

## EDUCATION IN THE 21<sup>ST</sup> CENTURY: THE PROBLEMS AND PROSPECTS OF DISTANCE LEARNING

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### Abstract

*In the recent time, there is rapid change in the methods of implementing distance education, and these changes are direct influence of different technologies used over the years. This paper attempts to identify some of the challenges impeding the effective implementation of distance learning in the 21<sup>st</sup> century. It explains the characteristics of distance learning and how emerging technology can be effectively employed to bring about the desired learning outcomes among learners. The study highlights the Pros and Cons of distance learning, and suggestions for maximizing its advantages are as well discussed.*

Keyword: Distance learning, Emerging technology, Distributed learning, Strategies, Solutions

### Introduction

The term distance learning is interchangeably used as distance education, distributed learning, correspondent learning, web based learning and on-line learning. These and many other acronyms are used to mean learning and teaching in which the teachers and the learners are at a different geographical location.

Distance learning is a process of creating and providing access to learning when the source of information and the learners are separated by time and distance or both. Robinson (1997) defines it as a teaching and learning system in which the teachers and learners are physically separated for some or all the time, and where learning materials take on some of the role of the traditional teacher. The Common Wealth of Learning (COL) in 2004 defines distance learning '*as the delivery of learning or training to those who are separated mostly by time and space from those who are teaching or training. The teaching is done with a variety of mediating process to transmit content, to provide tuition and to conduct assessment or measure outcomes*' (Kutty & Siraj, 2007). To Sife, Lwoga, and Sanga (2007). Similarly, AECT (2012) in Aduwa-Ogiegbaen (2013) linked distance learning "to technology of delivery, it can be seen as a set of instructional methods based largely on mediated communication capably of extending the influence of the educator beyond the formal institutional setting for the purpose of benefiting the learner through appropriate guidance and support.

Historically distance learning could be traced back to 1840 when Isaac Pitman taught Shorthand in Great Britain via correspondence. In the 19<sup>th</sup> century, the emergent of postal services act as a catalyst for the thriving of distance learning. Following this, was the use of sound technology for distance learning. Sound recording was the first medium that allows access to segment of a non-textual presentation. The recording can be listened to not necessarily from the beginning but from any point on the recording. The invention of telephone which allows two-way communication also aided distance education, even though, this technology allows communication between a limited number of people, yet, its advent enable information to be shared in real time. The major set-back of this medium was the reduction in the signal quality whenever many users connect the line at the same time. The invention of radio marks another improvement in distance learning delivery because the use of radio provided a more realistic mode of delivery education to many people with a wider coverage in a real time. The advent of television and other media in the 20<sup>th</sup> century leverage the acceptability of distance learning because these media were employed to teach distance learners and it enables those who are in a remote location to have access to education.

The emergent of internet in the mid-80s have contributed in no small way to the success recorded in this mode of education in the knowledge explosion age (Kutty & Siraj, 2007; Glass & Sue, 2008). The Internet has improved distance education in a more dramatic way so much that teaching and learning could occur synchronously or asynchronously between the instructor and the learners.

