Adapting the E-Learning Model Education in Digital Age for Nigeria Schools

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ABSTRACT
Educational technologies are becoming an increasingly important part of education.The days of chalkboards and overhead projectors are slipping away. Increasingly, schools across the world are using educational technology as part of the curricula. Virtuallya greater numberof students have smartphones.Adapting the e-learning model education for digital age in Nigeria schoolsis an inevitable evolution of times.Incorporating more technology into the classroom provides learning paths that are most effective for a particular student.Most students are familiar with devices such as the laptop, iPod, and iPad. These devices may be found at home, in the library, or at friend's house. Onecannot change the importance of how this new technology is changing literacy and how literacyis now defined.
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I.   INTRODUCTION
Improved education holds both individual and national implications.E-learning of various kinds offers a way switch to a demand-driven paradigm, putting clients – students and potential employers – in the driver's seat, and so reducing costs dramatically, while enhancing relevance. Indeed, if more than a tiny elite is to be educated, e-learning is the only option. Schools can either ignore this imperative, or continue to cater to small numbers of students, or they can take the lead in e-learning and become change agents.

Peter Bamkole, founder and director of Lagos's Enterprise Development Center, a superb institution spun off by Lagos Business School sees future faculty acting as "conductors" rather than lecturers. E-learning is the most promising way to grow the number of skilled local managers and entrepreneurs in the developing world more especially in Nigeria.

The Concept of E-learning
E-learning is a type of computer-supported collaborative learning (CSCL) system that developed with the emergence of Web 2.0. (Washington Times, 2009). Since an e-learning 2.0 perspective, conventional e-learning systems were based on instructional packets, which were delivered to students using assignments. Assignments were evaluated by the teacher. In contrast, the new e-learning places increased emphasis on social learning and use of social software such as blogs, social media, wikis, podcasts, discussion groups and virtual worlds such as Second Life. This phenomenon has been referred to as Long Tail Learning (Ho, Reich, Nesterko, Seaton, Mullaney, Waldo, & Chuang, 2014).

When it comes to online learning in education, the model has been pretty straightforward - up until the early 2000s education was in a classroom of students with a teacher who led the process. Physical presence was a no-brainer, and any other type of learning was questionable at best. Then the internet happened, and the rest is history. E-learning is a rapidly growing industry, the effects of which we can trace back to the 1980s and even well before that (in the form of distance learning and televised courses)(Guy, 2015).

Now that affordable e-learning solutions exist for both computers and internet, it only takes a good e-learning tool for education to be facilitated virtually from anywhere. Technology

has advanced so much that the geographical gap is bridged with the use of tools that make you feel as if you are inside the classroom. E-learning offers the ability to share material in all kinds of formats such as videos, slideshows, word documents and portable document formats (pdf). Conducting webinars (live online classes) and communicating with teachers via chat and message forums is also an option available to users(Guy, 2015).

There is a plethora of different e-learning systems (otherwise known as Learning Management Systems, or LMSs for short) and methods, which allow for courses to be delivered. Various processes such as a course with set materials and automatically marked testscan be automated with the right tools. E-learning is an affordable (and often free) solution which provides the learners with the ability to fit learning around their lifestyles, effectively allowing even the busiest person to further a career and gain new qualifications.

Some of the most important developments in education have happened since the launch of the internet. These days, learners are well versed in the use of Alemdag

s, text messaging and using the internet so participating in and running an online course has become a simple affair. Message boards, social media and various other means of online communication allow learners to keep in touch and discuss course related matters, while providing for a sense of community(Smith, 2015; Guy, 2015).

In the fast-paced world of e-learning, the available technologies to make a course new and exciting are always changing, and course content can and should be updated quickly to give students the very latest information.

The Development of E-learning
Evolution of e-learning
E-Learning is defined as the use of the Internet and other digital technologies to educate people without geographical boundaries. The definition is as new as 2001, though the term e-Learning was first used in the year 1999 when the word was first utilized at a Cognitive Behavioural Therapy (CBT) seminar. This is also why e-Learning is still considered as a new form of learning.

E-Learning has evolved in different ways in the education, business and training sectors, and it has different interpretations for different sectors. E-Learningat the school level refers to a learning process that uses both software-based and online learning tools, whereas in business, training and

higher education sectors, e-Learning solely refers to online learning.

