Effect of Emotion on Distance e-Learning — The Fear of Technology

Felicia K. Oluwalola

Abstract—**Distance e-learning has its difficulties, but it is still a strongly growing aspect of education and training that both public and private organizations use extensively. Technophobia is a growing problem with continuously increasing technology around us. While more and more teaching is given through different technological equipment, more troubles are encountered by the people, because of the negative feelings they have towards them. Frustration and anxiety are known to be part of the computer user's life; almost all of the users at some point feel themselves frustrated. Frustration causes people to withdraw from the frustrating situation and make them not to go through the frustrating situation again. This causes problems in e-learning when students don't want to continue learning in frustrating environment and makes them to be afraid or reluctant towards the computer. It was recommended that government should assist in reducing the high cost of hardware in Nigeria, and tariffs. Teaching and learning of computer that has been inculcated in both secondary schools and tertiary institutions in Nigeria should be revisited; also institutions should be connected to internet.**

Index Terms—**Emotion, e-learning, distance and the fear of technology.**

I. INTRODUCTION

Distance e-learning is here to stay. But not everyone wants to use it. The problems behind the reluctant usage may lay in the fear of technology that is being used for distance e-learning purposes. Systems and software used in different distance e-learning facilities varied, but one thing they all have in common is the technology. In traditional classroom teachers teach in learning. The technology is not necessarily needed for such learning, but in distance e-learning neither the student nor the teacher can escape technology. This causes some people to develop several negative emotions towards the new learning media.

These emotions may be an obstacle in the students learning abilities and their willingness to learn in distance e-learning or even use it. These kinds of students are in danger of losing some of their possibilities in nowadays educational environment when they lose one learning channel that is quite important nowadays both in educational and in business environment.

The cause of this fear may come from the past negative experiences, with technology or computers and can influence even other parts of their lives to have reluctant behavior towards all the other technology assisted issues in the society.

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When the experience in using technology is low, the skills usually are also low and the willingness to even learn to more or become better user is low. These kinds of learners and technology users develop negative feelings toward technology and their behavior can be called technophobic.

II. CONCEPT OF DISTANCE E-LEARNING

Generally, education is seen as the adjustment of individual to his environment, thus distance e-learning or del, is the combination of distance education and e-learning which is characterized by the extensive use of Information and Communications Technology (ICT) in the delivery of education and instruction and the use of synchronous and asynchronous online communication in an interactive learning environment or virtual communities, in lieu of a physical classroom, to bridge the gap in temporal or spatial constraints. distance e-learning combines the strengths and advantages of distance education and e-learning. "The focus is shifted to the education transaction in the form of virtual community of learners sustainable across time. Distance education model has its traditional focus on content delivery or correspondence, and emphasis is on independent learning. Distance e-learning has its roots on computer conferencing and collaborative constructivist learning approach; it encourages collaboration in an interactive learning environment. Distance e-learning is also different from e-learning. Distance e-learning goes beyond the use of ICT as tools to access information which primarily characterizes e-learning use in classroom teaching or in the residential setting.

One of the most significant issues encountered in the mainstream correspondence model of distance education is transactional distance. Transactional distance results from lack of appropriate communication between learner and teacher. This gap has been observed to become wider if there is no communication between the learner and teacher and has direct implications on the learning process and future endeavors in distance education. Distance education providers began to introduce various strategies, techniques, and procedures to increase the amount of interaction between learner and teacher. Service providers began to use e-learning, the generic term for all technologically supported learning, to deliver online courses or tutorial services. These measures e.g. more frequent face-to-face tutorials, increased use of information and communication technologies including teleconferencing and the Internet, were designed to close the gap in transactional distance. The increase in utilization of ICT, particularly the internet, ushered in a new era in course design and delivery of instruction in ways never before

experienced in the mainstream model of Distance Education and traditional education paradigms. The marriage of the two concepts, Distance Education and e-Learning, marked a new strategy in delivering courseware for academic programs and other learning resources developed by Open Universities and conventional educational institutions.

The assumption for this write up is that computer using skills affect the students' behavior and emotions while using e-learning system. Also, the attitudes of students towards any new technology and computers affect the e-learning experience. Here the students who have such negative attitudes towards the technology and computer are labeled as technophobic.

III. Emotions in Distance e-Learning

Emotions have a big impact on learning in traditional teaching and in distance e-learning. The emotional connection between emotion and learning results in distance e-learning courses has been under research with strong implications. Attitudes towards distance e-learning have been both negative and positive, depending on who you are asking the question from. Frustration regarding the use of computers is a common phenomenon nowadays around the world with almost everyone who has operated a computer at some point. For some users frustration level grows to the extent of developing technophobia, while others are below such level.

