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Examining the Usage of Open Access Educational Resources in Higher Education: An Analytical Study

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Abstract:

Open Educational Resources (OER) are educational materials that are freely available for use, reuse, adaptation, and sharing. They include a wide range of resources such as textbooks, lectures, quizzes, and simulations, all of which are aimed at improving access to education. This paper examines the extent of use of OER in higher educational institutions through an analytical study.

The paper begins by defining OER and discussing its various elements. It highlights the importance of OER in education and the benefits it offers, such as reducing costs for students and increasing access to high-quality educational materials. The paper also discusses the different definitions of OER provided by organizations like UNESCO and scholars like Pawlowski and Bick, as well as the 5R Framework proposed by David Wiley, which outlines the permissions granted to users of OER.

The study then reviews the literature on OER and its use in higher education. It discusses initiatives like the UK Open University's Open Learn and Athabasca University's OER collections, which have been successful in promoting the use of OER. The paper also examines the barriers to the use of OER, such as the lack of awareness among educators and the difficulty of finding high-quality OER.

Methodologically, the study relies on an extensive literature review, drawing from secondary data accessible in the public domain. The authors have consulted various foreign books, articles, and newspapers, and all the relevant details have been properly documented in the article's reference section.

The findings of the study indicate that while there has been significant progress in the use of OER in higher education, there are still challenges that need to be addressed. These include the need for more awareness and training for educators, as well as the need for more high-quality OER.

Keywords: open educational resources, OER, perceptions of OER, teaching and learning, higher education, technology adoption, open pedagogy

Introduction:

Open Educational Resources (OER) constitute a rich tapestry of educational materials employed for instruction, learning, and exploration. These resources, which can be freely accessed and adapted, span a spectrum from entire courses and modules to textbooks, multimedia, and software tools. The overarching aim is to democratize access to knowledge (William and Flora

Hewlett Foundation, n.d., para. 7).

At an assembly convened with backing from the Hewlett Foundation, the term OER made its debut, with UNESCO (2002) furnishing an initial description. They depicted OER as materials accessible via information and communication technologies for non-commercial purposes. While this definition is widely acknowledged, others have broadened the concept. Pawlowski and Bick (2012), for instance, defined OER as resources freely available for educational use, covering a gamut of artifacts including multimedia, articles, textbooks, and digital resources, all released under 'open access' terms.

Pawlowski and Bick's expansive interpretation of OER encompasses software tools like Linux and Moodle, facilitating customizable learning experiences and collaboration. They also include instructional materials such as lesson plans and curricula, fostering the exchange of teaching expertise among educators.

David Wiley presents an alternative viewpoint, defining OER as educational content governed by Creative Commons (CC) licenses. These licenses enable users to access materials from the public domain without necessitating copyright permissions, aligning with the 5R Framework. This framework delineates five permissions: retaining, reusing, revising, remixing, and redistributing educational resources.

For the purposes of this discourse, OER is delineated as any educational resource available in the public domain or governed by CC licenses, thereby granting users the prerogative to engage with the 5R Framework. In essence, OER embodies resources that are accessible, free, and open for educators, curtailing licensing expenses and championing authorization and licenses conducive to the 5R Framework's governance.

Literature Review:

In the ever-evolving landscape of education, Open Educational Resources (OER) emerge as a beacon of innovation, aiming to enhance the educational experience and democratize access to knowledge. Spearheaded by institutions like the UK Open University (UKOU) and Athabasca University (AU), the OER movement embodies a commitment to quality education for all (William and Flora Hewlett Foundation, 2013).

UKOU blazes a trail in OER advancement since its inception in 2016, pioneering the use of an open-source learning management system to birth Open Learn, a virtual sanctuary dedicated to OER initiatives. Open Learn's dual domains, Learning Space and Lab Space, serve as fertile grounds for independent learning modules and dynamic content interaction, fostering collaborative learning through social networking technologies (Conole, 2015; Mikroyannidis, 2011).

Conversely, AU stands tall as a bastion of open access in Canadian higher education, earning its moniker as the 'First OER University' upon its establishment in 2006. At AU, a stringent policy

mandates that faculty publications find refuge in the institution's repository, housing a rich tapestry of OER collections ranging from scholarly works to open access textbooks (McGreal et al., 2015). This repository stands as a testament to AU's unwavering commitment to accessible education for all.

