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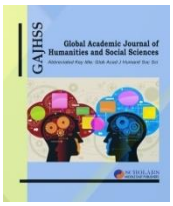

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Review Article

E-Learning: Shifting from Theory to Practice & Learning across Curriculum

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Abstract: In time past, knowledge and skills have usually been acquired in all educational institutions through the traditional mode of learning, which is mainly face-to-face instructional technique. Presently, the scenario has changed due to the advent of Information and Communication Technologies (ICTs), and the use of e-learning has taken the center stage in both the advanced and the developing worlds like Nigeria. With the arrival of the Internet and other mobile technologies across the globe, electronic learning mode of instruction is gradually being introduced into the education system to bridge the gaps in education between the citizens and as well reduce the level of illiteracy among Nigerian citizens. Consequently, this study reviewed relevant pieces of literature and gives a scholarly background to the study based on some contributions made by various researchers and institutions on the concept of e-learning concerning teaching-learning in higher educational institutions of learning. The also paper discussed the development of e-learning (electronic learning) in Nigeria; the available technological tools that support e-learning practice, and the pedagogical methodologies used to enhance this mode of instruction. It further examined the benefits of e-learning over the outmoded methods of classroom learning. Notwithstanding, the pitfalls of electronic learning were similarly outlined. The paper highlighted the obstacles that face the proper integration of e-learning in teaching-learning practice in Nigeria's educational institutions. Lastly, the paper suggested or recommended appropriate measures to be taken for the proper implementation of an ideal e-learning instructional strategy in Nigerian educational institutions, while at the same time focusing on the future of e-learning in Nigeria.

Keywords: E-learning, ICT, blended learning, personalized learning, and Distance education.

INTRODUCTION

The advent of new technologies has changed the way human activities are done, and the education arena is not left out as the conventional methods of teaching and learning are gradually changing to digital formats (Samuel, 2021). The education sector is undergoing serious transformation and is constantly being challenged due to the aforementioned advances in new technologies. As further put forward by Samuel (2021), learning physically with the teacher before learning or knowledge is gained can take place is now becoming a thing of the past. Education is said to be the backbone of any nation. Nigeria, as one of the developing countries, is as well trying to meet up

with the educational standards of the advanced nations to fit into the changing world. The need for an improved education system and knowledge acquisition has elicited the introduction, acceptance, and incorporation of e-learning, not only in Nigeria but globally.

Lynch (2020) gives thanks to technology for the emergence of e-learning method of instruction that now makes it possible for many students at the global level to access all kinds of courses online without leaving the comfort of their homes. The instructional method also provides opportunities for students/learners to learn from competent instructors/teachers, and as well interact with other students/learners from different parts of the world without any form of restrictions, either based on gender, race or colour.

However, Kyari, Adiuku-Brown, Abechi, Pyochi & Adelakun (2018) declared that despite the vital roles e- learning plays in primary education in many countries of the world, most developing nations, including Nigeria, are yet to unlock its full potential. Given its numerous benefits for both teachers and learners, its application has been popularized, not only in the field of education but in business, the military, and others fields. As a result, educational institutions, teachers, and students are also facing new challenges posed by these technological advancements. These challenges, as well need different pedagogical approaches, that is, the use of information and communications technology (ICT) to meet the diversification of student populations, and new expectations related to working life (Valtonen, Leppänen, Hyypiä, Kokko, Manninen, Vartiainen, Sointu & Hirsto, 2020). Presently therefore, there is a big shift in almost all aspects of educational activities, from an instruction paradigm to a learning paradigm, and from broadcasting knowledge to students to knowledge construction; also, there is a shift from the conventional methods of instruction toward more student-centered teaching and learning practices (Harasim, 1996).

The paper gives the conceptual meaning of e-learning, the available technological tools that support e-learning practice, and several teaching methodologies employed in the services of e-learning programmes, and at the same time examines the hindrances facing the integration of e-learning programmes in Nigeria's educational institutions. Conclusively, the paper recommends measures to curb the envisaged hindrances on the way of implementing successful electronic learning.

