Emerging Trends on 'OER'

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ABSTRACT

Open Educational Resources (OER) have gained significant traction in the education sector due to their potential to democratize access to knowledge and enhance pedagogical practices. This research article explores the emerging trends in OER adoption, usage, and development across various educational settings globally. The study reviews current literature, analyses key developments, and identifies future directions for OER in fostering inclusive, accessible, and equitable education.

KEYWORDS: *OER, education technology, digital learning, open licensing, adaptive learning, AI in education*

INTRODUCTION

Open Educational Resources (OER) encompass freely accessible, openly licensed educational materials that can be used, adapted, and shared to support teaching, learning, and research. The movement towards OER is driven by the belief that knowledge should be freely accessible to all learners, regardless of geographical location or socio-economic background. In recent years, OER has evolved significantly, influenced by technological advancements, educational policy changes, and the growing demand for flexible learning resources.

Definitions of Open Educational Resources

Creative Commons define OER as "Open Educational Resources (OER) are teaching, learning, and research materials that are either (a) in the public domain or (b) licensed in a manner that provides everyone with free and perpetual permission to engage in the 5R activities." (Open Education, n.d.)

The definition given by UNESCO is – "Open Educational Resources (OER) are teaching, learning and research materials in any medium – digital or otherwise – that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions. OER form part of 'Open Solutions', alongside Free and Open Source software (FOSS), Open Access (OA), Open Data (OD) and crowdsourcing platforms." (Open Educational Resources (OER), 2017)

Background of the Study:

1. **Global Adoption of OER:** Studies indicate a growing global adoption of OER across educational levels, from K-12 to higher education and beyond. Countries such as the United States, Canada, and the United Kingdom have made substantial investments in OER initiatives to reduce textbook costs and enhance educational quality.

2. **Technological Integration:** The integration of OER with digital technologies, such as learning management systems (LMS) and adaptive learning platforms, has facilitated personalized learning experiences. This trend is reshaping traditional teaching methods and promoting interactive, student-cantered approaches.

3. **Open Licensing and Copyright Issues:** The adoption of Creative Commons licenses has been pivotal in promoting the legal sharing and adaptation of OER. However, challenges remain regarding copyright compliance and ensuring proper attribution of content creators.

4. **Collaborative OER Development:** Collaborative platforms and communities (e.g., Wikimedia Commons, OER Commons) enable educators and researchers worldwide to collaborate on the creation and enhancement of OER. This collaborative ethos fosters innovation and knowledge exchange.

5. **Quality Assurance and Evaluation:** There is an increasing focus on developing quality standards and evaluation frameworks for OER to ensure accuracy, relevance, and pedagogical effectiveness. Initiatives like the Open Education Quality Initiative (OPAL) are pioneering efforts in this domain.

Emerging Trends:

1. **Microlearning and Modular Content:** OER are increasingly being developed in modular formats, allowing learners to access bite-sized content that can be easily integrated into diverse learning pathways. This trend supports personalized learning and just-in-time knowledge acquisition.

2. **Multilingual OER:** Efforts are underway to enhance the availability of OER in multiple languages, catering to diverse linguistic communities globally. Multilingual OER initiatives aim to bridge language barriers and promote inclusive education.

3. **AI and Machine Learning in OER:** The application of artificial intelligence (AI) and machine learning algorithms is revolutionizing how OER are curated, personalized, and recommended to learners. These technologies offer adaptive learning experiences tailored to individual learner needs.

4. **Open Pedagogy and Student Engagement:** Open pedagogical practices encourage students to actively participate in the co-creation and adaptation of OER. This collaborative approach fosters creativity, critical thinking, and digital literacy skills among learners.

5. **Policy and Funding Support:** Governments and educational institutions are increasingly recognizing the importance of OER in achieving educational equity and affordability goals. Policy frameworks and funding initiatives are being established to incentivize OER adoption and sustainability.