Technophobia can be apparent even with people who are using the computer and not just with the ones that do not use the computer at all. The computer self-efficacy and attitude play big role in frustration levels. Frustration has been researched to take up to one third to half (1/3-1/2) of time spent on the computer and this should be considered while planning courses and timetables. People react in different ways to different situations. Partly these reactions are learnt and based on people's previous experiences, some people associates positive emotions to new technology and others think of technology as a negative issue. The difference among these two groups is that they associate the same technology to a completely different emotional context. People's emotional reactions do not stay unchanged; they are in a constant change during their whole life. Someone who has been reacting very negatively towards technology can later even like the use of technology. This shows that people's emotional contexts can change. This kind of process may be referred to as emotional learning.

IV. The Fear of Technology/Technophobia

Society today is permeated by technologies. The study of technophobia becomes increasingly relevant when examining technology's influence in user's psychology. Korukonda and Finn (2003) affirmed that "Ref. [1]" Technophobia has been an enduring problem in industrial economies over the last 20 years with some estimates putting the number of technophobes at close to one-third of the industrialized population of the world". They further suggested that it is the consequences of the heavy infusion of computer technology in everyday life. Students are often exposed to such technologies, with computers and digital media at the forefront of education. As technology develops, it demands people to develop their working habits. For some, this is a normal way to work. That is when there is new technology; they take it in to their everyday life functions and their work. While for others, this kind of development and demand for new technology is terrifying. They are very reluctant to adopt any kind of technology to their actions; not minding whether it would help their life enormously. This kind of people are said to have technophobia. This kind of fear towards technology has been seen everywhere and obviously with increasing amount of technology surrounding us, the technophobia is showing up with more people and more widely than ever. Therefore, the study of technophobia becomes increasingly relevant. In this paper, fear of technology and technophobia are used interchangeably examining technology's influence in user's psychology. "Ref. [2]" Defining technophobia is essential at this point. There are many definitions of technophobia, but the most commonly cited definition is the one proposed by Jay (1981) who defined it as:

1) A resistance to talking about computers or even thinking about computers
2) Fear or anxiety towards computers
3) Hostile or aggressive thoughts about computers

V. Technophobia in e-Learning

Students in e-learning courses tend to react on usability problems with fairly strong emotions. In his exploratory-grounded study of graduate students, Scull (1999) found that, "Ref. [3]" in one hand, students experienced higher levels of anxiety when they were under time or goal pressures, or when the technology failed or somehow malfunctioned. When something goes wrong, this affects the emotional state of the students, leading to panic and anxiety. On the other hand, the study also showed that despite deadlines and equipment failure, many students were able to develop strategies that can reduce their computer anxiety. For example, "they were careful to avoid information-support that used computer jargon and to call on patient and understanding computer friends for help".

In the same vein, another study by Sheeson (2005) found that "Ref. [4]" "computer confidence had significant effects on user's perception of task complexity while the effects of liking computer were minimal at various task levels. Also increase in computer experience may help reduce computer anxiety. Students" learning results in e-learning are affected by the way they react on the problems of learning and technique. The students that react positively are more equipped to overcome bigger and more problems than the negatively reacting and thinking ones. The frustration-pride model indicates the positive and negative cycles in e-learning experience. The students who manage to keep their attitude and thinking positively despite the setback in studying through computer are more likely to be able to finish their courses with positive experiences. Fear of technology plays a big role in e-learning studying. In most e-learning courses,

the main learning device is the computer, with which every student have to work with and if they have fear or anxiety towards computers or any new technology, it makes their e-learning career fairly difficult.

VI. ROLE OF ICT IN DISTANCE e-LEARNING

There is a progressive shift from traditional method of learning modern method that employs made use of information and communication technology, Nwanewezi(2010) affirmed that "Ref. [5]" technology has become a powerful tool for education and economic development. Osuala (2009) "Ref. [6]" posited that most current literature is overwhelmingly positive about the potential for variety of technologies to be powerful components in accomplishing vision. ICT provides an array of tools for acquiring and using information for thinking and expression. ICT can be seen as a catalyst that provide tools which teacher use to improve teaching and by giving learners access to electronic media that make concepts clearer and more accessible.

In addition, Jude and Nosakhare (2012) "Ref. [7]" identified role of ICT for teaching and learning to include but not limited to the following:
- Technology as curriculum
- Technology as delivery mechanism
- Technology as a complement to instruction and
- Technology as instructional tool

VII. BENEFITS OF DISTANCE e-LEARNING

Distance e-learning can expand access to education and training for both general populace and businesses since its flexible scheduling structure lessens the effects of the many time-constraints imposed by personal responsibilities and commitments. Devolving some activities off-site alleviates institutional capacity constraints arising from the traditional demand on institutional buildings and infrastructure. Furthermore, there are potential for increased access to more experts in the field and to other students from diverse geographical, social, cultural, economic, and experiential backgrounds. As the population at large becomes more involved in lifelong learning beyond the normal schooling age, institutions can benefit financially, and adult learning business courses may be particularly lucrative. Distance education programs can act as a catalyst for institutional innovation and are at least as effective as face-to-face learning programmes, especially if the instructor is knowledgeable and skilled.

