

The Importance of e-Learning as a Teaching and Learning Approach in Emerging Markets

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Abstract—Technological advances in information and communication technologies have led to the emergence of e-learning systems that can be used effectively as a teaching and learning approach. For emerging markets, e-learning is of special relevance, as it can provide access to education at a relatively low cost compared with traditional settings as there is no associated travel or housing costs. Additionally, internet access in emerging markets has increased steadily in the recent years.

This paper discusses the importance of e-learning as a teaching and learning approach and its relevance in emerging markets. The paper presents some findings from four sections of a Faculty Certificate of Online Training (FCOT) program conducted by GlobalNxt University. The learners consist of faculty from India (n=20), South Africa (n=19) and Malaysia (n=9), which are representative of countries in the emerging markets. The paper examines the implications of the findings, and concludes with possible directions for the future of e-learning as a teaching and learning approach in emerging markets.

Keywords—E-Learning, Emerging Markets, Faculty Online Training Certification, Faculty Training Program

1 Introduction

Technological advances in information and communication technologies have led to the emergence of e-learning systems that can be used effectively as a teaching and learning approach. E-learning relates to learning that utilizes electronic technologies to access educational curriculum outside of a traditional classroom. It can refer to a course, program, or degree delivered completely online (North Carolina e-Learning Resources, 2015 [1]). There are many terms used to describe learning that is delivered online, via the internet, ranging from distance learning, to computerized electronic learning, online learning, or internet learning, among others.

It is important to note that e-learning differs from distance learning, as the former is interactive and can be delivered through a variety of means both synchronously as well as asynchronously, while the latter is non-interactive (i.e., hardly any or no interaction between the learner and the professor and between the students) and can be delivered via the internet, a DVD or CD-ROM, in an asynchronous mode. Although the recent years have seen a proliferation of massive open online courses (MOOCs) offered on platforms such as edx.org, coursera.org and futurelearn.com, these courses tend to have a certain element of interaction but are, due to their nature with up to tens of thousands of learners in one course, less interactive than other e-learning programs.

This paper discusses the importance of e-learning as a teaching and learning approach and its relevance in emerging markets. The paper presents some findings from four sections of a Faculty Certificate of Online Training (FCOT) program conducted by GlobalNxt University. The learners consist of faculty from India (n=20), South Africa (n=19) and Malaysia (n=9), which are representative of countries in the emerging markets. The paper examines the implications of the findings, and concludes with possible directions for the future of e-learning as a teaching and learning approach in emerging markets.

2 Benefits and Limitations of E-Learning

A major advantage of e-learning is the elimination of face-to-face training and development costs (i.e., travel, lodging, meals), both in monetary terms as well as in terms of productivity loss, as learners spend time away from their daily activities and jobs in order to participate in the face-to-face training sessions.

E-learning courses are available 24/7, location independent, and provide effective and efficient training means for learners in geographically dispersed areas and across time zones. Such delivery allows for portability of the training (i.e., tablet/iPad, laptop, mobile phone that can be used for downloading files or assessing video and webinar links, etc.), which makes the learning convenient and on-the-go, especially with the proliferation of network, computers, laptops, PDAs and mobile learning.

Learners can also self-pace their study progress, catering to their own work-life balance, hence bringing about increased learner satisfaction and success. Not only can the interactive content in a good learning management system (LMS) or massive open online course (MOOC) captivate and engage the learner, it can also deliver the learning material in a more comprehensive and concise manner and can be designed to suit a variety of learning styles by using e.g. videos, text, discussions, vodcasts and other means.

Compared to traditional classroom learning, e-learning allows for a consistent delivery of the course content, as the online videos can be pre-recorded and shared with the rest of the class. This leads to scalability of e-learning, as the same course can be delivered immediately to numerous learners worldwide.

Moreover, with a good learning management system (LMS) or massive open online course (MOOC), expert knowledge can be communicated to and captured

effectively by an unlimited number of learners supported by interactive user forums and communities, while updated content and information can be disseminated quickly and cost effectively. Further benefits include the possibility of continued management of course quality as the entire course content, contributions and communications both from the professor as well as from the students are recorded in the LMS.