An eLearning Timeline
Before the Internet
Long before the Internet came into the picture, the concept of distance education was used to provide education on particular skills or subjects. The correspondence method, as it was termed, used the mail system to get in touch with students and vice versa.After the launch of the Internet, open universities further expanded their horizons and started the concept of distance learning. This was first started by the British.

The Start
Online Learning or e-Learning can go back to the 1990s, where the trend started and was emerging. In this decade, the development of personal computers was on the rise. E-Learning became more simplified, and it was easier to learn skills online. With this, e-Learning opportunities began to rise, with online environments becoming more acceptable. Interactive CD-ROMs and PDF text files came into the picture to ease the process of online learning. As it was monetarily more beneficial, online courses became more and more popular. This decade saw some notable achievements like personal home computers, online environments, educational courses online, and repurposing content into digital formats.

The Advancing Technology: 2000 – 2005
The common e-Learning that was becoming popular in the nineties era did not suddenly get discouraged because of the technology developments that took place. Instead, the technologies made the concept of e-Learning more advanced. The upgraded technologies, methodologies and software attracted more people to use PowerPoint tools and learning management systems (LMS).

In the span of these five years, there were a number of achievements in the field of e-Learning. Increased access to wireless, scalable vector graphics, improved PowerPoint capabilities, learning objects, educational games, e-Learning repositories, Sharable Content Object Reference Model (SCORM), LMSs and social media networks were some of the notable achievements in this field.

The Rapid Development Era: 2006 – 2010
The 2006 – 2010 was a time period when e-Learning tools became quite standard in the

learning industry. The "anyone can build" functionality of online learning tools enabled every common person to learn more. The added benefits of advancing technologies along with less money and no geographical boundaries changed the way learning happens. Introduction of methodologies like podcasting, mobile Internet, learning analytics, and augmented reality created a boon for the online learning niche. Other notable achievements for this time span included: Educational gaming, User created content, Library digitization, Virtual worlds, Cloud computing, Online video, Gesture-based computing, eBooks, Mobile learning (Course Hero, 2024).

Modern Times: 2011 Onwards

From 2011 onwards, online learning has advanced tools available that further simplify e-Learning course creation. Today, e-Learning courses are popular among students, businesses and trainers. The tools used in the industry have become more easy to use. There is more content, expert advice, virtual classrooms, and a lot of interaction.Students use these technologies to gain expertise in any one subject. Professionals use learning courses to enhance their skill set and attain a better position in their career path (Course Hero, 2024).

The future of e-Learning is bright and set to expand along with advancing technologies. Some of the technology advancements that have helped e-Learning grow since 2011 are the cloud, tablet computing, learning through social platforms, advancement in learning analytics, massive open online courses(MOOCs), and wearable technology (Course Hero, 2024).It will definitely be exciting to see what the coming years will have in store for e-Learning.

Virtual Learning Environments (VLEs) and Personal Learning Environments (PLEs) provide an easy to use system for flexibly delivering learning materials, activities and support to students across an institution. For the administrator, a VLE provides a set of tools which allows course content and students to be managed efficiently and provide a single point of integration with student record systems.

Multimedia tools in the teaching and learning processes

Multimedia is a combination of more than one media type such as text (alphabetic or numeric), symbols, images, pictures, audio, video, and animations usually with the aid of technology for the purpose of enhancing understanding or memorization (Guan et al., 2018). It supports verbal instruction with the use of static and dynamic images in form of visualization technology for better expression and comprehension (Alemdag and Cagiltay, 2018; Chen and Liu, 2012).

Educational media and tools can be used for:
▪ task structuring support: help with how to do a task (procedures and processes),
▪ access to knowledge bases (help user find information needed)
▪ alternate forms of knowledge representation (multiple representations of knowledge, e.g. video, audio, text, image, data).

Numerous types of physical technology are currently used:digital cameras, video cameras, interactive whiteboard tools, document cameras, electronic media, and LCD projectors. Combinations of these techniques include blogs,collaborative software, ePortfolios, and virtual classrooms(Reeves, 1998)

Audio and video

Radio offers a synchronous educational vehicle, while streaming audio over the internet with webcasts and podcasts can beasynchronous. Classroom microphones, often wireless, can enable learners and educators to interact more clearly.

