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Bridging the Gap: Open Educational Resources as a Tool for Reintegrating Dropout Learners in Public Sector Schools of District Lahore

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Abstract: The ever-increasing dropout rate among students in the public sector schools across Lahore is passing an ordinary phase of problems. Students from diverse socioeconomic statuses, poverty, and labor disengage from formal schooling due to the flexible, approachable, and appropriate learning opportunities. In this regard, the integration of Open Educational Resources (OER) presents a well-built solution to sustain reenrolled students in educational institutions. The current research is grounded in the rationale of OER, bridging the gap for reintegrating dropout learners by ensuring flexible pathways are used to foster academic continuity in public sector schools of Lahore. The current quantitative research leading to the positivist paradigm was conducted on a sample of 129 students randomly selected from the 10 public sector schools of district Lahore. After ensuring content validity and Cronbach's alpha reliability, a self-constructed questionnaire was administered among dropout learners. Data on dropout learners was obtained from schools after ensuring ethical considerations. The findings revealed that understanding through OER was the highest, and students' motivation and engagement were the lowest factor; a significant and strong correlation existed between overall OER resources and dropout learners. Moreover, a strong correlation exists between understanding through OER, access to OER and technology, and dropout learners, whereas moderate correlations existed between teachers' support and guidance, family and peer support, students' interest and effort, students' motivation and engagement, and perceived learning through OER and dropout learners. It is recommended that future researchers should explore the long-term effect of OER reintegrating dropout learners across other districts of Punjab.

Keywords: Dropout Learners, Open Educational Resources, Public Sector Schools, Reintegrating Strategies,

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Introduction

People around the world accept education as an essential human right that creates social and economic developments. However, due to poverty, gender discrimination, socio-cultural barriers, and institutional problems, education accessibility remains restricted for millions of children. The problem of school dropout problem in Pakistan also continues to challenge its efforts to achieve equitable and inclusive education. In Pakistan, there are approximately 23 million children are out of school, which shows one of the biggest dropout challenges in the globe (UNICEF, 2023). A significant number of poor communities from Lahore exacerbate educational exclusion due to infrastructural disparities, economic vulnerability, and scarcity of contextualized learning opportunities. Despite the intervention of the Right to Education Act, the involvement of NGOs and various non-formal education programs failed to reassert students' dropout rates in traditional academic institutions. OER offers promise as an educational equality solution because it provides adaptable learning environments through which students find learner-centered paths for reenrolling in education (Marín et al., 2022)

Learning materials comprised of OER are available to use, adapt, and redistributed with limited restrictions (UNESCO, 2023). OER has gained significant educational access due to the proliferation of digital technologies, mobile devices, and widespread Internet access. Unlike rigid textbooks, traditional curricula, and conventional teaching methods, the applications of OER permit customization, localization, and integration of contemporary technological gadgets focusing on dynamic and interactive learning (Feldman-Maggor et al., 2016). OER enables educators to make customized learning resources and integrate multimedia while adapting them for diverse population learning requirements. The distinctive aspect of OER is that it provides reintegration opportunities for dropout learners who generally encounter educational along withMarín psychological and social challenges to come back to learning at their pace, place, and academic level (Marín et al., 2019). Few studies examine the use of OER for serving marginalized school-aged students because most researchers analyze OER's cost-effectiveness in the education sector and teacher professional development (Hilton, 2016; McBride & Abramovich, 2022). Recent research reported that OER works effectively in preventing school dropouts due to poverty, family conflicts, and educational alienation (Panday-Shukla, 2024; Sarfaraz et al., 2022).

Educational institutions that include OER develop a curriculum that integrates inclusiveness and digital literacy alongside student autonomy, which are fundamental features of 21st-century learning needs (Adil et al., 2024). When OER is integrated with remedial and support programs, schools create hybrid reintegration models that focus on individual dropout learner requirements. In Lahore, children frequently discontinue their education due to manifold academic challenges, family responsibilities, and financial stress. The open-ended, flexible nature of OER provides a transformative learning model that corresponds to the experiences of students (Shams et al., 2020). Public Sector schools strongly benefit from OER because these schools face limitations in resources and deal with high numbers of students per instructor. The purpose of the current research was to gauge the effectiveness of OER use in bridging the gap in reintegrating learners who dropped out of school due to limited resources. The current research was framed to determine how OER is bridging the educational gap by understanding through OER and access to OER resources and technology, teachers' support and guidance, family and peer support, students' interest and effort, students' motivation and engagement, and perceived learning outcomes. Through identifying dimensions, the current research is situated within broader discourses on inclusive education and aligns with SDG 4 (Drevensek & Urbancic, 2022; Ossiannilsson, 2023), which emphasizes equitable quality of education.

