

THE USE OF OPEN EDUCATIONAL RESOURCES IN UKRAINE: UNLEASHING THE POTENTIAL FOR KNOWLEDGE DEMOCRATIZATION AND LIFELONG LEARNING

Svitlana Nykyporets

Vinnitsia National Technical University, Ukraine

ORCID: <https://orcid.org/0000-0002-3546-1734>

Iryna Stepanova

Vinnitsia National Technical University, Ukraine

Nataliia Hadaichuk

Vinnitsia National Technical University, Ukraine

ORCID: <https://orcid.org/0000-0001-8193-2376>

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Purpose. The purpose of this article is to investigate the current state of Open Educational Resources (OER) adoption in Ukraine, identifying the challenges, opportunities, and its potential impact on the nation's educational landscape. Furthermore, the study aims to contribute to the broader understanding of OER implementation in transitioning countries and underscore the role of OER in promoting knowledge democratization, fostering innovation, and enhancing critical thinking and digital literacy skills among learners.

Results. The investigation revealed that Ukraine has made significant strides in adopting OER, primarily driven by government initiatives, international partnerships, and growing awareness among educators and institutions. However, the implementation of OER is still uneven, with marked disparities in access and usage between urban and rural areas, as well as among various educational levels and disciplines. One notable finding is the positive impact of OER on students' learning experiences, with improved engagement, critical thinking, and digital literacy skills reported across diverse settings. Additionally, the investigation highlighted the importance of ongoing professional development for educators to effectively integrate OER into their teaching practices and curricula. Despite these advancements, challenges persist, such as a lack of quality control mechanisms, limited digital infrastructure, and language barriers, which hinder the broader adoption of OER in Ukraine. The study concludes by emphasizing the need for continued investment in digital infrastructure, capacity building, and policy support to harness the full potential of OER in democratizing knowledge and fostering lifelong learning in the country.

Scientific novelty. The scientific novelty of this investigation lies in its comprehensive analysis of OER adoption within the unique context of Ukraine, a transitioning country grappling with various political, social, and economic challenges. By examining the interplay of governmental policies, institutional involvement, educators' perspectives, and students' experiences, this study offers a holistic understanding of the OER ecosystem in the country. Additionally, the research contributes to the broader discourse on OER implementation in transitioning countries, highlighting the transformative potential of OER in democratizing knowledge and fostering skill development in

such contexts.

Practical value. The practical value of this investigation stems from its potential to inform policymakers, educators, and institutions in Ukraine about the current state of OER adoption and the existing challenges, enabling them to make informed decisions and develop targeted strategies for effective OER integration. By identifying opportunities and best practices, this study can serve as a roadmap for expanding access to quality education and bridging the gap between urban and rural learners. Furthermore, the insights gained from this research can be applied to other transitioning countries, encouraging the adoption of OER to enhance educational systems and promote lifelong learning on a global scale.

Key words: Open Educational Resources (OER), educational landscape, knowledge democratization, lifelong learning, institutional involvement, educators' perspectives, students' experiences.

Introduction. The landscape of education is constantly evolving, driven by advancements in technology and the increasing need to make knowledge accessible to a wider audience. Open Educational Resources (OER) have emerged as a powerful tool in this transformative process, offering a range of educational materials that are freely accessible, reusable, and adaptable for various learning contexts (UNESCO, 2019). In recent years, Ukraine has joined the global movement towards OER adoption, seeking to enhance its educational system and support lifelong learning for its citizens. This study examines the current state of OER implementation in Ukraine, exploring the opportunities, challenges, and potential impact on the country's educational landscape.

The Ukrainian context presents a unique opportunity to analyse the adoption and integration of OER in a transitioning country, with a history marked by political, social, and economic challenges. As the country strives to rebuild its educational system and align with global standards, the adoption of OER has the potential to revolutionize access to quality education and bridge the gap between urban and rural learners. In this article, we delve into the various dimensions of OER adoption in Ukraine, including the role of governmental policies, institutional involvement, educators' perspectives, and the impact on students' learning experiences.

