# ADULT LEARNING AND DIGITAL TRANSFORMATION IN THE 21ST CENTURY IN NIGERIA

**By**

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**Abstract**
*The world is technologically driven. Digital transformation has permeated all facets of life viz-a-viz, health, banking, communication, business, politics, education, among others. This paper focused on adult learning and digital transformation in the 21st century in Nigeria. The paper proposed that adult learning should disengage from the traditional practice of face to face and effectively adopt digitization which is the new normal. The paper made use of secondary source of information where concepts such as adult learning, digital transformation and 21st century were clarified. The benefits of digital transformation were x- rayed. Some challenges confronting digital transformation in adult learning were highlighted. The paper further proposed some recommendations as a way forward towards enhancing digital transformation in adult learning which include that digital technology should be incorporated into adult learning. This will increase access to more and better information and resources to the learners. There is need for training and re- training of adult facilitators and learners on the use of digital technologies. This will help them to acquire the necessary skills and competences to function effectively in this globalized society, among others.*

***Keywords****:* Adult learning, Digital transformation, 21st Century

## Introduction

Nigeria is one of the third world countries of the world ravaged by disease, hunger, poverty and illiteracy. According to World Bank Report (2015, as cited in Chieke, 2021), about 10.5 to 13.2 million Nigerian children are out-of-school, probably the highest in the world, while adult illiteracy in Nigeria stood at 62%. As a third world country, Nigeria still employs traditional methods of teaching both children and adults. In our traditional adult learning environment, physical presence of adult instructors and adult learners are important for learning to take place. Also, required is class interaction between adult instructors and learners and between learners and learners for meaningful learning to happen. The advent of covid-19 pandemic in the year 2020 has shown that traditional methods of teaching alone cannot bring about the desirable behavioural changes expected in an adult of 21st century in Nigeria. The Covid 19 pandemic has also restricted the physical presence of instructors and learners as well as class interaction between learners to minimize spread of infection. Goodman (2022) opined that the

era of Covid 19 pandemic has brought about the massive integration of technologies in the education sector globally. These technologies have been employed in all facets of teaching and learning to engage learners remotely either synchronous (learning at the same time) or asynchronous (learning at different times). In primary and secondary schools, the use of technologies in teaching is well embraced, but not quite accepted in the adult learning centres. Hence, the need to bring about digital transformation in the teaching and learning of adults so as to help adults continue learning even at home, workplaces and in their comfort zones without necessarily interacting with their instructors physically. It is also pertinent to note that today the digital transformation has opened entirely new spaces of education and learning through the use of more and better technological tools. Knowledge and information are now accessible through online. The adoption of face-to-face method of teaching where teachers use black boards to explain concepts and learners take notes is becoming obsolete. Classroom teaching has taken a new face and is interactive with the use of digital methods. It is therefore, worrisome to state that in a research conducted by Waish (2014) revealed that many adult educators and learners in Nigeria are often afraid or reluctant to fully engage with the opportunities of digitization. Since education has now undergone the digital turn, adult learning should not be left out. Ugwoegbu, Adebola, Ewelum and Madu (2011) noted that as technology is changing the world at an unprecedented rate, without the proper machinery in place, one stands the risk of being left behind. The authors further maintained that adults must learn to change with the constant changing of the world. This paper therefore, proposed that adult learning should be transformed from the traditional face to face mode of delivery to the use of digital technologies.

**Conceptual Clarifications**

**Adult Learning**

The concept of adult learning has been defined different by various scholars. According to Pallavi (2019), adult learning is the process of engaging sociable adults in a learning activities or programmes with the intention of gaining new knowledge and skills. It is also the acquisition of habits, attitudes, perception, preference, integrity, social adjustment, values and ideas. In addition, Madu and Obiozor (2020) defined adult learning as a practice in which an adult engages in a systematic and sustained self-educating activities in order to gain new forms of knowledge, skills, attitudes and values. Seya (2014, as cited in Chieke, 2021) saw adult learning as any form of learning undertaken by or provided for mature men and women outside the formal school system, especially youths, women and men who are generally poor or socially disadvantaged. However, the researchers' views are in contrary to that of Seya because adult learning is not only for the poor and socially disadvantaged, but also for the rich and powerful. For example, a lawyer who is delivering a paper to his clients on legal matters is engaged in adult learning. Equally, a medical doctor who embarks on a speech on safe delivery to a group of pregnant women is engaged in adult learning. International Law (2014), has it that the general aim of education includes the full development of the human personality and the sense of its dignity and to enable all persons to participate effectively in a free society. If this is so, restricting education to children only cannot help to achieve this noble objective, hence, the need to take adult learning very serious as a subset of education by the Nigerian government.

