HIGHER EDUCATION:

The Success and Challenges in Open Education Resources (OER)

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Abstract

Open Education Resources (OER) in higher education is reaching new platforms around the world. In this paper I would like to explore the success and challenges that higher education face when adopting an OER platform. This paper will allow the reader to look outside the walls of a centralized learning environment and gain a broader perspective on free information, knowledge and education used around the world.

Introduction

Open Education Resources (OER) is a major technological learning tool that is used globally around the world. OER is best known as an 'open' movement and the general foundation is simple: that information should be disseminated and freely accessible in order to benefit not just the traditional learner but also the non-traditional and self learner. This sense of 'openness' toward knowledge should not entail any limitations or restrictions. Infact, OECD (2007) defines the OER movement as "digitized materials offered freely and openly for educators, students and self-learners to use and reuse for teaching, learning, and research".

Many leading institutions in higher education adopted the OER platform and face many challenges in this modern day world including: the rapid growth of technology, globalism, licensing, economic, social and the constant competition among leading higher institutions in order to provide free access to educational resources. The success and challenges of the OER platform has paved the way for new methods of teaching and learning outside the confinements of traditional learning.

Successful OER Models

Licensed journals that cost the university money require the traditional student to log into the system using a private username and password. These proprietary licenses are the reason the OER movement became possible and to be able to share content for free. Surprisingly enough, most universities adopting the OER platform are well established institutions rather than smaller less-known institutions. This is evidence that the competition between higher education institutions is great which equates to better quality of education offered.

Wiley (2006) analyzes three successful models of the OER movement in higher education: the Massachusetts Institute of Technology (M.I.T.) model, the Utah State University (USU) model, and the Rice University model. M.I.T. is described to be one of the pioneers of OER according to Johnstone and Poulin (2002). M.I.T. has proved to be able to successfully launch an OpenCourseWare (OCW) with the ability to overcome copyright and technological challenges. One of the goals of M.I.T. is to publish the entire course catalog online. Once a new course is generated, older courses can be archived and available to access. M.I.T. has set the standards very high for competing institutions. However, it is important to note that M.I.T. is also funded by corporate and private sectors. The ability to fund an OER program in a high status institution is more common that funding to a lesser known institution. M.I.T. is one of the widely recognized institutions who have used their funding to kick-start the OER movement. It would be incredibly difficult for any institution to create resources as sustainable as M.I.T. without the funding provided.

The USU model is another successful pioneer in the OER movement. However, USU makes content available through distributing work to staff, faculty and volunteers. One important

aspect of the USU model is the faculty participation.   Faculty members volunteer their time in contributing their courses online as part of their academic duties to the University. The USU model is also funded by the William and Flora Hewlett Foundation which also assist in the success of USU approach.

Lastly, the Rice Model relies heavily on volunteers to enable a successful OER initiative. Volunteers contribute courseware globally not just through a centralized approach. This model is extremely unique among higher education initiatives related to OER. Collaboration on a larger scale involving community participation can be a great benefit for many institutions. Funding is less likely to play a powerful role in the Rice Model, unlike the M.I.T. model and the USU model.

These three models offer a variety of examples that can assist any institution in adopting the OER movement. From corporate and private funding to centralized and decentralized systems of collaboration it is possible to move toward the OER initiative and be successful.

Why Free Education?

Why would institutions in higher education want to share their content for free? Why upload an entire semester of a Computer Science on the M.I.T. website equipped with a syllabus, reading materials and even a streaming video of the actual class? What are the drivers behind this movement? Surely, these institutions would not profit from giving away education that was imprisoned behind the ivy-league laced walls for years. Or would they?

One surprising point why higher education would initiate an OER program is that 'if universities do not support the open sharing of research results and educational materials, traditional academic values will be increasingly marginalized by the market forces" (OECD, 2007). Really what this means is to avoid the risk of software monopoly. For higher education to be able to compete, they must participate in open education resources in their environment.

Another reason why higher education would want to share their content for free is the overall philosophy behind 'openness'. Openness is to share, reuse and create content in an environment that allows the quality of education to improve and maintain. The more content is free the more likely collaboration from diverse groups exists. Rather than keep the content in a centralized location it is more important to decentralize in order to improve the overall quality of education.

Yet, one of the most obvious reasons why higher education would participate in an OER movement is simply for the publicity. For instance, a prospective student is college shopping online for the best education. The prospective student can have free access to courses and have the ability to first hand evaluate the quality of education. This is a huge benefit for higher education in regard to adopting an OER platform. Higher education institutions are no longer a stagnant website waiting for the prospective student to come to them, yet these institutions are communicating and selling their school through these free courses available through the OER initiative.

Sure, they can sell their school to the prospective student, but also current students also benefit. For example, the current student can compare classes and increase their knowledge on any given subject. How about alumni of the institution? Alumni from the class of 1998 can keep current on new technology maintain their level of education. Moreover, these institutions are also providing a 'good deed' service for their prospective, current, and alumni students.

These are a few of the many reasons why institutions in higher education want to share their content for free. These are the drivers behind the OER movement that create a successful venture. However, what are the barriers behind each of these drivers that need to be considered before adopting an OER platform?

