Promoting Open Education Resources – Blended Learning

Vaishali Jadhav, Natasha Mahajan

Department of Medical-Surgical Nursing, Bharati Vidyapeeth College of Nursing, Navi Mumbai, Maharashtra, India.

Abstract

The open educational resources (OERs) movement has empowered researchers and educators to become more innovative in their teaching and learning, through the openness and flexibility. The use and adaptation of OER have been recommended as a very cost-effective investment in quality teaching-learning. In conventional teaching practices, teachers mostly spend time developing learning materials, reviewing lecture notes, anticipating questions and formulating answers, and preparing for examinations. OERs are teaching and learning materials which are freely available and openly licensed. This method is no longer appropriate with learners current association with the technology. This research aims on promoting OER-based learning for undergraduate learners. Action research has been conducted to identify the learners adaptation to the new culture of OER-based blended learning. The learner performance records were also evaluated as a measure of quality of learning. The study has focused on how the OER material to be incorporated in the online course development in undergraduate learning. At the same time, researcher provides feedback on the use of OER-based learning methods. The study further elaborates on effective assessment activities which need to be used in OER-based learning. Learners were quite positive on these effective assessment activities. All over the studies specify the importance of incorporating OER in undergraduate online learning.

Keywords: Blended learning, learning environment, open educational resources

INTRODUCTION

What are open educational resources (OERs)?

OERs 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.[1]

At Hewlett, we use the term "open education" to encompass the myriad of learning resources, teaching practices, and education policies that use the flexibility of OER to provide learners with high-quality educational experiences. Creative commons defines OER as 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 – retaining, remixing, revising, reusing, and redistributing the resources [Figure 1].[2]

What is blended learning?

Blended learning is a combination of offline (face-to-face, traditional learning) and online learning in a way that the one compliments the other.

Blended learning is often also referred to as "hybrid" learning and can take on a variety of forms in online education environments. Blended learning is one of the most accepted learning modes where the learners get the opportunity to learn using online digital media as well as the traditional classroom methods.[3] It is also been suggested that students who complete online coursework followed by interactive, face-to-face class activities have richer educational experiences.

MATERIALS AND METHODS

Reviewers searched nine databases for systematic reviews published in English language peer-reviewed journals between 2005 and 2019. Relevant articles were identified by search

Address for Correspondence:
Mrs. Natasha Mahajan, Department of Medical-Surgical Nursing, Bharati Vidyapeeth College of Nursing, Navi Mumbai, Maharashtra, India.
E-mail: natasha.jadhav@gmail.com

engine; PubMed, Medline, SCOPUS, CINAHL, PsycINFO, Embase, Elsevier, EBSCOHost, and Google Scholar with the following key words: "OER, Blended learning, Collaborative learning environments, Computer-Supported Collaborative Learning, and Learning object repositories."

Review Articles

With tremendous developments in ICTs, the education system of today has been enriched by various OERs. The optimal utilization of opportunities provided by the technological developments presents a profound challenge for education systems and has serious implications involving cost, access, equity, pedagogy, and quality. The paper discusses various opportunities and challenges presented by the use of OERs in the education system of today. The various meaningful initiatives taken in India aiming at proper utilization of ICTs are also highlighted. The paper also discusses the role of libraries in promoting the use of OERs in educational institutions.[3]

Literature Related to OERs

Utah State University offers a collection of OER used in their formal campus courses for faculty, students, and self-learners throughout Utah and around the world. The USU Open Course Ware (OCW) also provides self-learners a variety of "credit by examination" options so that they can obtain college credit for what they have learned through using USU OCW. The Center for Open and Sustainable Learning (http://cosl.usu.edu/) at Utah State University has developed an OCW development tool – eduCommons. It allows institutions to easily publish OCW content through a ready-made platform designed for efficient production of course materials. This model is also intended to provide an institution with the means to assure academic and pedagogical quality through two different digital course resource systems within a university: One built entirely of creative commons material and another built within the IP environment of the institution's digital library/repository allowing access to copyright material only to authenticated members of the community. Open source software also designed by the center to support learner communities using OCW and to provide educational support services.[4]

OERs are commonly stored, used, adapted, remixed, and shared within learning object repositories (LORs) which have recently started expanding their design to support collaborative teaching and learning. As numbers of OER available freely keep on growing, many LORs struggle to find sustainable business models and get the users' attention. The previous studies have shown that quality assurance of the LORs is a significant factor when predicting the success of the repository. Within the study, we analyzed technology enhanced learning literature systematically regarding LORs' quality approaches (LORQAF) and specific collaborative instruments. This paper's theoretical contribution is a comprehensive framework of LORQAF that demonstrates the wide spectrum of possible approaches taken and classifies them. The purpose of this study is to assist LOR developers in designing sustainable quality assurance approaches utilizing full the potential of collaborative quality assurance tools.[5]