Objectives of the Study

1. To identify the factors associated with OER use to support dropout learners within public sector schools
2. Measure the relationship between OERs for dropout learners to reintegration within public sector schools.
3. Determine the correlation between OER factors and dropout learners for student reintegration purposes.

Statement of the Problem

Since independence, the education sector in Pakistan has been facing the persistent problem of high school dropouts throughout districts such as Lahore. The high dropout rates continue in primary education despite government policies because poor students face barriers from uninteresting classes while also lacking proper teacher assistance (UNESCO, 2023). Once they drop out, learners find it hard to reenroll due to social stigma, academic gaps, and limited access to remedial resources. The research investigates OERs as a cost-effective, flexible solution to help public sector schools reintegrate students who dropped out. Among students, the applicability of OER provides free access and bridges the gap through self-paced students' student-centered approaches (Hilton, 2016). Research into the adoption of OER for helping dropout learners reintegrate within the Pakistan context has not received sufficient attention despite the rising interest in this approach. In public sector schools of Lahore, due to less availability of sources, teaching material, poor quality of infrastructure, the integration of OER support differentiated instructions, remedial learning, and the teaching-learning environment (Adil et al., 2024). When both teachers and learners gain access to OERs, such context serves as an essential mechanism to overcome learning differences and encourage students' enrollment. Moreover, the current research has significant worth given the post-COVID-19 educational landscape, where digitalization has become approachable to educational access and equity (Ahmad, 2024; Eden et al., 2024). The exploration of OER in reintegration practices will guide teachers as well as educational organizations who seek to

minimize dropouts and promote inclusive education in public sector schools of Lahore. Hence, the current research has significance worth contributing on practical and academic grounds to the discourse on dropout obstacles and improvement by evaluating OERs systematically employed in the School Education Department to support dropout learners.

Conceptual Framework

The current research is founded on various OER-related factors associated with dropout learners reintegrating through OERs in educational institutions. The framework provides the conceptual base that explains how access, support systems, and learner attitudes intertwine to determine educational outcomes. The fundamental aspect is understanding through OER, which defines the learners' ability to comprehend and remember knowledge obtained from open digital educational resources (McBride & Abramovich, 2022). This theme depends on Access to OER and Technology, which means devices, internet connectivity, and digital platforms play an important role in reintegrating dropout learners. The benefits from OER are hardly maximized due to insufficient access, which especially impacts resource-limited educational facilities in public schools. The assistance provided by teachers' support and guidance proves essential for students to successfully use OER content (Jensen & Kimmons, 2022). Digital literacy and pedagogical expertise in teachers enable them to create learning scaffolds that improve the effectiveness of OERs (Hilton, 2016). Family and peer support play a vital role in creating a favorable learning environment because it provides emotional courage, supervision, and collaborative possibilities that help to reduce dropout learners' return to enroll in educational institutions. Students' interest and effort enhance their voluntary participation, curiosity, and interest in learning (Nipa & Kemanshachi, 2020), while motivation and engagement capture emotional and cognitive potential used for investments in students' educational activities (Trust et al., 2023). The affective variables represent key aspects that effectively forecast learner persistence as well as achievement within self-directed and technology-dependent learning scenarios. Finally, all the concepts collectively contributed to key components that influence Perceived Learning Outcomes through OER as described by students' educational achievements and formal school readiness assessment, skill achievements, and readiness to reintegrate into formal schools. The current conceptual framework presumed that students have plenty of access, teachers' support, and well-built inspirational nitty-gritty through which OER significantly bridges the gap caused by dropout episodes.