Technological and Economic Shifts

First let us explore further the technological and economic benefits behind the OER movement in higher education. Presently, we experience high speed broadband that will support any OER format provided online at a quality speed. As technology expands to new heights so does the availability to download and review educational resources. It has become easier now more than ever to step outside our environment and with the click of the mouse explores a class topic of our choice at a cutting edge institution. These new learning tools are an incredible achievement toward the advancement in technology.

However, as technology continues to rapidly change, so does the accessibility to courseware. For example, we now enter an economic and social barrier to people who are not able to afford or keep up with the latest technology. These are the groups, in my opinion that would greatly benefit from the OER movement. These lack of resources deny the freedom of education to all individuals. On one hand, the OER's mission is to provide free knowledge without limitations, yet on the other hand, these limitations are vivid when only a select group can access these courses. It is not only a problem in the United States but also globally.

The lack of resources are not the only thing attributed to software and hardware issues, but also the technological skills needed to utilize these OER formats. This is not only a technical barrier but also an economic barrier. There are significant barriers that exist in developing countries that affect the mission of open education resources. For one, how can a self-learner in another country that also speaks a different language use these resources when there are no available tools to aid the learner? It is evident that developing countries face both technical and economic issues.

However, we also have a self-educator and/or faculty member who has the resources to share their knowledge on a platform but does not have any idea how to share, reuse, create and post their content to the internet. These are problems that need to be addressed. Technology based programs need to be more of a priority during these transitions that meet both the technical and economic criteria. Fortunately, the Open Participatory Learning Infrastructure (OPLI) has created adequate training to meet these concerns.

The Open Participatory Infrastructure was proposed by the William and Flora Hewlett Foundation which consists of meeting the needs of technical infrastructure and social norms. According to Atkins (2007) the OPLI mission is to enable a learning environment that:

- permits distributed participatory learning;
- provides incentives for participation (provision of open resources, creating specific learning environments and evaluation) at all levels; and
- encourages cross-boundary and cross cultural learning.

An OPLI platform should include at least three types of activities:

- creating and providing infrastructure;
- meaningful and transformative use of the infrastructure; and
- discovery and transfer of the fruits of relevant research into future generations of the infrastructure.

It is important to build this infrastructure in order to support an environment that successfully thrives on the needs of the creator and user. If these needs are not established early on in the OER project, the institution will never be able to meet their goals and will ultimately fail during the migration of an OER platform. Once this infrastructure is established, it will become a driving force for many educators to share content.

Incentives

These technical and economic constraints also create concerns regarding budget and costs for sustaining an OER project in higher education. Scarce funding for open education resources is a legit problem. A lack of funding and participation in this program could defeat the mission altogether. It is urgent for higher education to mandate an incentive program for their faculty. In doing so, this creates a system that allows faculty to devote time and energy into the content they contribute to the development of OER.

The lack of incentive participation for faculty members is a social barrier. The greatest concern for these institutions is the lack of dedication spent toward the development of OER. The faculty is the most important ingredient to foster in higher education environments. Without institution or faculty recognition, there will be little interest for faculty to volunteer their time and resources to contributing to the OER movement.

An incentive program in higher education in order to support OER is an achievable goal. For one, higher education can create and mandate an incentive for faculty members. Faculty members are required to reach a certain goal every few years in order to keep in tune with their instruction and career endeavors with the institution. Higher education should require that OER participation must also play an integral role. Moreover, a policy set forth with these incentives that provide support and encouragement will be the success of an OER initiative.

Creative Commons

Copyright laws are a troublesome spot for higher education. Copyright serves by protecting the creators work and also grants them monopoly rights. The internet has made it possible for content to be spread throughout the web at little or no cost and this has caused much disruption in copyright laws. Copyright laws have darkened the spirit for educators in academia to adapt causing great friction in OER platforms. Fortunately, due to the digital revolution a solution for copyright laws exists: Open licenses.

One of the most popular open licenses is the Creative Commons license. According to (OECD, 2007) Creative Commons released copyright licenses for public use in December 2002. These machine-readable licenses are solely implemented for creative material such as websites, blogs, music and most importantly educational materials. Creative Commons licensing created a new way of protecting copyright laws by also allowing the copyright owner to choose from a number of licensing options. These options not only protect the integrity of the work but also generate new ways of sharing and collaboration while protecting and abiding by copyright laws. Existing copyright laws is one of the most prominent barriers in the OER movement and technology. This open access in higher education is a great way for faculty to publish their scholarly work freely on the online without restrictions. Increased awareness of copyright issues needs to be outlined and discussed in higher education. Copyright issues are taken very seriously in higher education environments and these institutions need to pay close attention and inform their faculty or the new copyright policies.

Conclusion

Open Education Resources is a major technological tool that has taken higher education to a new level. A level that will need to be discussed and addressed before a successful OER platform can exist in any institution. Technological, user, economic, social and copyright/license support are key strategies that higher education should focus on in order to have a positive outcome on the OER movement. The diverse models discussed in this paper are resources that institutions can analyze and adopt. It is important that higher education is prepared to embrace both the success and challenges that follow the OER movement.

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