Video technology has included Video Home System (VHS) tapes and Digital Versatile Disc (DVD), as well as on-demand and synchronous methods with digital video via server or web-based options such as streamed video from YouTube, Teacher Tube, Skype, Adobe Connect, and webcams. Telecommuting can connect with speakers and other experts. Interactive digital video games are being used at K-12 and higher education institutions (Diecker, Lane, O'Brien & Kyger, 2009).
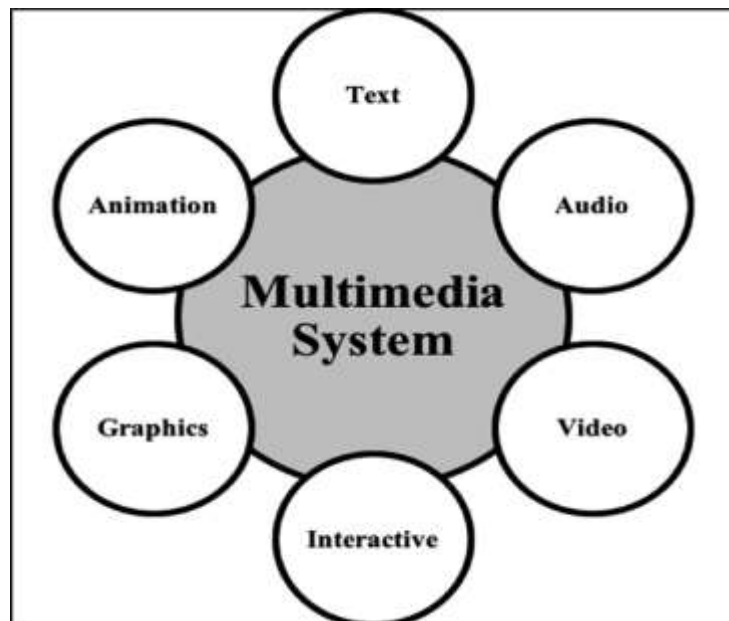
Figure 1: Multimedia-Based Learning Tools and Scope

Teaching and Learning Online

Collaborative learning is a group-based learning approach in which learners are mutually engaged in a coordinated fashion to achieve a learning goal or complete a learning task. With recent developments in smartphone technology, the processing powers and storage capabilities of modern mobiles allow for advanced development and use of apps. Many app developers and education experts have been exploring smartphone and tablet apps as a medium for collaborative learning(Smith, 2015).

Computers and tablets enable learners and educators to access websites as well as programs such as Microsoft Word, PowerPoint, PDF files, and images. Many mobile devices support m-learning (Guan and Song, 2018).

Online Delivery Principles

The following principles reinforce the provision of online delivery of modules. Online delivery should:

1. Encourage and develop an inclusive student learning experience
2. Build motivation and engagement by making students want to learn through: Encouraging active learning,encouraging collaborative learning, building a sense of belonging and community.
3. Be clearly structured, coherent and follow established patterns of lesson activities
4. Be accessible and easy to use

Inclusivity in this context describes inclusive learning and teaching as provision that recognizes all student's entitlement to a learning experience that respects diversity, enablesparticipation, removes barriers and anticipates and considers a variety of learning needs andpreferences.Examples of inclusive practices in online teaching and learning are(Advance HE,2016; Columbia University Centre for Teaching and Learning, 2020):

▪ Thinking about your learners, their prior experiences with online learning, and theirneeds when designing online classes2
▪ Keeping students informed
▪ Teaching digital skills (especially when using a new tool/activity/learning application)before or alongside teaching course contents.

Teaching online is not easy but it can work and be rewarding. While there are many pros to online learning, there are cons to consider. Staying on task and being self-motivated can be challenging in its own way(Advance HE, 2016).

Benefits/Advantages of Online Learning

Among the many benefits of an online learning, virtual classrooms are great for people who are advancing their education while working(Drexel University School of Education, 2024).

1. **Flexibility:**In a traditional classroom, lectures will be scheduled at a specific time of day and your schedule will be formed around the

availability of classes. If you are currently employed and courses arenot available after your working hours, it can be difficult to juggle a course load in addition to your work duties.When attending a virtual campus, online learning allows for far more autonomy in deciding your own schedule. That means you can study whenever it is convenient for you. Having more control over your schedule also means you can avoid distractions easier.