Despite the above benefits, there are a few limitations of e-learning such as upfront investment and development costs in e-learning solutions. Technology can also be a hindrance if there is a lack of infrastructure to accomplish the learning goals and processes, whether it is hardware or software related. There might exist a cultural barrier in e-learning and technology adoption, depending on the demographics, psychographics and the geographical location of the learners, which may predispose them against using computers, laptops, tablets, or smartphones for e-learning [2]. Finally, the lack of face-to-face interaction can be a potential disadvantage due to the impersonality and lack of body language related communication. To a large extent, this can be overcome with the increased use of synchronous tools in the e-learning environment.

3 Relevance of e-learning to emerging markets

For emerging markets, e-learning is of special relevance, as it can provide access to education at a relatively low cost compared with traditional settings as there is no associated travel or housing costs. E-learning can also be utilized as an educational tool to complement existing literacy programs in emerging markets (e.g. Philippines, South Africa, India, and Malaysia) where limited resources, poor infrastructure, and lack of physical access to higher education is widespread. Additionally, internet access has increased steadily in the recent years, with an internet penetration rate of 63 percent in China [3]. According to the World Bank, there is increased internet usage worldwide, both in developed as well as emerging markets [4]. Internet usage continues to be highest in the most developed regions, however, the increase in usage is highest in emerging markets, particularly in markets with the lowest usage in 2008 (e.g. annual growth of 23 percent in Sub-Saharan Africa over the period 2008 until 2015). As reported by Internet Society, there are currently more than one billion users in emerging Asia Pacific countries [5].

Given the high usage of smart mobile devices in remote areas, internet accessibility has become less of an issue in recent years. It is not uncommon to have more than one subscription/number which leads to extremely high internet penetration rates, especially in developed markets where rates can exceed 100 percent. Compared to some developed markets, this rate is not as high in emerging markets, however, the growth rate is certainly projected to outpace developed markets (e.g. central and Latin America with a projected annual growth rate of 23%) [6].

Although internet penetration rates have been growing in emerging markets, bandwidth might still pose an issue for users. This place added emphasis on appropriate instructional design and facilitation customized for emerging markets (e.g. limited/no videos, limited/no webinars and other live streams). E-learning offers plenty of oppor-

tunities for people in remote areas to connect and communicate with others, and exchange views and ideas through various means (e.g. email, chat, discussion board, team assignments).

4 E-Learning tools

Several e-learning tools can be used in the teaching and learning approach to enhance transfer of knowledge and aid better recall among learners [7]. Some of the tools are as follows:

- Announcement tools, emails
- Discussion Boards, Blogs, Wiki
- Videos, vodcast, podcast
- Content Authoring Tools
- Live Webinars
- Instant messaging, Skype, Whatsapp
- Social media tools - Facebook, Twitter

With the increased variety of e-learning tools, selecting a single format for an e-learning program can be challenging as there are a plethora of options to choose from, ranging from the very basic off the shelf type e-learning tools to the very complex, customized models that may be quite expensive [8]. Moreover, the format of the e-learning program could determine the effectiveness of the program in many ways. As internet access and bandwidth speeds vary greatly depending on the region and culture, synchronous web camera enabled webinars and 100 percent web-based programs with large graphical files, animations, and high definition videos may not be ideal.

In emerging markets where bandwidth is limited, an entirely new program may need to be devised. Given the potential issues with bandwidth in emerging markets, the use of bandwidth-intense tools may not necessarily be feasible. Although streaming videos might work well in some areas with good connectivity and appropriate bandwidth, in emerging markets with limited bandwidth, connectivity and expensive access, text-based tools might be more suitable. Specifically, the process of designing and facilitating online classes in emerging markets requires a good understanding of preferred teaching and learning approach, as well as the strengths and limitations of the technology available for delivering the e-learning program.

5 E-Learning as a teaching and learning approach in emerging markets

Data for this study was collected from four Faculty Certificate of Online Training (FCOT) programs conducted at GlobalNxt University in 2015. The FCOT is a 6-week online program, conducted via both synchronous and asynchronous mode. It is designed for faculty involved with some form of online teaching and/or who wish to embark on online teaching. The program aimed to equip learners with the basic

knowledge on teaching and facilitating online classes, designing online courses, assessments, and providing an effective online learning experience for students. The program covered aspects of e-learning including learning theory, learning design, learning tools and technology, online facilitation and interaction, online assessments, and academic integrity. To collect data, a qualitative online discussion forum approach was adopted.