LITERATURE REVIEW

Brief History of E-learning in Nigeria

The present society is highly dynamic, and technological advances are changing human endeavour rapidly. Consequently, the human race is seriously being challenged in all spheres. There is no gainsaying that the conservative methods of teaching and learning have started suffering some serious setbacks in Nigerian higher educational institutions (Aina & Abdurraham, 2020). Currently, teaching-learning has developed into an electronic paradigm (e-learning) that has pervaded the entire globe (Olaitan, 2020).

E-learning stands for electronic learning. It embraces the use of computers, telephones, and other electronic devices to enhance the teaching-learning process. The quest for a better and more inclusive education (knowledge acquisition) necessitated or triggered the introduction, acceptance, and incorporation of e-learning into the Nigerian education system (Sucuoglu & Andrew, 2022).

Nonetheless, the introduction of the concept of e-learning to the Nigerian education arena dates back to the '80s, when reputable Nigerians started enrolling in several online universities in London. According to Ajadi, Salawu, & Adeoye (2008), as reported by https://www.medianigeria.com/history-of-e-learning-in-nigeria/ website, the history of electronic learning could be traced back to the development of telecommunications, which began in 1886 when e-cable connections were established by the colonial masters (British government) between Lagos and the colonial office in London. The purpose of this move was to transmit information and receive timely feedback. It is on record that by 1893, all government offices in Lagos were provided with telephone services for easy communication. Later, other parts of the country were provided with telephone services to ease administrative work. However, at the time, the commonest type of e-learning adopted in Nigerian schools was in form of lecture notes on CD-ROM, pre-recorded audiotapes provided to learners, which can be played when the learners so desire, and other forms of instruction through radio and television broadcasts (Olaniyi, 2006; Meskhi, Ponomareva & Ugnich, 2019).

The modern or the reformed e-learning mode of instruction started with the advent and popularization of the Internet in the 1960s, and its introduction in Nigeria dates back to the '80s as earlier affirmed when respectable Nigerians started enrolling in several universities in London (Sucuoglu & Andrew, 2022). The rapid emergence of these digital technologies facilitated the efficient and reliable delivery of lectures, virtual classroom

sessions, and other instructional materials and activities via the internet (Onlineeducation.com, 2020).

E-learning Tools

E-learning attempts to shift the focus of the educational environment away from the physical teacher-pupil context, while disseminating information (Franklin & Nahari, 2018). Different scholars define e-learning based on their perception; hence, there is no commonly accepted or formal definition for the term. Some tools are peculiar to e-learning depending on the type being practiced. The implementation of electronic learning requires the utilization of some basic tools for instruction in higher education to achieve its basic goal. According to Pande, Wadhai & Thakare (2016), these tools include the following - Social bookmarking, Wiki, RSS, Podcasting, Instant messaging, text chat, internet forums, videoconferences and chat rooms. These, among others, are the basic essential tools for any e-learning programmes to achieve its goal.

Pedagogical Methodologies that Support E-learning

Technology advances have made it possible for the development of various instructional strategies of delivery for electronic learning to suit the various preferences ort learning styles needed by learners (Bouchrika, 2022). Today, different methods are used to achieve e-learning programmes irrespective of where it is being organized. The type used depends on the user's mode (Olaitan, 2020), the timing of interaction, and the extent of their engagement in education (Algahtani, 2011). Arkorful & Abaidoo (2014) and Algahtani (2011) opined that e-learning is classified as both computer and internet-based instructional strategy, which depends on the user's choice.

Electronic learning could be classified as mixed or blended, assistant mode, or completely online mode. It could also be classified as synchronous or asynchronous mode. The synchronous type allows learners to receive instruction via real-time communication processes, such as teleconferencing, videoconferencing, Zoom app, etc. This type, according to Almosa and Almubarak (2005) offers the advantage of instantaneous feedback. The asynchronous mode allows learners to discuss with the instructors or teachers as well as among themselves over the internet at different times via some internet tools, such as WhatsApp, blog, thread discussion, and emails (Almosa and Almubarak, 2005; Algahtani, 2011), with an advantage that learners can learn at a time that suits them.

However, the most common e-learning delivery modes are: -

- Blended or Hybrid Learning e-learning.
- Computer-Based Training or Web-Based Training.
- Mobile eLearning.
- Social eLearning.
- Game-Based eLearning.