Distance Education Timeline

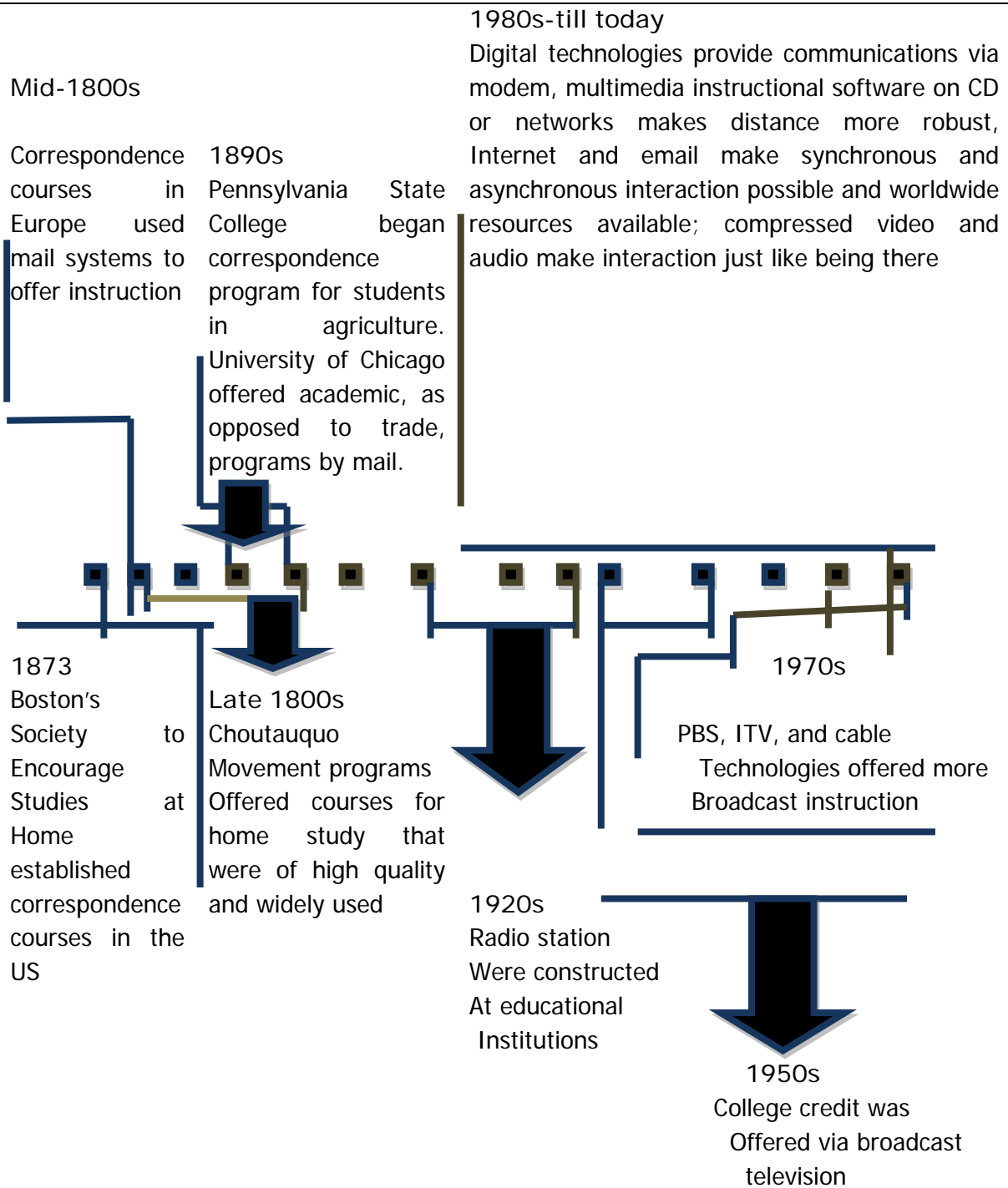


Fig 1: Sources: Teaching and Learning with Technology. Edited by Lever-Duffy & McDonald, B Jean

Research conducted so far about distance learning has continued to keep pace with rapid development of the field. In the recent time, criticism has started trailing the quality of education that the students receive through this program because of the rate at which universities mount program on distance learning around the world. Some of the reasons advanced include the incompetence of the distance learner's educator, the method of

student's evaluation and impersonations; this mode of education is regarded as a lesser kind of learning, which symbolizes learning at the back door among others. These reasons are apparent shortcomings of distance learning that is making many educators to ask some fundamental questions such as; do we have to compromise standard in an attempt to provide more education opportunity? How can we teach physical, sociological, emotional, and more importantly spiritual aspect of curriculum to distance learners? These are germane questions begging for answer. Of course, these are some of the importance of education. Any education that is short of this is tantamount to the goal of holistic education. Hence, leading to producing graduates that are physically, sociologically, emotionally and spiritually imbalance individual, which apparently is not good for any society.

#### Characteristic of Distance Learning

The major characteristic of distance learning is the mode of instruction delivery, which involves different media. The trainers and the learners are geographically separated. They are at different locations. Instruction presentation in distance learning is either synchronous or asynchronous. Synchronous technologies such as web based VOIP, web conferencing, video conferencing, and telephone are mostly used to achieve this. However, in the case of asynchronous delivery system, the technology involve are e-mail, audiocassette, print materials, videocassette, voice mail, fax, message board forum and so on. (Khan, Khan & Al-Abaji, 2001).

