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EXPLORING THE IMPACT OF OPEN EDUCATIONAL RESOURCES (OER) ON KNOWLEDGE CREATION AND ACCESS IN KENYAN HIGHER EDUCATION

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Abstract

The adoption and utilization of Open Educational Resources (OER) in Kenyan higher education institutions represent a transformative avenue in addressing challenges of access, affordability, and quality in education. While awareness of OER among faculty is growing, actual integration into teaching practices remains modest. Various factors impede widespread adoption, such as inadequate awareness, limited access to quality resources, technical barriers, and institutional support deficiencies. Nevertheless, ongoing initiatives, including the African OER Network and university specific programs, exhibit promise in promoting OER adoption. The utilization of OER in Kenyan higher education encompasses diverse approaches, from supplementing traditional materials to fostering professional development and course adaptation. Perceived benefits of OER in Kenyan higher education span affordability, accessibility, diverse content, flexibility, and lifelong learning opportunities. However, challenges encompass awareness, quality assurance, sustainability, infrastructure, and cultural alignment. Overcoming these hurdles demands strategies like establishing institutional policies, fostering collaboration, providing faculty training, creating dedicated repositories, addressing infrastructure gaps, advocating OER, and supporting research on its effectiveness. OER in Kenyan higher education significantly enhances knowledge access, fosters collaborative creation, and empowers student learning outcomes. Despite challenges, concerted efforts in policy, culture, faculty development, infrastructure, awareness, and research can effectively leverage OER to democratize education and enrich the higher education landscape in Kenya.

Keywords: Access and affordability, Adoption and utilization, Challenges and benefits, Institutional policies, Kenyan higher education, Knowledge creation, Open Educational Resources (OER)

1.0 Introduction

How Open Education Resources being adopted and utilized in Kenyan higher education institutions Open Educational Resources (OER) have gained significant traction in the global education landscape, offering a promising avenue to address the challenges of access, affordability, and quality in higher education. In Kenya, OER initiatives are gradually gaining momentum, with institutions exploring ways

to incorporate these freely available resources into their teaching and learning practices. The adoption of OER in Kenyan higher education is still at an early stage, but there are several promising developments. A study by Adala et al. (2016) found that OER awareness among Kenyan higher education faculty is growing, with a majority of respondents (82%) indicating some familiarity with the concept. However, the actual use of OER remains relatively low, with only 16% of respondents reporting using OER in their teaching.

Several factors contribute to the limited adoption of OER in Kenyan higher education. These include: Lack of awareness and understanding of OER: Many faculty members are not fully aware of the potential benefits of OER or how to effectively incorporate them into their teaching. Limited access to quality OER: While there is a growing repository of OER available online, not all OER are of equal quality. It can be challenging for faculty to identify and curate high-quality OER that align with their specific teaching objectives. Technical challenges: Accessing and using OER often requires a basic level of digital literacy and familiarity with online platforms. This can be a barrier for some faculty members, particularly those from older generations.

Institutional policies and support: The adoption of OER can be hindered by a lack of supportive institutional policies and practices. Clear guidelines and incentives for OER development and use can encourage greater faculty engagement. Despite these challenges, there are several initiatives underway to promote the adoption of OER in Kenyan higher education. These include: The African OER Network (OER Africa): OER Africa is a pan-African network that provides resources and support for the development and use of OER in higher education. The Kenya Education Management Information System (EMIS): EMIS is a national platform that provides access to a growing collection of OER for Kenyan higher education institutions. Individual university initiatives: Several universities in Kenya are implementing their own OER initiatives, such as the University of Nairobi's OER policy and the Kenyatta University's OER repository.

The utilization of OER in Kenyan higher education is varied, with different institutions and faculty members adopting different approaches. Some common ways in which OER are being used include: Supplementary materials: OER can be used as supplementary materials to traditional textbooks and course readings, providing students with access to a wider range of perspectives and resources. Course content: OER can be used to create or adapt entire courses, reducing the reliance on expensive textbooks and proprietary materials. Assignments and assessments: OER can be incorporated into assignments and assessments, providing students with more opportunities to engage with the course material and demonstrate their understanding. Professional development: OER can be used to support the professional development of faculty members, providing access to current research and best practices in their fields.

2.0 Perceived benefits and challenges of using OER in Kenyan higher education

Open educational resources (OER) have gained significant traction in the realm of higher education, offering a promising avenue for enhancing access to quality educational materials while reducing costs for both institutions and students. In the context of Kenya, OER adoption has the potential to address critical challenges faced by the higher education sector, including affordability, accessibility, and quality of learning resources. However, alongside these potential benefits, there are also challenges

that need to be addressed to ensure the effective integration of OER into Kenyan higher education institutions.

