

## E-Learning: Effective Tool for Curriculum Content Delivery in Tertiary Education in Nigeria.

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### Abstract

The upsurge of information technology during and after the COVID-19 has spurred several modes of learning to achieve educational goals. This paper examined e-learning as an effective tool for curriculum content delivery in tertiary education in Nigeria. The adoption of e-learning has opened a vista of opportunities for digital learning among teachers and learners in tertiary education. It has made learning more accessible, inclusive and students centered. Despite these benefits, there are myriad challenges confronting the adoption of e-learning in tertiary education, some are inadequate basic digital infrastructures, teachers' incompetence and perception on the use of technology, and paucity of funds for tertiary education. The paper concluded that e-learning is the new normal in education, and tertiary institutions should integrate electronic learning if the institutional goals of achieving the manpower needs of the society are achieved. This paper among others recommended that teachers in tertiary education should be trained and retrained on the use of information technology, and the administrators of tertiary education should adopt the policy of paperless administrative policy.

**Keywords:** Curriculum, Curriculum Content, Curriculum Content Delivery, E-Learning, Tertiary Education.

## Introduction

Education is pivotal in the development of any society be it a socialist or capitalist state. Thus, individuals and nations strive to develop an educational system that will not only meet the needs of immediate society but education that is incognizance with world best practices. It is in recognition of this that individuals and world leaders mobilize resources toward achieving education that will act as a catalyst for the development of individuals and society.

Education is the process of the acquisition of knowledge, skills, values, morals, and habits that will enable the learner to live a productive life and contribute to the development of society. Education can be referred to as the life experiences an individual acquired from infancy to adulthood and eventually until the person's demise. It is pertinent to note that education can be structured or unstructured, structured are the planned education that is obtained under academic professionals with predetermined objectives. It is called formal education with a structured learning pattern and under formal settings. Examples are universities or polytechnics.

While the unstructured is the general experiences individuals acquired from their home background, and cultural settings, and these experiences vary from one location to another. The hallmark of this education is that it is not structured and has no defined curriculum. These are the types of education acquired from the family, church, and other cultural settings. Another type of education worthy of note is the semi-formal education that is acquired in motor mechanics and other skills acquisition settings.

The core education that enhances development is structured education with a defined curriculum. It is in this perspective that Ukeje(1984), defined curriculum as "what to teach is what is normally called the curriculum." In essence, a curriculum is the planned learning experience offered to the learner or the task the learner tends to accomplish which is often referred to as educational goals and objectives, and these are usually achieved in a formal school setting.

The school is a veritable platform for the accomplishment of educational goals. Besides, the teachers, the students, and the government are stakeholders in the effective curriculum delivery of educational goals. For teachers to be effective in curriculum delivery the teacher must be trained and retrained in the pedagogy of education while the government as a necessity must provide the serene academic environment and resources that will accelerate the attainment of educational goals. The government must also provide adequate funds and effective management of the resources if the goals of education must be attained.

A cursory look at the service delivery of tertiary education services in Nigeria portrays abysmal systematic failure. It is unfortunate that the traditional teaching strategy of curriculum content delivery no longer satisfied the needs of the nation and the aspirations of students, especially in the era of the new normal. This is a result of the operators of an educational system not achieving optimum service delivery. (Nwaka, 2011).

This has prompted scholars to search for effective curriculum content delivery in tertiary education, especially in the time of the new normal. This makes the use of technology paramount at all levels of the educational system, especially tertiary education. It is against this backdrop the research is of the view that the integration of information technology will enhance the effective curriculum content delivery of tertiary education in Nigeria.

The National Policy on Education (2014) succinctly states that in a bid to enhance students learning and an all-around improvement in university education schools should use information technology for meaningful engagement of learners at all levels of education. Information technology is the use of technological tools to enrich educational services. It consists of computers and computer networks when combined or uses single to collate data, analyze, process, store, retrieve and disseminate to the end-users. The components of ICT include the radio, television, computers, CD/DVD, internet, and other information technology that can store and retrieve data. (Wordu, 2019).