Blended or Hybrid Learning

The definition of blended learning varies according to scholars' perspectives (Bryan & Volchenkova, 2016). This may as well be referred to as mixed learning. Blended learning is hybrid of traditional face-to-face classroom and e- learning experiences that is getting popular globally as renowned universities are integrating it to improve learning standards, increasing passing rates of examinations, adding time flexibility, and removing distance barriers (Hrastinski, 2019; Rasheed, Kamsin Abdullah, 2020; Baumann, Rodríguez, Wieling, Parra-Cardona, Rains and Forgatch, 2019; and Schefer-Wenzl, Miladinovic and Ensor (20218). Blended learning is rotation, self-blended, and enriched virtual (Bryan & Bolchenkova, 2016). Cleveland-Innes & Wilton (2018) categorized blended learning into three, which are blended presentation and interaction, blended block, and fully online, meaning that lectures are partly through the traditional and partly online instructional modes.

According to Graham (2006) blended learning is an educational concept that allows technologies to be combined with traditional classroom practices. It creates a provision to integrate any teaching pedagogy or approach that includes constructivism, behaviorism, cognitivism, etc. also declared that it integrates digital/online modalities with face- to-face learning. Additionally, the blended online learning approach is a practical strategy to combine the usage of both synchronous and asynchronous modes of learning (Lapitan, Tiangco, Sumalinog, Sabarillo & Diaz, 2021; Singhal, Kumar, Singh, Fuller & Gill, 2020).

For clarity, by online learning, we mean Internet-based teaching and learning. (Bonk & Graham, 2005) avowed that blended e-learning combines face-to-face instruction and computer-mediated instruction this method supplements in-person instruction with technology, such as collaboration software, web-based software, and communication software. Aa and affirmation, Oye *et al.,* (2012) and blended e-learning encourages educational and information review beyond classroom settings. Algahtani (2011) described it as a completely online mode when it uses both "synchronous" or "asynchronous" communication

systems. The complete online mode of instruction involves the exclusive use of the network for teaching and learning via the internet with the use of such tools as, telephone, videoconference, teleconferencing, chat rooms, e-mail, and other social media platforms like WhatsApp, Facebook, Telegram, etc. In totality, therefore, the two major objectives of blended learning include is support to faculty teaching and to facilitate students to learn.

Computer-Based Learning

Computer-based learning (CBT) offers many possibilities for students. In this method of learning, learners/students can access content or course materials through media, such as DVDs, Flash drives, and CDs or CD-ROMs. CBT is another term used to facilitate learning with the use of computers. This method is normally run on the learners'/students' systems. Another notable term is Web-Based Training (WBT). This method virtually uses the Internet for course delivery. One common thing among the terms is that learning is self-paced and there is no interaction among instructors and learners. The interaction is between the learners'/students' and their computers or Internet sites or platforms'. This instructional delivery method, according to Soni (2015) specifically suits the adult learners' who desire to learn new skills.

Mobile E-learning

Due to technological advances, different types of learning techniques have been introduction in teaching and learning process. Sharples (2000) noticed that the availability of advanced mobile technologies, such as high bandwidth infrastructure and wireless technologies, have also lent itself to the extension of e-leaning towards the use of mobile devices, such as handheld computing devices are used to provide access to learning content and information resources. Learners/students can easily use their mobile devices to complete some of their course-related activities. Though the ease, availability, and affordability of mobile devices can make e-learning more accessible, but Soni (2015) has warned that before introducing this approach, the disk space, screen size, and Internet connectivity features must be taken into consideration because these are some of the disadvantages of the adoption of these devices in teaching-learning.

Social E-learning

As the name implies, social learning does not mean that this type of instructional delivery is not learnt in an isolation. Social loaning looks like the hybrid system, which approaches it instructional delivery via both in-person and online. Social e-learning involves the application of social learning principles to the e-learning approach. Therefore, as the name implies, social learning entails learning from and with others both physically through the direct face-to-face and thorough the indirect interaction via interactions on social media platforms and discussion forums). According to Chetia (2019), social learning occurs when individuals observe others' behavior or the consequences of others' behavior. Aubron (2018) affirmed that social e-learning entails the use of technologies, such as videoconferencing and social media sites to facilitate interactions among learners. The scholar also affirmed that group discussions and question-and-answer sessions help build up social interactions throughout the learning process.