Objectives:

The primary objectives of this research endeavor are delineated as follows:

1. To delve into the fundamental underpinnings of Open Educational Resources (OER), scrutinizing their conceptual framework and elucidating their essential characteristics.
2. To underscore the paramount significance of open access resources within the educational milieu, discerning their role in democratizing access to knowledge and fostering equitable learning opportunities.
3. To meticulously assess the potential and scope of employing these open access resources within the domain of higher education institutions, delineating the extent to which they can be leveraged to augment pedagogical practices and enhance learning outcomes.
4. To discern and delineate diverse modalities through which these open access resources can be effectively harnessed to optimize their efficacy in fostering holistic development within higher educational institutions, encompassing universities and colleges alike.
5. To undertake a comprehensive and exhaustive review of extant literature pertaining to Open Educational Resources (OER), synthesizing insights garnered from scholarly discourse and empirical investigations to draw definitive conclusions regarding their efficacy, utility, and implications within the educational landscape.

Methodology:

This study is based on a comprehensive literature review that draws from secondary data available in the public domain. The authors have consulted a variety of international books, articles, and newspapers, and all pertinent details have been meticulously documented in the article's reference section.

Benefits and Significance of Open Educational Resources:

Open Educational Resources (OER) confer numerous advantages upon educational institutions, educators, and learners. Their integration is anticipated to narrow the disparity between different social strata and nations on the global platform, thereby enhancing the quality of education and facilitating greater access to information. OER is regarded as a catalyst for informal education and lifelong learning, providing individuals with increased opportunities for continuous learning.

OER, by its nature, offers unrestricted access to educational materials, allowing them to be freely utilized, modified, and tailored to meet specific needs and objectives. A fundamental tenet of OER is their universal relevance, transcending specific education systems or national curriculum

frameworks. The European Commission underscores the values of personalized learning and enriched learning experiences associated with OER.

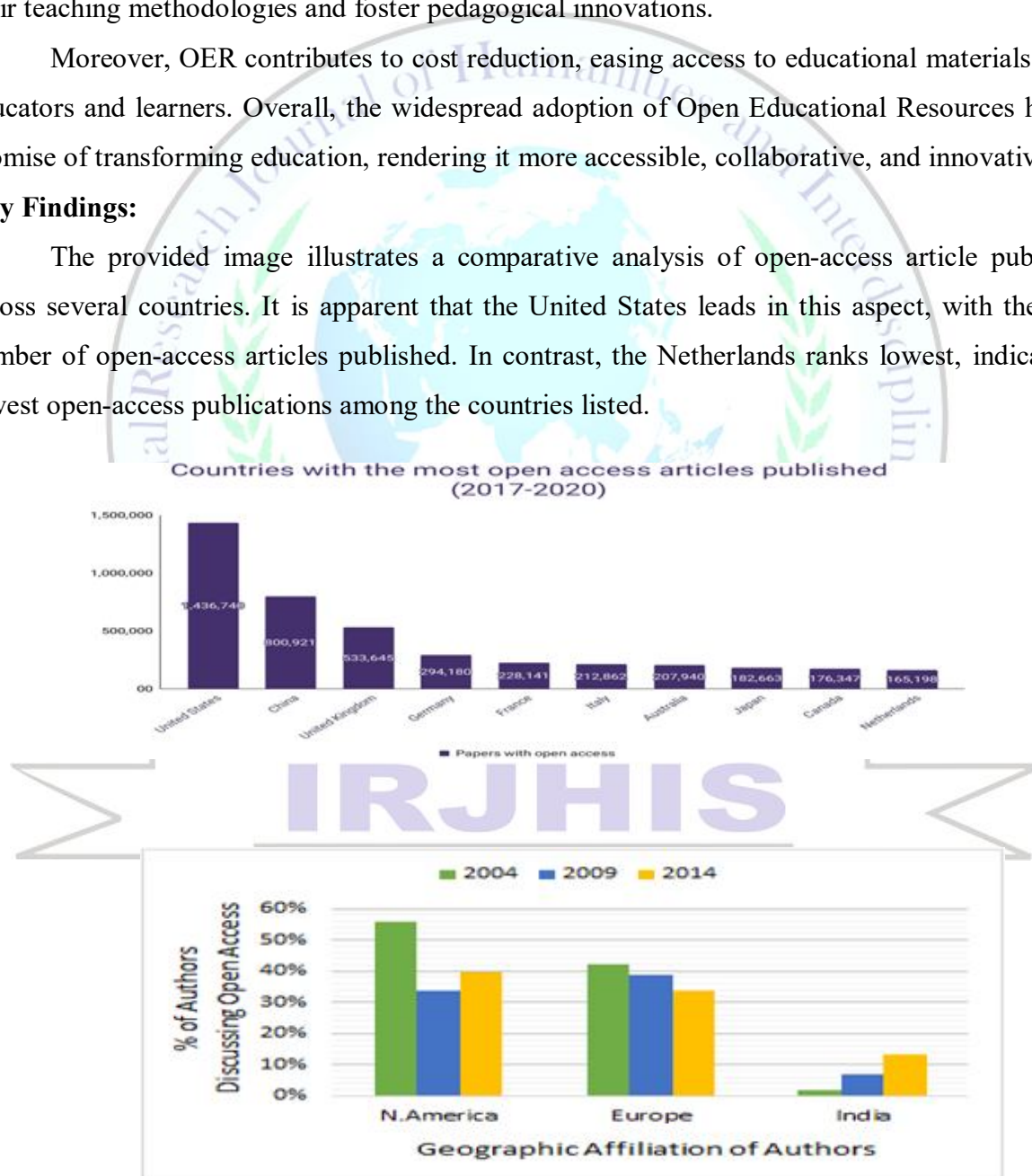
Furthermore, OER empowers learners by granting them increased access to information, thereby fostering more equitable and efficient utilization of educational resources. OER accommodates diverse learning styles, enabling students to access a variety of educational materials without restrictions related to space, support, or time constraints, and using any device.

