
Distance Education Challenges: Teacher- and Student-Related Issues

Aleksandar Bulajic
LANB@45.dk
LANB, Buddingevej 48
Kongens Lyngby 2800, Denmark

Samuel Sambasivam
ssambasivam@apu.edi
Azusa Pacific University
Azusa, CA 91702, USA

Abstract

The virtual world created by the Internet revolution has moved education to Cyberspace. Education resources that previously were owned solely by educational institutions and teachers is now available to a wider audience who has the time and interest to read, learn, research, and contribute. Enormous amounts of education resources cross the borders of educational institutions, organizations, and countries to introduce issues that were unknown in traditional classrooms. Profit-oriented, privately owned education providers challenge traditional venues and bring market competition to the field of education. This paper discusses the issues and challenges that Internet-based distance education introduces to the educational institutions, teachers, and students, and is based on the authors' own experience.

Keywords: distance education, distance learning, educational institution, teachers' issues, student issues, online education, Internet revolution.

1. INTRODUCTION

Distance learning, otherwise known as correspondence courses, has been around since more than a hundred years ago, and became more developed by audio and video and tape lessons (Valentine, 2002). However, distance learning as it is known today is based on the communication technology revolution and worldwide Internet connections. While long-distance communication via telephone and postal service can be too expensive for most people, the Internet, gratis e-mail messages, and Voice over Internet Protocol (VoIP) communication open new possibilities. Text, picture, sound, and video can be not only sent and received, but—even more important—

shared by individuals, communities, and among the worldwide population. The equipment necessary to connect to the high-speed networks is growing cheaper, and libraries and universities provide free access to these facilities in many parts of the world.

The wireless revolution enables access to the communication channels anytime and everywhere where Wi-Fi radio waves are available. Free Internet access is available in restaurants, in buses, on the train, and in airplanes. Mobile Internet cards enable access in the garden, on the beach, or high in the mountains.

The communication revolution gives anyone free access to an enormous amount of education materials. This can be advantageous for those searching for data and information, regardless of whether they are researchers, students, or common people. However, the enormous availability of materials necessitates spending more time to find the correct information. Different opinions and information create confusion and doubt as to accuracy, as well as causing questions about the credibility of a source of information.

Education generally requires a structured approach and continued verification milestones to measure progress. Education materials and programs need to be verified and accredited if an education degree is to be recognized as valid. This system must now be applied today to the new educational program known as distance education, distance learning, or online learning. Many would say that to achieve all the advantages of distance learning it is only necessary to transform the materials to the digital form.

While the concept is easy enough to describe in a few words or sentences, the implementation can be a challenge. This paper describes the challenges and issues that greet those who prepare education materials evaluate learners' progress, and those who use these materials to expand their field of studies by searching for the solutions described through homework and assignments. Both teachers and students have their own issues and challenges.

2. THE RELATED WORK

The theoretical foundation for distance learning is not yet clear, and the rapid development of new technologies and the appearance of different terminologies, such as "virtual, open, distributed, distance education", create conceptual confusion (Garrison, 2000). Garrison (2000) further asks whether a distance education theory captured all possibilities available through the latest developments in the field of communication and information technology, and whether the distance-learning field possesses principles and concepts that can "explain and predict developments in distance education in the 21st century" (Garrison, 2000). Valentine (2002) established that issues related to distance education are caused by problems related to the technology, administration, instructional methods, or the students. Valentine

(2002) argues that the most thorough definition of distance education is Desmond Keegan's definition that says, "Distance education and training result from separation of teacher and learners, which frees the student from the necessity of traveling to fixed place, at a fixed time to meet a fixed person, in order to be trained".

MIT launched Open Courseware that aims at achieving a high availability of learning materials, improving the quality of education, and adapting learning materials to their context of use (Schuwer & Kusters, 2014).

The Open Educational Resources (OER) are an initiative to create generic building blocks to design learning materials that offer varied learning paths, which can be adapted for each student's specific needs and reduce overall costs related to the preparation of learning materials (Schuwer & Kusters 2014).

The OER and Massively Open Online Courses (MOOC) attracted educators searching for educational materials available on the Web, in order to include such materials in both traditional and distance education programming (Kelly, 2014).

Bowen, et al. (2012) "measured the effect on learning outcomes" and "conducted speculative cost simulation" by assigning students at six public university campuses to take "machine-guided courses" and traditional face-to-face instruction. They found no difference "in terms of pass rates, final exam scores, and performance on a standard assessment of statistical literacy", and concluded that "machine-guided instruction accompanied by an hour of face-to-face instruction each week" can "significantly reduce instructor compensation costs in the long run, in large introductory courses".

Kimball (2001) acknowledged that "many institutions introducing distance learning spend a large amount of their resources (both time and money) on training faculty to manage the new technical and administrative aspects of distance courses. Instead, faculty needs to learn to manage critical dimensions of the new environment in which their courses are taking place, dimensions like metaphor, meaning, culture, roles, time, awareness, and collaboration". Kimball (2001) further concluded that "faculty members who are most successful

with distance technologies see them as actually providing some qualitative advantages”.

