13

E-LEARNING: TOWARDS THE REALISATION OF THE UNITED NATIONS GOALS FOR 2030 IN NIGERIA

By

TERFA JATO
Department of Educational Foundations and Management,
College of Education, Katsina-Ala, Benue State

And

TIVZUA BELLE GBOKO
Department of Curriculum and Instruction,
College of Education, Katsina-Ala, Benue State

Abstract

The United Nations Goals for 2030, popularly referred to as Sustainable Development Goals (SDGs) or Agenda 2030, tell a history going back to a pivotal United Nations' conference in Stockholm in 1972 called the Conference on the Human Environment. The history is one of decades of international efforts to evolve a global society where dignity, peace and prosperity for people and lasting protection of the planet and its natural resources prevail. This paper recognises e-Learning as crucial to revamping Nigeria's education system as a significant step on the path to the realisation of a better and more sustainable future for all Nigerians as envisaged by Agenda 2030. Consequently, the paper recommends, inter alia, that Governments at the federal and state levels should accelerate joint efforts with the commercial providers of internet technologies in order to expand geographical coverage of internet accessibility and to strengthen existing internet connections; that e-Systems of learning where certificates are issued at completion should be included in conventional universities; and that all teachers should be trained to be "e-Teachers".

Keywords: E-Learning; ICT; Education; Technology; and United Nations

Introduction

The digital information revolution – characterised "in most part by a geometric growth in the production of high-tech electronics, including components of computers, computer peripherals, semiconductors, integrated circuits, printed circuit boards, video display equipment, audio equipment, and household electronics" (Adeola, 2018) and defined by massive, sustained increase in human capability to assess, process, analyse large amounts of data and transmit them (Central Intelligence Agency [CIA], 2011) in a matter of seconds across the international lines of geography – has spread the tentacles of its effects to major segments of life in society. This has occurred with dramatic consequences in terms of improvements experienced in the quality of life for individuals around the world. The revolution has ushered in the age of the internet where optical communication networks now play a central role in the delivery of massive amounts of data. This has dramatically transformed important aspects of human society with the consequence that we now speak of "e-Commerce", "e-Government", "e-Banking", and, of course, "e-Learning" to reflect the fact the e-prefixed activities are facilitated or, in some cases, enabled by digital technology. The revolutionary effects of information revolution felt in these areas of human society have created the concept of "e-Society" – i.e. a society where human activities are increasingly carried out via digital electronic media.

The internet has continued to expand due to user population growth and internet penetration. Previously inaccessible geographical regions in Africa have increasingly been united with the rest of the world by digital electronic media. This means Africans are fast becoming the "citizens" of the digital world, a world united by one language and a world where people from across the continents share ideas with one another and work together to build projects and ideas. The effects of digital information revolution are increasingly but not fully felt on the capability of education to provide weaponry devices against some challenges that developing countries like Nigeria have been having to face. Majority of these countries have for decades been experiencing challenges having to do with low growth economic rates, rising birth and death rates, balance of payment difficulties, weak industrial and economic structures, stunted physical and communications infrastructural developments, rising debts, lack of confidence in currency valuation, limited foreign exchange capacity, a slow and ineffective judicial system, unreliable dispute resolution

mechanisms, insecurity, and pervasive corruption. Many of these countries are also united in reckoning with challenges arising from famines, drought, wars, plagues and poverty. These were the talking points of the deliberations by some leaders of 193 Member-States of the United Nations when they came together to take a definitive stand on the future at the organisation's General Assembly of September, 2015. These leaders saw all of these – i.e. they saw the famines, drought, wars, plagues and poverty earlier referenced – not just in some faraway places, but in their very own counties, cities, towns and villages. They knew that there was enough food to feed the world, but that it was not getting shared judiciously. They saw that there were medicines for HIV and other diseases but that they cost a lot. They knew that earthquakes and floods were always inevitable potentially causing untold hardship for the cavernous quantity of humanity. They also saw that billions of people worldwide shared their hope for a better future. They were jolted by the chilling realisation that the current global context of slow economic growth, social inequality and environmental degradation was creating unprecedented challenges for the international community. They apparently recognised the potential of education to enable upward socio-economic mobility and saw education as a key to poverty eradication. They apparently saw Information and Communication Technology (ICT) as great in its potential to accelerate human progress, to bridge the digital divide and to develop knowledge societies. They then decided that things did not have to continue in this wise. So they created – or technically speaking, they endorsed – Agenda 2030, which was a document that outlined a series of transformative global visions for economic, social and environmental development for the next 15 years (United Nations, 2018).