OER offers several potential benefits for Kenyan higher education, including: Affordability: OER are freely available or have very low costs, which can significantly reduce the financial burden on students and institutions. This is particularly relevant in Kenya, where the cost of textbooks and other educational materials can be a major obstacle to accessing higher education (Macharia et al., 2016). Accessibility: OER can be accessed from anywhere with an internet connection, breaking down geographical barriers and expanding educational opportunities for students in remote or underserved areas (Mtebe et al., 2014).

Quality and diversity: OER can be of high quality and offer a wider range of perspectives and approaches than traditional textbooks, providing students with a more diverse and enriching learning experience (Tarus et al., 2015). Flexibility and adaptability: OER can be easily adapted and remixed to meet the specific needs of different institutions, instructors, and students (Macharia et al., 2016). Promoting lifelong learning: OER can facilitate lifelong learning by providing individuals with access to educational resources beyond their formal education (Ssekakubo et al., 2011).

Despite the potential benefits, there are also challenges associated with the adoption and effective use of OER in Kenyan higher education: Awareness and understanding: Many instructors and students in Kenya are not fully aware of OER or their potential benefits, which can hinder their adoption (Tarus et al., 2015). Quality assurance: Ensuring the quality and relevance of OER can be challenging, as there is a vast amount of OER available, and not all resources are created equal (Mtebe et al., 2014). Sustainability: Developing, adapting, and maintaining OER repositories requires ongoing funding and support, which can be a challenge for many institutions in Kenya (Macharia et al., 2016). Technical infrastructure: Access to reliable and affordable internet connectivity is essential for accessing and using OER effectively, but this infrastructure is not always available in all parts of Kenya (Ssekakubo et al., 2011). Cultural and contextual factors: OER may not always align with local cultural norms and educational practices, which can limit their effectiveness in certain contexts (Tarus et al., 2015).

OER holds immense promise for transforming higher education in Kenya by improving access, affordability, and the quality of learning resources. However, overcoming the challenges associated with OER adoption and integration is crucial to fully realize these benefits. Kenyan higher education institutions should focus on raising awareness about OER, establishing quality assurance mechanisms, securing funding for OER development, investing in infrastructure, and adapting OER to local contexts. By addressing these challenges, OER can play a significant role in expanding access to quality higher education in Kenya and empowering learners to reach their full potential.

3.0 Impact of OER have on knowledge creation and access among Kenyan higher education students

The impact of Open Educational Resources (OER) on knowledge creation and access among Kenyan higher education students is multifaceted and far-reaching. OER has the potential to democratize education, empower learners, and bridge the digital divide, particularly in resource-constrained settings like Kenya.

One of the primary impacts of OER is its ability to expand access to knowledge resources for Kenyan higher education students. Traditionally, access to educational materials has been limited by factors such as cost, availability, and geographic location. OER, by virtue of being free and openly available online, has the potential to overcome these barriers and provide students with a wealth of learning resources. Studies have shown that OER can significantly increase access to educational materials for Kenyan students. For instance, a study by Muthanga et al. (2016) found that OER adoption in Kenyan universities led to increased access to textbooks, journals, and other educational resources. Similarly, a study by Maku et al. (2018) found that OER use among Kenyan students was associated with improved access to digital libraries and online learning platforms.

OER not only enhances access to existing knowledge but also fosters knowledge creation and collaboration among Kenyan higher education students. OER provides a platform for students to share their own knowledge and expertise, engage in peer-to-peer learning, and contribute to the development of new educational resources. Several initiatives in Kenya are promoting knowledge creation and collaboration using OER. One such initiative is the Open Education Africa (OEA) platform, which provides a repository of OER and encourages African educators and students to develop and share educational resources. Another notable example is the Kenyatta University Open Education Repository (KUOER), which houses a collection of OER created by Kenyatta University faculty and students.

The use of OER has been shown to empower Kenyan higher education students and enhance their learning outcomes. Studies have demonstrated that OER can lead to increased student engagement, improved understanding of concepts, and better academic performance. A study by Were et al. (2017) found that Kenyan students who used OER in their studies reported higher levels of engagement and motivation compared to those who did not use OER. Similarly, a study by Otieno et al. (2019) found that OER use among Kenyan students was associated with improved understanding of complex concepts and better performance on assessments.

Despite the significant benefits of OER, there are challenges that need to be addressed to fully realize its potential in Kenyan higher education. These challenges include: Awareness and Adoption: Many Kenyan educators and students are still unaware of OER or hesitant to adopt it due to concerns about quality or relevance. Infrastructure and Connectivity: Access to reliable internet connectivity and devices remains a challenge in many parts of Kenya, limiting OER adoption and utilization. Content Creation and Adaptation: There is a need for more OER content tailored to the specific needs and context of Kenyan students. Quality Assurance and Sustainability: Mechanisms need to be established to ensure the quality and sustainability of OER development and maintenance.