The distance learning is designed to cater for adult learners, it is designed for underserved population and those that have constrain of attending normal class because their jobs demand cannot allow them to attend regular school. It caters for people to develop their skill on a continuous basis and provides for life-long learning without a barrier of age. Distance learning can be offered inform of correspondence program where mail are majorly used as a vehicle of instruction. Distance learning can be conducted through the internet; it can be through broadcasting in which the content delivering is via television or radio. The content of instruction could be embedded on CD-Rom, videocassette or audiocassette to be studied by the learners. If the instruction is on CD, the learner will access the instruction through computer. Similarly, instruction on videocassette will be accessed using video player and audio player (Wikipedia). Below in Table (1) is the learning technologies, there pedagogical, Technical and the cost implication of the technologies employ for implementing distance learning

Table 1: Pedagogical, Technical and Cost of Implementing Distance Learning

Distance Learning Technologies	Pedagogical Implication	Technical Implication	Cost Implication
TV/Radio	Effective use of TV/Radio depends on three key things in its application before, during and after the viewing session and give instructions explanations, questions or evaluation before and after each moment	Equipments are needed depending on the objectives and the scope of the training application which includes audiocassette, video camera, PCs, editing soft-wares, distribution channel and displaying equipment	It is costly in terms of TV/Radio production which includes animation and graphic designers, hardware, access to the broadcast network.
CD & DVD	-Simulation for self study - It can be used in the presence or remote support of the trainer	Hardware that meets their specifications- graphic screens, MPEG2 Cards, CD or DVD reader and their software	It is costly than printed materials though downloading free products or buying ready-made product can reduce the costs
Web-based Technology	Permanent accessibility (24hrs, all days of the week), speed, direct communication, links to related topics and up-to-date notes	Fast computers with sound cards and reliable Internet connection are required The following team is needed for implementing web based training 1: Instructional designer familiar with Computer delivered instruction 2: A programmer or Author to use the authoring tool 3: Graphic designer 4: A subject matter expert 5: A web master	Hardware, technical expertise and Internet subscriptions cost

Videoconferencing	<p>-New pedagogical methods required to provoke interaction\</p> <p>-Required small group</p> <p>-Both trainers and learners required basic training</p>	<p>for manipulating the server</p> <p>Required equipment</p> <p>1: Sound proofing and accostic controlling the light condition</p> <p>2:Audio-Visual pheripheral-TV. Monitor or video projector, camera(s) and sound playback</p> <p>3: Video conferencing codec (Roll about)</p> <p>4:Multimedia PC, with PCI-based as well as software based Video-conferencing codec</p> <p>5: More band-width is needed for higher quality image</p>	<p>There are two types of cost setting-up the video-conferencing system and operational cost</p>
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Source: Sife, Lwoga, & Sanga (2007) New technologies for teaching and learning: Challenges for higher learning institutions in developing countries. (IJEDICT) pg 61

### Challenges Facing the Distance Educators

Distance educators are facing a lot of challenges, ranging from resources selection for implementing the teaching function to distance learners, to lack of technical skills for effective implementation of distance education. Most of the challenges identified can be attributed to teacher's perception on how to go about implementing distance-learning curriculum. Sheinberg (2000) identified some of the pitfalls to include treating DL course like traditional face-to-face course by the trainers; jumping straight to the course content; lacking the necessary support structure; absent of motivation or support for students; lack of planning for technology problem; inadequacy of time for discussion and teamwork and failure to consider cultural and regional differences of learners.

Most online trainers are always tempted to think that there was no difference between teaching face-to-face and distance learning students. As a result, they tend to prepare themselves just like traditional classroom teaching. In the present day distance learning teaching, the approach involve utilization of different media, delivery methods and course design, evaluation methods and learner support structure which is totally different from

traditional mode of instruction (Sheinberg, 2000). Jumping into the course content without proper planning always creates problem to the trainers thereby leading to injudicious use of time. Sometime, the trainers themselves may lack the necessary support facilities to do the job, because students always require attention ranging from responding to their questions, giving feedback, and reassurance. If the teacher fails to provide this, the program will suffer setback. In addition, lack of motivation from the trainers constitutes a threat to the success of distance education (Oomen-Early & Murphy, 2007). The learners are always alone studying, therefore; the trainer should provide a mechanism that will motivate them to learn. On the issue of technology breakdown, the trainer should always plan for this, they should have alternative medium that will serve the purpose appropriately. The trainers should always take into consideration the cultural and regional differences of the learners, because their students are from different cultural set-up, race, ages, language, and time zone. Planning for time is also important. The trainers should always remember that timing for face-to-face classroom cannot be equated to time required for distance learning especially if the mode of instruction is asynchronous, this would require time for learners to file in their responses.