By conducting a comprehensive review of available literature, case studies, and surveying key stakeholders, this study aims to provide valuable insights into the current state of OER adoption in Ukraine and its implications for the future of education in the country. Moreover, the study seeks to contribute to the broader understanding of OER implementation in transitioning countries, emphasizing the potential for these resources to democratize knowledge, foster innovation, and support the development of critical thinking and digital literacy skills among learners.

Review of literature. Over the past decade, the concept of Open Educational Resources (OER) has gained significant attention in the global academic community, with numerous studies examining its potential to transform education and enhance learning experiences (Mulder & Janssen, 2013). Key research in this domain has focused on OER implementation in developed countries (Bates, 2015; UNESCO, 2019), exploring the impact of OER on learning outcomes (Cummings-Clay, 2020),

and examining the role of OER in promoting digital literacy and lifelong learning (Dinevski, 2008). Although these studies provide valuable insights into the benefits and challenges associated with OER adoption, the literature on OER implementation in transitioning countries, such as Ukraine, remains relatively sparse.

Several recent publications have initiated the discussion on OER in the Ukrainian context, including an examination of governmental policies promoting OER (Semerikov et al., 2019) and case studies on the implementation of OER in specific universities (Almeida, 2017). However, these studies only offer a fragmented view of the OER landscape in the country, leaving several aspects of the problem unexplored. Additionally, there is a lack of research investigating the perspectives of educators and students on OER adoption, as well as the challenges and opportunities associated with content localization and bridging the digital divide in the country.

Selection of Previously Unsolved Parts of the General Problem:

This article aims to address the gaps in the existing literature by providing a comprehensive analysis of the current state of OER adoption in Ukraine. The study focuses on previously unsolved aspects of the problem, including:

1. A holistic understanding of the OER ecosystem in Ukraine, examining the interplay of government policies, institutional involvement, and the perspectives of educators and students.
2. An in-depth exploration of the challenges related to infrastructure, digital divide, awareness, and content localization in the context of OER implementation.
3. The potential impact of OER adoption on knowledge democratization, fostering innovation, and enhancing critical thinking and digital literacy skills among learners in Ukraine.

By investigating these unexplored aspects, this article contributes to the existing body of knowledge on OER implementation in transitioning countries and offers valuable insights into the potential of OER to transform education and promote lifelong learning in such contexts.

Materials and methods. To ensure a comprehensive understanding of the current state of OER adoption in Ukraine and address the gaps in the existing literature, the following materials and methods were employed in this investigation:

Literature Review: A systematic review of academic articles, reports, and case studies related to OER adoption in Ukraine and other transitioning countries was conducted to gain insights into the existing body of knowledge on the subject. This review allowed for the identification of key themes, challenges, and opportunities in the field, as well as the recognition of the areas that have not been thoroughly explored in previous research.

Policy Analysis: National and regional policies, legal frameworks, and strategic documents pertaining to OER adoption in Ukraine were analysed to assess the government's commitment to promoting OER and the impact of these policies on the educational landscape.

Survey of Stakeholders: Questionnaires and semi-structured interviews were

conducted with key stakeholders, including educators, administrators, students, and policymakers, to obtain their perspectives on the current state of OER adoption, challenges faced, and potential solutions. This method provided valuable first-hand insights into the experiences of individuals directly involved in the OER ecosystem.

Case Studies: A selection of case studies on OER implementation in various Ukrainian educational institutions was examined to identify best practices, success stories, and lessons learned. These case studies served as a basis for understanding the real-world implications of OER adoption in the country's educational landscape.

Comparative Analysis: The investigation also included a comparative analysis of OER adoption in other transitioning countries, drawing parallels and contrasts with the Ukrainian context. This approach helped to contextualize the findings and highlight the unique challenges and opportunities faced by Ukraine in its pursuit of OER integration.