Overcoming these challenges requires a multi-pronged approach involving stakeholders such as the government, universities, educators, and students. By addressing the challenges and maximizing the potential of OER, Kenya can harness the power of open education to transform its higher education landscape and empower its students to become lifelong learners and knowledge creators.

4.0 Strategies that can be implemented to enhance the effectiveness of OER in promoting knowledge creation and access in Kenyan higher education

Open Educational Resources (OER) have emerged as powerful tools for promoting knowledge creation and access in higher education, particularly in resource-constrained settings like Kenya. By providing free and openly accessible educational materials, OER can break down barriers to learning and empower students from diverse backgrounds to pursue higher education. However, to fully realize the potential of OER in Kenyan higher education, a strategic and comprehensive approach is needed.

Develop Institutional Policies and Guidelines for OER Adoption: To effectively integrate OER into the curriculum and pedagogy, Kenyan higher education institutions should develop clear policies and guidelines that promote the creation, adaptation, and utilization of OER. These policies should encourage faculty members to incorporate OER into their teaching materials, provide support for OER development, and establish mechanisms for quality assurance and peer review of OER (Muthuri et al., 2017).

Foster a Culture of Openness and Collaboration: A culture of openness and collaboration is essential for the successful implementation of OER. Institutions should encourage faculty to share their expertise and materials with colleagues, both within the institution and across the region. This can be facilitated through workshops, seminars, and online platforms that promote knowledge sharing and collaboration (Anderson, 2009). Provide Professional Development for Faculty: OER adoption requires a shift in teaching practices and a familiarity with OER licensing and copyright issues. Institutions should provide professional development opportunities for faculty to learn about OER, develop OER creation skills, and integrate OER into their courses effectively (Hew et al., 2007).

Establish OER Repositories and Platforms: Creating centralized repositories and platforms for OER can increase accessibility and usability of these resources. Institutions should develop and maintain their own OER repositories, while also encouraging the use of international OER repositories like OER Africa and MERLOT (Hew et al., 2007). Address Infrastructure and Connectivity Challenges: Access to reliable and affordable internet connectivity is crucial for the effective use of OER. Institutions should work with ICT providers to improve connectivity on campus and explore alternative delivery methods, such as offline OER packages, for areas with limited internet access (Hew et al., 2007).

Promote Awareness and Advocacy for OER: Raising awareness about OER and their benefits is essential for wider adoption. Institutions should organize workshops, seminars, and conferences to inform faculty, students, and policymakers about OER. They should also engage in advocacy efforts to promote OER at the national and regional levels (Muthuri et al., 2017). Support Research and Evaluation of OER Effectiveness: Rigorous research and evaluation are needed to assess the impact of OER on student learning outcomes and teaching practices. Institutions should support research projects that investigate the effectiveness of OER in different contexts and disciplines (Hew et al., 2007).

By implementing these strategies, Kenyan higher education institutions can effectively harness the power of OER to promote knowledge creation, access, and equity in education, empowering students to achieve their full potential.

Conclusion

In conclusion, the adoption and utilization of Open Educational Resources (OER) in Kenyan higher education institutions hold significant promise, with the potential to transform access, affordability, and quality in education. While OER awareness is growing among faculty, challenges such as limited access to quality resources, technical barriers, and the absence of supportive institutional policies hinder widespread adoption. Nevertheless, promising initiatives like OER Africa and individual university efforts are driving progress. OER is being used for supplementary materials, course content, assignments, and faculty development. The perceived benefits of affordability, accessibility, quality, flexibility, and lifelong learning are compelling.

The impact of OER on knowledge creation and access for Kenyan students is remarkable, fostering a culture of collaboration and empowerment. Challenges of awareness, infrastructure, content adaptation, quality assurance, and sustainability must be addressed. To enhance OER effectiveness, Kenyan institutions should develop clear policies, foster openness and collaboration, provide faculty development, establish repositories, improve infrastructure, raise awareness, and support research. With these strategic efforts, OER can truly revolutionize higher education in Kenya, making quality knowledge accessible to all.

Suggestions

To enhance OER adoption in Kenyan higher education, institutions should prioritize faculty development programs that focus on OER awareness and effective integration into the curriculum. Collaborate with organizations like OER Africa and utilize their resources to expand the availability of high-quality OER materials. Establish a national framework for OER in Kenya to ensure consistency in OER adoption and quality across institutions.

Encourage students to actively participate in the creation of OER, fostering a culture of peer-to-peer learning and knowledge sharing. Develop a system for the peer review and quality assurance of OER to ensure that they meet the required standards. Lobby for increased government support and funding for OER initiatives in higher education. Create incentives for faculty members to engage with OER, such as grants or awards for OER development and adoption.

Implement measures to address infrastructure and connectivity issues, ensuring that all students have equal access to OER resources. Establish OER task forces or committees within institutions to drive OER adoption and implementation. Encourage collaboration and partnerships between Kenyan higher education institutions to share best practices and resources for OER development and utilization.

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