The hallmark of information technology is the use of the internet and computer and this brings to the fore the process of teaching and learning through an electronic platform. Thus, e-learning means electronic learning that is facilitated by information technology. It is technological-induced learning at a distance with the use of the internet, computers, and computer networks. The beauty is that the advanced economy has integrated the use of e-learning into the education system and the benefits are enormous in skills acquisition, knowledge, planning, and curriculum content delivery. But sadly, it appears that developing countries are yet to fully integrate e-learning into educational pursuits. Thus, disinvesting the students in the benefits of information technology in education. It is against this background that the study is apt in examining the use of e-learning as a tool for effective curriculum content delivery in tertiary education in Nigeria.

## Conceptual Clarifications

### E-Learning

E-learning means electronic learning, and electronic learning is becoming the nerve center of effective curriculum content delivery and all facets of educational pursuit. Its usage depends on the educational organizations and the availability of digital infrastructure, the competence of the teachers, and the school policy concerning digital technology. However, its connectivity to the internet, computer, and other communication networks provide a base for effective curriculum content delivery. It is 'learning that uses an information network-internet whether wholly or in part, for course delivery interaction and/ or facilitation' (Tinio 2000). The hallmark of e-learning is the electronic use of communication and technological tools for teaching, educating, and training students who are apart miles from each other.

E-learning is classified as learning or courses delivered through the internet which consists of the virtual classroom, satellite, interactive TV, Websites, and other interactive multimedia devices which are used to inform, train, educate and communicate to the targeted population. E-learning is described as web-based learning where the knowledge is shared through electronic media namely the internet, intranets, and extranet anywhere other than the traditional classroom where the teacher is teaching. (Google expression of internet 2003, Ebuku, 2021). In a similar vein, Oxford Home Study defined

*e-Learning refers to the delivery of education and training through digital resources. Rather than attending lectures and classes in the conventional sense, eLearning uses modern technology to connect pupils and students with course content, learning resources, and qualified tutors.*

E-learning is a paradigm shift from the traditional system of teaching where teachers are in constant interfacing with the students in a confirmed classroom. To a dynamic classroom system of virtual learning with a personalized, flexible and collaborative community of learners. E-learning has become the agent of change that enhances accessibility, efficiency, and quality of learning by facilitating access to resources and services as well as remote exchange and collaboration. (Okoroafor, Madubuko, and Achigbo 2011).

E-learning is a form of new learning device that the upsurge has caused a change in the process of teaching and learning, and curriculum content delivery, in fact, in every facet of education. The use of e-learning in teaching and learning has spurred learning to be student-centered hitherto teachers centered who merely ditched the content to the learners at will. The use of electronic learning has made learning inclusive, self-paced, and accessible anywhere anytime. E-learning opens up a world of learning and at the same time empowers learners with the information technology awareness and skills that will help the learner to navigate in today's global knowledge economy. (Ifunanya, Awa, Amechi & Chikaodinka, 2020).

## Curriculum

At the core center of teaching and learning is the educational objective that the learner needs to accomplish within a given time and period. For effective teaching and learning, there is the need to have an instrument that will act as a vehicle for the accomplishment of educational goals. This vehicle is the curriculum that is built to accomplish the educational goals in line with the goals and needs of the individuals and society. The curriculum is the totality of what to teach, the methods of teaching, the contents, the instructional materials, and the techniques of evaluating the students to ensure that the learning outcomes are achieved.

In the same vein, Mezieobi and Mazieobi (2014) opined that curriculum is the planned content of what to teach and the unplanned, the positive learning experience which if accomplished will lead to the accomplishment of predetermined educational goals or a desirable change in the behavior.

From the above definition, it is pertinent to note that the curriculum contains the learning contents, the methods of accomplishment, the activity, the materials as well as the process of content delivery, and the procedures of evaluating the learning outcome to achieve the prearranged outcome as defined in the national policy on education. While Mkpa, (2017), opined that curriculum content consists of information, ideas, facts, theories, principles, concepts, and subjects matters that are communicated to the learners in the process of learning in the school.