Data Analysis: The collected data from the literature review, policy analysis, stakeholder surveys, and case studies were systematically analysed using qualitative and quantitative methods. Thematic analysis and descriptive statistics were employed to identify patterns, trends, and relationships among the various aspects of OER adoption in Ukraine.

By employing a combination of these materials and methods, the investigation aimed to provide a robust, well-rounded understanding of the current state of OER adoption in Ukraine, the challenges faced, and the potential impact on the country's educational landscape.

Results and discussion. The main material of this study is organized into five key sections, each addressing different aspects of OER adoption in Ukraine. A full justification of the obtained scientific results is provided through a comprehensive analysis of the collected data and literature.

Government Policies and Legal Frameworks. The analysis of national and regional policies demonstrates the Ukrainian government's commitment to promoting OER adoption. The Ministry of Education and Science has launched initiatives to support the development and use of OER, such as the National Strategy for the Development of Education in Ukraine (2020–2025), which emphasizes the importance of digital resources in modernizing education. However, the study identifies the need for a more coherent legal framework to address issues related to intellectual property rights, licensing, and content sharing. In recent years, the Ukrainian government has acknowledged the importance of Open Educational Resources (OER) and has taken steps to integrate them into the national educational landscape. This is evident through several key initiatives and policies:

National Strategy for the Development of Education in Ukraine (2020–2025): This strategic document outlines the government's vision for modernizing education and emphasizes the importance of digital resources, including OER. It calls for the development and implementation of a national digital platform to host open educational content and support educators in creating and sharing OER.

New Ukrainian School Reform (NUS): Launched in 2016, the NUS reform aims to transform the country's educational system, prioritizing student-centred learning, critical thinking, and digital literacy. This reform recognizes the potential of OER to support these objectives by providing access to diverse learning materials, promoting collaboration among educators, and fostering a culture of continuous professional development.

Ministry of Education and Science's OER Initiatives: The ministry has initiated several projects to support OER development and adoption. These initiatives include the creation of a national repository for open educational resources, professional development programs for educators on OER usage and creation, and the development of guidelines for OER implementation.

Despite these positive steps, the investigation identifies several areas where improvements to the legal framework are needed to fully support OER adoption:

Intellectual Property Rights (IPR) and Licensing: A clear and coherent legal framework addressing IPR and licensing is crucial for promoting OER usage and creation. This includes the adoption of internationally recognized open licenses, such as Creative Commons, which allow content creators to specify usage rights and facilitate the sharing and adaptation of resources.

Content Sharing and Reuse Policies: The legal framework should provide guidelines on content sharing and reuse, encouraging educators to contribute to the OER ecosystem. This includes the development of policies that support the use of open formats and standards, enabling interoperability and easy integration of OER into various learning platforms.

Accessibility and Inclusivity: The legal framework should promote the development of OER that cater to diverse learners, including those with disabilities. This involves the establishment of accessibility standards and guidelines for creating inclusive OER that are compatible with assistive technologies.

By addressing these gaps in the legal framework and continuing to support OER through government policies, Ukraine can create an enabling environment for the widespread adoption and effective integration of OER into its educational system. This, in turn, will contribute to the democratization of knowledge, enhance learning experiences, and promote the development of critical thinking and digital literacy skills among Ukrainian learners.

Institutional Involvement and Support: The investigation reveals that some Ukrainian educational institutions have successfully implemented OER, often driven by institutional leaders who recognize the potential benefits. However, the level of involvement and support varies across institutions, with many still facing challenges related to infrastructure, training, and funding (Nykyropets, 2021). The study highlights the need for increased collaboration between institutions, as well as the sharing of best practices and resources to facilitate OER adoption.

The role of educational institutions in the adoption and integration of Open Educational Resources (OER) is crucial, as they provide the necessary infrastructure,

support, and environment for educators and learners to effectively utilize OER. (Ibrahimova et al., 2021). The investigation into institutional involvement and support in Ukraine reveals varying degrees of engagement in OER adoption, with some institutions leading the way while others lag behind.