Taking into consideration, all these will help in solving the problem the trainer may have in the course of teaching the distance learners. Wonacoh (2002) suggested that good practice in planning and monitoring the students increases the success that is recorded by trainer in distance learning. In addition, distance learning pedagogy must be suited to the need of the learners, the media use should suit the content, and the trainer should combine different technology to increase learner-learner and trainer-learner interaction via email, list serve, group chat, discussion boards and social media.

Another challenge of distance learning is testing and evaluation system, distance learning has difficulty-controlling cheating in quizzes, test, or examination because of the lack of teacher control mechanism. This problem can be solved by conducting examination to distance learners at a common venue so that trainers can invigilate the students directly. By so doing, this will increase the credibility of the evaluation conducted for distance learners.

#### The Pros and Cons of Distance Learning

There are many advantages inherent in distance learning. Some of it is that it allows for active involvement of students in the learning process, when assignment reflect real-life contexts and experience, and when critical thinking or deep learning is promoted through applied and reflective activities (Bransford, Brown, & Cocking, 2000; Smart & Cappel, 2006). Distance learning saves money and time of the learners because it does not require commuting to and from, nor travel back and forth to school. Learners schedule their learning around their personal and professional life. Learners can attend to their assignments and lecture note send for studying at time when they want and this makes it adaptable to varying work schedule and other engagements. This mode of study allows for self-paced learning because the students are in charge of themselves. They can study at a pace that is in tandem with their rate of comprehension. This accommodates both slow and fast learners (Smart & cappel, 2006).

However, there are also potential disadvantages of distance learning. Among such disadvantages is that distance learners are always learning in isolation (Brown, 1996); learner frustration, anxiety, and some confusion (Piccoli, Ahmad, & Ives, 2001). Studying alone is one of the major problems encountered by the students especially when they need instant clarification of ambiguous information. The cost of acquisition of the technology involved is also another disadvantage. Inevitably, the learner must have a computer and access to internet which is additional cost to his or her tuition fees.

#### Strategies for Maximizing the Opportunities in Distance Learning

Distance learning is a mean of providing functional and life-long learning to people. Its benefit cannot be over emphasized. Without it, learning opportunity may elude some people, many working adult and those that live in a remote place and those that are old enough to attend regular class may have constraints to continue their education. The advance in technology has made some of the things that seem impossible in the past to become easier to do now. More often than not opportunities are created, with the usage of emerging technology for distance learning. Optimum means of impacting knowledge involved designing instructional materials that engage as many senses as possible barring any disability a learner may have. Distance educator should employ technologies that have the capability for blending all media that appeal to many senses. Educators should employ technologies that allow for on-line interaction (synchronous) so that the learners would have the opportunity of seeking clarification of information when the need arises among themselves and from the teacher (Marotta, 2005). Another method of maximizing distance learning is the introduction of hybrid program in higher institution of learning. According to Gould (2003) 'hybrid class is commonly defined as a course in which a significant portion of the learning activities have been moved on-line'. It is a combination of traditional classroom and internet instruction. This will allow for blending the effectiveness of both traditional face-to-face learning with on-line learning. According to Gould, introduction of hybrid will enable higher institution of learning to enroll more students without over stretching the physical resources, ultimately maximizing the resources, and meeting the students' learning demand.

#### Conclusion

Distance learning has been around for a long time and it has been used tremendously to meet educational need of people which normal traditional institution cannot provide. Like other human endeavor, distance learning has been found to bedevil with shortcoming which is threatening the quality of it graduates and eroding the credibility of the certificate received through it in the present information explosion age. Unfortunately, many higher institution of learning are springing up with program through distance learning purposely for financial gain with little regard to standard. In addition, distance learning certificate is being awarded to students that are found to be worthy in learning alone with little or no regard to their character. When in actual sense, certificate is awarded to students that were found to be worthy in character and learning in normal traditional school system. All these are issues that require a serious and curious reflection. Albeit, this paper tries to look at the Pros and Cons of distance learning in the 21<sup>st</sup> century and other issues that border on the challenges



and the effective way to maximize its advantage in order to minimize avoidable problem that is threatening the credibility and perception of people about distance learning.

The paper tasks all distance educators, the curriculum planners, to make learning an holistic one by designing a strategy that can be used in teaching other aspect of education such as emotional, physical, and more importantly spiritual part of education to learners at a distance. On like in the industrial era where distance learners are aged people, the present online students are young people that require to be given a comprehensive education. Leaving out all this vital parts of education may potent a serious danger for the society. In conclusion, the paper therefore, tasks researchers in education and other areas of specialization to come up with ways of addressing these issues.

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