e-Learning

One area where the wonders of information revolution have been appreciated is in the delivery of learning and training through digital media. The term "e-Learning" – related to the use of internet-based system that conduces to learning anywhere and at any time – has only been in use since 1999 when the word was first utilised by Elliott Masie at a CBT systems seminar. Other terms have sprung up in man's search for an accurate description of the delivery of learning and training through digital media such as "online learning" and "virtual learning". e-Learning is a system of learning based on formalised teaching but with the utilisation of electronic technologies to access educational curriculum outside of the traditional classroom. e-Learning can also be regarded as a network-enabled

transfer of skills and knowledge where the delivery of education is made to a large number of recipients at the same or different times (Coleman, 2020).

Prior to the arrival of the internet on the scene, the use of technology in the teaching and learning processes used to be limited to printed manuals, CD-ROMS and other restrictive methods of learning and training. The rise of the internet has minimised reliance on such one-dimensional practices. With the progressing pace of e-Learning, the ability to integrate elements such as images, videos, audio and graphics has proved to be a more reliable way of keeping learners engaged compared to traditional learning (Lawless, 2018). Now, with internet technologies education can easily be facilitated from virtually anywhere. Technology has advanced so much so that the geographical gap is bridged with the use of tools that make one feel as though one were inside the classroom. e-Learning offers the ability to share material in all kinds of formats such as videos, slideshows, word documents, and PDFs. Conducting webinars (live online classes) and communicating with professors via chat and message forums is also an option available to users (Epignosis LLC, 2014).

It is worthy to note that e-Learning is moving away from its traditional narrow definition (Arkorful & Abaidoo, 2014) as a revolutionary approach to teaching and learning that incorporates Internet technologies to communicate and collaborate in an educational context (Jennex, 2005 and Twigg, 2002) or its definition as the use of the use of internet based-system for learning facilitation to embrace broader definitions such as "the utilisation of internet and multimedia technologies (European Commission, 2001) to communicate and collaborate in an educational context" and "the use of information and communication technologies to access, create and communicate information and ideas, solve problems and work collaboratively in all learning areas at school and in their lives beyond school" (Australian Curriculum, 2020, para. 1). Going by the narrow definition of e-Learning, e-Learning is not a course delivered via a DVD or CD-ROM, video tape or over a television channel. It is interactive in that one can also communicate with one's teachers, professors or other students in one's class. Sometimes it is delivered live, which is where one can "electronically" raise one's hand and interact in real time; and sometimes it is a lecture that has been pre-recorded. There is always a teacher interacting or communicating with learners and grading their participation, their assignments and their tests (eLearningNC, 2020). A broader definition would include one of the most progressive

and promising technologies: "virtual reality", which is a whole new concept in educational technology designed to help raise engagement and increase knowledge retention for students of all ages. Virtual classrooms are artificial environments which are created with software and presented to the user in such a way that the user suspends belief and accepts it as a real environment or as a physical world of reality. On a computer, virtual reality is primarily experienced through two of the five senses: sight and sound.

To participate in a knowledge-based economy and to be empowered within a technologically sophisticated society now and in the future, students, particularly those in a developing country like Nigeria, need the knowledge, skills and confidence to harness information revolution to advance their interests at school, at home, at work and in their communities. Information and communication technologies are fast and automated, interactive and multi-modal, and they support the rapid communication and representation of knowledge to many audiences and its adaptation in different contexts. They transform the ways that students think and learn and give them greater control over how, where and when they learn (Australian Curriculum, 2020). Classes can be boring and stressful for students, making the learning materials delivered to students ineffective. However, through e-Learning, the learning process becomes more flexible and convenient as students can access their e-Learning materials anytime and anywhere using the various types of mobile devices they might have thus encouraging them to learn continuously. They can repeat any subject as they please whenever they struggle to comprehend it. They can also choose materials that suit their needs and preferences.

