

Barriers Thrusting e – learning to the Backseat : Nigeria a Case Study

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Abstract— Today, Internet Technology is no longer a barrier; on the contrary it has become a necessity of a society across the globe. The rise of Internet has facilitated the emergence of the ‘e’ word referred to as electronic which today is applied to every walk of life such as commerce, communication, healthcare, learning to name a few . Modern achievements in the field of computing and communication technologies has offered tremendous opportunities for learning by electronic means popularly referred to as e-learning. The use of new multimedia technologies and the Internet in learning is seen as a means to improve accessibility, efficiency and quality of learning by facilitating access to resources and services as well as remote exchange and collaboration. These new technologies allow more flexibility in learning and a wider reach for education. e-learning continues to grow over the years, in 2012, over 1.4 billion students and 62.5 million educators got involved in e-learning. However, adoption of e-learning is faced with challenges especially in the developing countries. This paper focuses on the aspect of e-learning in an education environment in Nigeria, analyzes and identifies the factors forming a barrier in its successful taking off within the region. These barriers are identified under four heads namely: Non Influencing Environment, Lack of State-of-the-art Facility, Financial Resistance and Community Mindset. The paper analyzes the factors identified and proposes a framework that will give a breakthrough for e-learning from the vicious technology cycle.

Keywords— *e-learning, Barrier, Framework*

I. INTRODUCTION

Traditional learning system has been the long-established custom in schools that society has traditionally deemed appropriate. Today, modern achievements in the field of computing and communication technologies offers tremendous opportunities for learning by electronic means popularly referred to as e-learning. The term e-learning is broadly used to describe instructional content or learning experience delivered or enabled by electronic technologies [17]. This has brought a change in the education environment through the use of the Internet, intranets/extranets, audio or videotape, satellite broadcast, interactive TV, CD-ROM, mobile and wireless learning applications not only for content delivery, but also for interaction among participants. This

allows flexibility in learning and a wider reach for education integrating e-learning programs into existing educational systems providing the highest learning outcomes. The use of new multimedia technologies and the Internet in learning is seen as a means to improve accessibility, efficiency and quality of learning by facilitating access to resources and services as well as remote exchange and collaboration [12].

II. MOTIVATION AND OBJECTIVE

e-learning continues to grow over the years, in 2012, over 1.4 billion students and 62.5 million educators got involved in e-learning [9]. It has become a popular tool today especially in developed countries to enhance learning and keeps evolving with the World Wide Web. However, its adoption and implementation in developing countries is still a challenge.

This paper focuses on the aspect of e-learning in an education environment specific to Nigeria. It identifies and analyzes the factors forming a barrier in its successful taking off within the region keeping in mind the significance of e-learning in today's world.

III. METHODOLOGY

In today's society, the primary purpose of e-learning is to achieve the objectives of instruction and facilitate retention and transfer of knowledge. e-learning is an instructional medium that permits alternative approaches to curriculum implementation in the ICT age [18].

In under developed countries specifically Nigeria, certain factors act as a barrier in not letting the society breakout of its current situation. The focus of this paper is to analyze the barriers hindering e-learning which is illustrated in Fig. 1.

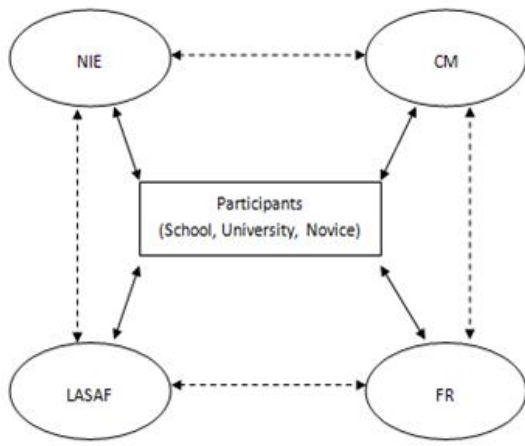


Fig. 1: Factors affecting e-learning

e-learning challenging factors :

A. Non-Influencing Environment (NIE):

NIE is a major factor effecting adoption of e-learning. Irregular and frequently interrupted power supply is a persistent problem in Nigeria affecting almost every aspect of the economy, including education. Some rural areas are not connected to the national grid making it difficult for students residing in these areas have proper access to ICT facilities and considering the average income of workers in the country, the cost of a personal computer (PC) and Laptop are still very high in Nigeria [4]. Moreover few privileged students who poses a personal PC/Laptop do not have much flexibility in choice of service providers due to their efficacy and most of the times provide poor quality service [8] .

B. Lack of State-of-the-art Facility (LASAF):

Another challenging factor posing as an obstacle to the practice of e-learning is slow and unreliable internet connection, inadequate instructional materials, and poor telecommunication infrastructure [8].

C. Financial Resistance (FR):

The cost of implementation affects the acceptance and diffusion rate of technologies. Cost is the underlying factor responsible for the effect caused by other factors. Inequality of access to technology is the challenge of digital divide existing among learners; thus, some are unable to afford computers [2][3]. The hardware and maintenance costs are also contributing factors.

D. Community Mindset (CM):

Lack of entrenchment of computer education in all school curriculums creates a phobia among students for operating one. Most students are also reluctant to take responsibility for their own learning, but prefer to be spoon-fed at all times, because

the lack of confidence and are not exposed to the benefits of e-learning and its gain [4].