Cengage (2018) stated that adult learning is basically an intentional, systematic process of teaching and learning by which persons who occupy adult roles acquire new values, attitudes, knowledge, skills and disciplines. Adult learning happens in many ways and many contexts, just as all adults' lives differ. Any adult learning can be in any of the three contexts:

(1) Formal – Structured learning that takes place in schools with a set curriculum.
(2) Non-formal – Learning outside the formal school system. It is flexible, learner centered and uses participatory and hands on approach.
(3) Informal – Learning that goes on all the time, resulting from daily life activities related to work, family, community or leisure. (Cafarella & Baumgartner 2007). Informal learning is accidental and incidental. Adult learning covers a variety of areas or scopes. Buber, Rosenzweig, Mansbridge and Adler (2022) categorized adult learning as: (1) vocational, technical and professional education (2) Health, welfare and family living (3) Civics, political and community

competence (4) Leisure and liberal education (5) Remedial, fundamental and literacy education, among others.

It is important to note that adult learning does not restrict itself to illiterate adults only. It includes all adults pursuing one career or the other in the various continuing education programmes in Nigerian universities, sandwich and prescience programmes. A bank manager pursuing Masters' degree (M.Sc) or Doctor of Philosophy (Ph.D) in a university is engaged in adult learning. It can therefore be deduced that adult learning is any learning activity undergoing by an adult for self improvement. To ensure that these groups and other categories of adult learners are properly educated, they need to learn under a technology-mediated environment. They need to be taught with modern digital technologies in order to remain relevant in the competitive world of work in this 21st century.

**Digital transformation**

Transformation connotes positive change. It is a complete change in the appearance or character of something or someone so as to bring about improvement. Digital transformation is the adoption of digital technology by ignition of Dan organization or institution. Okonji (2019) defined digital transformation as the integration of digital technology into all areas of life. Okonji further stressed that there is need for Nigeria to be digitally prepared in order to take advantage of the many gains of digital transformation that the world is currently looking up to. Similarly, Schmarzo (2017), defined digital transformation as the adoption of digital technologies by an establishment, its essence is to improve efficiency value or innovation. Therefore, digital transformation connotes the use of computer- based technologies in all spheres of life. Digital technologies are multi-functional devices with internet connectivity, particularly those that are handled and portable (Trevor 2016). Explaining further, Johnson (2021) opined that digital technology includes all electronic tools, automatic systems, technological devices and resources that generate, process and store information. Johnson maintains that the difference between analogue and digital technology is that in analogue technology, data is converted into electric rhythms of multiple amplitudes, while in digital technology, information is converted into binary system, that is, zero or one, where every bit is the symbol of two amplitudes. Traxler (2010) suggests that everyone should own one, uses one and often has more than one digital technologies. This is because it has the potential to change the traditional dynamics and patterns of the learning environment.

More so, International Training Centre of the International Labour Organization (2021) added that digital revolution is having a twofold impact on adult learning systems. It is changing the world of work and therefore the competences present and future workers should develop and it also redesigning the way learning takes place. The International Training Centre of the International Labour Organization went on to say that the International Community is recognizing that application of digital technology within adult learning has potential to leverage the excess, the quality and the relevance of learning experiences. According to Adedeji (2020), digital transformation will help in equipping Nigerian learners with 21st century skills required for future workplace using science, technology, engineering and mathematics (STEM) based programmes. Adedeji explains 21st century skills as skills required to succeed in the 21st century and goes beyond occupation-specific skills. The 21st century skills as submitted by Adedeji are (i) learning skills, such as critical thinking, creative thinking, communication and collaboration (2) literacy skills like, information literacy, media literacy and technology literacy. (3) Life skills which include flexibility, leadership, initiative, productivity and social skills.