Game-Based eLearning

Game-based learning is one of the instructional strategies currently developed to impart knowledge and experiences to learners. Games used for e-learning are exceedingly interactive to encourage complete engagement and are designed around specific learning objectives. Often times, game-based learning is commonly misrepresented with gamification. As a result, Chieta (2019) differentiates gamification from gamified e-learning in that, while gamification uses game mechanics and elements to make learning compelling, game-based e-learning courses use full-fledged games to help learners achieve their objectives. As a clarification, Connolly and Stansfield (2006) defined game-based e-learning as *"The use of computer games-based approach to deliver, support, and enhance teaching, learning, assessment, and evaluation".* Games used for e-learning and are highly interactive to encourage complete immersion and engagement.

TYPES OF E-LEARNING

Benefits of E-learning

The benefits of e-learning are enormous. As Kyari, Adiuku-Brown, Abechi, Pyochi & Adelakun (2018) observed, it is unfortunate that despite the vital roles this mode of learning plays in all levels of the education system as noticed in many countries of the world, most developing nations, Nigeria inclusive, is yet to utilize the full benefits of e-learning. Notwithstanding, below are some of the benefits of full implementation of e-learning in teaching-learning.

In a research conducted by Rawashdeh, Mohammed, Arab, Alara & Rawashdeh (2021), the following benefits were identified thus: -

- **Tutoring and Verbalism:** E-learning helps minimize tutoring and verbalism as previously practiced in physical classrooms.
- **Administration:** It as well reduces administrative burdens for university and faculty member

- **ICT Skills:** E-learning enables students to become skilled in the use of ICTs, especially, computers, thereby raising their level of culture and skills.
- **Independent Study:** Students can self-learn through digital means, such as CDs or through the internet.
- **Computer Literacy:** Knowledge of computers helps students in retaining information for long periods. The e-learning mode of instruction gingers students to become computer literate, which is essential to its programmes.
- **Immediate Feedback:** E-learning provides immediate and continuous feedback to the learner, especially when video conferencing, Teleconferencing, and Zoom apps are used for instruction. This is facilitated via the use of synchronous communication.
- **Motivation:** The use of ICTs increases the learner's motivation to learn.
- **Learning Capacity:** E-learning increases students' capacity to learn.
- **Pragmatism:** E-learning encourages students to participate rather than listen, as practiced in the past. E-learning raises the level of students' achievement in scientific subjects.
- **Increases Interaction:** E-learning increases student-teacher interaction. Students, particularly, introverts to express themselves are allowed to communicate or interact with teachers and peers without any hindrance or intimidation, either from the teachers or fellow students. Students can communicate with the teacher or their peers via e-mail, phone, and any form of social media platform anytime and anywhere.
- **Curriculum Update:** E-learning enriches the curriculum as new methods of instruction are constantly introduced to meet educational reforms. Therefore, the curriculum is constantly being reformed or updated to conform with the changes in the society.
- **Parental Monitoring:** Parents can easily communicate with the university authorities through any of the online communication tools to follow and guide their children while in school.
- **Learning Styles:** E-learning takes into consideration individual differences between students' levels.
- **Collaboration:** Through the use of the e-learning environment, there is potential to establish a collaborative teaching and learning community (Bates, 2005; Bonk, Wisher & Lee, 2004).
- **Flexibility:** Some of the advantages, according to Pande, Wadhair, and Thakare (2016) include flexibility, efficiency in knowledge and qualification enhancement, motivation of pupils' interaction, cost-effectiveness, and others.
- **Internet:** Olaitan (2020) also stated that good internet connections, learning software, digital skills, availability, and access to technology lead to the success of e-learning programmes.
- **Better retention:** Scholars agree the e-learning facilitates greater retention of information learnt. E-learning makes use of different platforms like *Pedagogue*, which provides interactive content. Also, you can share your thoughts and opinions with others. The more engaging the lessons, the more students can remember the information (Lynch, 2020).
- **Inclusive Education:** Franklin & Nahari (2018) declared that e-learning, though a new phenomenon, particularly in Nigeria is aimed at promoting education at all levels of the education system.
- **Shift Pedagogy:** E-learning attempts to shift the focus of the educational environment away from the physical teacher-pupil (teacher-centered) context while disseminating information (Franklin & Nahari, 2018).
- **Personalized Feedback:** Scholars have agreed that personalized feedback is essential for students as it positively impacts the learners, and also makes the learning process richer, and boosts the morale of the students.
- **The superiority in Learning:** E-learning, though a new method of learning, has been proven to be superior to conventional methods of learning given its accessibility and ease of learning.
- **Home Study:** It enables learners to study in the comfort of their homes, and at their own pace (Arkorful & Abaidoo, 2013).
- **Time Management:** E-learning gives learners/students the opportunity to manage their schedule their time to suit their daily activities. It enables them to take online courses at their most convenient time, whether early in the morning, late in the afternoon, or evening period (Lynch, 2020).
- **Environment-Friendly:** Lynch (2020) claimed that e-learning is environmentally friendly. This is due to the fact that it doesn't contribute to the pollution brought about by paper production. Also, students or learners are not as well exposed to environment pollutions as their counterparts in physical classrooms.