Future Directions:

1. **Enhanced Interoperability and Accessibility:** Efforts to enhance interoperability between OER repositories and learning platforms will facilitate seamless content sharing and integration. Accessibility features for learners with disabilities will also be prioritized.

2. **Quality Enhancement and Continuous Improvement:** Continued research into effective OER design, evaluation methodologies, and user feedback mechanisms will be crucial for enhancing the quality and relevance of OER.

3. **Global Collaboration and Knowledge Sharing:** Increased collaboration among educators, researchers, and policymakers across borders will accelerate innovation in OER development and implementation. Platforms for global knowledge sharing and best practice dissemination will be essential.

4. **Ethical Considerations and Sustainability:** Addressing ethical concerns related to data privacy, content ownership, and sustainability of OER initiatives will be paramount. Clear guidelines and ethical frameworks will ensure responsible use and management of OER.

5. **Advocacy and Awareness:** Advocacy efforts to raise awareness about the benefits of OER among educators, students, policymakers, and the general public will be crucial for fostering a supportive ecosystem for OER adoption and sustainability.

Key Open Educational Resources initiatives in India

➢ **National Programme on Technology Enhanced Learning (NPTEL)** is Massive Open Online Courses was initiated in 2003 by 7 Indian Institutes of Technology, i.e. Bombay, Delhi, Kanpur, Kharagpur, Madras, Guwahati & Roorkee and Indian Institute of Science Bangalore. It has 235 courses in web and video format covered with five core engineering disciplines, i.e. Civil, Computer Science, Electrical, Electronics and Communication & Mechanical. In phase II, added 600 more web and videos during 2019-14 in all major branches of engineering, physical science and management course at undergraduate and postgraduate levels. https://nptel.ac.in (Nptel, Online Courses and Certification, Learn for Free, n.d.)

➢ **SWAYAM** is a free online education program initiated by the Government of India. It contains the courses in video formats, downloadable reading materials, quizzes, and assessment and online discussion forums. The courses available for class 9 to postgraduation level, accessible by anyone at anytime and anywhere. https://swayam.gov.in (Swayam Central, n.d.)

➢ **Swayam Prabha** is a free DTH channel for education, 34 DTH channels telecasting only quality education programs on a 24X7 basis by using GSAT-15 satellite. The DTH channels cover Higher and School level education. NPTEL, IITs, CEC, IGNOU, NIOS, NCERT and UGC are contents provider for Swayam Prabha. These channels uplinked by BISAG, Gandhinagar and the web portal maintained by INFLIBNET Centre, Gandhinagar. https://www.swayamprabha.gov.in (Swayam Prabha- Free 34 DTH Channels, n.d.)

➢ **ShodhGanga** is a reservoir of Indian Theses. It is an open-access digital repository of Indian Electronic Theses & Dissertation, and it has M.Phil. and PhD theses full-text collections and it is set up and maintained by INFLIBNET Centre, Gujarat. https://shodhganga.inflibnet.ac.in (ShodhGanga : A Reservoir of Indian Theses @ INFLIBNET, n.d.)

➢ **NOPR (NISCAIR Online Periodicals Repository)** is full-text articles of 19 research journals published by CSIR-NISCAIR. It is an open access repository developed and maintained by CSIR- NISCAIR, New Delhi. http://nopr.niscair.res.in (NOPR: Home, n.d.)

➢ **Open Government Data (OGD)** Platform India is a platform developed by Government of India to support Open Data Initiatives. This portal is joint initiatives of Government of India and US Government. The portal is intending to use for Government Ministries/Departments their organisation to publish dataset, documents, services, tools and application collected by them for public use. https://data.gov.in (About Open Government Data (OGD) Platform India, 2013) etc.

Conclusion: The landscape of Open Educational Resources is dynamic and evolving, driven by technological advancements, educational reforms, and a shared commitment to educational equity and access. As OER continue to gain prominence globally, embracing emerging trends and addressing existing challenges will be essential for harnessing their full potential in transforming educational practices and outcomes worldwide.

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