Research Design and Methodology

The design of the current research was quantitative leading to a positivist paradigm. The current design focuses on measuring the observable phenomenon to build objectivity of the truth (Daniel et al., 2024). The researcher adopted quantitative methods to find out how OERs contribute to reintegrating dropout learners among public sector schools in District Lahore. The research design used descriptive surveys to gather information from students who had background experience with OERs. A self-developed questionnaire was administered among participants to evaluate OER efficiency in areas of student involvement and successful reintegration.

Population and Sample

The current research was conducted in the district of Lahore, which is administratively categorized into ten Tehsils. The target population consists of male students aged 10-13 years of age who were previously out of school but were reenrolled in schools through government initiatives. Each Tehsil shows unique educational and socio-economic dynamics, making it perfect for a representative sampling of the different educational experiences. The sample consisted of at-risk learners who were children of migrant parents conveniently selected from ten Tehsils of District Lahore: City, Cantt, Model Town, Shalimar, Raiwind, Allama Iqbal Town, Nishtar Town, Saddar, Wahga, and Ravi Town. A multistage sampling technique has been employed to ensure broad coverage and representativeness (Depoy, 2024). From each Tehsil, two public sector schools were randomly selected, focusing on institutions known to have integrated dropout learners. From each selected school, samples of 10 male students who had previously dropped out and were reintegrated into the system were purposively chosen. This results in a total sample size of 200 students. This sampling strategy allows for balanced representation across geographic and demographic strata and enables

meaningful comparison of reintegration patterns and OER utilization across the district. The study adopts a purposive yet stratified approach to ensure that participants meet the specific criteria of having dropout experience and exposure to OER-based reintegration efforts. Such a structured sampling framework is supported by educational research best practices (Bailey & Burch, 2024; Privitera, 2024), which emphasize targeted yet diverse data sources for qualitative validity and generalizability. This design is expected to yield insights into both systemic challenges and localized successes in using OER as a tool for educational reintegration in Lahore.

Instrumentations

The instrument consists of two parts: Part A consists of seven factors: understanding through OER, Access to OER resources and technology, Teachers' support and guidance, family and peer support, students' interest and effort, students' motivation and engagement, and perceived learning outcomes through OER. Part B: A questionnaire on dropout learners from schools with a 10-item model of 5-point Likert options was constructed. The questionnaire was translated into Urdu as it is hardly possible for elementary students to understand the items of the questionnaire and then mark appropriate options against the five options. A self-constructed questionnaire was validated by experts in language, psychology, and curriculum and was piloted on a sample of students who were hardly included in the final data collection. The overall Cronbach's Alpha reliability was calculated as .817.

Data collection Procedure

After ensuring ethical considerations, the researchers collected data personally from the participants. From the ten Tehsils of Lahore, the researchers selected 10 schools, and from each school, 20 students were randomly selected. The researchers met with the heads of the schools, asked them about the purpose of the study, ensured ethical considerations, and, from each school record office, made the list of dropout learners. Due to poor jobs, poverty, political issues, family problems, and good education, parents of learners move to Lahore and enroll their learners in public schools. As the issues resolve, during midsession, they leave their child at school and move to their mother cities or hometowns, which severely affects learners' dropout rate and is a cause of concern for the stakeholders. Moreover, in certain areas of Lahore, there are part-time job place centers like vehicle shops (Montgomery Road Lahore), food points and hotels (Shahdara, Lahore Railway Stations), and parking stands from where dropout learners earn money after school hours. They work late nights and sleep very late, and it is hardly possible to get up early in the morning and reach school on time. At this age, earning money brings a change in students' attitudes and behavioral modification and, consequently, says goodbye to education. To enhance the quality of education, the government is taking initiatives to reintegrate dropout learners into schools. It was hectic for the researchers to approach a child in every ten Tehsils, but with the cooperation of teachers, headteachers, and parents, the collection of the data was made easy.

Data Analysis and Interpretation

After collecting the data, the researchers analyzed the data through Statistical Package for the Social Sciences (SPSS) and calculated frequency, %age, and Pearson Product Moment Correlation (r) to determine significant OER usage and reintegration success relationships. Descriptive statistics (Mean, Standard Deviation) were calculated to summarize the responses of the participants. The researchers used Pearson's correlation as an inferential statistical test to determine relationships among variables (Cohen et al., 2018). A strong positive relationship existed between teacher support and engagement levels, which demonstrates how educator guidance enhances learner reintegration through OERs.