Generally, over the years, e-learning has made teaching-learning more accessible, affordable, cheaper, flexible to use, because online teaching-learning process lowers the cost of transportation, accommodation, and the overall cost of institution-based learning (Samuel, 2021; Lynch, 2020). Therefore, any investment on e-learnings is not a

waste, but a worthwhile investment for any government or organization.

Demerits of E-learning Mode of Instruction

Electronic learning system has been credited with many advantages. Notwithstanding, it has been associated with lots of disadvantages as well. Scholars have taken less time to dive deeper into the downside of electronic learning. Irrespective of its acclaimed advantages, e-learning still has lots of problems to be a perfect replacement for traditional methods of instruction. Some of the notable pitfalls of electronic learning are hereunder discussed. Parker (2023), Arkorful & Abaidoo (2013) among other scholars has identified some of the advantages of e-learning thus:

E-learning lacks practical elements and cannot be compared to the traditional methods of instruction in terms of practical subjects or courses.

- **Credibility & Accreditation:** E-learning faces issues relating to credibility ad accreditation. Various e-learning platforms have no accreditation. Most societies, especially developing nations find it difficult to accredit electronic e-learning programmes for the singular reason that it is not popular, and most societies are still very skeptical about their authenticity, quality, and reliability. Most often, the certificates obtained through this process are not recognized or looked down upon by societies.
- **Electricity:** In any electronic learning programme, adequate or constant power supply remains the most important factor because all the equipment requires electricity for operation. There is constant epileptic supply of electricity in Nigeria. Most of the rural areas in Nigeria are not electrified and have never seen electricity once. As a result, according to Nnajiofor & Achukwu, 2011), this situation reduces the life span of hardware and also militates against effective usage. Even enthusiastic teacher\educators and students who have access to computers may be debarred from using them as a result of endless power outage (Nnajiofor & Achukwu, 2011).
- **Communication:** E-learning is virtually based on written communication. This means that learners who cannot communicate effectively will lag in online programmes. Therefore, e-learning is exclusively for those learners who can effectively communicate with their teachers and their peers in exclusion of those who cannot fully express themselves in writing.
- **Cost:** The high cost of ICT facilities is yet another problem hindering the effective e-leaning implementation in Nigeria. There are lots of economic setbacks in Nigerian, which makes it very difficult to purchase needed facilities for e-learning. The value of Nigerian currency diminishes daily against other countries in the world market; hence, Nigerians find it problematic to acquire sophisticated ICT tools for e-learning programmes.
- **Boredom:** Students are used to the traditional methods of teaching. A man by nature is a social being. E-learning gives learners the freedom to learn materials sent to them; they have the onus to choose when, how, and where to learn the course materials from the facilitators or instructors. Students/learners involved in Online learning have nobody else except their mentors or instructors, who interacts virtually with them. As a result, scholars have claimed that e-learning programmes (both online and offline classes) often lead to boredom as there is less engagement within them than experienced in traditional classrooms. Again, most of the students or learners study individually or independently in the comfort of their homes, sitting in front of a screen the whole day. Students may find online learning very dull and uninteresting to attend a class that is not lively.
- **Curriculum:** Inadequate curriculum for ICTs course content for trainee teachers. The current curriculum content is based on the already known and out fashioned academic standards of NUC draft benchmark for teachers, which lacks ICTs content. It is meant to teach trainee teachers about computers, but not the needed skills and knowledge to integrate ICTs in their instruction.
- **Cheating:** Cheating in e-learning is almost unavoidable. Cheating has been attributed as some of the most pitfalls, as many people believe that there are so many people behind the computer, which is not the original student that registered for the course. Ordinarily, as Lynch (2020) claimed, e-learning includes assessment, just like in a regular classroom setting. In e-learning programmes, there are no teachers or proctors to watch over you during exams. It's easy for online students to share answers knowing there's nobody watching. In totality, cheating in e-learning examinations are, easy, very difficult to monitor, and the technologies used for such purposes are usually very expensive to purchase and difficult to manipulate.
- **Lacks Practical Components:** E-learning lacks practicality. E-learning has been accused of implementing theoretical lectures rather than practical ones in an online learning platform, thereby, fields where more practice is required lag in e-learning programmes. Scholars have affirmed that learning process cannot reach its full potential until students practice what they

