practices and policies related to OER integration.

By addressing these limitations and considering future research directions, scholars can continue to advance the field of OER adoption and utilization, contributing to the knowledge base and guiding evidence-based practices in educational settings.

8. Statements and Declarations

- A preprint version of this study has previously been published in Research Square (Al-Zahrani, 2023).

- No funding was received to assist with the preparation of this manuscript.

- No relevant financial or non-financial interests to disclose.

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Appendix 1

General Information

Please tell us a bit about yourself:

Gender

1. Male

2. Female

Teaching Status

1. Teaching only

2. Teaching with administrative role

Number of Years Teaching

1. Less than 5 years

2. From 5 to less than 10 years

3. From 10 to 15 years

4. More than 15

A. Teaching with Technology

1. Which of the Following Have You Taught during the Most Recent Academic Year?

- Face-to-face Course

- Blended/Hybrid Course

- Online Course

2. How much do You Agree on the Following?

Item	SA	A	N	DA	SDA
1. Used digital materials such as simulations and videos in course presentations					
2. Assigned material available only in eText book format					
3. Assigned books for which eText books and traditional formats are both available					
4. Published digital scholarship (beyond publishing an online version of a traditional scholarly paper)					
5. Used social media to interact with students					
6. Used social media to interact with colleagues					

3. What is Your Opinion about the Nature of Support That You Have Received from Your Institution?

My institution...	SA	A	N	DA	SDA
1. Respects teaching with technology (in person or online)					
2. Has a fair system of rewarding contributions made to digital pedagogy					
3. Has strong policies to protect intellectual property rights for digital work					
4. Provides support and flexibility in understanding and choosing intellectual property policies					

B. Awareness of OER

How aware are you of Open Educational Resources (OER)?

1. I am not aware of OER
2. I have heard of OER, but don't know much about them
3. I am somewhat aware of OER but I am not sure how they can be used
4. I am aware of OER and some of their use cases
5. I am very aware of OER and know how they can be used in the classroom

C. Faculty Perception of OER

If You were to Describe the Concept of Open Resources, Which of the Following would you Include in Your Description?

Description	SA	A	N	DA	SDA
1. Is available for free					
2. Has the ability to remix and repurpose					
3. Is provided with a Creative Commons license					
4. Is easy to modify					
5. Is easy to combine with other course materials					
6. Is of high quality					
7. Is more up to date than textbooks					

D. Faculty Believes about OER

Do You Believe the Following Statements about Open Educational Resources (OER) are True?

	SA	A	N	DA	SDA
1. Use of OER leads to improvement in student performance					
2. Use of OER leads to improvement in student satisfaction					
3. The open aspect of OER creates different usage and adoption patterns than other online resources					
4. Open educational models lead to more equitable access to education, serving a broader base of learners than traditional education					
5. OER adoption at an institutional level leads to financial benefits for students and/or institutions					
6. Use of OER leads to critical reflection by educators, with evidence of improvement in their practice					

E. Faculty Use and Type of OER

Have You Used any of the Following Types of Open Educational Resources?

	SA	A	N	DA	SDA
1. Slides and class presentations					
2. Elements of an existing course					
3. Tests and quizzes					
4. Interactive games or simulations					
5. Audio podcasts					
6. Whole course					
7. Infographics					
8. Open textbooks, chapters from textbooks					
9. Ebooks					
10. Homework exercises					
11. Video lectures/tutorials					
12. Videos					
13. Images					

F. Ease of Searching For OER

How Easy Searching for OER?

- Very Easy
- Easy
- Difficult
- Very Difficult

G. OER Compared To Traditional Resources

How would you Compare the Quality of Open Resources to That of Traditional Resources on the Following Dimensions?

	Open Resources Superior	About the Same	Traditional Resources Superior
1. Wide adoption			
2. Range of subjects			
3. Range of materials for each subject			
4. Trusted quality			
5. Mapped to learning outcomes			
6. Works with LMS			
7. Proven efficacy			
8. Easy to find and select			
9. Ease of Use			
10. Current			
11. Cost			

H. Use of OER in the Next Three Years

Do You Think You will Use Open Educational Resources in the Next Three Years?

1. I am not interested in using Open Educational Resources
2. I might consider using Open Educational Resources
3. I will consider using Open Educational Resources

I. Deterrents to Adopting OER

What are the Most Important Deterrents to the Use of Open Educational Resources in your Courses?

Deterrents	SA	A	N	DA	SDA
1. Not current, up-to-date					
2. Too difficult to use					
3. Too difficult to change or edit					
4. Not effective at improving student performance					
5. Too difficult to integrate into technology I use					
6. Lack of support from my institution					
7. Not used by other faculty I know					
8. Not high-quality					
9. Not relevant to my local context					
10. Not knowing if I have permission to use or change					
11. Not enough resources for my subject					
12. Too hard to find what I need					
13. No comprehensive catalog					

Acknowledgments

Not applicable.

Authors contributions

Not applicable.

Funding

Not applicable.

Competing interests

The author declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Informed consent

Obtained.

Ethics approval

The Publication Ethics Committee of the Sciedu Press.

The journal's policies adhere to the Core Practices established by the Committee on Publication Ethics (COPE).

Provenance and peer review

Not commissioned; externally double-blind peer reviewed.

Data availability statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Data sharing statement

No additional data are available.