Table 1

To Identify the Factors Associated with OER Use to Support Dropout Learners

S#	Factors	N	M	SD
1	Understanding through OER	200	25.32	2.68
2	Family and peer support	200	25.31	2.75

S#	Factors	N	M	SD
3	Access to OER resources and technology	200	25.31	2.74
4	Students' Interest and effort	200	25.26	2.79
5	Teachers support and guidance	200	25.21	2.79
6	Perceived learning outcomes through OER	200	25.10	2.62
7	Students' motivation and engagement	200	25.02	3.02

As revealed in Table 1, the researchers applied descriptive statistics on the factors affecting the reintegration of dropout learners using OER. The interpretation confirms that among seven factors, understanding through OER contains the highest mean score (M=25.32, SD=2.68), then factor family and peer support (M=25.31, SD=2.75) and access to OER resources and technology (M=25.31, SD=2.74) highlighted the worth of supportive environment and access in facilitating reintegration. Students' interest and effort (M=25.26, SD=2.79) and teachers' support and guidance (M=25.21, SD=2.79) were positively related, ensuring that both intrinsic motivation and teachers' involvement play a significant role in reintegrating dropout learners. The factors perceived learning outcomes through OER (M=25.10, SD=2.62), students' motivation, and engagement (M=25.02, SD=3.02) had slightly lower mean scores. Overall, the results conclude that all factors of OER have been positively perceived by the dropout learners, with minor differences in the degree of influence reported by (N=200) public sector school students.

Table 2

Measure the Relationship Between OERs for Supporting Dropout Learners

Sr. #	Variables	N	M	SD	Pearson Correlation	p
1	Dropout learners	200	39.62	6.30	.604***	.04
2	OER	200	176.53	7.99		

**. Correlation is significant at the 0.01 level (2-tailed).

The interpretation confirms that to find the relationship between OER and dropout learners, the researchers applied Pearson Product Moment Correlation (r). The results confirm a significantly strong correlation (r=.604, n=200, p<.05) between OERs for supporting dropout learners. It is concluded that change in independent (OER) reduces the ratio of dropout learners among public sector schools.

Table 3

Determine the Correlation between OER Factors and Dropout Learners

Name of Factors	M	SD	Dropout	1	2	3	4	5	6	7
Dropout learners	39.62	6.30	-							
Understanding through OER	25.32	2.68	.68**	-						
Access to OER and technology	25.31	2.74	.241**	.75**	-					
Teachers support and guidance	25.21	2.79	.255**	.044	.403**	-				
Family and peer support	25.31	2.75	-.002	-.058	.085	.37*	-			
Students' interest and effort	25.26	2.79	.012	-.010	-.031	-.118	.387**	-		
Students' motivation & engagement	25.02	3.02	-.190**	-.005	-.125	-.040	.014	.41**	-	
Perceived learning through OER	25.10	2.62	.029	.263**	-.071	-.042	-.002	.022	.45**	-

**. Correlation is significant at the 0.01 level (2-tailed).

As delineated in Table 3, a Pearson product-moment correlation was conducted to examine the relationships among dropout learner reintegration and various factors related to OER (N=200). The interpretation confirms strong correlation exists between understanding through OER and dropout learners (r=.68**, n=198, p<.05), access to OER and technology and dropout learners (r=.75**, n=198, p<.05), moderate correlations existed between teachers support and guidance and dropout learners (r=.403**, n=198, p<.05), family and peer support and dropout learners

(r=.37**, n=198, p<.05), students' interest and effort and dropout learners (r=.387**, n=198, p<.05), student's motivation and engagement and dropout learners (r=.41**, n=198, p<.05) and also exist moderate correlation between perceived learning through OER and dropout learners (r=.45**, n=198, p<.05). It is concluded that a change in the independent variable (factors of OER) significantly supports the reintegration of dropout learners in public sector schools.