Literature on e-Learning implementation, according to Kuimova, Kiyanitsyna & Truntyagin (2016), proves that it helps not only to deliver the content and materials of the course, but also to improve students' academic achievement. e-learning engages students in the learning process, provides opportunities for students' online activities at their own pace and at the time convenient for them. It creates learning situations and makes learners responsible for their own learning. Additionally, e-Learning improves learners' time-management skills, ability to coordinate their study time and an opportunity to skip the elements they do not need. It provides the ability for teachers to track student progress and ensure that they fulfil their performance achievements. For example, if a student fails to pass their online examinations, the teacher can offer them learning methods that are more in line with their personalities so that they can absorb the learning materials more easily

and ultimately improve their performance. Advanced e-Learning systems provide reporting and analytic tools that allow teachers to pinpoint areas of their e-Learning courses that may be lacking, as well as the areas where they excel. For example, if there are many students who have difficulty in mastering certain learning materials, the teacher can evaluate the content and make improvements if needed.

Specifically, modern educational technologies and e-learning technologies are student-centred and are focused on the development of individual student resources. Specifically, e-Learning has a number of advantages:

- Provision of an opportunity for university teachers to study colleagues' experiences, thus providing a chance of continual retraining;
- Provision of better teaching aids, their efficient, timely updating and availability;
- Facilitation of flexible asynchronous learning;
- Provision of learners with a sense of autonomy and control;
- Provision a personal work schedule and a list of students' training courses tailored to their interests within the framework of educational standards;
- Intensifying the students' learning and cognitive activities;
- Forming critical thinking skills, initiative and responsibility for the work;
- Developing student's ability to work independently;
- Contributing to the students' professional competencies;
- Ensuring lifelong learning by removing spatial and temporal restrictions (Kuimova et al, 2016).

E-Learning in Nigeria

The education system in Nigeria is reaping benefits from e-Learning, and the utilisation of e-Technologies is becoming increasingly important for the tertiary education sector. Before e-Learning gained currency in the country's educational system, national attempts to reach the teaming educationally deprived groups in the population with basic and literacy education used to be made with means extracted from educational radio and television programmes. For example, the education sought for the nomadic Fulani population by the establishment in the 1980s of the National Commission of Nomadic Education, which centred around the prevention of cattle diseases, best animal and crop practices, production of cheese, milk, and butter, cooking and nutrition hygienic practices,

and propagation of the Islamic faith, relied at first on the radio (Gulati, 2008). Open and distance education from National Open University of Nigeria (NOUN) provided as alternatives to the formal education available in conventional universities was at first based on print technologies. Nigeria started implementing its ICT policy in April 2001 following an approval by the Federal Executive Council for the establishment of the National Information Technology Development Agency (NITDA). The policy empowered NITDA to enter into strategic alliances and joint ventures and to collaborate with the private sector to realise the specifics of the country's vision of, "making Nigeria an IT capable country in Africa and a key player in the information society by the year 2005 through using [ICT] as an engine for sustainable development and global competitiveness" (Agyeman, 2007, p. 4). Since then, e-Infrastructures have been put in place in universities across the country, though fuller participation in online education in private universities is still constrained by huge deficits in e-Technological infrastructures. However, the proliferations in the availability of smartphones for students alongside the growing penetration of mobile broadband technologies are increasing the potential for e-Learning to negotiate challenges arising from e-Infrastructural deficits.

e-Learning has become integrated into tertiary education through such approaches as replacing chalkboards with interactive digital whiteboards, using students' own smartphones or other devices for learning during class time, and the use or e-Libraries for student and staff research purposes. The use of online technology to deliver courses to people in far-flung communities leading to certified completion has not been an important function of Nigerian conventional universities. The National Open University of Nigeria is mandated to administer open and distance learning leading to award of degree certificates to those whose work schedules leave them with little time to acquire education from conventional universities. At the National Open University, academic activities are facilitated now by various information and communication technologies to bridge the distance between facilitators and learners, both physically and psychologically.