**21st Century**

21st Century encompasses the information age. An era marked by rapid adoption of new technologies. It is also called the **"Jet Age"** or the age of globalization. This is the age at which technological devices are used in all spheres of life particularly in teaching and learning. Nwagwu, Okere and Branch (2021) defined 21st century as a period of acquiring skills needed in the new world. It is a period of problem solving, critical thinking and innovation. Akudolu as cited in Madu (2011) noted that in this era of technological revolution, the rate of national development of a country depends on the nation's ability to prepare her citizens to produce and make effective use of digital devices such as email, internet, computer networks and websites, satellites and cable devices, hardware and software packages, among

others. It can be maintained that 21st Century refers to the age of information technology, where everything is done using the computer. Technological devices are essentially needed for effective teaching and learning in education at all levels including adult education. The researchers are therefore advocating that adult learning should embrace this new trend to supplement the traditional method of face-to-face teaching and learning that is becoming obsolete in this globalized society, this is because, the benefits of integrating adult learning with digital technologies are enormous.

**Benefits of Digital Transformation in Adult Learning**

Today, digital transformation is omnipresent and is witness in all parts of life, it benefits cannot be underestimated much especially in the field of adult education. Some of the benefits are:

1. Digital transformation has made knowledge and information to be accessible at any time and place. Inchiparamban and Pingle (2016) noted that digital learning makes it possible for learners to take up a course without attending an educational institution. This implies that adult learners get the benefit of taking up a course from their home or from any place they are comfortable with.
2. Kerrman (2004) is of the view that digital transformation brings about development of skills and competencies. This means that with the use of digital devise, instructors and learners can also develop the skills and competencies needed in their various professions. Learners are ensured to have the digital literacy skills required in their disciplines and careers.
3. More so, with the use of digital tools in teaching and learning, learners get self- motivated and become more engaged in learning than the traditional approach.

Other benefits according to Walters (2022) includes:

4. Communication, accessibility of learning materials, collaboration and social networking
5. Another is personalized learning and content management, better engagement and retention of information, provision of instant feedback for instructors.
6. In addition, the effective use of digital learning tools in adult learning can increase learners' engagement, help instructors improve their lesson plans as well as the learners building essential 21st century skills.
7. Digital transformation can also bring about a more practical approach to track adult learners' performance, this will help to monitor their progress.
8. It saves time as learners learn at their own convenient time. Examples of digital technologies in an adult learning environment are – television, Radio, tape recorder, Compact disc (CD), Digital Video Disc (DVD), computer, social media, emails, online lessons or games, e-book, digital camera, Automated Teller Machine (ATM) also known as at the moment (atm) in digital communication (Goodman, 2022), among others.

The researchers also added that digital transformation help adult learners to engage remotely either synchronous (learning at the same time) or asynchronous (learning at different times). Through digital learning, instructors and learners get a better understanding of the most effective method to adopt.

**Challenges of Digital Transformation in Adult Learning**

Despite the numerous benefits derived from using digital technologies in adult learning, some challenges subsist. These challenges include but not limited to:

**1. Lack of technological Skills**

Technological skills refer to the ability to interact and complete a task using computer-based technologies or other online devices. It can also be the ability to acquire the competences to use technological devices. Obiozor and Madu (2022) opined that with the outbreak of the global pandemic (Covid -19 ) in 2020 where people were forced to start teaching online, those facilitators who were digital illiterates were shortchanged because they could not cope with the training that was provided during the lockdown. This indicates that many facilitators in adult education still lack the technological skills to compete in this technologically driven society. Olutola and Olatoye (2015) buttressed further that some facilitators and learners are not trained to make use of some of the digital devices, this affects the programme. Similarly, Adedoyin and Soykan (2020) revealed that instructors

and learners with low digital competences are liable to lack behind in online learning. Furthermore, in a study conducted by researchers like Igbokwe, Okeke-James, Anyanwu and Eli-Chukwu ( 2020) and Eze, Sefotho, Onyishi and Eseadi ( 2021) in Nigeria, revealed that many teachers in both primary and secondary schools lack the necessary digital skills to participate in online learning. Since most of these teachers particularly primary school teachers in Nigeria are employed to handle adult learners in many literacy centres, the situation would not be different with some facilitators and learners in adult learning programmes. Hence, lack of technological skills remains a challenge in adult learning.