Discussion

The current research confirms a significant knowledge of how OERs help to reintegrate dropout learners within the public sector schools across District Lahore. The results support the previous studies reporting that the application of OER among students enhances learning flexibility and student engagement among dropout learners (Hilton, 2016). With the integration of OER, student-teachers showed a strong perception in terms of student-centered approaches, enhancing motivation and bridging the gap caused by dropout learners. The findings are also congruent with the results of Wiley and Hilton (2016), who state that the use of OER not only plays an important role in reducing educational costs but also supports pedagogical innovations.

Teachers' support is also one of the major indicators of students' engagement when using OERs. This is supported by Mishra (2017), who states that the demand for education navigation in digital literacy better guides students to reintegrate learners within formal schooling, ensuring that Epstein's (2001) theory on the value of home-school community partnership. There seems to be a strong correlation between students' motivation and perceiver learning outcomes, also supported by Ryan and Deci's (2000) Self-Determination Theory, which confirms that autonomy and competencies are the key indicators of intrinsic motivation. Learners, along with teachers' positive perceptions about OER, help to develop learner-centered educational approaches and motivate students to achieve better achievements. Wiley and Hilton (2016) pointed out that OERs minimize educational expenses while using educational innovation practices. Students improved perceived learning perceptions directly corresponded to motivation and sense of interest (Allen, 2023). The research findings support previous work that highlights digital access and support systems for enhancing the learning outcomes of marginalized students (Hilton, 2016; Ryan & Deci, 2000). The research findings got meaning through the research objectives and conceptual framework, hence enabling meaningful insight into OERs' role in minimizing educational gaps among dropout learners from public schools.

Every student displayed superior digital readiness traits during the study period. Research often assumes that younger students are inherently tech-savvy (digital aptitude), but this assumption is incorrect (Crozier, 2018). Several dropout learners struggled with navigating platforms and downloading material and interactive content. Veletsianos and Kimmons (2012) argue that digital accessibility alone hardly ensures successful learning; hold structure, training, and sustained guidance are the important aspects. The findings of this research do confirm existing studies about OER advantages for equity and accessibility but additionally demonstrate local challenges that reduce the impact on reintegration programs. To achieve dropout recovery success through OER implementation, teachers must enhance facilities while training their staff, involving guardians, and motivating students (Makokotlela, 2022; Mićunović et al., 2023). The literature provides detailed insights that improve knowledge both at local policy levels and within global dialogues about using technology integration for inclusive education. Students who make their learning activities within OERs demonstrated better educational performance alongside enhanced learning participation levels (Gisip et al., 2024; Henke et al., 2024; Zhang et al., 2020; McBride & Abramovich, 2022). UNESCO (2021) shows that the use of digital equipment and internet services is rapidly strengthening, and teachers in this study noted that unmaintained facilities and unreliable internet connectivity were the biggest obstacles. The finding contradicts global OER accessibility predictions because it describes how low-resource public schools within urban areas of Pakistan continue to face a digital divide. Shams et al. (2020) agree with the notion that OERs demonstrate strong potential, yet their real impact significantly reduces when proper technical support is hardly available.

Conclusions

The current research explored how OERs operated to help reintegrate dropout students within public sector schools within District Lahore. Results showed that OER acts as a powerful tool that aids learner engagement while

simultaneously boosting motivation and filling knowledge gaps. However, it requires the presence of dedicated teacher instruction together with family and peer support. Well-designed OER needs effective teacher participation as well as adequate technological resources and motivated students to successfully integrate into dropout recovery initiatives. Digital infrastructure problems, together with inconsistent device availability and differences in digital skills between students and teachers, constitute strong impediments to their use. The study finds that OERs demonstrate promising abilities to reintegrate students, but their performance depends heavily on teaching personnel who have received proper training and available technology systems alongside community participation. Public education in Lahore should adopt strategies to handle existing institutional problems so it utilizes OERs efficiently to decrease student abandonment and ensure wider educational inclusion.

