ONLINE EDUCATION: PROGRESS AND PROSPECTS

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ABSTRACT: The purpose of this study was to determine the gains of the online education and the challenges ahead. The study examined the definition of online education, the gains online education has achieved in terms of teaching and learning technologies, the advantages of online education, and the challenges ahead. The findings of this study show that online education is perceived as internet based delivery, e-teaching and learning, and distance education which employs internet based technologies. Learning management systems (LMS) such as Blackboard, e-college by Pearson, iLMS, Canvas, and others have taken the lead in developing attractive learning management systems to both students and faculty. Some of the advantages of online education such as convenience, accessibility and the like are equally important as the considerations of equity and accessibility to technology, and staying motivated. The outcomes of this study will be shared with students, faculty, program leaders, and administrators. The study predicts that online education will grow like a wild fire with no signs of quenching it, and it will be upon universities and colleges, administrators, students, parents, and the varied communities of stakeholders to be assimilate to this new teaching and learning model.

INTRODUCTION

Internet is perceived as “the outgrowth of US Defense Department work and popular enthusiasts” (Guice, 1998, para. 1). Hence, both engineers and managers in the US Defense Department in the 60s through 70s became the driving force of the development of internet as they developed ARPANET (Guice, 1998, para. 8). Consequently, researchers, and academicians in other interdisciplinary fields started using the network. In a brief timeline, you will notice that in 1969 the defense department came out with ARPA, which was used by the defense, universities; and in 1970 ARPANET was established, but still limited to defense, universities, and regional networks; NSFNET came into being where email, and other networking; in 1991, National Research and Engineering network (NREN) was established; and, in the recent years access of internet to businesses, university students, technical professionals, primary and secondary students brought the use internet technology for teaching, and learning at the figure tips, where by 1995 the public had access to internet, corporate advertising, and electronic commerce such as internet marketing by eBay, Amazon, PayPal, Billmelater, etc. have persistently taken hold of online trading (Guice, 1998). Apparently, the spread of internet technology hardware has opened varied ways of disseminating education through...
teaching and learning; and in the mix teaching and learning has been simplified as the learning management systems (LMS) compete for business in schools (Okamoto, Cristea, & Kayama, 2001; Sener, 2010; Fu, 2010).

**METHODOLOGY OF THE STUDY**

As part of qualitative research methodology, this study employed “narrative research” method, where I collected the online education narratives, analyzed the themes found in these narratives (McQueen, & Zimmerman, 2006, p.475); and, based on the analysis I developed the following research questions: (1) What is the definition of online education? (2) What are the gains online education has achieved in terms of teaching and learning technologies? (3) What are some of the technologies driving online teaching learning? (4) What are the benefits of blackboard learning management system? (5) What are the advantages of online education? And, (6) what are the challenges that lay ahead for online? The understanding of the narrative research method was enhanced by “meta interpretation” for the interpretation synthesis of online education by weaving together the discussions of the earlier studies, their findings, and the conclusions (Weed, 2005, para. 1). Also, this study took a deliberate reflection on varied resources on online or internet education, analyzed them, and identified patterns of online education and the use of varied technological tools to determine the gains online education has made, and the challenges ahead (Del Carlo, Hinkhouse, Isbell, 2009).

**REVIEW OF LITERATURE**

The process of literature review was applied to determine the gains online education has achieved and the challenges ahead by providing answers to the research questions. Below, research questions were restated in terms of topics as shown throughout the study.

**The definition of online education**

Online education can be viewed as an education that is received through the use of varied technologies. Online education is distance education which utilizes internet based delivery, and employs internet based technologies (Kaya, Kesın, & İzgiol, 2013; Cejda, 2010; Johnson, 2004; Ahern & Repman, 1994). In the internet based delivery, community colleges and universities have relentlessly embarked on online education; where curriculum developers, course administrators have included varied courses in the course shells. Consequently, full time and part time faculty members are contracted to teach courses that may be already prepared, or the courses they collaboratively prepare. In trying to understand what online education is, Milman (2010) shows other terms used to mean online education as “distance education, distance learning, e-learning, online education, online learning, virtual education, or web-based instruction” (p.95; Kaya, et al., 2013). The online education comes as a powerful alternative to face to face learning, where courses at all levels could be delivered in an hybrid format - half time online and half time online, or completely delivered through internet based format.
Teaching. Teaching is a strong ingredient of online education which irresistibly has grown like a wild fire penetrating K-12 education, colleges, and universities (Cejda, 2010; Sener, 2010). Although face to face teaching and learning is not totally wiped out of the face of the educational ecology, online education as is rapidly expanding and its growth is “by leaps and bounds across all sectors of education, from corporate training to higher education to K-12 education settings” (Milman, 2010, p.95; ). In the beginning, most colleges and universities didn’t think that online education will grow until recently when these institutions, public or private embarked on online education by competing with those who had established themselves as pioneers of online education. In these days, you can hardly open laptop, iPad, iPhone, or desk computer without seeing online education by myriads of private and public universities advertising their online educational programs. This is not a bad trend, but it comes with its own price of quality of education provided due to some of the schools just putting out programs out there without academic scrutiny only assured by accreditation institutions of education at the state and the national levels. Studies demonstrated that by 2004, we had 2.35 million students taking their courses online, and the concern for quality online education was amounting, and some of the ways of increasing quality of online education was to train and support full time faculty and part time faculty involved in teaching (Kim & Bonk, 2006). Figure 1 shows the teaching experience of faculty after taking a survey seeking to understand years of experience with online teaching.

