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Using mobile technology to deliver distance education in developing countries [984 words]

Introduction

This essay discusses using mobile technology and asynchronous communication to provide distance education in developing countries. Because people in developing nations have limited access to computers and networked connections (Sagarmay, 2011, p. 33), mobile technology offers a realistic means of delivering distance education. Also discussed is how mobile technology can be used to overcome the infrastructure issues that many developing countries face. Mobile technology can surmount these problems because many people in developing countries are already using mobile devices with wireless capability far more than traditional computers (Mohamed & Mohammed, 2013, p. 14). Mobile technology also has the advantage of not requiring bandwidth connections (Sagarmay, 2011, p. 38). Finally, by combining the use of mobile technology and asynchronous communication, learners in developing countries can adapt their education to when their limited access to technology is available.

Benefits of Distance Education and the Issues Preventing It

Distance education is one of the best ways to address the educational needs of developing countries, yet there are many obstacles standing in its way. Due to a severe shortage of qualified teachers, Mohamed and Mohammed (2013, p. 15) suggest that distance education can address this shortage because distance education requires fewer teachers, and learners are not required to attend physical schools. Nyerere, Graveir, and Mse (2012) posit that distance education is "fast becoming an accepted and indispensable part of the mainstream educational platforms in both

developed and developing countries, with particular emphasis in the latter" (p. 186). Also, the effects of globalization have encouraged the growth and expansion of cross-border education, in addition to creating greater access to information for under-served populations (Fakinlede, 2012, p. 309). Unfortunately, there are still several issues facing the establishment of effective distance education programs in developing countries.

Problems with infrastructure, electricity, and lack of funding can prohibit the development of successful distance education programs. Ibara (2012) explains that in developing countries, "unlike the developed countries of Europe, the problem of epileptic power supply still persists" (p. 22), making consistent and readily available power for computers and networked connections difficult. Many people in developing countries cannot afford computing resources (Nyerere, Gravenir, & Mse, 2012, p. 200), and governments do not have the capital to build the infrastructure necessary to link them. Sagarmay (2011) describes how some developing countries have built regional multimedia centers, but this has done little to increase developing countries' participation in a "global information society" (p. 34). These are just a few reasons why mobile technology would be a viable option for providing distance education to developing countries.

Advantages of Mobile Technology in Delivering Distance Education

Because the delivery of distance education using computers and networked connections is not feasible in developing countries, the use of mobile technology to administer distance education is a possible solution. According to Mohamed and Mohammed (2013), "the combination of mobile technology and OER will enable institutions, organizations, and companies to narrow the learning divide so that there can be education for all" (p. 15). One

reason that mobile technology can help narrow the learning divide is because many people in developing countries already own mobile devices or tablets with wireless capability (Mohamed & Mohammed, 2013, p. 14). By making use of technology that is already widely used, little time and money will be wasted in developing the infrastructure necessary to deliver distance education by more traditional methods (Nyerere, Gravenir, & Mse, 2012, p. 187). Also, many of the mobile connections necessary to deliver distance education are already in place (Fakinlede, 2012, p. 313). Finally, access to OERs via mobile technology allows self-paced learner flexibility and possible accreditation. Mohamed and Mohammed (2013) describe how MIT has developed OERs called MITx "that will allow teachers to organize and present course material to enable students to learn at their own pace...and demonstrate their mastery of subjects to earn a certificate of completion" (p.19). Another advantage to delivering distance education via mobile devices is that communications can be exchanged asynchronously, which is often far more practical for learners in developing countries.

Advantages of Asynchronous Technology

Because synchronous technologies often require large amounts of bandwidth, reliable mobile networks, and up-to-date hardware and software, learners in developing countries cannot realistically take advantage of them. When the educational institution and fellow classmates are in different countries, the scheduling challenges associated with synchronous communications only become worse (Fakinlede, 2012, p. 315). According to Fakinlede (2012), a distance learner in Nigeria, "asynchronous media tools...are less challenging and more attractive in practical terms. They provide the DE student with better access and a more stable Internet and online learning platform than synchronous media" (p. 316). Not only are they more practical, but they allow for greater learner flexibility (Fakinlede, 2012, p.316), giving learners in developing

countries the option of engaging in educational experiences when scheduling, access to electricity, or the availability of technology allows.

Challenges to Mobile Distance Education in Developing Countries

One of the major challenges facing mobile distance education in developing countries is that many of the resources available are in English (Mohamed & Mohammed, 2013, p. 17). This creates a language barrier that can be difficult for many learners to overcome. Others feel that mobile distance education will not "come of age" until all aspects of education (content delivery, project work, searching for information, assessment, accreditation) can be achieved by solely using a mobile device (Sagarmay, 2011, p. 38). At this point, only the most advanced mobile devices can provide this type of service.

Conclusion

Despite infrastructure and economic issues that are common in developing countries, distance education is the most viable option for providing education to under-served populations. Because mobile technology is readily available, does not require advanced infrastructure, and allows for learner flexibility, it is well-suited as a platform for delivering distance education to people in developing nations. By using mobile technology asynchronously, distance education students in developing countries are able to more effectively participate in learning activities.

References

Fakinlede, C. (2012). Cross-border distance education (CBDE) in a wired world: The experience of a student in Nigeria. *Turkish Online Journal of Distance Education*, *13*(4), 309-319. Retrieved from http://tojde.anadolu.edu.tr/tojde49/index.htm

Ibara, E. C. (2012). Institutional framework for developing sustainable, quality distance education in West Africa. *Educational Planning*, *20*(3), 19-30. Retrieved from http://connection.ebscohost.com/c/articles/82315936/institutional-framework-developing-sustainable-quality-distance-education-west-africa-guidelines-engines-policy-options

Mohamed, A., & Mohammed, S. (2013). Open education resources and mobile technology to narrow the learning divide. *International Review of Research in Open and Distance Learning*, *14*(2), 14-27. Retrieved from http://www.irrodl.org/index.php/irrodl/article/view/1530

Nyerere, J., Gravenir, F. Q., & Mse, G. S. (2012). Delivery of open, distance, and e-learning in Kenya. *International Review of Research in Open and Distance Learning*, *13*(3), 185-205. Retrieved from http://www.irrodl.org/index.php/irrodl/article/view/1120

Sagarmay, D. (2011). Effective distance learning in developing countries using mobile and multimedia technology. *International Journal of Multimedia & Ubiquitous Engineering*, *6*(2), 33-40. Retrieved from http://www.sersc.org/journals/IJMUE/vol6_no2_2011/4.pdf