References

Adil, H. M., Ali, S., Sultan, M., Ashiq, M., & Rafiq, M. (2024). Open education resources' benefits and challenges in the academic world: a systematic review. *Global Knowledge Memory and Communication*, *73*(3), 274–291. https://doi.org/10.1108/gkmc-02-2022-0049

AHMAD, F. (2024). The digital divide and AI in education: Addressing equity and accessibility. *Journal of AI Integration in Education, 1*(2), 12-23. https://researchcorridor.org/index.php/jaiie/article/view/259

Allen, T. (2023). Awareness and future use of open educational resources by music faculty. *Update (Music Educators National Conference (U.S.))*, *41*(2), 48–59. https://doi.org/10.1177/87551233211069313

Bailey, J. S., & Burch, M. R. (2024). *Research methods in applied behavior analysis*. Routledge.

Bozkurt, A., Koseoglu, S., & Singh, L. (2019). An analysis of peer reviewed publications on openness in education in half a century: Trends and patterns in the open hemisphere. *Australasian Journal of Educational Technology*, *35*(4). https://doi.org/10.14742/ajet.4252

Cohen, L., Manion, L., & Morrison, K. (2018). *Research methods in education*. Routledge.

Crozier, H. (2018). Promoting open access and open educational resources to faculty. *The Serials Librarian*, *74*(1–4), 145–150. https://doi.org/10.1080/0361526x.2018.1428470

Daniel, B. K., Harland, T., & Wald, N. (2024). *Higher education research methodology: A step-by-step guide to the research process.* Routledge.

DePoy, E. (2024). I*ntroduction to research-e-book: Understanding and applying multiple strategies.* Elsevier Health Sciences.

Drevensek, M., & Urbancic, T. (2022). The role of teamwork in the creation of open educational resources for closing SDG-related knowledge gaps. *Open Praxis*, *14*(2), 148–161. https://doi.org/10.55982/openpraxis.14.2.266

Eden, C. A., Chisom, O. N., & Adeniyi, I. S. (2024). Promoting digital literacy and Social Equity in education: Lessons from successful initiatives. *International Journal of Management & Entrepreneurship Research*, *6*(3), 687–696. https://doi.org/10.51594/ijmer.v6i3.880

Epstein, J. L. (2001). Building bridges of home, school, and community: The importance of design. *Journal of Education for Students Placed at Risk*, *6*(1–2), 161–168. https://doi.org/10.1207/s15327671espr0601-2_10

Feldman-Maggor, Y., Rom, A., & Tuvi-Arad, I. (2016). Integration of open educational resources in undergraduate chemistry teaching – a mapping tool and lecturers' considerations. *Chemistry Education Research and Practice*, *17*(2), 283–295. https://doi.org/10.1039/c5rp00184f

Gisip, J., Ibrahim, N., Ratim, S., & Abdul Ghani, F. S. (2024). Open educational resources (OER) in e-learning for higher education. *International Journal on E-Learning and Higher Education*, *19*(2), 449–467. https://doi.org/10.24191/ijelhe.v19n2.19227

Henke, N. A., Anthoney, M., & Burek Pierce, J. (2025). Librarians' roles in OER authoring and open pedagogy: Lessons from the field. *Internet Reference Services Quarterly*, *29*(1), 73–82. https://doi.org/10.1080/10875301.2024.2443851

Hilton, J., III. (2016). Open educational resources and college textbook choices: a review of research on efficacy and perceptions. *Educational Technology Research and Development: ETR & D*, *64*(4), 573–590. https://doi.org/10.1007/s11423-016-9434-9

Jensen, B., & Kimmons, R. (2022). How OER can support teacher collaborative learning to enact equitable teaching practices. *Journal for Multicultural Education*, *16*(5), 538–553. https://doi.org/10.1108/jme-12-2021-0230

Makokotlela, M. V. (2022). Student teachers' experiences in using open education resource in the open distance learning context. *Turkish Online Journal of Distance Education*, *23*(4), 108–120. https://doi.org/10.17718/tojde.1182763

Marín, V. I., Bond, M., Zawacki-Richter, O., Aydin, C., Bedenlier, S., Bozkurt, A., et al. (2020). A comparative study of national infrastructures for digital (Open) Educational Resources in higher education. *Open Praxis, 12*(2), 241-256. https://doi.org/10.5944/openpraxis.12.2.1071.