**2. Inadequate Funding**

Poor funding of education in Nigeria is a big challenge. Despite UNESCO recommendation that developing nations should allocate 26 percent of their national budget to education, only 6.7 percent was allocated in 2020 which is below 10 percent and adult and non- formal remains 2 percent of the consolidated revenue (World Bank Report, 2019, as cited in Hussain, 2021). The poor funding of the sector has contributed to the deplorable state of Nigeria institutions. This has also caused the incessant strike action by Academic Staff Union of Universities (ASUU). Similarly, adult and non-formal education as a subset of education has equally suffered a serious neglect in funding and has resulted in low productivity and increase in disease in the country. Hussain (2021) maintained that the poor funding of adult and non- formal at all levels of governments is one of the most serious constraint militating against the successful implementation of adult and non- formal education in Nigeria which seriously affects the programmes in terms of recruiting qualified and trained facilitators as well as purchase of technological materials needed for enhancement of the programmes. Speaking on poor budgeting provision on education in Nigeria, Mbalisi and Oyebamiji (2015) observed that education in Nigeria generally is poorly budgeted which invariably affects adult and non- formal education as an aim of education. The authors further stressed that UNESCO recommendation of 25 percent nation's annual budget to education has never been realized.

**3. Poor/Lack of Internet Access**

Having access to internet is a key driver of digital teaching and learning. For digital transformation to be a success in adult learning, there must be an effective internet connection, this is because the transition from face- to- face to online teaching and learning requires that both the facilitators and the learners stay connected through the internet. It is worthy of note that findings from the studied conducted by some researchers in Nigeria like Igbokwe, et al,2020 and Eze, et al, 2021 revealed that or poor internet access remains a challenge to digitalization of teaching and learning.

**4. Lack/ Unsteady Electric Power Supply**

Lack or unsteady electric power supply in Nigeria has been a serious issue to the citizenry. Without constant power supply, the idea of transforming from the traditional mode of face- to- face teaching and learning to digitalization remains a mirage. According to Thisday as cited in Igbokwe, at al (2020) reported that investment in electric power supply does not commensurate with the megawatt generated for use. This may probably be the reason for the deteriorating state of electric power supply in Nigeria. In the same vein, Ogbunugwor, Ugwoegbu, Obunna, Apiti and Okunna (2019) found in their study that lack of electric power supply inhibits effective utilization of information and computer technologies among learners in Nigeria. Igbokwe et al (2020) added that lack and unsteady power supply reduces the effective utilization of online teaching and learning. More so, the researchers observed that in Nigeria, most rural communities lack electricity while urban communities are plagued with unsteady power supply. This situation could hinder an effective digital transformation of adult learning in Nigeria.

**5. Unqualified Personnel**

Unqualified personnel is another challenge of adult learning. There is paucity of trained personnel to handle adult education programmes. Most often, those employed to teach adult learners are primary school teachers who have no knowledge on andragogical principles and also do not possess the technological skills to impact to the learners.

**Way forward**

The following recommendations are made as a way forward in enhancing digital transformation in adult learning in Nigeria:

1. Digital technology should be incorporated into adult learning. This will increase access to more and better information and resources to the learners.
2. There is need for training and re- training of adult facilitators or personnel and the learners on the use of digital technologies. This will help them to acquire the necessary skills and competences to function effectively in this technologically driven society.
3. The Federal Government of Nigeria should implement UNESCO recommendation of 26 percent budget allocation to education. Budget allocation for adult and non -formal education should be increased and the funds released to every state government for the purchase of the needed digital facilities for teaching and learning.
4. Education should be prioritized by the Federal Government of Nigeria. This is because, it is the key to socioeconomic development. When this is done, adult and non- formal will take its place of priority in the country.
5. The issue of poor or inadequate power supply in Nigeria should be addressed. Digital transformation in adult learning cannot be achieved without adequate or regular power supply. To ensure uninterrupted process of digital education, the government can provide other alternatives to electric power supply such as solar for powering digital devices.
6. Provision of free wifi and adequate servicing of the network is essential for the technological devices to function effectively in the centres.