In this study which included surveying professors, instructors, or lecturers, administrators or instructional designers showed that more than 53% of online teaching were women more than anticipated, and the reason might have been that “Perhaps female instructors had become more comfortable teaching and sharing activities online during the few years that elapsed between surveys, or perhaps support for instructors had improved on college campuses, or both” (Kim & Bonk, 2006, para.13).
Learning. Online learning was not only a challenge to institutions, and faculty, but to students too. Students’ experiences of online education and the learning processes was alien as contrasted with the long-felt blessings of face to face learning experience. As a life-long learner, I experienced real blessing of learning under wonderful professors face to face. The discussions and the collaborative learning strategies were extremely appealing. In my classrooms, discussions and dialogues with my students demonstrated that their level of satisfaction in the four block classroom was very high. However, with the coming of online education, online learning was not bread and butter to most of the students. The promising blessings of learning when at home or anywhere in the world was with the help of computers, laptops, ipads, note books, tablets, etc. was enticing and students very quickly adopted to the new technologically rich learning environment. With the acceptance of the online education, today students in colleges and universities enjoy learning in the hybrid or totally online learning environments; and, irrefutably recent studies have demonstrated that e-learning has positively affected teaching and learning (Yuan-Hsuan, Waxman, Jiun-Yu, Michko, & Lin, 2013, Tella, 2011). Sener (2010) predicting the growth of online online education showed that “online education will reach full scale” with the characteristics of being a routine, becoming a significant facet of students’ learning
experiences, accepted at the collegiate level to the university, blended learning becoming a norm, and growth of online education breeding more growth (p.4).

Some of the Technologies Driving online Teaching and Learning

There are several technologies which have proven effective in driving teaching and learning to higher heights in higher educational learning environments. Some of these include the blackboard, ecollege - classlive pro, moodle, Desire 2 Learn, Angel, webCT, skype, moocs, and webex. These technologies could be used interchangeably to enhance effective teaching and learning. These technologies are part of the information communication technologies (ICT) which has constituted e-learning and at the same time enhancing teaching and learning in higher education where universities and colleges are competing for student enrollment. In the beginning private universities and colleges seemed to be in the forefront of the use of e-technology in teaching and learning, but in these days all universities and colleges, state governed or non-state governed are using ICT in their course delivery (Sander & Gale, 2012; Tella, 2011).

E-learning uses “ICT [Information Communication Technologies] to support learning” (Tella, 2011, p.56; Lai & Savage, 2013). Hence, ICT has become “a central construct that enables and/supports the process of e-learning” and has made great gains in the last thirty years (Tella, 2011, p.56). In order to effectively utilize e-learning in teaching, faculty and program care takers have used course management system (CMS) using software program(s) which use web-based tools to create learning activities for students.

Blackboard Learning Management System. Blackboard teaching and learning technology as teaching and learning “tool that allows faculty to add resources for students to access online,” and it includes “PowerPoint, Captivate, video, audio, animation, and other applications are created outside of Blackboard and added into Blackboard courses for students to enhance teaching and learning efforts” (What is blackboard? Para.1).
With the use of virtual classroom too, students and teachers can chat, and teachers use the whiteboard to communicate and teach in real time.

Table 1: Course Discussion

Using this discussion tool, students can post their research papers to each other for peer evaluation and feedback. This is a great tool because it can enhance cooperative and team learning strategies we want develop in our students.

Benefits of blackboard learning management system. As describe by Bradford, Porciello, Balcon, and Backus (2007), some of the noticeable benefits of blackboard learning management system (LMS) include: increased availability, quick feedback, improved communication in terms of announcements,
discussions, virtual classroom, and email; tracking students learning activities, and
skill building in terms of organization, and time management (p.2-3).

Drawbacks of blackboard Learning Management System. Although the
blackboard LMS has shown growth, its drawbacks are a great concern. These
drawbacks involve: (a) The software is harder to learn than expected; (b) Certain
options may be restricted to specific operating systems; (c) There are inefficiencies
in bandwidth use when materials have to be downloaded every time access is
sought; and (d) cost.

