

ADVANCING INCLUSIVE EDUCATION: EXPLORING THE POTENTIAL OF INCLUSIVE OPEN EDUCATIONAL RESOURCES (IOER) FOR LEARNERS WITH VISUAL IMPAIRMENTS

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ABSTRACT

As educational technologies propel us towards a more advanced future, the foundational principle of 'leave no one behind, a transformative promise sealed in the 2030 Agenda of Sustainable Development Goals, becomes imperative. The 2019 UNESCO Recommendation on Open Educational Resources (OER) from the 40th UNESCO General Assembly emphasizes the need for member states to 'encourage inclusive and equitable quality OER. This call includes leveraging open educational practices to ensure greater access to educational materials and resources. In this evolving landscape, the spotlight is on Inclusive Open Educational Resources (iOER), a topic that has gained significant traction, particularly with the implementation of a national-level policy statement by Malaysia for its higher learning institutions. iOER stands as a beacon of accessibility, designed to cater to learners with disabilities, irrespective of their specific needs or abilities. Moreover, for persons with visual impairments, iOER provides materials in assistive devices like screen readers, while also incorporating features such as adjustable font sizes and contrast levels which can affect different level of visual impairments. These features empower learners with visual impairments to navigate educational content with ease, fostering a more independent and inclusive learning environment. However, despite the immense potential benefits, there are challenges hindering the widespread adoption of iOER. Misconceptions and barriers, including a lack of awareness, understanding of its value, technical skills, and support from educational and policy makers, persist within the OER advocacy community. Additionally, issues related to cost, copyright, and quality pose further barriers to adoption. In response to these challenges, iOER-enabled environments are deliberately designed to be flexible and adaptive. This flexibility allows learners to tailor their educational experience according to their needs, sharing content in various formats and across multiple platforms. SEAMEO SEN, as the regional center for special educational needs, stands at the forefront of this commitment. Expressing its dedication to being a referral center for iOER among its eleven SEAMEO Member Countries and beyond, SEAMEO SEN plays a pivotal role in championing and facilitating the adoption of inclusive practices.

Keywords: iOER, educational technology, learners with disabilities, disability-inclusive education, OER, SEAMEO

INTRODUCTION

Education is fundamentally intended to be universally accessible as learning is an vital and foundational aspect of every individual's daily existence, indifferent to their social status or family background. As of this moment, education accessibility has been restricted because of the focus on monetizing the education industry instead of caring about expanding knowledge to others. As a consequence of this, parents have to allocate half of their salary to their kids' education every year to provide their children with the highest quality education possible. This is the outcome of teachers applying non-inclusive teaching methods that are causing the students to struggle in grasping the material that are induced by the lack of inclusive open education resources (iOER). Recently, the United Nations have emphasised the importance of quality education in their 17 Sustainable Development Goals. Malaysia, like other nations, should integrate inclusive education practices into their system to ensure that all students, including those with disabilities would have the chance to receive the exceptional education that they all deserve. However, before diving deeper into the intricacies of iOER, it's crucial to understand the fundamentals of OER. This paper will explore the essence of OER, the challenges and benefits of iOER, and the role of the Southeast Asia Minister of Education Organization Regional Centre for Special Educational Needs (SEAMEO SEN) in promoting iOER across the nation.

Open Educational Resources (OER)

Open Educational Resources (OER) encompass teaching, learning, and research materials that are freely accessible for anyone to use, modify, and distribute. These resources include textbooks, lecture notes, assignments, tests, projects, audio, video, and software. According to Wiley and Hilton (2018), OER can significantly enhance learning opportunities by providing high-quality educational materials to a broad audience at no cost. The use of an open licence, such as those provided by Creative Commons, allows users to freely adapt and share educational resources while respecting the original creators' rights. These licences range from allowing any type of modification and redistribution (CC BY) to more restrictive options that limit commercial use or modifications (CC BY-NC, CC BY-SA).

Research has shown that OER can improve educational outcomes. A study by Hilton (2016) found that students who used OER performed as well or better than those who used traditional textbooks. Additionally, OER can reduce the financial burden on students, making education more accessible. The availability of OER also fosters innovation in teaching practices, as educators can adapt and share resources to better meet the needs of their students. Another study by Wiley et al. (2017) demonstrated that the use of OER can lead to increased student retention and satisfaction, as well as improved academic performance.

LITERATURE ON OER

Several studies have been conducted to understand the adoption and usage of OER in various educational settings. Research by the Babson Survey Research Group (2019) revealed that the awareness and adoption of OER are growing among educators, with many reporting positive experiences in using these resources. However, the study also highlighted barriers such as the time required to find and evaluate OER, and concerns about the quality and relevance of available resources.

The impact of OER on learning outcomes has been a focal point of research. A comprehensive review by Fischer et al. (2015) found that students using OER generally perform as well or better than those using traditional resources. The study also noted that the

cost savings associated with OER can alleviate financial pressures on students, potentially leading to better academic performance and increased retention rates. Moreover, research by Colvard, Watson, and Park (2018) indicated that the use of OER can reduce the achievement gap for underrepresented and financially disadvantaged students, thereby promoting educational equity.