The participants of the four FCOT programs consisted of faculty from India (n=20), South Africa (n=19) and Malaysia (n=9), which are representative of countries in the emerging markets. Participants were asked to post their views and perspectives on how they would go about designing and facilitating an online class in their own institutions. They were also asked to reflect on the plethora of e-learning tools and technology introduced in the program, and choose their preferred communication tools.

They were also encouraged to interact with the rest of the participants by probing and discussing further via the online discussion boards. This led to heightened social interaction among the participants as well as increased contextual influences, which impacted on the participants' statements and helped generate rich data [9], [10], [11], [12].

Qualitative content analysis was used to analyze the discussion board data [13]. Categories for coding were defined following an inductive approach where both authors separately analyzed the postings submitted on the discussion boards. To identify the emergent themes, each author separately listed the themes that resulted from the discussion board question. Next, the emergent themes were compared and consolidated, resulting in a subsumption of all categories, with an inter-rater reliability of 100 percent. A final analysis of the data further guaranteed summative reliability and allowed for a summative analysis.

6 Discussion and Findings

The following section presents the results of the summative qualitative analyses conducted.

The four main areas for categorizing the participants' preferred e-learning and communication tools included the (1) course opening, (2) course delivery, (3) course assessment, as well as (4) faculty attributes. As can be seen, participants used these four main areas to plan, organize, design, and implement a new online class. Within each area, participants documented the various e-learning and web 2.0 tools that they intend to use as their preferred communication tools, taking into consideration the profile and needs of students in emerging markets.

6.1 Course Opening

Participants recommended introductory webinars, both compulsory as well as non-compulsory sessions. Some participants suggested the use of a web camera for their introductory webinars, however, they were mindful that this might not always be

feasible in emerging markets due to potential bandwidth issues. Some participants recommended that the facilitator post an introductory announcement, opening the class few days prior, and detailing its syllabus and content overview to set clear expectations and guidelines.

The participants also advocated the use of an introductory video. Given the potential issues with bandwidth, participants agreed that this would work as an additional method as the students can choose to download the short video at their own free time. The participants suggested posting an introductory note and photo to the discussion board, which might be something both the facilitator and the students could adhere to, so that they can connect with everyone in the class. One participant mentioned the use of “selfies” to break the ice at an introductory level so that students would get to know each other better. Alternatively, the use of narrated PowerPoint presentations was proposed.

Another preferred method for opening a course include the use of emails for introductory purposes. The participants suggested the inclusion of course outlines, objectives, and outcomes in these opening emails. They also recommended the use of a “course overview document for clarity” that includes information on suggested readings and articles. This could be augmented by sending photos of the facilitator in his/her email.

The participants also proposed to use social media such as Facebook and LinkedIn to break the ice, although some participants voiced concerns about moving out of the LMS into social media, as seen by the quote

“Staying within one virtual space (the LMS), in my views, serves to support coherence and logical thought in student discussion and interaction. The sense of a single “learning space” also sustains social presence. External social network sites like Facebook, that are essentially open-ended, seem likely to encourage distractions and tangential activities rather than a focus on the course”.

An important area mentioned was an orientation session to the LMS, possibly with videos to explain the steps required in maneuvering the LMS. It should be noted, however, that such sessions are usually offered prior to the start of the program, for new students who are taking the online class for the first time. Again, videos may pose a problem in emerging markets due to potential bandwidth issues.

Some participants recommended an introductory face to face session to explain the LMS features and to avoid subsequent technological issues. However, this might not necessarily work in emerging markets with potential long distances to/from campus and insufficient infrastructure, which is the main reason why students are opting for an online study program. Participants also suggested the use of “navigation screenshots” to explain the LMS, though this should be the job of the tech support or student care team. Finally, participants suggested creating additional informal discussion boards, such as a peer support forum and a student care forum designed to enable students to get help when needed.

6.2 Course Delivery

To help students stay on track throughout the course, various approaches were suggested. First, the participants suggested to “Be sure to get students to participate right from the start”. Another participant recommended the use of a “participant diary” to record the daily activities that took place in the online class. The participants recommended the use of “online calendar tracking” to help students stay on track, which can be used by the facilitator to actively monitor student performance and “email those who are struggling”.