Marín, V. I., Orellana, M. L., & Peré, N. (2019). Open educational resources for research training: quality assurance through a collaborative evaluation. *Research in Learning Technology*, *27*(0). https://doi.org/10.25304/rlt.v27.2271

Marín, V. I., Zawacki-Richter, O., Aydin, C. H., Bedenlier, S., Bond, M., Bozkurt, A., Conrad, D., Jung, I., Kondakci, Y., Prinsloo, P., Roberts, J., Veletsianos, G., Xiao, J., & Zhang, J. (2022). Faculty perceptions, awareness and use of open educational resources for teaching and learning in higher education: a cross-comparative analysis. *Research and Practice in Technology Enhanced Learning*, *17*(1), 11. https://doi.org/10.1186/s41039-022-00185-z

McBride, M., & Abramovich, S. (2022). Crossing the boundaries through OER adoption: Considering open educational resources (OER) as boundary objects in higher education. *Library & Information Science Research*, *44*(2), 101154. https://doi.org/10.1016/j.lisr.2022.101154

Mićunović, M., Rako, S., & Feldvari, K. (2023). Open educational resources (OERs) at European higher education institutions in the field of library and information science during COVID-19 pandemic. *Publications*, *11*(3), 38. https://doi.org/10.3390/publications11030038

Mishra, S. (2017). Open educational resources: removing barriers from within. *Distance Education*, *38*(3), 369–380. https://doi.org/10.1080/01587919.2017.1369350

Nipa, T. J., & Kermanshachi, S. (2020). Assessment of open educational resources (OER) developed in interactive learning environments. *Education and Information Technologies*, *25*(4), 2521–2547. https://doi.org/10.1007/s10639-019-10081-7

Ossiannilsson, E. (2023). Open educational resources (OER) and some of the United Nations sustainable development goals. *International Journal of Information and Learning Technology*, *40*(5), 548–561. https://doi.org/10.1108/ijilt-01-2023-0002

Panday-Shukla, P. (2024). Comparing an open educational resource and a traditional textbook: Learner outcomes and engagement. *Foreign Language Annals*, *57*(2), 425–449. https://doi.org/10.1111/flan.12727

Privitera, G. J. (2024). *Research methods for the behavioral sciences.* Sage Publications.

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *The American Psychologist*, *55*(1), 68–78. https://doi.org/10.1037/0003-066x.55.1.68

Sarfraz, M., Muslim, D., & Kausar, S. (2022). An analytical approach of the usage of Open Educational Resources (OER) by the teachers at business and health science schools: A case study from the universities of Lahore district. *Pakistan Journal of Social Research, 4*(1), 437-450. https://doi.org/10.52567/pjsr.v4i1.668

Shams, S., Haq, M. A. ul, & Waqar, Y. (2020). Open educational resources (OER) usage trends among university students of Pakistan. *Education and Information Technologies*, *25*(6), 5637–5654. https://doi.org/10.1007/s10639-020-10195-3

Trust, T., Maloy, R. W., & Edwards, S. (2023). College student engagement in OER design projects: Impacts on attitudes, motivation, and learning. *Active Learning in Higher Education*, *24*(3), 353–371. https://doi.org/10.1177/14697874221081454

UNESCO. (2023). Leave no child behind: Addressing school dropout in education systems. United Nations Educational, Scientific and Cultural Organization. https://www.unesco.org/

UNICEF. (2023). Global annual results report 2022: Gender Equality.

Veletsianos, G., & Kimmons, R. (2012). Assumptions and challenges of open scholarship. *International Review of Research in Open and Distributed Learning, 13*(4), 166-189. https://doi.org/10.19173/irrodl.v13i4.1313

Wiley, D., & Hilton, J. L., III. (2018). Defining OER-enabled pedagogy. *The International Review of Research in Open and Distributed Learning*, *19*(4). https://doi.org/10.19173/irrodl.v19i4.3601

Zhang, X., Tlili, A., Huang, R., Chang, T., Burgos, D., Yang, J., & Zhang, J. (2020). A case study of applying Open Educational Practices in higher education during COVID-19: Impacts on learning motivation and perceptions. *Sustainability*, *12*(21), 9129. https://doi.org/10.3390/su12219129