2. **Reduced Costs:** Education can be expensive, but virtual learning can provide a number of ways for students to save. Not having to commute to campus can help you save on transportation costs.Every year, the average student spendsthousands ofnaira on textbooks and course materials. Virtual coursework often takes advantage of virtual resources, which translates into less money spent on textbooks.Tuition costs can also vary between online and on-campus programs. Between all these sources of savings, cost-cutting can be an enormous benefit of online classes.

3. **More Free Time:**Because your schedule isnot dictated by classes, you can spend more time doing the things you want. Plus, in addition to saving money, not having to commute also means saving time because you donot need to travel to-and-from campus.That extra time can be used in any way you want, such as focusing on your career or spending time with your family. All you need is a digital device and an internet connection, and you have access to the necessary tools to further your education and earn your degree on your own time.

4. **Increased Course Variety:** Another reason why online school is better for some is the increased variety of education options. Since students are not required to travel to campus for courses schedule on specific days and times, students can enroll in the courses they are most interested in. There is no need to rearrange schedules, students in an online program can take the course they want and complete the coursework at a time that is most convenient for them. Through online courses, students can gain the knowledge they need to earn their degree or grow in their profession.Online courses allow you to earn essentially the same range of different degrees that can be earned from a traditional educational environment. That includes learning certificates and professional certifications to master's degrees or doctoral degrees.

5. **Career Advancement Opportunities:** Just like courses taken in a traditional classroom setting, virtual learning can provide you with a number of career advancement opportunities. Because you are the master of your own schedule, students of virtual learning are better prepared to continue working while pursuing academic credentials. And for students who arenot employed, academic work can serve to explain any discontinuity or gaps in a resume. In either case, the advantages of virtual learning can be clearly seen on a resume.

6. **Increased Collaboration:** Online students have better opportunities to collaborate with classmates through virtual group work and meetings. One of the benefits of online courses are the message boards and grouping tools that allow students to post their feedback on readings and other assignments and respond to their classmates.Students may also receive more one-on-one time with their professor with virtual learning, which is beneficial for both learning and networking. Students can communicate directly with their professor and upload assignments for review.

7. **Personalized Education:** Students who find their focus suffers from classroom activity may benefit from online classes. Students who arenot as confident may have better opportunities to participate in class discussions when communicating online. Working from your own choice of environment, with self-paced learning, the result can be a more personalized learning experience.In online courses, students choose the time that works best for them to complete readings and assignments. Since the coursework is online, courses can be completed anywhere there is an internet connection.

8. **Enhanced Time Management Skills:** While the benefits of online learning include the flexibility to complete assignments at a time that is most convenient to the student, the student still needs to manage their time wisely to ensure they complete their assignments by the deadlines set by the teacher. Online courses teach students how to manage their time better since the student bears the responsibility of engaging with the course instead of simply showing up to class on an assigned day and time. As a result, students not only gain knowledge from the coursework, but they also sharpen their time management skills.

9. **Immediate Feedback:** Integrating coursework with technology provides a number of

advantages. Rather than waiting days or weeks after exams, you can often get immediate feedback. In online courses, students upload assignments digitally for review by their teacher or tutor. Teachers review student work online and submit feedback electronically. As a result, students receive feedback right away. In a traditional classroom setting, students may need to wait a week or two to receive feedback on their assignments. By receiving feedback sooner, students can learn faster and make adjustments for future assignments.

10. **Repeated Access to Course Materials:** Where a traditional lecturing leaves you at the mercy of your best note-taking skills, video presentations can be watched and revisited as necessary. If a student is unableto understand some of the content covered in a video lecture, they can go back and listen to it again. Students can use lecture videos as a supplemental tool to help with competing assignments.

II.   CONCLUSION

Similar to attending a physical campus and learning in person, there are advantages and disadvantages of attending a virtual classroom and learning online. Among the many benefits of online learning, virtual education allows a more flexible schedule, can reduce the cost of a degree, and can allow to more easily develop a career alongside furthering an education.Overall, traditional learning is expensive, takes a long time and the results can vary. The importance of E-learning is now a given fact and it can offer an alternative that is much faster, cheaper and potentially better

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