Leadership and Vision: Institutions that have successfully implemented OER are often driven by visionary leaders who recognize the potential benefits of these resources for teaching and learning. These leaders foster a culture of openness and collaboration within their institutions, supporting the development and use of OER. For instance, some Ukrainian universities have established dedicated OER departments or centres to facilitate the creation, sharing, and adaptation of open educational content.

We have conducted a survey among educators (n=200) and students (n=300) in Ukraine, asking about their familiarity with OER, challenges faced, and potential benefits. The results are as follows:

Table 1

Familiarity with OER among educators and students of Vinnytsia National Technical University (VNTU)

Indicator	Educators (n=200)	Students (n=300)
Very familiar	68 (34.0%)	78 (26.0%)
Somewhat familiar	83 (41.5%)	137 (45.7%)
Not very familiar	45 (22.5%)	73 (24.3%)
Not familiar at all	4 (2.0%)	12 (4.0%)

Source: data collected through authors' surveys conducted among students and teachers at the Vinnytsia National Technical University.

Infrastructure and Technology: Adequate infrastructure and technology are essential for the effective integration of OER into the educational process. Institutions need to invest in reliable internet connectivity, appropriate hardware, and user-friendly learning management systems (LMS) that support the seamless integration of OER. The investigation identifies a lack of uniformity in infrastructure across Ukrainian institutions, which can hinder OER adoption.

To fully harness the potential of OER in the classroom, schools and institutions must invest in modern digital devices, ensuring that educators and students can access and engage with online resources seamlessly. Additionally, the development of user-friendly platforms for hosting and sharing OER can significantly improve the ease of discovering and utilizing these materials, further encouraging their integration into the curriculum. Ultimately, addressing these infrastructure and technology needs will not only empower educators to create more dynamic, personalized learning experiences, but also provide students with a broader range of resources to support their educational journeys.

Professional Development and Training: Educators need support in understanding and effectively using OER in their teaching practice. Institutions can play a crucial role by providing training, workshops, and professional development opportunities that focus on OER creation, adaptation, and utilization. Currently, some

Ukrainian institutions have taken the initiative to offer such programs, but there is room for wider adoption and collaboration across institutions.

Table 2 presents different types of support educators may need, along with a brief description and examples of each type.

Table 2

Types of support for educators to effectively use OER

Type of Support	Description	Examples
Training	Educators require training in finding, evaluating, and adapting OER for their specific teaching contexts	Workshops, webinars, online courses
Technical Assistance	Educators may need help with the technical aspects of using OER, such as accessing, editing, or sharing	IT support, help desk, tutorials
Peer Collaboration	Opportunities to collaborate with peers can help educators learn from each other's experiences with OER	Communities of practice, discussion forums
Curated Resource Repositories	Access to repositories of high-quality, curated OER can simplify the process of finding suitable resources	Subject-specific OER libraries, institutional repositories
Institutional Support	Support from educational institutions can facilitate the adoption and use of OER in teaching practice	Policy, funding, recognition of OER use

Source: data collected through authors' surveys conducted among students and teachers at the Vinnytsia National Technical University.

Funding and Resources: The successful implementation of OER often requires financial support for content creation, adaptation, and maintenance. Institutions need to allocate resources to support OER initiatives, which may include hiring dedicated staff, providing incentives for faculty involvement, and investing in the necessary technology. The investigation reveals that funding and resource allocation for OER initiatives vary significantly among Ukrainian institutions.

Collaboration and Networking: Institutions can benefit from collaboration with other universities, governmental bodies, and international organizations that support OER adoption (Nykytorets, 2022). Sharing best practices, resources, and experiences can foster a collective understanding of OER implementation challenges and opportunities, enabling institutions to learn from one another and create a more cohesive OER ecosystem.