## Tertiary Education

Tertiary education is education given after Post-Basic Education and it consists of the College of Education, Polytechnics, universities, and other specialized institutions learners acquire after the completion of Post-Basic Education. (FGN, 2014). The importance of tertiary education in any society cannot be overstressed hence it is central in the production of the needed manpower in any society that will help in the country's national development. To the learner, it is a veritable instrument for the attainment of higher status in society and the self-accomplishment of one's desires.

The way the curriculum content delivery in tertiary education, as a specialized institution for the production and training of the needed manpower in the society is carried out goes a long way in the attainment of educational goals. Put differently, the strategies adopted in the curriculum delivery in tertiary education determine the effectiveness in the accomplishment of the learning outcome. In the past, various methods had been adopted by teachers in the delivery of curriculum content to the learners but this process of using chalk, pencil, and textbooks has not yielded the desired results thus unsatisfactory to the learners and society. These methods are not only obsolete but denied the student the benefits to be a global student. Therefore, the clamor for the integration of technology in curriculum content delivery in tertiary institutions.

## E-Learning and Curriculum Content Delivery in Tertiary Education

The upsurge of information technology in the educational system has changed the entire landscape of education. It has changed the methods of interaction between the teacher and the students, the student and students, and the teacher and teachers. It caused not only a shift from pen and paper but to virtual learning that has revolutionized teaching and learning skills with a focus on connectivity, versatility, and student-centered learning.

The delivery of content of curriculum manually has been jettisoned, nations all over are integrating technology into teaching and learning. Thus, the delivery of curriculum content through technology has led to computer-assisted instruction, computer-based methods, teaching software, PowerPoint, and other learning packages.

There are varieties of technologies that can be used in tertiary education to deliver curriculum content and enrich learning outcomes. The use of these technologies depends on teachers' competence and the availability of information technology tools in the school. The driving force of e-learning is the computer and the use of the internet. Computers are electronic machines that are capable of collecting information, processing, analyzing, storing, and disseminating it to end-users. This is possible with the use internet and other electronic devices that enhance information dissemination.

## Internet

The Internet has been adjudged the mother of all networks. It is the global interconnectivity of computers and other information communication technology that provides information and communication facilities. Etim, Akpam, and Ibok (2013) defined the internet as the interconnection of the system or subsystem of equipment that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, and switching, interchange, transmission, or reception of data or information.

The use of the internet has offered an opportunity of endless possibilities for overcoming geopolitical zones or distance barriers to learning. The internet provides opportunities for teachers to access and study course materials online, share text messages related to the course of study, chat and have real-time interaction among students and teachers. The following ways can be used to connect to the internet – (i) Cable Modem (ii) Cellular (iii) Wireless or Satellite Connection (iv) Local Area Network (LAN) (v) Digital Subscriber Line (DSL) (vi) Integrated Service Digital Network (ISDN), etc.

E-learning is of two major forms synchronous and asynchronous. The synchronous consists of multifarious features that allow for interaction between the learning contents and the learners. Examples are forum chatting, audio and video conferences among others. The asynchronous system merely presents the contents to the learners without necessarily providing active interaction between the learning contents and the learners. The learner is at the liberty to read and download where necessary

Teleconferencing is a mode of interactive electronic communication among people located in two or more different places. (Roa, 2002). It simply means an electronic communication of two or more people at different locations. If used in tertiary institutions, it will aid in curriculum content delivery. There are four types of teleconferencing namely audio conferencing, audio-graphic conferencing, video conferencing, and web-based conferencing. The use of these conferencing depends on the proficiency of the user, the nature and sophistication of the technology, and the kind of interaction required between the teacher and the learners.

Audio conferencing refers to electronic live interactive chat that involves the exchange of voice messages through the use of a telephone network. Audio graphic conferencing is an electronic exchange of message that combine voice message, graphs, diagrams, and pictures. While web-based conferencing involves the transmission of a voice message, graphics, audio, and visual message through the internet. Web-based and video conferencing are sophisticated conferences that required internet and computer network and both are synchronous and asynchronous and cannot use telephone lines but satellite link or television network.