People in the country are also participating in e-Classes at foreign universities with a view to certified ending. Unfortunately, certificates for courses received entirely online are currently stigmatised as an inferior form of academic currency. Many online providers of education still operate, or are criticised as operating, outside of established quality assurance and accreditation frameworks. Beyond that, all forms of distance education – be

they formally accredited or not – still have to overcome the barrier having to do with its low standing in public perception. Online education is also not suitable for disciplines that require practical, hands-on training (unless offered as part of a blended model approach). The most common and closely related criticism of online learning in Nigeria is that it is an inferior, isolated, anonymous learning experience. In this view, according to Trines {2018), "online learning provides a sterile environment that cannot compete with the real-world, tangible and touchable learning environments in which it is much easier for students and teachers to interact and exchange ideas" para. 118.

e-Learning: Towards the Realisation of the United Nations Goals for 2030 in Nigeria

The United Nations Goals for 2030, popularly rendered as Sustainable Development Goals (SDGs) or Agenda 2030, exist as a child of the United Nations Conference on Sustainable Development held in Rio de Janeiro, Brazil, in June 2012, where member states of the United Nations Conference adopted the outcome of the document "The Future We Want" in which they decided, inter alia, to launch a process to develop a set of SDGs to build upon the Millennium Development Goals and to establish the United Nations High-level Political Forum on Sustainable Development. In January 2015, the General Assembly of the United Nations began negotiations on the post-2015 development agenda. The negotiations culminated in the subsequent adoption of the 2030 Agenda for Sustainable Development, with 17 SDGs at its core, at the United Nations Sustainable Development Summit in September 2015 (United Nation, n.d.). The United Nations Goals for 2030 provide time-bound targets in selected sectors – prominent among which are health, education, employment, energy, infrastructure, and the environment – for all member states of the United Nations to achieve by 2030. Nowhere is the need to achieve these targets greater than in Africa. While progress in some areas and countries is encouraging, overall, Africa will need to redouble its efforts if it is to achieve the SDGs by the set year (Brookings, 2020).

The United Nations Goals for 2030 are integrated, by which we mean that the goals recognise that action in one area will affect outcomes in other areas or that success on one goal leads to success on the rest of the goals, and that development must balance social, economic and environmental sustainability. For example, Nigeria's ability to achieve Goal 4, which aims to "ensure inclusive and equitable quality education and promote lifelong

learning opportunities for all"**,** is directly or indirectly connected to its agricultural system, its strategy for rural development, economic and income growth, management of natural resources, level of infrastructure, natural disaster mitigation plans, and the health of its population, requiring that many actors work together across and outside of government (United Nation, 2015). One action that can be taken in relation to the realisation of Goal 4 for the generation of outcomes with positive effects on the realisation of the other goals is in the creation of life-long learning opportunities for all Nigerians, and e-Learning initiatives fit in here. Agenda 2030 recognises the potential of ICT, the empowerer of e-Learning, to accelerate human progress, to bridge the digital divide and to develop knowledge societies. Target for the use of ICTs for sustainable development in education is clearly referenced in the 2030 Agenda for Sustainable Development (United Nations, 2016). The UNESCO-organised 2010 international working conference on **ICT in Teacher Education: Proceedings Policy, Open Educational Resources and Partnership** demonstrates that any initiatives for life-long learning can only be actualised with e-Learning as a central instrument. e-Learning is, therefore, crucial to life-long learning, which, in turn, is necessary if the United Nations goal for inclusive and equitable quality education is to be achieved in Nigeria – with resultant effects on the realisation of the rest of the items on Agenda 2030.