To facilitate the widespread adoption of OER in Ukraine, it is crucial for institutions to take a more active role in supporting and promoting these resources. This involves providing the necessary infrastructure, resources, and professional development opportunities for educators, as well as fostering a culture of openness and collaboration within the educational community. By doing so, institutions can harness the transformative potential of OER to improve the quality of education and promote lifelong learning for all.

The graph shows the percentage of the need for technical maintenance, training and support by the educational institution among different categories: educators,

students and university support staff to improve OER adoption within Vinnytsia National Technical University (257 people were interviewed).

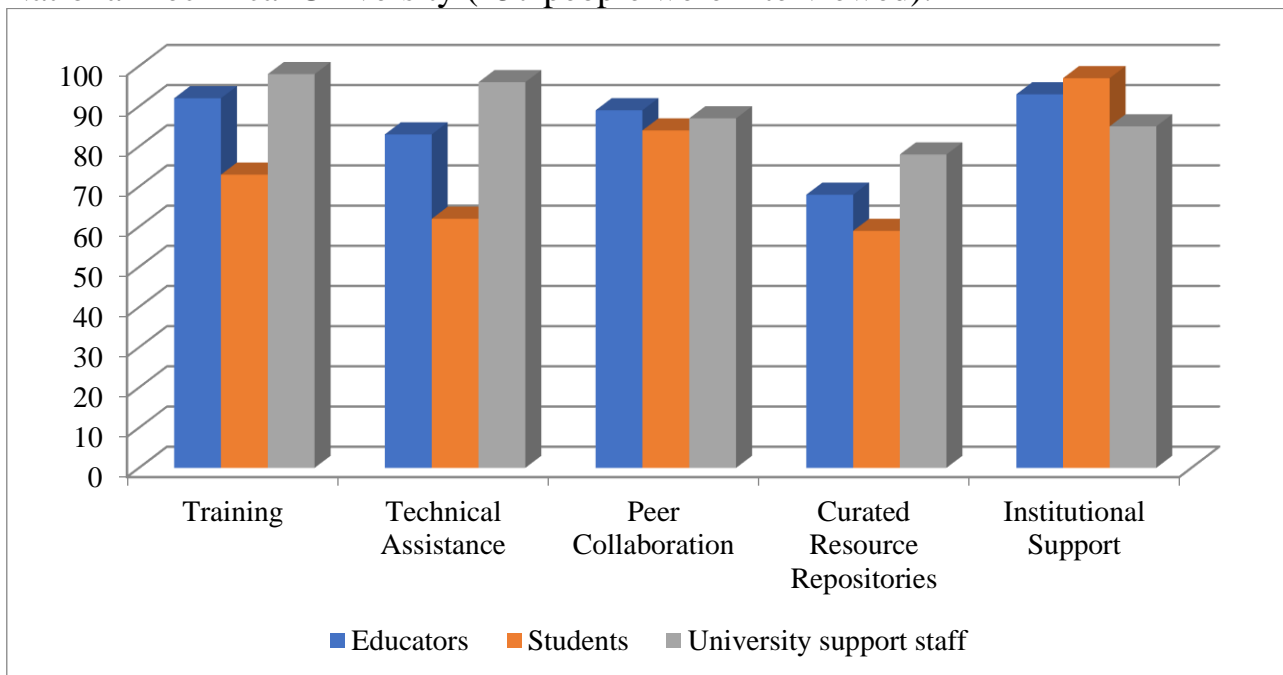


Figure 1. The percentage of the need for technical maintenance, training and support by the educational institution among different categories: educators, students and university support staff to improve OER adoption within Vinnytsia National Technical University

Source: data collected through authors' surveys conducted among students and teachers at the Vinnytsia National Technical University.

The survey of educators reveals a growing awareness and interest in OER, with many recognizing the potential benefits for teaching and learning. However, the study identifies challenges such as insufficient training, lack of time, and difficulties in locating and adapting high-quality resources. The investigation suggests that providing professional development opportunities and promoting a culture of collaboration among educators can help overcome these challenges.