Education is one of the areas that are experiencing phenomenal changes as a result of the advancement and use of information technology. Mobile and e-learning are already facilitating the teaching and learning experience with the use of latest channels and technologies. Blended learning is a potential outcome of advanced technology-based learning system. The charm of blended learning approach lies in the adaptation of technology aided learning methods in addition to the existing traditional-based learning. With the introduction of technology, the overall learning as well as teaching experience is considerably enhanced by covering negative aspects of the traditional approach. In this paper, a blended learning model for higher education where traditional classroom lectures are supported through e-learning is described.[6]

An overview of the current state of repositories of OER (ROERs) in higher education at international level was studied. It analyzes a series of educational indicators to determine whether ROER can meet the specific needs of the education context and to clarify understanding of the reuse of OERs provided by ROER. The aim of the study is to assess ROER by combining these two perspectives and to form a basis for discussion among the universities that are responsible for these repositories. The method was based on content analysis and consisted of two phases: An exploration of international sources and an analysis of 110 ROER using the proposed set of indicators. The results focus on data from the analysis of ROER websites and some models of good practices. They are presented according to three core dimensions for evaluating ROER: General factors to establish types of ROER, a focus on drivers for OER reuse, and a focus on educational aspects. It was found that most of the ROER that included one or more of the proposed reuse indicators were created exclusively for educational resources. Educational aspects are not yet firmly embedded into ROER. The few repositories that seem to have successfully included them are those that provide other educational metadata and use educational standards.[7]

OERs are teaching and learning materials which are freely available and openly licensed. ROERs are platforms that host and facilitate access to these resources. ROER should not just be designed to store this content in keeping with the aims of the OER movement, they should support educators in embracing open educational practices such as searching for and retrieving content that they will reuse, adapt, or modify as needed, without economic barriers or copyright restrictions. This paper reviews key literature on OER and ROER, to understand the roles, ROERs are said or supposed to fulfill in relation to furthering the aims of the OER movement. Four themes which should shape repository design are identified, and the following 10 quality indicators (QIs) for ROER effectiveness are discussed: Featured resources; user evaluation tools; peer review; authorship of the resources; keywords of
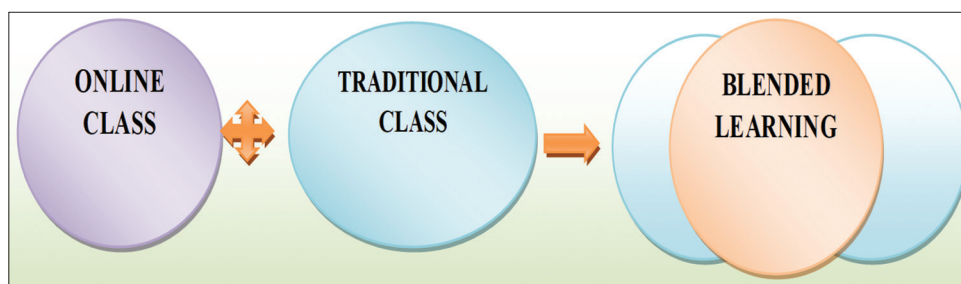
Figure 1: Concept of blended learning

the resources; use of standardized metadata; multilingualism of the repositories; inclusion of social media tools; specification of the creative commons license; and availability of the source code or original files. These QIs form the basis of a method for the evaluation of ROER initiatives which, in concert with considerations of achievability and long-term sustainability, should assist in enhancement and development.[8]

The demand for qualified teachers with sufficient pedagogical knowledge and skills is high. However, existing teacher education programs do not provide adequate experiences through which to develop pre-service teachers' professional foundations. This study recognized OERs as a means by which to address the issue of enhancing teacher education. The purpose of this study was to propose a framework to be used to integrate OER into lesson design activities for pre-service teachers. In this study, a focused literature review investigated the frameworks of distributed cognition and example based learning. This review process resulted in a unified framework that provides a description of how pre-service teachers learn with OER at both the individual and cognitive system levels. Four principles and 10 guidelines are provided to guide the implementation of OER-based lesson design activities in real settings. The new framework has the potential to enhance pre-service teachers' web resource-based professional development.[9] Over the past decade, great progress has been made in improving the availability of OERs. However, one area in which OER has been deficient is in its ability to lead to college or university credit, something that many users of OER may desire. This article describes the work done by the Saylor Academy in amalgamating OER in such a format that college credit is more easily attainable. We describe not only the theory behind what Saylor has done but also provide details about the initial stages of their program implementation within specific accredited institutions.[9]