learnt. They opined that sometimes online content is all theories and does not let students practice and learn effectively.

- **Limited to Specific Disciplines:** Since e-learning takes more theoretically based, some disciplines like Medicine and Craft are rarely offered online.
- **Social Isolation:** Social isolation is more pronounced in electronic learning programmes, particularly when distance learning is involved as individual learners study in the comfort of their homes and time. Distance learning lacks social and physical interaction and isolation as both the teachers and the students spend most of their time online. This situation may lead to several mental health problems like increased stress levels and anxiety.
- **Unwillingness/Reluctance:** Eiv (2002) in his reviewed literature indicates that one of the major problems hindering the use of e-learning systems in higher education is reluctance. The scholar stated that getting a new idea adopted, even when it has obvious advantages, is very difficult. Therefore, adapting new technological innovations, such as e-learning systems in higher education requires faculty to change their ways of teaching, as change does not come easily. The teachers, students and the populace that have been used to old systems must to change their mindsets to accommodate innovative ideas.
- **Health Hazard:** Prolonged screen exposure to the computer screen is not healthy for both students and adults alike. e-learning inescapably leads to continued exposure of learners to computer screens. Therefore, a long stay at the computer screens is both harmful to children and adults too. It may affect the mental development of the children and can also lead to weakened eyesight and migraines.
- **Self-motivation:** Lynch (2020) stressed that e-learning requires self-motivation and proper time management skills. As a result, persons embarking to participate in an online programme must be self-motivated to achieve their objectives. Therefore, e-learning is meant for those who can motivate themselves, else, you are basically on your own. Learners/students most motivate themselves to study hard, take down notes, and gather more information (Lynch, 2020).
- **Obesity:** Scholars have affirmed that sitting for a longer period may lead to obesity.
- **Time Management:** Time management is very sacrosanct with e-learning (distance education). E-learning is not for those who cannot manage their time properly, but procrastinate. Learners must learn how to manage their time very well by learning how to juggle studying while doing other things like household chores or earning money part-time (Lynch, 2020).
- **Software and hardware incompatibility:** It is no more a news to observe that some of the foreign technical equipment do not conform with the existing ones (local), thereby making it difficult to organize any viable digital programmes in this part of the world. Sometimes the devices purchased from America will not be compatible with those acquired for China or other parts of the world. This incompatibility has created a lot of obstacles in course of implementing e-learning programmes in Nigeria.
- **Course Content:** Scholars have also identified mediocre course content as one of the major issues bordering on electronic learning. Most of the course contents doesn't address the main issues of the course; either an aspect of the course or the theoretical aspect is addressed.
- **Digital Illiteracy/Technical Incompetence:** E-learning is sometimes limited to learners who are digitally compliant. Computer literacy is a sine qua-non for effective digitized learning. Computer literacy as the ability to use computers. According to Ekpo (2010), computer literacy involves the mental knowledge of computer hardware, software, data processing, concepts, and application of computer, attitudes towards computer (including a willingness to use it where appropriate in daily use situations without fear), and Skills (requisite skills to operate the system; also to modify existing programmes to suit daily instructional needs and programming new application, etc.). Most students/learners in Nigeria are computer illiterate; hence, learners without the above skills will find it very difficult to participate in online and offline electronic programmes. Lack of technically experienced lecturers is another problem. Most of the lecturers in Nigerian higher institutions lack technical competence in ICTs use that will foster effective integration of e-learning in their instructions. The majority of lecturers, who are in the Nigerian education system were not taught with ICTs; hence, they don't have such technological or technical competence to handle ICTs-related skills needed for the proper digital classroom
- **Lacks Personal/Physical Interaction:** Face-face interactions: One of the biggest pitfalls of electronic (online learning) is lack of face-to-face interaction or direct communication between the students and the facilitators/instructors. Feedback from electronic learning may not be immediate as noticed in the traditional methods of learning. Students, as a social being wants to be loved, they want to touch and see the faces of their