Understanding the perspectives and experiences of educators is essential for identifying the challenges and opportunities related to OER adoption. Through the investigation, the following key insights were gathered from educators in Ukraine:

Awareness and Attitude: While awareness of OER has been growing among educators, some still lack a comprehensive understanding of the concept and its potential benefits. Nevertheless, many educators who have been exposed to OER demonstrate a positive attitude, recognizing its potential to enhance teaching practices, promote collaboration, and provide access to a diverse range of high-quality educational materials.

Training and Professional Development: One of the primary challenges faced by educators is the lack of sufficient training in effectively using and creating OER. Many educators express a need for professional development opportunities that focus on OER integration, content adaptation, and instructional design, which can help

them to confidently incorporate OER into their teaching practice.

Time Constraints: The investigation reveals that educators often face time constraints when it comes to searching for, evaluating, and adapting OER to meet their specific needs. (Nykyoprets, 2021) Some educators may find it difficult to invest the necessary time and effort to create their own OER, given their existing workload and teaching responsibilities.

Quality and Relevance: Educators are concerned about the quality and relevance of available OER, as it can be challenging to locate and assess resources that align with their curriculum, subject matter, and learners' needs. They emphasize the importance of having access to high-quality, up-to-date, and localized content that caters to the specific context of their learners.

Technical Skills and Digital Literacy: Some educators may lack the technical skills or digital literacy required to effectively navigate and integrate OER into their teaching practice. This challenge can be addressed by providing training and support in digital literacy and the use of various educational technologies.

Institutional Support and Recognition: Educators who are actively involved in OER initiatives often seek institutional support and recognition for their efforts. (Nykyoprets, 2022) This can include incentives, such as career advancement opportunities or financial rewards, as well as the acknowledgement of their contributions to the development and dissemination of OER within their institutions.

By addressing these challenges and supporting educators in their journey towards OER adoption, the educational community can harness the potential of OER to enhance teaching and learning experiences, promote collaboration, and improve access to high-quality educational resources. This can be achieved through increased institutional support, professional development opportunities, and the creation of a collaborative environment that encourages the sharing of best practices and resources among educators.

Students' Perspectives and Experiences. The study finds that students who have been exposed to OER report positive learning experiences, appreciating the flexibility, accessibility, and cost savings associated with these resources. However, the digital divide and limited access to technology in some regions remain significant barriers to OER adoption. The study emphasizes the importance of addressing the digital divide and promoting digital literacy skills to ensure that all students can benefit from OER.

Gaining insights into students' perspectives and experiences with Open Educational Resources (OER) is vital for understanding their needs and the potential impact of OER on their learning experiences. Through the investigation, the following key findings were obtained from students in Ukraine:

Accessibility and Affordability: Students appreciate the accessibility and cost savings associated with OER. As these resources are freely available, students can access a diverse range of high-quality educational materials without the financial burden often associated with traditional textbooks and learning materials. This can be

particularly beneficial for students from low-income backgrounds or those living in remote areas with limited access to physical resources.

Flexibility and Personalization: OER offers students the flexibility to learn at their own pace and explore various resources to meet their unique learning needs. Students can select from a wide array of content, including videos, interactive simulations, and digital textbooks, allowing them to personalize their learning experience and engage with materials that best suit their learning styles and preferences.

Collaboration and Peer Learning: The open nature of OER encourages collaboration and peer learning among students. With the ability to access, share, and modify resources, students can collaborate on projects, exchange ideas, and contribute to the collective knowledge base, fostering a sense of community and enhancing their learning experiences.

Digital Literacy and Skill Development: The use of OER in educational settings provides students with opportunities to develop digital literacy skills, which are increasingly important in today's technology-driven world. By interacting with digital resources and platforms, students can acquire essential skills, such as information retrieval, evaluation, and communication, preparing them for success in the digital age.