A study conducted with students using OERs as the primary course material in their health psychology course. The study took place at New York City College of Technology of the City University of New York, a comprehensive college located in Brooklyn. Students were assigned the OER by their course instructor, who developed it as part of a library funded pilot initiative. Two research instruments were employed to collect qualitative data from students: A survey and one-on-one interviews with a smaller student sample. Both survey and interview items asked students how they engaged with the

OER as the primary assigned course material. Students shared feedback about the overall organization of the OER, methods used to access the OER and complete course work, ease of use, benefits and challenges, and differences and similarities to using a traditional print textbook. Findings indicate that the majority of students were able to access the OER with more ease than traditional textbooks given the multiple electronic devices they used to access the OER. A small proportion of students encountered minor usability issues, but the most frequent challenge was difficulty gaining access to the OER through college WiFi. The majority of students reported that the course readings were equal to or better than traditional textbooks and responded positively to the variety of learning materials and assignments. Most students agreed that they would be willing to register for a course offering a similar resource in the future.[10]

LITERATURE RELATED TO BLENDED LEARNING

The literature landscape of blended learning in higher education: The need for better understanding of academic blended learning and practice. If we are to realize the potential of blended learning in higher education, then further research into academic practice and relevant academic development is essential. Our review of literature relevant to blended learning in higher education reveals an interesting scholarship landscape which when described in detail pointedly directs attention to the lack of literature seeking to understand academics' current blended practices. It is argued that this is problematic in terms of formulating the required professional development and support. In essence, this paper uncovers the need for further research into understanding not only why academics may choose to engage in blended learning but also, once engaged, why some choose to integrate technology to create transformative blends while others choose minimally impacting blends. This paper may interest those supporting academics in developing blended learning. It provides a guiding resource for both researchers into blended practices and those embarking on blended learning implementations.[11]

This paper reports that on case study aimed at developing a better understanding of the different dimensions of blended learning technology. Drawing on learners experience it examines the circumstances in which learners preference for human and online learning support environments and the factors driving their choices. Finally, the paper describes an

instructor selection of and experiences in the use of technology to supports students learning and how technology has impacted face-to-face interaction with students. The study concludes with summary of different dimensions of blended learning and how an understanding of these dimensions impact the theory and practice of blended leaning within the educational environment.[12]

CONCLUSION

This review was conducted to promote OER-based learning among learners. Moreover, the study reveals that designers of OER-based blended course should create social interaction though innovative interaction such as peer facilitated discussion forums and video-based learning material to deliver course content. Moreover, study was elaborate on effective assessment activities which need to be used in OER-based learning and was learners quite positive on these effective assessment activities.

REFERENCES

1. Bang J, Dalsgaard C, Kjær A, O'Donovan MM. MOOCs in higher education-opportunities and threats or how small can a learning unit be in university degree programmes? In: Proceedings of Enhancing European Higher Education, Opportunities and Impact of New Modes of Teaching; 2016. p. 543-53.
2. What is ORE? Wikipedia, the Free Encyclopedia; 2020. Available from: https://www.wiki.creativecommons.org/wiki/what_is_oer%3f. [Last accessed on 2020 Dec 14].
3. Open Education; 2020. Available from: https://www.hewlett.org/strategy/open-education. [Last accessed on 2020 Dec 14].
4. OCW Development Tool-Education Commons; 2020. Available from: http://www.ocw.usu.edu. [Last accessed on 2020 Dec 14].
5. Clements K, Pawlowski J, Manouselis N. Open educational resources repositories literature review-towards a comprehensive quality approaches framework. Comput Hum Behav 2015;51:1098-106.
6. Khan AI, Shaik MS, Ali AM, Bebi CV. Study of blended learning process in education context. I. J. Modern Educ Comput Sci 2012;9:23-9.
7. Taylor & Francis. This is an Electronic Version of an Article Published in International Journal for Academic Development. Vol. 18. United Kingdom: Taylor & Francis; 2013. p. 371-83.
8. Atenas J. Havemann L. Questions of quality in repositories of open educational resources: A literature review. Res Learn Technol 2014;22:20889.
9. Kim D. A framework for implementing OER-based lesson design activities for pre-service teachers. Int Rev Res Open Distrib Learn 2018;19:148-70.
10. Hilton J. From open educational resources to college credit: The approaches of Saylor academy. Open Prax 2014;6:365-74.
11. Paris OER Declaration; 2012. Available from: http://www.unesco.org/new/fileadmin/multimedia/hq/ci/ci/pdf/events/paris%20oer%20declaration_01.pdf. [Last accessed on 2020 Dec 14].
12. Santos-Hermosa G, Ferran-Ferrer N, Abadal E. Repositories of open educational resources: An assessment of reuse and educational aspects. Int Rev Res Open Distrib Learn 2017;18:84-120.