IV. DISCUSSION

As discussed above, analysis of the influencing factors identified in the methodology is carried out through a case based analysis. To support the methodology, two cases have been identified that describe the situation in Nigeria with respect to e-learning:

A. Case Study 1: Challenges of Integrating e-learning in Nigeria

e-learning in Nigerian tertiary institutions is faced with poor ICT infrastructure and other socio-economic challenges [4]. According to [Salawudeen] in [4], The cost of personal computer is still on the high side considering the average income level in the country as such only few students are privileged to have a pc/laptop and moreover, the cost of accessing the internet is also high considering the slow and unreliable connection that exists.

Most of the students also have no computer education background hence they are afraid of operating one. This is because it has not been entrenched in all schools curriculum at their elementary and secondary education level but the perennial problem in Nigeria is that of electricity instability which has been a major setback in our technical development.

B. Case Study 2: Challenges of e-learning studies in Nigeria

According to [7], from the research conducted to identify the challenges in e-learning, the most challenging aspect is the unstable power supply. The alternative left to resort to is generator set but this again is too expensive to run as the cost of petrol or diesel is beyond the reach of an average Nigerian.

The internet connectivity tariff is also on the high side. The high cost of connecting internet is among the major reason that kept many academic staff and students from being on the net. Likewise, cost of bringing a good computer system especially branded ones is also high; depth of knowledge and skills in the operation of internet is likewise a challenge to the e-learning student in Nigeria. Many students spend huge money to cyber cafe and hiring those who have good knowledge of computer and the internet to help them download and print for use as hard copy. More training on how to meet the internet the internet for accessing their training cities without much hassle is very important. Lack of adequate skills to access and navigate the internet is a very serious impediment to the success of any e-learning student.

Analyzing each factor identified with respect to the case studies:

A. Non-Influencing Environment (NIE):

According to [4] and [7], unstable power supply, slow and unreliable internet connections are the critical factors affecting the acceptability of e-learning by both students and lecturers. This has been a major setback in the technological advancement in the country.

The unreliable and slow internet connection has kept many academic staff and students from being on the net browsing to get access to the global networking of researchers [7]. The tariff is also high due to the efficacy of service providers which gives less room for choice.

The non-influencing environment has formed due to the culmination of lack of state of art facilities. This in turn has reflected in the community mindset bringing in the technophobia in the participants.

B. Lack of State-of-the-art Facility (LASAF):

The population of students and the number of computers available in most of the secondary and universities in Nigeria is not proportional as such each of the students is not able to have hands-on training. There is also unavailability of subscribed digital libraries in Nigerian universities that will provide a better and easier learning platform; inadequacy of technical staff to maintain the system [4].

Due to financial resistance, there is lack of state of art facilities in a significant number of secondary and universities in Nigeria and even where available, the facilities are not optimally used because of the non influencing environment.

C. Financial Resistance (FR):

Inequality of access to technology is the challenge of digital divide existing among students; most of them are unable to afford computers due to the relative cost [7]. The cost of accessing the internet is still on the high side considering the slow service offered hence, affordability becomes a challenge.

There is a resistance in providing fund to build the required infrastructure and produce learning materials. This resistance is due to the point highlighted above.

D. Community Mindset (CM):

Most of the students have no computer education background, hence they are afraid of operating one, some go to the extent of hiring expert at a cost to fill their admission, registration and other documents meant for them to fill online [4]. However, the very few who have access to the computer do not know how to use it and maximize it usage. This is largely because computer education has not been entrenched in all schools curriculum at their elementary and secondary education level.

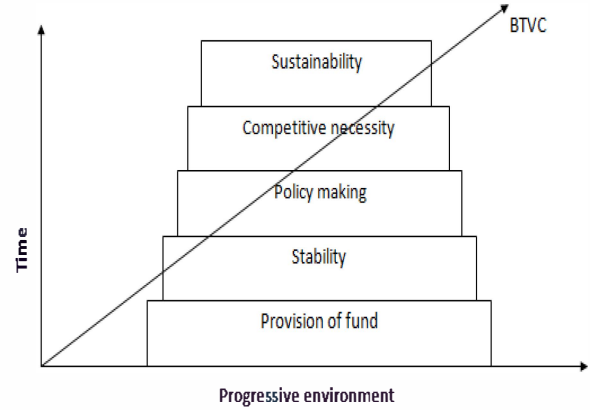


Fig. 2: Proposed Model

Keeping all the four factors in mind, each factor is influencing the other and the entire society is suffering from a pull back because of which the community is not in a position to break through from the vicious technology cycle (btvc) it's currently in. The proposed model illustrated in Fig. 2, suggests a layered approach detailing provision of fund as the base layer bagged by stability in practice which can be ensured through appropriate formulation of policy. This will suffice and motivate the society to adapt and practice e-learning, supported by competitive necessity gives sustainability and a competitive edge to the society resulting in break through from the vicious technology cycle with time and progressive environment.

V. CONCLUSION

The findings show that a good way to start in solving this problem would be the provision of adequate finance. Availing university administrators with adequate finance for the acquisition of necessary e-learning infrastructure and the establishment of e-learning centers should be a front line issue. Also, teaching and learning still remain local, not impacted by current international trends and standards. In the last 20 years Nigerian HEIs have experienced staggering increases in student population, while working with inadequate resources. They continue to use outdated course materials and old instructional perspectives that are damaging institutional prestige. The best and brightest are rejecting local institutions in preference for overseas training and opportunities. Nigerian HEIs are therefore losing the most valuable national resources [13]. It is imperative to embrace change and make the paradigm shift into 21st

The government should also mount an intensive e-learning training program for teachers, as well as adequately provide all the materials needed for e-learning implementation.

Moreover, other technical constraints have to be overcome in order to increase the participation of Nigeria into the implementation of e-learning bagged with suitable learning techniques to imbibe e-learning into the environment.

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