Distance education can also provide a broader method of communication within the realm of education. With the many tools and programs that technological advancements have to offer, communication appears to increase in distant education amongst students and their professors, as well as students and their classmates. The distant educational increase in communication, particularly, communication amongst students and their classmates is an improvement that has been made to provide distance education students with as many of the opportunities as possible as they would receive in in-person education. The improvement being made in

distance education is growing in tandem with the constant technological advancements. Present-day online communication allows students to associate with accredited schools and programs throughout the world that are out of reach for in-person learning. By having the opportunity to be involved in global institutions via distance education, a diverse array of thought is presented to students through communication with their classmates. This is beneficial because students have the opportunity to "combine new opinions with their own, and develop a solid foundation for learning." It has been shown through research that "as learners become aware of the variations in interpretation and construction of meaning among a range of people (they) construct an individual meaning," which can help students become knowledgeable of a wide array of viewpoints in education. To increase the likelihood that students will build effective ties with one another during the course, instructors should use similar assignments for students across different locations to overcome the influence of co-location on relationship building.

The high cost of education affects students in higher education, to which distance education may be an alternative in order to provide some relief. Distance e-learning has been a more cost-effective form of learning, and can sometimes save students a significant amount of money as opposed to traditional education. Distance education may help to save students a considerable amount financially by removing the cost of transportation. In addition, distance education may save students from the economic burden of high-priced course textbooks. Many textbooks are now available as electronic textbooks, known as e-textbooks, which can offer digital textbooks for a reduced price in comparison to traditional textbooks. Also, the increasing improvements in technology have resulted in many school libraries having a partnership with digital publishers that offer course materials for free, which can help students significantly with educational costs.

In addition, within the class, students are able to learn in ways that traditional classrooms would not be able to provide. It is able to promote good learning experiences and therefore, allow students to obtain higher satisfaction with their online learning. For example, students can review their lessons more than once according to their need. Students can then manipulate the coursework to fit their learning by focusing more on their weaker topics while breezing through concepts that they already have or can easily grasp. When course design and the learning environment are at their optimal conditions, distance education can lead students to higher satisfaction with their learning experiences.

Distance learning may enable students who are unable to attend a traditional school setting, due to disability or illness such as decreased mobility and immune system suppression, to get a good education. Distance education may provide equal access regardless of socioeconomic status or income, area of residence, gender, race, age, or cost per student.

Distance e- Learning may also offer a final opportunity for adolescences that are no longer permitted in the General Education population due to behavior disorders. Instead of these students having no other academic opportunities, they may continue their education from their homes and earn their

diplomas, offering them another chance to be an integral part of the society.

VIII. E-Learning and Its Impact on Teachers

The networked environment of this new Internet-connected world has expanded the opportunities for teaching and learning in ways that we are only beginning to understand. What makes the implementation of e-teaching so challenging to the teachers is that asking them of the dot.com age to teach in a way in which they have never been taught when they were at school. They will work in an environment in which they have never been learners and may have had few first-hand experiences. However, without a history and a wide knowledge base to draw on, e-teachers will have the opportunity to be pioneers in their own right as they set sail. They will have the chance to re-examine what it means to be a teacher.

IX. The Fear of e-Teaching

The level of internal motivation to utilise ICT and to consider new and different teaching options was found to be an essential factor in research by Goodwin et al. (1993) "Ref. [8]", Hirschbuhl (1994) "Ref. [9]" and Wolcott (1997) "Ref. [10]" in tertiary education settings. A positive attitude toward the use of ICT was a strong indicator of whether a teacher might consider e-teaching. Conversely, one of the major barriers to e-teaching identified by Hirschbuhl was the fear some staff felt when faced with stepping outside their comfort levels and they were not willing to take the risk. They included fear of looking foolish, fear of asking for help, fear of not 'catching on' quickly enough, and fear of not being able to be effective with the technology in instructional settings. It was important for us to note that these fears were self-imposed and self-generated but it is real.