Through OER, students actively participate in the learning process, engaging with peers in virtual learning environments. Educators benefit from the ability to access and utilize teaching materials from their colleagues, promoting an open exchange of knowledge and best practices. OER incentivizes educators to share their work globally under open licenses, enabling them to enhance their teaching methodologies and foster pedagogical innovations.

Moreover, OER contributes to cost reduction, easing access to educational materials for both educators and learners. Overall, the widespread adoption of Open Educational Resources holds the promise of transforming education, rendering it more accessible, collaborative, and innovative.

Key Findings:

The provided image illustrates a comparative analysis of open-access article publications across several countries. It is apparent that the United States leads in this aspect, with the highest number of open-access articles published. In contrast, the Netherlands ranks lowest, indicating the fewest open-access publications among the countries listed.



Barriers to Open Access Publications:

The provided image depicts a comparative analysis spanning different timeframes - 2004, 2009, and 2014 - illustrating a concerning trend of decreasing open-access publications. This decline is evident across various regions, including North America, Europe, and India, presenting significant challenges to the open access movement.

Technology, which encompasses tools and devices that simplify life, permeates every aspect of modern life. It is applied in agriculture, industry, trade, banking, health, defense, education, science, sports, and entertainment. Virtually no domain remains untouched by technology and its products. The digital age has revolutionized information access, facilitating easy access to e-books, digital libraries (both public and private), encyclopedias, articles, blogs, websites, and interactive discussion forums. This transformation fundamentally alters the way information is accessed and shared.

Despite technological advancements, traditional education has largely remained unchanged for centuries, with classroom environments, their components, teacher-student interactions, and participation structures remaining stagnant.

Open Educational Resources (OER) play a crucial role in making education more accessible. In 2001, the Massachusetts Institute of Technology (MIT) initiated the Open Course Ware (OCW) program, sharing course materials globally and free of charge, marking a significant step in open access within education.

Conclusion and Recommendations:

The shift towards liberating educational and scientific resources represents a profound transformation in the educational paradigm. Open Educational Resources (OER) infuse conventional learning models with unrestricted educational materials and digital tools, nurturing collaborative learning environments, critical thinking, and the exchange of knowledge, ultimately catalyzing the genesis of novel insights.

This study delves into the essence of OER, exploring its diverse applications and ramifications within the realm of education. OER is hailed for its manifold advantages, empowering institutions, educators, and learners alike to participate in educational activities within the framework of the 5R principles.

For the universal adoption of OER and its fundamental principle of inclusivity, certain prerequisites such as digital literacy, access to ICT resources, time allocation, and institutional backing are imperative. To surmount challenges posed by linguistic diversity, the localization of resources aims to enrich cultural and educational cohesion.

Amidst the increasingly digitized landscape of education, educators are encouraged to share their expertise through OER, fostering networks with peers and staying abreast of the latest

advancements.

To harness the full potential of OER, it is imperative to raise awareness among educators and scholars and provide pertinent training. The formulation and execution of organizational-level OER policies, akin to esteemed institutions such as MIT, Yale, and Stanford, alongside recommendations from entities like the European Commission, can further bolster the integration of OER.

In alignment with the vision of the William and Flora Hewlett Foundation, incorporating the remixing and revising of OER into teaching practices can significantly enhance learning outcomes. The global prominence of OER has spurred substantial investments and initiatives aimed at promoting its utilization. To bolster such endeavors, organizing seminars for aspiring educators on OER utilization can foster the evolution of teaching methodologies and pedagogical practices.

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