Zawacki-Richter (2009) used the Delphi technique to examine the opinion of “distance education experts” about “(1) categorization of research areas in distance education, (2) their importance, and (3) the most neglected areas of distance education research”. Zawacki-Richter (2009) concluded that interaction and communication in learning are ranked highest on the micro level and future research “should be on the pedagogical impact of educational technologies on teaching and learning and on capacity of social software, Web 2.0 applications, and mobile devices to foster social interaction and to support flexible learning”.

Chen (2014) argues that “systematic, extensively published research on MOOCs is unavailable”, and provides a list of challenges that MOOCs deal with, such as “questionable course quality, high dropout rate, unavailable course credits, ineffective assessments, complex copyright, and limited hardware”.

Marty (2014) analyzed the process of industrialization of French education and the transformation of the organization’s culture from a “state-controlled public good” to a “commercial and industrial activity”. Replacing civil servants within the private sector “in order to be profitable” requires estimating values “of a particular training course (how much it is worth on the market?) and the workers’ values within the institution (what do they value in their educational work?)” (Marty, 2014).

Eaton (2001) describes the USA, Australia, and the United Kingdom as “major exporters of higher education through electronic technology”, and India and South Africa as “heavy importers of distance-learning consumers”.

“China, Thailand and Japan employ their own distance learning technologies to develop their own programs and degrees” (Eaton 2001)

3. TEACHERS ISSUES

In this section are discussed following issues:

- Preparing and delivering materials in the digital form,
- Communication overhead,
- Resistance to technology changes,
- Technology misuse.

Preparing and delivering materials in the digital form

Besides solid knowledge about their subject, teachers need more technical skills to develop educational materials. Even though it can be argued that teachers are already using the same amount of time to prepare text and presentation for lectures, distance learning requires in-depth knowledge and experience regarding the technical platform. While traditional education lectures can be recorded on video, delivering recorded material over a network introduces new challenges.

Although it can be argued that the OER approach offers reusable educational resources, the OECD reported that “adapting OER and localizing it to the context can be a difficult and expensive process” (Schuwer & Kusters, 2014). The negative impact of sharing and reusing the OER can include resistance of the material’s creator because of a “lack of reward and recognition, and a possible negative impact on reputation” (Shuwer & Kusters, 2014) . Garrison (2000) noted that “the role of the teacher was largely simulated by way of written instructions and commentary”.

Communication overhead

Even in small student groups, teachers can get too much email and waste time on cleaning out the mail box every day. If there are more mail messages waiting to be answered, then answers need to be short and direct, and this causes the answers’ quality to be affected.

Resistance to technology changes,

The new generation of learners requires the educators to apply these higher levels of knowledge and theories to real-life issues. While questioning the teacher’s authority was a rare exception for previous generations of students in the traditional education system, the new generation requires that the teacher, besides demonstrating good theoretical issues, is also innovative (Teras and Herrington 2014). New digital generations of students are now requiring the application of theoretical knowledge to solve practical issues. Teachers are continuously challenged to demonstrate a high level of knowledge about emerging technologies. “Innovation also tends to be translated quite literally as ‘technology’, whereas pedagogy—either online or offline—seldom receives equal attention” (Teras and Herrington 2014).

Valentine (2002) pointed out that quality of distance education is affected by the quality of instruction, hidden costs, misuse of technology and the attitudes of instructors, students, and administrators. This affects the quality of the educational environment.

Traditional teachers often feel technology is a convenience that will overtake their jobs. Another subject of concern is the lecture written in the digital form. Once uploaded and downloaded on the student computer, these lectures can be distributed without the author's permission. There is also a risk that education institution could replace the author with a lower-paid teacher. In that case, replacing the teacher can led to students moving too. However, such emotional connections in the case of distance learning are rare.

Technology misuse

Technology misuse opens new fields of research: how to expose plagiarism, identify illegitimate help, and how to effectively recognize a student and the student's work?

Authentication of student work can be an issue, especially in distance education. Student work authentication is even an issue in cases of traditional education, especially today when wireless and Bluetooth technologies provides plenty of spyware and gadgets that can be used even in a classroom for illegal communications and to help during examinations.

4. STUDENTS ISSUES

The following is a list of issues that affect distance learning students during the study period:

- Accreditation and degree recognition issues
- Financial issues
- Study program requirements
- Technical platform issues
- Support issues
- Social issues
- Personal issues

The longer study time increases a student's risk to experience some of the above-mentioned issues.

Accreditation and degree recognition issues

The study period is, in most cases, considered an investment. The student expects that an educational degree will open more opportunities

to find a good and well-paying job, and increase their personal competitive advantage on the labor market. Therefore, the distance education degree, along with its accreditation and recognition, can be an important factor.