peers; they also want to be touched as experienced in the traditional classroom situation. E-learning hamper the communication between the learner and the educator, that is, direct communication and human touch are totally lost, especially when delivered through asynchronous mode of instruction. In a traditional setup, students receive immediate feedback, which may not be the issue in distance learning, but take days and weeks when the asynchronous method of instruction is used, e.g., email and text messages. Personal interaction or attention is one of the enormous issues facing electronic learning, especially online instruction.

- **Self-Motivation:** Participants in e-learning must be self-motivated individuals. It is not for immature learners, who have no self-discipline and effective time management skills. In the traditional setup, fallow students could remind each other about the teachers' assignments, which and efficient time management skills.
- **Cultural Exposure:** It has been affirmed that most online participants lack cultural exposure as opposed to the traditional classroom setup, where learners come in contact with people from various cultures and perspectives. These learners cannot have cross-cultural experiences, thereby limiting their reasoning or thinking within their geographical areas. Online learning limits the student's exposure to various cultures Therefore, having less exposure to other peoples' cultures could be regarded as one of the demerits of e-learners.
- **Bandwidth Issue & Connectivity:** Engaging content requires a rich combination of multimedia components. However, due to bandwidth and connectivity limitations, downloading of engaging content to the learners are usually very slow. Some learners don't even have or have a very limited access to the internet. As a result, most of them resort to utilizing the internet cafes or use public Wi-Fis within the environment, which creates frustration and boredom among learners and affects the ease of learning. As Lynch (2020) put it, consider yourself lucky if you're located in an area where the internet connection is fast and stable.
- **Lack of E-learning Awareness:** There is still a lack of general e-learning awareness among Nigerian teachers, students, and parents about the effectiveness of e-learning. Some are very skeptical about the authenticity of certificates obtained through this instructional approach. Some still believe that the traditional methods of instruction are far better than the modern type.
- **Data:** High cost of data is yet another obstacle preventing effective e-learning implementation in Nigeria. Most of the networks in Nigeria are privatized, thereby giving rise to the autonomy in allocating cost of data to customers in Nigeria. Nigerians are significantly poor, irrespective of the rich natural resources within the environment. Only a significant few among students, parents and teachers can afford to purchase enough data that will keep them connected online. Hence, they have no such money to buy data to vigorously stay online and have easy access to online teaching-learning practice. Therefore, introducing e-learning under this condition will be counterproductive.
- **Laboratory:** Most faculties of education and schools of education in Nigeria do not have dedicated laboratories for ICTs (e-learning) training. Classrooms are equally not equipped for ICTs (e-learning) usage. Thus, teacher trainers and trainee teachers do not have access to ICTs (e-learning) within their schools. The few available ones are used mostly for administrative purposes.
- **Focuses on Theory:** Scholars like Lynch (2020) argued that e-learning content focuses much on theory. As he put it, "You'll spend most of your time listening to podcasts, watching videos, and looking at slide presentations; there's no hands-on experience like conducting experiments".