Conclusion

Apart from a myriad of problems in the socio-economic area of society which Nigeria shares with other developing countries in facing, the country is facing a crisis regarding its education. Access to education has continued to be low among school-age children. People living in poverty cannot afford to send their children to school. Hence, children are forced to work instead to support their family. Despite their love for school, there are people living in areas that do not have a nearby school. Some cannot go to school because of the distance and they may not have the money for getting an accommodation. These places are usually in the countryside wherein houses could be several kilometres away from each other. The priority of a sizeable number of some Nigerians is not to acquire education of some degree or other but to keep body as soul together. As long as they are working and earning enough just to let life continue, getting educated is not on the list of priorities. Some people who would have their children in school look at a question

of the sort: "But who would help me in my farm work?" and pull back from the brink. Many other Nigerians of adult-age, who are not dependant on any parent or guardian, are not in school because being there might deprive them of "time", which is the indispensable fuel for the generator of daily earnings for their daily basic living. There are other people in the country who are fortunate to have access to education, but being in school is not the same thing as learning. A good percentage of school children reach adulthood without the most basic skills like calculating the correct change from a transaction, reading a doctor's instructions, or writing out a police statement. Education is at the centre of building human capital, but where citizens of a country who are supposed to be school are not, the country stands the risk of experiencing low productivity. For such a country, the realisation of Agenda 2030 is out of the question

Spectacular technological accelerations happening across the world can raise the stakes, which means Nigeria can make remarkable progress on its march towards the realisation of the United Nations Goals for 2030 from e-technology. Technology is already playing a crucial role in providing support to teachers, students, and the learning process more broadly. It can help the educational system better manage the classroom and offer different challenges to different students. e-Learning has the potential to allow working Nigerians to earn degrees, receive education at their convenience as they can study according to their own schedule. This can be achieved when they do not have to commute to far-flung lecture theatres for lectures. Elimination of expenses for classroom space, for purchase or renting of textbooks can make education highly affordable to people who cannot afford education in conventional classrooms. e-Learning deployment is also a force for the positive in the elimination of logistical issues that can arise in Nigeria in relation to poor public transport infrastructure and traffic congestion in the metropolitan cities of Lagos, Benin, Ilorin, Kano and suchlike states, and for those Nigerians who cannot stand the limitations, rigidities and rigours of conventional education. Students can fix it for their coursework and lectures to match their schedules and work hours, and thereby dispense with the waste of valuable time travelling to and from universities and risking their jobs and livelihood in the process in order to attend classes. In this way, inclusive and equitable education can be achieved for adequate realisation of the United Nations Goals for 2030.

Recommendations

1. International donor agencies that provide funds to drive educational investments in developing countries should make substantial portions of such funds available for developments in e-Learning structures in private universities.
2. Policy-makers should look at e-Learning and conventional system of education and consider imposing on the educational system standardised admission criteria, uniform requirements for certification and standardisation of curriculum contents to remove the stigma attached to certificates obtained from National e-System of learning. This would encourage more Nigerians to pursue the online education that National Open University of Nigeria and institutional forms of e-System of learning offer.
3. e-Learning should be implemented at the secondary level of the country's education system. The first year in secondary school for those with the intention to enrol at e-Classes for their secondary education should be spent in classes that adopt a conventional (or physical) approach so that students can be prepared for e-Classes for their subsequent years.
4. Since smartphones are replacing laptops in most of the functions of the computer, courses designed for online delivery should be suited for smaller mobile devices in order to afford learners with comfortable desktop experiences.
5. Governments at the federal and state levels should accelerate joint efforts with the commercial providers of internet technologies in order to expand geographical coverage of internet accessibility and to strengthen existing internet connections.
6. Distance education used to be designed for those who for some reason or other could not attend conventional schools. But now, distance learning is necessary for all. Everyone has to be able to work at a distance and to learn at a distance simultaneously. The evolution of knowledge is so much in constant acceleration that no one can claim to have acquired all the knowledge and competences necessary for now and the future. e-Learning fits the bill here – providing as it does the means for lifelong education. Responsibility, therefore, falls on the shoulders of schools to prepare students for e-Learning.