Further measures proposed were the use of discussion boards with set topics, and new ones regularly added on a timely manner to show faculty presence. This can be complemented with the use of open discussion boards for relevant topics. The results clearly indicated the importance of facilitator presence and engagement, and that the facilitator needs to open and close discussions in a timely manner, be active on the discussion boards, and promptly replies to messages and provides frequent feedback. If discussions go off track, the facilitator has to “steer discussions” or “manage discussions”. One participant mentioned the use of “role play in discussion boards”, although it was not explained how this would work. Discussion boards were recommended to be both graded as well as ungraded so it can be seen as a “fun, non-credit bearing exercise”.

The participants also suggested conducting webinars, both at regular and irregular intervals. These webinars should include discussions and polls as well as Q&A. Separate Q&A sessions (e.g. “fixed consultation slots”) can be scheduled to help weaker students. Additionally, webinars conducted by industry speakers as well as students can be organized.

The participants proposed the need for the LMS to be mobile friendly. The use of social media such as Facebook, Whatsapp, SMS and GooglePlus as well as Youtube, Skype and phone calls were mentioned. Indeed, social media generates instantaneous posts and eliminates geographic and time boundaries, connecting learners that are physically separated but digitally connected. Social networks are capable of reaching a greater audience as it allows learners to share information, resulting in more online discussion and views. Social media is an economical and affordable alternative to traditional face to face teaching and learning methods, as it allows for two-way communication between students and the professor. To reinforce this, one participant suggested the need to:

“Encourage students to share personal stories and experiences and set an example; use the tools available to create a sense of immediacy; encourage students to become involved, allow the uploading of files including images, PowerPoint and videos.”

The use of case studies, wikis and reflective blogs were also recommended. For group work, the participants suggested the use of a name for each group and the use of a group logo to build team cohesiveness and bonding.

The participants also suggested the use of blended learning though, it should be noted that this might not necessarily be the best approach for emerging markets.

The use of interactive graphs, images and charts was suggested in addition to webinars and videos, while podcasts and mobile apps were suggested. Announcements and the use of emails (“if necessary, for one-on-one communication”) throughout course delivery were recommended. The use of an e-library, articles, and links to external sources were also seen as an important component of effective course delivery. To sum up on course delivery, one participant mentioned:

“I think that as a facilitator, we have to have a "bag of tricks" at hand” ... the time consuming way of interaction means a need to plan online presence to avoid 24/7 presence ... we must balance the use of technology/bag of tricks with our role as a facilitator/academic/lecturer”.

6.3 Course Assessment

For course assessment, the participants proposed the use of relevant rubrics for evaluating the following: discussion boards, quizzes, essays, individual assessments, team assessments, self-assessments, peer assessments, weekly multiple choice questions, self-assessments with feedback, learning portfolios, summary videos, and rankings. Discussions about open book vs. closed book exams and plagiarism/academic integrity and honesty also took place.

6.4 Faculty Attributes

In terms of faculty attributes, the participants recommended that faculty members should have the ability to connect and to be dynamic, knowledgeable both in the subject as well as an “authority in an online setting”. Other important attributes of an online facilitator cited include: be a motivator, encourage students and make them feel safe, possess good planning and time management skills, confidence, patience, respect, trust, and power.

7 Conclusion

This paper discusses the importance of e-learning as a teaching and learning approach and its relevance in emerging markets, where bandwidth is limited, and an entirely new e-learning program needs to be devised. Contrary to developing markets, the findings showed that the use of bandwidth-intense tools may not necessarily be feasible in emerging markets. The findings reinforced the use of four main areas for categorizing the preferred e-learning and communication tools in emerging markets, namely (1) course opening, (2) course delivery, (3) course assessment, as well as (4) faculty attributes.

Online facilitators can use these four main areas to effectively plan, organize, design, and implement teaching and learning initiatives in emerging markets. Within each area, various e-learning and web 2.0 tools can be used, taking into consideration the profile and needs of students, as well as the internet access and bandwidth speeds in the various emerging markets.

Given that the growth rate in internet usage in emerging markets is projected to outpace developed markets [14], institutions need to prepare for the future growth in e-learning in emerging markets. As a start, institutions can consider designing and delivering learning content in a mobile-friendly environment, or take a step further to invest in the creation of mobile learning apps where learners can view and share content on the go [15]. This would certainly contribute to a rise in access of e-learning to learners from all around the world, especially in emerging markets.

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