However, the accreditation and degree recognition across a country's borders can be an issue. The validation of a foreign diploma and recognition of the earned degree comes into question and often requires additional domestic studies to be fully recognized.

Financial issues

The financial issues are important consideration and even the ranking of the educational institution is very important. Often students choose what they can afford.

Study program requirements

The requirements of the study program can affect a student's decision. For example, some study programs may require short visits and stays at a educational institution campus each year, or even each semester. Such requirements increase financial costs and could prevent students with jobs from participating in such a study program.

Technical platform issues

The authors' own experience is that there are technical issues related to the technical platform, account administration, and access to the common functionality used for delivery of education materials and assignments. Communications with teachers and fellow students can take a lot of time in the beginning, but in later phases of study the most irritating aspect can be software unavailability or slow response times. Slow response times can be attributed to older computer equipment or low-speed Internet connections.

Backup and recovery procedures are an important part of the technical platform in order to protect from loss of student work.

Support issues

Different time zones and asynchronous communication while using distance education require 24/7 technical support and high site availability. Such good technical support can be expensive.

It is very important to have a prompt answer from a teacher. Waiting for an answer from a teacher can waste time and discourage the

student. Written communication with a teacher takes up more time than a verbal discussion, but for most human beings, in the case of a verbal discussion, it can be difficult to precisely reproduce the discussion's contents.

Garrison (2000) noted that "there is no recognition that written communication may be qualitatively different from verbal discourse when guiding students", and "the dependence upon written communication seriously constrains and limits the role of conversation".

Social issues

Social issues can be varied. Distance education is a journey by an individual, and consists of self-study. Contacts with teachers and fellow students are established through e-mail, video conferences, and video presentations.

While this can be an issue with groups of older students, the newer generations of student have since their early days communicated with friends by exchanging electronic messages, pictures, and videos, and find this environment familiar. This issue can also be an advantage for the generation of adult learners that already have a job, a family, children, and friends.

Personal issues

Personal issues affect all generations and these issues can be described as commitment, motivation, and self-organization and control. The distance student's individual ability to organize their time and complete assignments is a critical success factor. The distance student can access lessons any time, but distance learning has precise deadlines for assignment delivery. Delays and falling behind the due date can create a lot of pressure and frustration, and a student may drop out of their education even if it means financial loss.

5. CONCLUSIONS

The communication revolution, globally available access to a high-speed network, and the enormous amount of educational materials stored in the digital form bring new opportunities to the education system. This development, based on the implementation of advanced technologies, opens the possibilities to commercialize an educational system that has been traditionally state-owned and financed, or—in the case of private educational institutions—sponsored by volunteers who had a

need for innovation or want to promote own brand, or by benefactors.

The commercialization opportunity attracted many players who were ready to invest and risk their assets. Development based on an advanced technology often brings chaos to the market. Well-established names want to keep their established relationships and new names are forced to be inventive in order to compete. Competition for students who are spread all over the world has forced even the most prominent educational institutions to provide distance education and degrees that can be completed online.

Distance education brings a wide variety of issues to all involved parties—the educational institutions, teachers, and students.

Traditional, brick-and-mortar educational institutions can experience virtual classes as a convenience that moves education to cyberspace. However, the lack of the clear theoretical foundation, models, and concepts can lead educational institution to experience financial loss.

Teaching virtual classes requires more technical skills to develop effective educational materials and gain experience with the target distance learning software platform. Delivering digital education materials over a network can require post-processing and conversion to the standard format supported by the target software.

Teachers can use up a lot of time creating education materials, and in the event of using reusable OER, the process of adapting it to an alternate study program and target student group can be difficult.

A lack of instant reward and the computer simulation of a teacher can provoke teacher resistance.

Answering student mail can take an enormous amount of time even in small student groups. The number of mail messages can explode and require the teacher's personal attention for answering each mail.

Teachers are continuously challenged to demonstrate a high level of knowledge about emerging technologies. The new digital student generation requires applying the theoretical knowledge to solve real-life problems.

On the other side, students are often confused by the numerous sources of education materials and study programs. Tailoring a student's study according to the student's best expectations is not an easy job. When a study program's accreditation and degree recognition is expected, strong guidance and a skilled mentor is also required.

The technical platform issue can force students to use valuable time understanding the technical platform and solving technical issues instead of reading lectures and doing assignments, especially in cases when the educational institution does not provide appropriate and continuous technical support.

Social and personal issues can discourage students and create frustration that can lead student to dropping or failing out of their school. However, distance education is a reality that each and every education institution needs to meet, regardless of the education institution's status or ranking. The fast-growing population is forcing brick and mortar education institutions to find digital ways to teach; in countries such as China and India, neither government-funded nor privately owned institutions are able to provide enough space, teachers, or supplies for the huge number of people interested in a higher education. Therefore, it is expected that distance learning will solve many of these issues; however, the issues that distance education opens as discussed in this paper must be immediately addressed.

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