IOER BARRIERS

Challenges are inevitable when one is taking initiatives to commence a global welfare. The same goes for iOER, which has numerous contributing factors that prevents it from being adapted into people' lives. In lieu of investigating the common barriers of iOER, alternately focusing on the social science elements of it, which are political, economic, and social. According to Truong (2020), political, economic, and social factors are the most influential in the development of iOER repositories. These elements were then dissected to be explored in a deeper sense. Primarily, the analysis will begin by introducing the political factors which are the Ministry of Education as it plays an important role in dictating the hows and whys of the education system.

Conducive to the implementation of inclusive education teaching techniques to teachers, the Ministry of Higher Education (MOHE) in Malaysia alongside the universities in Malaysia collaborated in launching the National iOER policy in 2021 and had an Inclusive Open Education Resources (iOER) virtual showcase in 2023. As the policy is currently recognised, educators have barely exercised this practice into their teaching methods and are still flawed as it is focused on the higher education level rather than lower education level. The implementation should be in the early stages of teaching so that those with disabilities would not be overlooked despite making up 1.9% of the population in Malaysia as of 31 January 2023. Educators can benefit highly from iOER as it can increase equity and save their money as they can cut the cost on the resources that they are using for their class.

After diving into the political factors that contribute to the barriers of iOER, it is important to not forget about the economic factors of it too. The distinction of online resources is crucial in iOER underlining the significant role of technology. While technology poses a prevalent role for most countries, Malaysia presents a contradicting point wherein it is not at a disadvantage as a large number of Malaysians have access to the internet and technology. Nevertheless, in the absence of IOER the students will not gain the appropriate resources for their education. In particular, students with disabilities need specific technology for them to excel in acquiring knowledge. This aspect adds to the reason the ministry of education is taking proactive measures to assist special needs schools by publishing comprehensive guidelines highlighting the technologies that should be applied.

Ultimately, the social factors of it such as one's age and family background can have a pertinent contribution towards the lack of knowledge in iOER amongst students. Students from lower income families might be unaware of the ways to locate the information that they need during studying. On the basis of the lack of teaching on the ways to find details on the topics that the students are learning regardless of having the technologies to find them. This phenomenon mostly takes place among students from rural areas, as the education institutions in such areas may exhibit an impassive attitude towards the emphasis on this aspect. Education institutions and educators wield the most notable influence towards the students as the parents are not able to help the students much since they do not have any knowledge on it.

IOER BENEFITS

However, despite the barriers, iOER comes with its own advantages that will be worth it once the barriers have been broken down. The leading benefit among the bunch is that it is open pedagogy, meaning the students can engage with the resources instead of just consuming it. When students are encouraged to fully engage in the learning process, something "magical" happens, leading to the creation of imaginative work (Hegarty, 2015). This holds significant advantages since the source can be updated so that it aligns with the current issues. This will then ease the efforts that the educators have to make in order to use inclusive ways to teach the class and design the teaching materials that focuses on inclusivity.

Moreover, it demonstrates to be highly cost effective in view of the fact that the educators and students can spend their money on more important things than overpriced learning materials. In the thick of obtaining the learning materials, the parents won't have to spend a large amount of their income on their children's education such as paying tuition fees and buying study materials. The reason is that the students and educators can access the freshly updated learning materials through online platforms without charge. The most extensive study on the impact of open educational resources (OER) has revealed that free, digital learning materials help students save money while maintaining a reasonable cost for colleges (The Feed, 2020).

Roles of SEAMEO SEN towards OER and iOER

There are three main roles of SEAMEO SEN towards Open Educational Resources (OER). Firstly, SEAMEO SEN actively promotes the use of OER to improve educational outcomes for learners with special needs. By advocating for accessible and inclusive educational materials, SEAMEO SEN helps ensure that educational resources are available to all students, regardless of their abilities. Other than that, SEAMEO SEN plan to conduct training and workshops for educators and other stakeholders on how to create, adapt, and use OER effectively in special education. These efforts will help educators to integrate OER into their teaching practices, making education more inclusive and accessible. Lastly, SEAMEO SEN collaborates with other educational institutions and organisations to promote OER. This collaboration ensures a wider reach and impact, providing valuable resources to a diverse range of learners.

The roles of SEAMEO SEN towards Inclusive Open Educational Resources (iOER) is wider compared to OER. SEAMEO SEN is involved in the implementation of iOER, which are OER specifically designed to be inclusive of all learners, including those with special needs. This involves creating resources that are accessible in multiple formats, such as text, audio, and video, and that accommodate various learning styles and needs. SEAMEO SEN advocates for policies that support the creation and use of iOER as well. By working with governments and educational bodies, SEAMEO SEN will help to establish frameworks that promote the integration of inclusive resources into education system. SEAMEO SEN plan to host and contribute to repositories of iOER, making these resources easily accessible to educators, students, and other stakeholders. This repository serves as a central hub for high-quality, inclusive educational materials.

CONCLUSION

Inclusive Open Educational Resources (iOER) has the potential of transforming the education process to be more accessible, equitable and inclusive. By embracing the principles of universal design for accessibility, equity and learning, iOER can address the diverse needs of all learners and promote lifelong learning opportunities. Research findings underscore the

positive impact of OER on student performance and engagement, particularly for underserved and disabled students. Contributions of SEAMEO SEN to iOER can be revealed in many forms, SEAMEO SEN have furthered the development and dissemination of inclusive educational resources in Southeast Asia. However, challenges related to quality, technology, and awareness must be addressed to realise the full potential of iOER. Through collaborative effort and policy support, iOER can play a crucial role in bridging the educational divide and fostering a more equitable learning environment for all.

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