E-College Learning Management System. E-college by Pearson is one of their
effective learning management systems (LMS) in teaching and learning, and it has
improved since its inception to include course management tools such as course
home and its pertinent elements, units of study, course administration, gradebook,
email, live, doc-sharing, dropbox, webliography, technical support, etc. See the
Pearson e-College class model Figure 3.

iLMS – inspired Learning Management System. iLMS is a platform that is used
to manage “both online and instructor-led training” (http://www.ilms.com/?gclid=CJDQ6NHU2bwCFQ-DfgoGtG4Aog). The
compatible tools used by iLMS for eLearning include: Adobe Captivate, Articulate

Canvas Learning Management System. Many universities and colleges have
eyed on the Canvas LMS. With rapid growth and competition of which Learning
Management System can best deliver educational programs, and the fact that the
old systems give way to the new, Canvas LMS is appealing to college professors
and students; its layout is much better and appealing to the eye, assignments are in
the grade tab and this impresses students because they are able to see the
assignments to be graded, and it is stable than other Learning Management
Systems ( The Breeze, http://www.breezejmu.org/opinion/article_bddd22a6-
8243-11e3-ae9b-0019bb30f31a.html).

Other Learning Management Systems. There are many Learning Management
Systems, and some of these include:
Moodle.
Desire2Learn.
Sakai.
Jenzabar.
Angel Learning.
Cengage learning/MindTap.
Loudcloud.
Adrenna.
McGraw-Hill Connect.

The advantages of online education
In a traditional classroom, the teacher – student relationship is linear, one way, and
the teacher knows everything and passes knowledge to students who are relatively
passive. In this model, the teacher owns knowledge and doesn’t care to provide
feedback to students work informing them of the review and the results of their work (Fu, 2010). Students have difficulties trying to understand the teacher, and they are prone to not develop thinking skills. On the other hand, students do not provide feedback to the teacher, and the teacher doesn’t know whether he is effectively teaching or communicating to students which are necessary in enhancing learning in and outside the classroom. This relationship could be best illustrated in Figure 3.

**Figure 3: Teacher – Student One Sided Relationship**

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With the advent of technology, teaching has dramatically changed and students have an added learning aid in technology. Here, the teacher receives feedback from students, and students likewise are able to receive feedback from their teachers. This is best demonstrated in figure 4.

**Teacher Technologies**

**Figure 4: Teacher – Student – E-technology Reciprocal Relationship**

In this triangular teacher – student relationship, effective teaching and learning is the outcome which irrefutably provides a healthy and democratic learning environment. Students are at the center, and they benefit from both the teacher and the e-technologies. Hence, e-technologies have considerably transformed the way students learn, and what they learn; and, at the same time teachers of the 21st century are the beneficiaries of computer assisted teaching and learning. And, according to Fu’s (2010), “Based on constructivism, a teacher is a helper, an assistant, a facilitator in the process of the students’ meaning construction” (p.414). Students do not wait for a week before teachers respond to their questions because teachers can respond and provide feedback on students’ work in a twinkling of an eye through ipads, smart phones, iphones, or laptops. Likewise, students are able to submit their questions, and class assignments to their teachers on a timely manner as opposed to the 20th century learning environments which was surrounded by problematic type writers, and printers. Five notable advantages of using e-learning include:

- Convenience.
- Time efficiency.
- Accessibility.
- Dynamic interactions.
- Creativity.  
(http://www.webanywhere.org/blog/top-5-advantages-of-using-e-learning-for-schools/)

**The challenges Ahead**
As much as internet technology has developed, and has been used in the educational and business arena, there are current and foreseeable challenges that technology users ought to consider and tackle in their way forward. Some of these challenges include:
- Equity and accessibility to technology.
- Improving achievement.
- Delivering value & Affordability.
- Hidden costs problem.
- Computer literacy.
- Major self-discipline is required.
- Not fit for every style and kind of learning.
- Minimal social interactions.
- Staying motivated.
- Difficult to improve oral communication.
- Technical problems.
- Lack of essential online qualities.
- Lack of adequate training for faculty and online administrators (Whitehead, 2005, para. 3-6; Salsbury, (n.d), para. 1-4; Weaknesses of Online learning, para. 1-5).

**CONCLUSIONS**

Throughout the study we that online education or internet based delivery, distance education, use varied learning management systems to enhance both teaching and learning. Both colleges and universities have embarked on hybrid and totally online educational system which is growing like wildfire. The gains online education has achieved over the years in terms of teaching and learning technologies are overwhelming. Some of the learning management systems developed by Blackboard, e-college, iLMS, Canvas, and the like have attracted e-teaching and learning immensely; and, more fine tuning and springing up of more technologies of online education are inevitable. Irrefutably, the advantages of online teaching and learning to both students and faculty extends from a virtue classroom, to convenience, time efficiency, accessibility, dynamic interactions between students and teachers, and students and students, and the immensity of creativity generated in the process. However, the challenges of online education such as equity and accessibility to technology by all students, improving achievement, delivery value and affordability, hidden costs problem, computer literacy, requirement of self-discipline, online education not fitting all learners, minimal social interactions, and staying motivated must be addressed to enhance sustainability.

**REFERENCES**


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