

DIGITALIZATION IN HIGHER EDUCATION: COSTS AND BENEFITS

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Introduction:

I am very happy to have a special invitation from my friend Dr. Sheela Nabar to write this paper, and express my views for the International Conference organized and held at the Russell Square International College, Mumbai. Unfortunately, prior commitments preclude me from attending the conference, which, if possible, I would have very gladly done.

The advent of digital (online) course in US higher education can be traced in mid-1990s when computers started becoming a commonplace, and learning/teaching with the help of computers became the new thing to do. While initially only few departments such as sociology and history found this to be a very suitable way of offering classes, the modern time period has seen online classes mushrooming all over the world. Now, almost all departments have taken this method of instruction as a convenient delivery process. This paper addresses issues involved in online education and brings about the expected challenges to be faced if this way of offering higher education becomes widespread.

Why Digitization in Higher Education?

The modes of teaching in higher education have drastically changed in last 15 years. While some old guards still stay with the old “Chalk and Talk” technology, it is very rare that in these days professors do not use some modern technology in class-room delivery. Abundant information on any subject is available on such sources as “Youtube”, “Facebook”, “Wikipedia” and “Google”. The online education therefore has added new options of teaching, has created a wide variety of new courses, and has increased the enrollment in many academic institutions.

This type of delivery has some substantial conveniences. It has no regional boundaries, so the internationalization of education has become a common phenomenon with satellite campuses mushrooming all over the world. New ways of teaching may include development of new information and communication technologies such as cable and satellite transmissions, audio and video conferencing, PC software and CD Roms and in particular the Internet sources. This wide variety of means increases the accessibility to the rest of the world. For example,

University of California (UCLA) Extension jointly with Home Education Network is offering more 50 courses over internet reaching to 44 States of US and 8 countries. Stanford University, in California is preparing first online engineering program—a Masters in Electrical Engineering. Similarly the Massachusetts Institute of Technology (MIT) in Boston offers numerous graduate classes online, while there are numerous other universities that stay busy recruiting students for their online education.

In India there are many institutions such as IITs and IIMs that have in recent years opened satellite campuses abroad, or have signed memorandum of understandings (MOUs) with some foreign universities to offer online education.

In our university (Metropolitan State University of Denver) first online course was offered in 1996, and currently (in 2013) there are roughly 8000 students enrolled in at least one online class. Online teaching has been seen as a “win-win situation” for all parties involved. The university administration loves to have higher enrollment that brings in more tuition income as well as the growth. Moreover, the students in online class rarely visit the campus, so, traffic, parking and other physical facilities such as restrooms, cafeteria, gymnasium are rarely used. The tuition paid by online students is about the same (if not more) as the tuition paid by on-campus students. Many students in online classes appreciate the lack of strict demand on their times. They can study when the time is most appropriate, they can stay away from the traffic and commute and the pace can be selected by them. Instructors of online classes also understand and sometimes appreciate the lower need for being on the campus. For some professors the preparation involved can be less taxing than the lecturing on-campus classes.

In general, therefore, all the stakeholders of online education are gaining the convenience it has created. No wonder then the online sections have been filling up their enrollments faster than the “on campus” sections in last few years. The online class delivery is not without some anticipated problems however. First, if the student wants to cheat the system and take outside help, there are few warranties against less than faithful education. While computers can manage the time for which the tests are allowed to be taken, they cannot control who is the receiver of the questions and provider of the answers on the other end. Some kind of a written promise or a signed oath of integrity may help in this regard. However, there is not enough police work to completely protect from plagiarism.

Second way to infuse security in teaching online classes is to require some tests to be taken on the campus in a secured environment such as testing centers at the campus. This precludes students from far distance and scheduling final exam for each student in a large class is a nightmare.

In a recent survey (2004) Kim and Bonk have argued that online class teaching has added the value to higher education in USA. It is estimated that roughly 4 million students take some kind of online education in US. As illustrated in numerous issues higher education magazines, during last 25 years the excitement and enthusiasm for digital alternative has existed with pervasive sense of e-learning gloom, some disappointment and some litigation attempts. Navigation of effective online education therefore requires ability to innovate and change the pedagogy, respond positively to the students' dynamic expectations, keep the low operating budget and upgrade the standards of education.

Challenges for Higher Education in USA and Digitalization:

Since the advent of financial crisis of 2008 the higher education system in USA has been under tremendous stress. In Colorado for example, for three successive years (2008-2010) the higher education budget was cut by 30% . (MSU-Denver, Handbook). In fact some other states, such as New Jersey, California, and Connecticut were facing even more challenging problems. When state funding is cut by such a high degree, "across the line cuts" or reduction in budget of all departments becomes almost essential. In state supported higher education institutions therefore, increase in tuition fees was seen as the last resort or an essential evil.

Some people may think that the budgetary slowdown was a crisis only in the state supported schools, but that is a misconception. While the states were experiencing lower tax revenues due to the economic slowdown, the private colleges were equally at loss. This is mainly because in the financial crisis, the stock market retracted by roughly 25%, and one must recognize that most of the investments of private universities were in the stock related assets. Therefore there has been a budgetary gloom in private universities as well.

As a consequence of lower funds higher education institutions were not only cutting faculty salaries, having hiring freeze, dismantling entire departments (or some programs) , but also were willing to offer more and more cost saving digital classes. So by 2013 we have this unique situation for digitalization that it must help administration save funds and simultaneously improve the quality of education. Several universities are trying to improve the quality of education by hiring nationally some outstanding online teachers. In a recent pilot program initiated by Harvard University famous professors are digitalizing there lectures to be sold for similar classes in other universities. Thus by paying some fee, other universities are buying the entire course taught on the digitalized lecture series. While there is some merit to this arrangement, this obviously makes some other professors obsolete. This can be perceived as

an indication that jobs are at stake for some established faculty members if the online education is done en masse. Second important challenge for digital education is the training and innovation willingness of the faculty. Especially the old timers, who may inhibit reluctance to learn and innovate, might detest the online education which requires being at the top of change. Hence mentoring the faculty in online offering comes from the young generation to the old generation, a phenomenon which may not be a welcome sight for some stubborn individuals!!

Technology dynamism has played an important role in the development and expansion of digitalization. Accordingly many universities have reported an increase in use of online tools. Several studies have reported cases related to the use of blogs to promote student collaboration and reflection. "Some researchers also have promoted plausibility of using "wikis" for online student collaboration and podcasting is beginning to garner attention from educators for its instructional use. Although some discussions in the literature relate to effective practices in the use of emerging technologies for online education, empirical evidence to support or refute the effectiveness of such technologies, or, perhaps more importantly, guidance on how to use such tools effectively based on empirical evidence , is lacking" (Kim-Bon (2006) page 24) Thus we are left with directionless path of future development in online education modifications. More effort has to be exerted in finding simple ways of offering online education.

Third, there is a major concern of digital divide to be created by excessive use of technology in teaching and higher education learning. As more and more classes sue the digital technology those who do not have an access to the modern equipment, may fall behind. This problem is more acute in developing countries where the availability of internet resources is scanty and limited. Policy makers have to keep an eye on the widening digital divide and have to come up with solutions that would make higher education inclusive of all strata of society. In India this digital divide is more widespread so actions have to be taken to make it less stressful to the future economic growth.

In conclusion, we can point out that digitalization has helped transmit education faster, more efficiently and at a lower cost, but the challenges for its future delivery are unspecified and somewhat unpredicted. It will be interesting to see how we tackle these challenges in futures. The success or failure of higher education system not only in USA, but world over, is dependent upon our effective answers to these challenges.

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