The Digital Divide and MOOCs

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Introduction

This paper will examine the effect Massive Open Online Courses (MOOCs) are having on impoverished people within the United States. Where data allows, discussions will be limited to learners living below the federal poverty guideline. Few studies exist focusing on this demographic so wherever necessary, other data is considered. In such cases, inferences and assumptions are clearly distinguished.

Individuals living below the poverty line make up the majority of those on the losing end of the digital divide. A 2013 study by Dr. Xiaoquan Zhang established a positive relationship between Internet use and income level on a global scale. The study examines the Internet Consumption Model and concludes that individuals do not buy the Internet when it is above their budget line. This study is supported by data reported by the U.S. Census Bureau, which demonstrates that less than half of households below the poverty line have Internet access (2013).
Access to the Internet is paramount when discussing MOOCs as the Internet is the primary means of delivery for these courses. In today’s technology-based era, a student’s computer literacy is predictive of their overall learning success (Shannon, 2008, p. 1).

**Definitions**

**Massive Open Online Course (MOOC)**

MOOCs use the Internet to deliver recorded university lectures with supporting material (Callaghan, 2013). Usually these classes are free and certificates of completion can be obtained at a low cost (Benderly, 2012).

**Poverty Guideline**

The poverty guideline is an ambiguous number that varies based on the year in question and the number of people in a given household. For this paper, households with an annual income of $25,000 or less in 2013 are considered below the poverty guideline (Office of the Assistant Secretary for Planning and Evaluation, 2013).

**Information and Communication Technology (ITC)**

Information and Communication Technology (ITC) is a term often used to describe an individual’s ability to effectively use the Internet. Literacy of ICT is described as a sound understanding of the nature and operation of technology systems and the ability to use these systems (Shannon, 2008, p. 6).

**The Digital Divide**

The digital divide is the gap between those who have ITC and are using it effectively, and those who do not (Loo & Ngan, 2012, p. 888). More specifically, Zhang defines the digital divide as the gap between those who have access to the Internet and those who do not (2013).

**The MOOC Revolution**
MOOCs are being lauded throughout academia as the “next big thing” (Buchanan, 2013). Walter Buchanan, President of PRiSM, (a journal published by the American Society for engineering education) further states:

*Nontraditional adults returning to college now outnumber traditional students.*

*These adult learners, who often cannot leave work to attend college during the day, have up until now been limited to evening courses. Numerous students, traditional or nontraditional, are also constrained by the soaring costs of college.*

*MOOCs offer assistance in both cases; but whether they are the best answer is yet to be determined.*

The co-founder of Coursera, Andrew Ng, believes that MOOCs “offer able individuals everywhere a revolutionary opportunity for top-flight education.” Ng goes onto cite his audience as “the poor kid in India, the 40-year-old single mother who cannot take time off” (Benderly, 2012). These attitudes toward accessible learning are commendable, but strongly indicate that the future of MOOCs depends upon the field pioneers targeting individuals not currently participating in our higher education system.

The initial results of research on the potential of MOOCs are promising. They have the potential to reach people around the world, especially those who may otherwise not enroll in college (Paldy, 2013). Around the world, hundreds of thousands of individuals have signed up for MOOC courses. Who are these individuals, why they are taking the courses, and exactly how many of them exist remains a mystery.

While little is known about MOOC users, some scholars suggest that they are primarily men with some college education (Christensen, Alcorn, Steinmetz, Bennett, Woods, & Emanuel, 2013). MOOC critics have already written off a majority of the population claiming
that MOOCs only appeal to those who are motivated and already high-achieving (Hu, 2013, p. 11).

After performing an exhaustive search in preparation for this paper and finding no demographic data of MOOC users, I have concluded that no one actually knows who is using MOOCs. A recent study conducted by a group of students at the University of Pennsylvania confirms this finding in their recent paper on the same topic. Their paper concludes “The individuals the MOOC revolution is suppose to help the most – those without access to higher education in developing countries – are underrepresented among the early adopters (Christensen, Alcorn, Steinmetz, Bennett, Woods, & Emanuel, 2013, p. 1).”

Without a quantitative study of the demographics of MOOC users, it is impossible to determine who is, and who is not, benefitting from the MOOC revolution. The evidence shows that individuals living below the poverty line do not have Internet access (U.S. Census Bureau, 2013). In the absence of data proving otherwise, it is reasonable to infer that those without Internet access are not among the early adopters of MOOC education.

**Closing the Digital Divide**

Closing the digital divide is necessary, both for the educational health of our nation and for the longevity of the MOOC business model. Drew Tiene (as cited in Brooks 2005) assesses the situation in the following way:

“One of the most unfortunate by-products of the digital divide is its negative impact on educational efforts throughout the developing world…Without access to ICT, students in less developed countries may fall even further behind their peers in other nations.”
A 2010 study by Sangmoon Kim concludes that technology adopters tended to have higher socio-economics statuses. Furthermore, the greatest predictor of continued use by adopters was found in the social implications of Internet usage. In other words, individuals were more likely to continue to use the Internet and increase their technological skill set if they were connected socially online. By contrast, non-adopters were characterized as those who did not create social connections online and were more likely to limit or eliminate their use of ITC altogether. To close the digital divide, a social approach to introducing and maintaining the technology is necessary to encourage continued use and growth of basic ITC skill sets.

In addition to building a technology-rich social structure within impoverished communities, MOOC ventures also face the challenge of funding growth projects. While some ventures are not-for-profit, others are exploring various revenue streams. Most MOOCs are connected to a university and depend heavily on their parent company for funding. Convincing stakeholders to enable and equip our nation’s poorest people without the expectation of a monetary return on investment is a difficult proposition.

Conclusion

In order for MOOCs to fully realize their potential and create a revolution within the educational system, they must do more than place their content online. They must also pioneer efforts to bring new users to the Internet and create evangelical users within each community. They must provide support and infrastructure that encourage technological integration beyond social media and email (Shannon, 2008, p. 53).
REFERENCES