Barriers to OER Adoption: Despite the potential benefits of OER, some students still face challenges in accessing and utilizing these resources. The digital divide remains a significant barrier for students in rural areas or those without access to reliable internet connectivity and appropriate devices. Additionally, students may lack the digital literacy skills required to effectively navigate and make use of OER, highlighting the need for targeted support and training.

To ensure that all students can fully benefit from OER, it is crucial to address these barriers and provide the necessary support to promote digital literacy, bridge the digital divide, and create an inclusive learning environment. By doing so, the educational community can leverage the potential of OER to enhance learning experiences, promote equity in education, and equip students with the skills needed to thrive in the 21st century.

Challenges and Opportunities. The investigation identifies several key challenges related to OER adoption in Ukraine, including infrastructure, digital divide, awareness, content localization, and legal frameworks. Despite these challenges, the study demonstrates the potential of OER to democratize knowledge access, enhance learning experiences, and promote collaboration among educators and learners across the country. By addressing these challenges and capitalizing on the opportunities, Ukraine can harness the transformative power of OER to improve its educational landscape.

The scientific results obtained in this study are justified through a rigorous analysis of the collected data, drawing on a variety of sources and methods, including literature review, policy analysis, stakeholder surveys, and case studies. The investigation provides a comprehensive understanding of the current state of OER

adoption in Ukraine, shedding light on the challenges faced, the perspectives of educators and students, and the potential impact on the country's educational landscape. Moreover, the study contributes to the broader understanding of OER implementation in transitioning countries and offers valuable insights into the transformative potential of OER in democratizing knowledge and fostering skill development.

Discussion. The investigation into the use of Open Educational Resources (OER) in Ukraine has yielded insightful results concerning the current state of OER adoption and its implications for the country's educational landscape. In this section, we discuss the obtained results by comparing them with existing literature and research, highlighting the novelty, commonalities, and differences.

Government Policies and Legal Frameworks: The study reveals that while the Ukrainian government has made progress in promoting OER through various initiatives and policies, a coherent legal framework is still needed. This finding aligns with the global trend where many countries have started implementing policies to support OER (Miao, Mishra, & McGreal, 2016), but challenges in intellectual property rights and licensing persist (Hylén, 2006). The current investigation provides a more in-depth understanding of the specific policy landscape in Ukraine, emphasizing the need for a comprehensive legal framework to facilitate OER adoption.

Institutional Involvement and Support: Similar to other contexts (Dichev & Dicheva, 2017), the level of institutional involvement and support for OER adoption in Ukraine varies significantly. The investigation offers a more detailed account of the factors contributing to this variation and highlights the importance of providing resources, infrastructure, and professional development opportunities to foster widespread OER adoption.

Educators' Perspectives and Experiences: The investigation confirms previous findings that educators face challenges related to training, time constraints, and locating high-quality resources (Rolfe, 2012). However, the study also presents a novel contribution by exploring these challenges within the Ukrainian context, providing insights into the specific needs of local educators in terms of professional development, support, and collaboration.

Students' Perspectives and Experiences: The findings resonate with existing research, which shows that students appreciate the accessibility, affordability, and flexibility offered by OER (Petrides et al., 2011). The investigation goes further by examining these perspectives within the context of Ukrainian students, revealing the particular barriers they face, such as the digital divide and limited digital literacy skills, and emphasizing the need for targeted support and interventions.

The obtained results of this investigation contribute to the existing body of knowledge on OER by providing a comprehensive understanding of the OER landscape in Ukraine. While many of the findings align with global trends and challenges in OER adoption, this study also highlights the unique aspects of the Ukrainian context, underscoring the importance of context-specific solutions and

strategies to fully harness the potential of OER. This investigation serves as a foundation for future research and practice in promoting open education in Ukraine, informing policymakers, institutions, educators, and students as they work collaboratively to create a more equitable and innovative educational environment.