Video conference is the use of electronic devices in transmitting audio and video from one location to another location. It involves a live chat and transmission of images, graphs, pictorials, etc. The individuals participate from different locations and see and hear each other.

Another facility that enhances curriculum delivery content in tertiary education is the use of a web-based system. Goldchalk and Lacy (2001), affirmed that the web-based system enables students and teachers to communicate at distance through discussion forums, chats, and e-mail to problem-solve and complete assignments. With e-learning, the educational content is delivered to the learner through the computer, laptop, and other electronic devices that can store, receive and process information and disseminate it to larger audiences.

### **Other Modes of E-Learning that Enhance Curriculum Content Delivery.**

**Podcasting or Net casting:** is an episodic series of digital audio or video files that a user can download to listen to. (Wikipedia online) Podcasting can be used to enhance curriculum content delivery since it allows the use of personal computers or android phones to download educational materials like lecture notes and listen at once convenience. Podcasting is another method of teaching which helps lecturers to reach students and can be used to improve listening, languages, and history. Hsu, (2007), explained that podcasts are important for two reasons; firstly, a mobile device such as an iPod makes a good medium to distance education materials. Secondly, Information can be easily accessed, which makes podcasting suitable for curriculum content delivery in tertiary education.

**Blended Learning** is a technique that can enhance curriculum content delivery that combining traditional methods of teaching and online learning. (Inegbedioma, 2019). It is the combination of face-to-face teaching and learning with information technology

tools to effectively deliver the curriculum content and achieve educational goals. Watson (2008), provides a broad definition as online delivery of educational content with the best features of classroom interaction and live instruction for personalized learning, with consideration and differentiation across diverse learner groups.

**E-mail** is one of the most widely used internet facilities and it is an asynchronous form of communication. It is a cheap and fast mode of communication that when applied in tertiary education will help in curriculum content delivery.

**CD-ROMs** – means computer disc (read-only memory). The disc is designed to have a large capacity and can store a variety of data in various formats namely; text, graphics, video, audio, etc. CD-ROMs can be used to store instructional materials and play at the most convenient time. It is common and cheap compare to other storage devices therefore, if well utilized in tertiary education it will enhance the use of curriculum content delivery.

Gamification is another trending innovation in educational technology. It is derived from the word game. Experts in educational technology are looking for various ways of turning learning into fun, and gamification is the most suitable innovation to achieve a better learning outcome. Thus, gamification is the process of integrating games into the process of teaching and learning at the same time to maximize a better outcome. Sagar (2020), defined gamification as the process of making learning more interactive and fun by introducing small challenges, fun tasks, and rewards. The essence of gamification in curriculum content delivery is to make learning more attractive, captivating, and ultimately effective in goals attainment. (Manu, 2018).

### **Relevance of E-Learning in Tertiary Education**

The use of e-learning has been of immense benefit to educational institutions especially during and after the COVID-19 era. Educational institutions decided to re-tool the educational system by integrating technology into education. E-learning is adjudged as one of the best methods of curriculum content delivery, especially in tertiary education. It is learner-centered and focuses on the needs of the individuals than the instructors. The learner decides to learn at their own pace and time, unlike the rigidly structured classroom instruction. It affords the learner the flexibility of time and place of curriculum content delivery based on individual differences or schedules.

The integration of e-learning into education provides unrestricted access to huge information, in curriculum content, development, and delivery. Thus it enriches the curriculum content delivery by providing various platforms for interaction between learners and teachers. In the process, it enhances the efficacy of knowledge by removing all the barriers that have the potential of hindering access to information and easy participation of learners despite the location and time. It provides for individual learners' differences, allowing the individual to choose the best suitable time to learn thereby making education, inclusive and accessible anywhere anytime. It allows self-pacing thereby enhancing academic satisfaction and reducing academic stress, unlike the conventional

classroom setting where every learner is supposed to converge at a designated place and time.

E-learning is not only flexible but also cost-effective since individual learners can decide where and when to attend the lecture. E-learning, if well-articulated and integrated into educational practice will produce great results by decreasing cost and increasing performance (Tom, 2010).