Curbing the Obstacles Hindering E-learning Implementation in Nigeria

E-leaning has been identified as an alternative method to traditional method of teaching-leaning practice. But, unfortunately as identified by (Samuel, 2021), this new method of imparting knowledge has not been more effective because of some identifiable or obvious challenges facing this new development. Several factors that hinder the implementation of e-learning in Nigeria have been identified by Several reviewed pieces of the literature by Makhija and Bharad (2020), Makhija and Bharad (2020), Adelakun (2020), (Samuel, 2021), Adelakun (2020), (Peters, 2014), Jeged, Ebio and Iroegbu (2019), and Davies, Nwankwo, Olofinnade & Michaels (2019), revealed major obstacles militating against the effective implementation of e-learning systems in Nigerian educational institutions that needs to be solved before thinking of replacing the traditional mode of instruction. These problems as identified are: -

1. Inadequate funding of ICT programs.
2. Inadequate ICT infrastructural facilities.
3. Shortage of ICT manpower.
4. Unstable power supply.
5. High cost of ICT facilities.
6. Poor network services of connectivity.
7. Poor implementation of ICT policies.
8. Corruption in high places.
9. Poor Computer Literacy among citizens.
10. Create E-learning Awareness.

11. Vigorous training of teachers and students on ICTS competence.
12. Reform the Curriculum content to be ICTs compliant.
13. Provide data for staff and students for free access to the Internet.
14. Time management skills.
15. Lack of community.
16. Technical problems.
17. Software and hardware compatibility.

In totality therefore, students/learners feel that, and difficulties in understanding instructional goals are some of the major barriers that need to be addressed for effective online implementation of online learning programmes in Nigeria.

Future of E-learning in Nigerian Schools

E-learning has come to stay as a potential instructional strategy that hopes to transform people, knowledge, skills, and performance. It is a fact that many educational institutions, corporate organizations or bodies, and private individuals have recognized the importance of e-learning in the entire education system. The role of e-learning in lifelong learning and its impotence in the knowledge-based economy cannot be overemphasized. Furthermore, with numerous advantages inherent in it, especially the comfort of studying one's comfort makes it unique. Therefore, the future of this instructional delivery learning approach will continue to see exponential growth in both the developed and developing countries of the world.

CONCLUSION

E-learning, though ascribed with significant advantages, still has a long way to properly replace the traditional learning methods because there are still some issues bordering on its implementation, such as - lack of practical elements, accreditation, and cheating (Parker, 2023; Lynch, 2020). Presently, however, e-learning is not yet ripe for everybody and every course. Being aware of its merits and pitfalls can help individuals, organizations /bodies to decide whether adopt it or not.

RECOMMENDATIONS

In view of the importance presently placed on e-learning as an effective instructional strategy in sustainable development of the educational sector worldwide, it becomes very imperative that Nigeria government cannot afford to overlook its importance in the overall development of its educational sector. Hence, education policy-makers should ensure that there is adequate funding of the educational sector to procure relevant ICT tools for learning at all levels of the education system. As Samuel (2021) put it, there should be training and retraining of teachers and students in the use of ICT tools in school, and ensuring proper implementation/management of e-learning tools and policies in the educational sector. Orientation programs are to be conducted for students, parents, teachers, and concerned education personnel on the importance of e-earning.

In addition, Samuel (2021) advised the government and Nigeria ministries of education to forecast and employ experts in the area of ICT to further introduce programs that will enhance the productivity of the education sector, especially in the event of future crises in the education sector. The scholar further suggested that teaching-learning activities should be designed via social media platforms, such as Google classroom, modules and the likes, which are free web services developed by Google and others for schools that aims to simplify creating, distributing and grading assignments in a paperless way with the purpose of streamlining the process of sharing files between lecturers and students. They further recommended that parents should ensure the they provide relevant needed ICT tools for their children to fit into the dynamicity of the education and the world at large that is becoming a global computer village.

In the same manner, Jegede & Iroegbu (2019) have similarly identified various obstacles that may hinder the implementation of e-learning in Nigeria and recommended that government address these obstacles as listed hereunder for effective implementation of a viable and reliable electronic learning education system at all levels of the education system.

- Provision of ICT facilities.
- Adequate funding of computer education program.
- Subsidize the cost of ICT facilities.
- Implement the ICT policies on education.
- Capacity development for teachers.
- Provision of constant electricity.
- Adequate provision of internet services.

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