7. e-Systems of education where certificates are issued at completion should also be included in conventional universities to improve the standing of e-Learning in the esteem of the public.
8. Consequently, all teachers should be trained to be "e-Teachers".
9. Blended learning – being an approach to education that combines e-Learning and offline (i.e. conventional or physical) learning – should be implemented at all levels of education in Nigeria. This would allow students to benefit from the best of both worlds while preparing them for life-long learning.
10. Consequently, teachers should be trained to be "blended teachers", which is where they can combine activities carried out via electronic media with those manually performed, being able to mix physical presence and geographical distance, dealing with time and space and all the possibilities offered by digital technologies in the balancing of time and space.

References

Adeola, F. O. (2018). *WEEE generation and the consequences of its improper disposal.* Accessible at https://doi.org/10.1016/B978-0-08-102057-9.00002-0

Agyeman, O. T. (2007). ICT for education in Nigeria. *Survey of ICT and education in Africa: Nigeria Country Report*

Arkorful, V. and Abaidoo, N. (2014). The role of e-learning, the advantages and disadvantages of its adoption in higher education. *International Journal of Education and Research, 2(12),* 397-410

Australian Curriculum (2020). *Information and communication technology (ICT) capability.* Retrieved online on 30th August, 2020 from: https://www.australiancurriculum.edu.au/f-10-curriculum/general-capabilities/information-and-communication-technology-ict-capability/

Brookings (2020). *Strategies to deliver on the sustainable development goals in Africa. Retrieved online on 31st August, 2020 from:* https://www.brookings.edu/research/strategies-to-deliver-on-the-sustainable-development-goals-in-africa/

Central Intelligence Agemcy (2011). *What is information revolution.* Retrieved from: https://www.cia.gov/library/readingroom/docs/CIA-RDP88G01117R001004310006-6.pdf

Coleman, B. (2020). *Definition of 'E-learning'.* Retrieved online on 27th August, 2020from: https://economictimes.indiatimes.com/definition/e-learning

eLearningNC (2020). *What is eLearning?* Retrieved online on 8th July, 2020 from: http://www.elearningnc.gov/about_elearning/what_is_elearning/

Epignosis LLC (2014). *E-learning concepts, trends, applications*. San Francesco: Epignosis LLC

European Commission (2001). *The eLearning Action Plan: Designing tomorrow's education.* Accessible at: http://www.elearningeuropa.info.

Gulati, S. (2008). Technology-enhanced learning in developing nations: A review. *International Review of Research in Open and Distance Learning,* 9(1), 1-16

Jennex, M.E. (2005). *Case studies in knowledge management*. Idea Group Publishing: Hersley.

Kuimova1, M. Kiyanitsyna1, A. and Truntyagin, A. (2018). E-Learning as a means to improve the quality of higher education. *ShS Web of Conferences*, 28, 01129

Lawless, C. (2018). *What is eLearning?* Retrieved online on 27th August, 2020 from: https://www.learnupon.com/blog/what-is-elearning/

Trines, S. (2018). *Educating the masses: The rise of online education in Sub-Saharan Africa and South Asia. What is eLearning?* Retrieved online on 27th August, 2020 from: https://wenr.wes.org/2018/08/educating-the-masses-the-rise-of-online-education

Twigg C. (2002). Quality, cost and access: the case for redesign. *In The Wired Tower. Pittinsky MS* (Ed). Prentice-Hall: New Jersey. p. 111–143.

United Nation (2015). *Getting to know the sustainable development Goals: An introduction to the SDGs. Retrieved online on 31st August, 2020 from:* https://sdg.guide/chapter-1-getting-to-know-the-sustainable-development-goals-e05b9d17801

United Nations (2016). *ICTs as a catalyst for sustainable development.* Retrieved online on the 5th July, 2020: from:

https://sustainabledevelopment.un.org/index.php?page=view&type=20000&nr=579&menu=2993

United Nations (2018). *The 2030 agenda and the sustainable development goals: An opportunity for Latin America and the Caribbean.*

United Nations (n.d.). *The 17 goals.* Retrieved online on 31st August, 2020 from: https://sdgs.un.org/goals

United Nations Educational, Scientific and Cultural Organisation (2010). *International Conference IITE-2010 "ICTs in teacher education: Policy development, OER and partnership".* UNESCO Institute for Information Technologies in Education: St Petersburg