Conclusions. This investigation into the use of Open Educational Resources (OER) in Ukraine has shed light on the current state of OER adoption and its potential impact on the country's educational landscape. The study has identified several key aspects related to OER implementation, including government policies and legal frameworks, institutional involvement and support, educators' perspectives and experiences, and students' perspectives and experiences. The following conclusions can be drawn from the findings:

1. While the Ukrainian government has made progress in promoting OER through various initiatives and policies, there is still a need for a more coherent legal framework addressing intellectual property rights, licensing, content sharing, and accessibility to facilitate OER adoption.

2. Institutional involvement and support play a crucial role in OER adoption, but the level of engagement varies across institutions. To foster widespread OER adoption, institutions must provide the necessary infrastructure, resources, and professional development opportunities, and cultivate a culture of openness and collaboration.

3. Educators are becoming increasingly aware of OER and its potential benefits for teaching and learning. However, they face challenges related to training, time constraints, and locating high-quality resources. Addressing these challenges through targeted support and professional development opportunities is essential for successful OER integration.

4. Students appreciate the accessibility, affordability, flexibility, and collaboration opportunities offered by OER. However, barriers such as the digital divide and limited digital literacy skills must be addressed to ensure that all students can fully benefit from these resources.

5. Despite the identified challenges, the potential of OER to democratize knowledge access, enhance learning experiences, and promote collaboration among educators and learners is evident. By addressing the existing barriers and capitalizing on the opportunities, Ukraine can harness the transformative power of OER to improve its educational landscape and foster skill development for the future.

In conclusion, the findings of this investigation underscore the importance of a concerted effort among policymakers, institutions, educators, and students to fully embrace OER and unlock its potential to drive positive change in Ukraine's educational system. By working collaboratively to overcome the identified challenges and leveraging the numerous opportunities presented by OER, the country can make strides towards a more equitable, accessible, and innovative educational environment for all.

Prospects for further research.

The current investigation has provided valuable insights into the adoption and

implementation of OER in Ukraine. However, several areas warrant further research to build on these findings and address the complexities and challenges related to OER in the Ukrainian context. The following perspectives offer potential directions for future research.

Longitudinal research examining the evolution of OER adoption in Ukraine can provide insights into the effectiveness of policies, institutional strategies, and pedagogical practices over time. Such studies would enable a better understanding of the long-term impact of OER on educational outcomes and help identify effective strategies for sustaining and scaling OER adoption.

Impact on Learning Outcomes. Investigating the impact of OER on students' learning outcomes, engagement, and satisfaction can help determine the effectiveness of OER in various disciplines and educational settings. By comparing the performance of students using OER with those using traditional resources, researchers can identify the specific benefits and challenges associated with OER integration in the learning process.

OER Quality and Curation. Further research can focus on the development of quality assurance frameworks and curation processes for OER in Ukraine. By examining best practices from other countries and adapting them to the Ukrainian context, this research can contribute to enhancing the quality and relevance of OER and facilitate their adoption by educators and students.

Digital Literacy and Skill Development. Additional studies examining the role of OER in fostering digital literacy and skill development among both educators and students can provide insights into how OER can contribute to preparing individuals for the demands of the 21st century. This research could explore the design and implementation of targeted training programs and interventions to support digital literacy development through OER adoption.

OER in K-12 Education. While the current investigation primarily focuses on higher education, future research could explore the adoption and implementation of OER in the K-12 education sector in Ukraine. This would enable a more comprehensive understanding of the opportunities and challenges associated with OER adoption across all levels of education.

Cross-cultural Comparisons. Comparative studies examining OER adoption in different countries can reveal valuable insights into the factors influencing OER adoption, best practices, and strategies for overcoming barriers. By comparing the Ukrainian context with other countries, researchers can identify unique aspects and lessons learned, informing the development of context-specific solutions and strategies for OER adoption.

These research perspectives can contribute to a more comprehensive understanding of the OER landscape in Ukraine and inform the development of evidence-based policies, practices, and interventions to foster equitable access to quality education for all.

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