Rutherford and Grana (1995) "Ref. [11]" also focused their research on academic staff fear in the face of technology. They identified nine areas that could prevent staff from making changes that would enable them to integrate technology into their teaching:

- Fear of change
- Fear of time commitment
- Fear of appearing incompetent
- Fear of techno lingo
- Fear of techno failure
- Fear of not knowing where to start
- Fear of being married to bad choices
- Fear of having to move backward to go forward
- Fear of rejection or reprisals

The issues of a lack of knowledge about ICT, a perceived lack of support, and an unwillingness to experiment with innovation all impact on the move to e-teaching. It is important that the concerns are acknowledged and addressed if progress toward e-teaching is to be made for many teachers. Supporting e-teachers as they begin their journey has to acknowledge the fears and anxieties as well as the likely predictors of success. Contrasting this notion of fear, Kaye (1989) "Ref. [12]" indicated four predictors of success when using computers to teach students at a distance:

- Some prior familiarity with the technology - at least at the level of word-processing, and in the use of electronic mail.
- An interest in the educational potential of networking and computer mediated communication (CMC).
- A commitment to the values of group work and cooperative learning.
- Sufficient time, not only actual on-line time, but, more importantly, the time to consider students' contributions and react to them appropriately.

When discussing ownership as the basis of individual commitment to change in education, L. Rutherford, & S. Grana, (1995) highlighted the importance of reflection on past experiences and practice so that teachers could see what it was they wished to change and why. The risks and fears, once acknowledged could become part of a recipe for change and success.

X. Challenges and Disadvantages of Distance e-Learning

Barriers to effective distance e-learning include domestic distractions and unreliable technology, as well as students' programme costs; adequate contact with teachers and support services, and the need for more experience. Others include the following:

1) Lack of customization to student's interest (also length instead of modules).
2) Lack of student motivation.
3) Lack of personal community and connection (not blended learning)
4) Its a banking model of education (which is partially inevitable)
5) Not experientially based–its simulation based at best
6) Not necessarily based on the best science knowledge regarding How People Learn
7) Lack of quality assessment and feedback, which hinders learning.
8) Instructors are mostly disconnected to the needs of employers, which means its disconnected from the desires of students and parents. (This may be the largest criticism)
9) Some self-directed learners are sometimes too random and have no process (it's too loosely joined–sometimes you need a bridge or a path). Also, some are subjected to quality issues. The learners are involved in self-analysis of content without pre-requisite knowledge or criteria (its ration on authority is 2.0).
10) Lack of certification (or assessment) for self-directed learning.
11) Focus on memorization over learning core competencies.
12) Time resource is at a minimum (into the arts in time, funding, and resources.) But some teachers don't know how much time they have.
13) Lack of mentorship for self-learners.
14) Lack of adoption to learning style of learners. (e-learning put textbooks in drag).
15) Best practice coordination is distributed instead of a centralized one (in terms of teaching and technology).

16) No ranking, evaluation of current modules.
17) Underutilized talents and facilities.
18) No reverse of engineering career paths and career skill sets. (Or very, very minimal).
19) Students lack passion for lifelong learning.
20) Lack of boundary spanners in education and business.
21) Lack of career center for employees that are they have to scale their knowledge efficiently or get a strategic lever to add on top of what they already offer. (Specifically on industry specific and network specific).

XI. CONCLUSION

This write up shows how the technophobia can cause problem for students in distance e-learning. These students lack the basic computer and technology skills and they are reluctant to learn the use of any new technology equipment or learning methods. Their emotions towards the computers and e-learning systems are negative and problems of usage make them even worse. The negative cycle causes the students to lose their interest in learning and looking for help. The key for these students would be good and fast technical support and tutors helping them to get to the positive thinking mode and therefore to the positive cycle that feeds the learning willingness and ability to handle the obstacles better. Technophobia can be caused from several issues, and these reasons should be found out to make these students get to the rising wave of e-learning studies. Otherwise they may be in great risk of dropping out from the development of the learning nowadays, whether it is in their education or at their work. Lifelong learning in today society demands the usage of computer and technology. Therefore, ICT can be seen as a catalyst to distance e-learning advancement and the importance cannot be overemphasized.

XII. RECOMMENDATIONS

For distance e-learning to be successful in our society, the following recommendations should be carefully considered:

- The government should assist by reducing the high cost of hardware in Nigeria, and tariffs. Teaching and learning of computer that has been inculcated in both secondary schools and tertiary institutions in Nigeria should be revisited; also institutions should be connected to internet.
- Computer education should be well spent out in secondary school curriculum and each candidate must pass it as one of the cure courses, offered in the school.
- Students should be made to understand that computer education is a compulsory course that should be offered from primary to tertiary education level due to the development of relevant IT curriculum of our educational system.
- The public and private organization need to be synthesized on the importance of distance education e-learning because not everybody can have the opportunities of passing through traditional method of learning.
- Provision of alternative power supply in view of the present poor power supply in the country.

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