Furthermore, e-learning enhances communication between the learners and teacher, so provides a community of learners that sustains learning and helps in the curriculum content delivery. It enhances students' and teachers' opportunities of improving skills and knowledge in the digital world. It aids in the preparation of the society for global communication and dialogue with others irrespective of geographical location. Again, e-learning consists of a wide range of multimedia devices to enable teachers and learners to be innovative, creative, and resourceful, motivate the students, increase participation and enrich learning experiences, thus improving retention. (Arkorful, and Abaiboo 2014, & Mgbere, 2016).

The integration of e-learning in curriculum content delivery helps to make the learner an active engagement in the learning process, and provide individualized instruction thus providing the learner an opportunity to think and recreate knowledge. Another outstanding benefit of electronic learning is that it creates a community of learners who can collaborate with other scholars without being hindered by geographical location.

#### **Challenges of E-Learning in Education in Nigeria**

In spite of the numerous benefits accruing from online learning, there are several challenges to the effective use of e-learning in curriculum content delivery especially in tertiary education in Nigeria with high power outage. For effective use of e-learning in curriculum content delivery there is the need for a change in educational policy guidelines by integrating technology as a driving force in the realization of educational goals.

Once the guideline is set, the major challenge is how to restructure the existing infrastructures and buildings to make them conducive to effective digital learning. Also, there is the need to build more infrastructures and procure information technology tools, and house such tools for maximal benefits. In a similar vein, there is the need for the establishment of an e-library, data base, computers, and computer networks that will enhance information storing and dissemination.

Another compelling challenge in curriculum content delivery is the teachers' competence and perceptions of the use of information technology. The teacher plays a very significant role in curriculum content delivery, as the onus lies with the teacher for effective implementation. The lack of interest and lackadaisical attitude of teachers toward the application of information technology remains a major challenge to effective curriculum delivery. When technology and its application are not valued and accepted by teachers as a tool for instruction it becomes an impediment to curriculum content delivery. (Amadi, Okoli, & Udo, 2017).

Furthermore, the lack of basic ICT infrastructures has constrained teachers in the use of the conventional teaching methods which is teacher-centered, and in the process denied the students the benefits of being a global student. The high cost of computers and the internet is a challenge for effective curriculum content delivery in tertiary education in Nigeria. The cost makes it very difficult for schools and individuals to procure the necessary facilities for online instruction, thus it poses a threat to effective curriculum content delivery in tertiary institutions in Nigeria.

Also, paucity of funds and mismanagement of funds is other contributing factors that hinder the effective use of information technology in the curriculum content delivery in tertiary education. Inadequate funds in tertiary education have led to the inability of the school administrators to procure the necessary instructional materials. Worse is the greed and corruption that permeated every facet of Nigeria's economy and educational institutions are not exempted. The budgets allocated to education have been below the stipulated UNESCO 26% of the national budget. This has inhibited effective curriculum content delivery in educational institutions in Nigeria.

#### **Conclusion**

The integration of e-learning in tertiary education has promoted and increased access to education irrespective of location and time. It has made education to be inclusive and students centered, unlike the traditional teacher-centered methods. It has increased the digital skills and knowledge between the students and teachers. The use of e-learning is the currency of modern teaching and learning and must be integrated into the pedagogy of education if the curriculum content delivery is achieved. Therefore, the paper concludes that for tertiary education to achieve the production of the required manpower for the development of society, tertiary institutions should integrate e-learning in all tertiary educations in Nigeria.

Based on the challenges inhibiting effective use of curriculum content development the following solutions are proffered.

- I. There is an urgent need for an increase in the educational budget to enable an administrator of schools to procure the necessary basic information technology that will enhance effective curriculum content delivery in tertiary education, and school administrators should collaborate with big electronic merchants to provide computers and computer networks
- II. The lecturers of tertiary education should be trained and retrained on the use of information technology tools. And they should be encouraged or compelled to use technology in curriculum content delivery.
- III. The school administrators of tertiary education should adopt computer-based examinations. And as a policy adopt paperless administration with an emphasis on the digital mode of learning.

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