**References**

Adedeji A. (2020). Global digital transformation – Importance of STEM Education: The Nigeria Experience. Retrieved from linked.com on 6th October 2020.

Adedoyin, O.B. & Soykan, E. (2020). Covid -19 pandemic and online learning: the challenged and opportunities. *Interactive Learning Environments.* 1-13

Buber, M., Rosenzweig, F; Mansbridge, A, & Adler M.J (2022). Adult education. Retrieved from https://www.britannica.com /adult education on 23rd June, 2023.

Caferella, R.S & Baumgartner, L.M (2007). Learning in adulthood: a comprehensive guide (3rd edition). San Francisco: Jossey Bass.

Cengage (2018). Adult education. Retrieved from encyclopedia.com on 21st May, 2022.

Chieke J. C. (2021). Adequacy of NCCE 2012 Nigeria Certificate in Education minimum standards for adult and non-formal education in Nigeria. An unpublished dissertation submitted to the Department of Adult and Continuing Education, Nnamdi Azikiwe University, Awka.

Eze, U.N, Sefotho, M.M, Onyishi, C.N. & Eseadi, C. (2021). Impact of covid- 19 pandemic on education in Nigeria: implications for policy and practice of e- learning. Library Philosophy and Practice, 1-36

Goodman, P (2022). 20 examples of digital technology. Retrieved from www.turbofuture.com on 7th January, 2022.

Hussain, M.S. (2021). Funding: A band for adult and non- formal delivery in Nigeria: Challenges for access and quality. *AL-hikmah Journal of Education. 8*(1), 15-19

Igbokwe, I.C, Okeke-James, N.J, Anyanwu, A.N & Eli-chukwu, N.C. (2020). Managing the challenges to the effective utilization of e- learning as a response in covid -19 Nigeria. *International Studies Education Administration.* 28, 28-34

Inchiparamban, S.& Pingles, S. (2016). Massive open online courses: why do we need them? Retrieved from: https://files.eric.ed.gov/fulltext/ED590312 on 14th June, 2023

International law (2014). Adult education and learning. Retrieved from right-to-education.org on 14th June, 2023.

International Training Centre of the International labour Organization (2021). Learning innovation. Retrieved from itcilo on 5th May 20223.

Johnson, K (2021). What is digital technology? 25 best examples. Retrieved from honestpersons.com on 18th March, 2022.

Kerrman, L. (2004). Convenience of online education attracts mid-career. *Students Chronicle of Philanthropy, 16* (6),1-12

Madu, J.E. (2011). New trends in teaching and learning: A key note address presented at Austica teachers' seminar/workshop in Austica Memorial College, Nnanka, on 2nd Nov. 211

Madu, C.O. & Obiozor, O.R. (2020). *An introductory approach to psychology of adult learning.* Awka: Patrobas Nigeria Ltd.

Mbalisi, O.F.& Oyebamiji, M.A. (2015). Adult education for meaningful socio-economic development in Nigeria. *Journal of Social Science Studies. 2* (2), 199.213

Nwagwu, L, Okere, C.O. P & Branch, N.C. (2021). Educational changes of the 21st century in a developing economy: contemporary possible solution. *International Journal of Innovative Social Science Research. 9* (3), 72-80

Obiozor, O.R. & Madu, C.O. (2022). Professional development of adult education facilitators in the digital era for sustainable development in Nigeria: post covid-19 pandemic. A paper presented at 11th Conference of Global Education Network, ISAGO University, Botswana from 23rd – 27th Oct, 2022

Ogbunugwor, A, Ugwoegbu, V, Obunna, M, Apiti, A.& Okunna, O. (2019). Utilization of ICT for teaching and learning by post graduate adult learners in Nigeria. Challenges and way forward. *Unizik Journal of Education Graduates, 6* (145-151)

Olutola, A.& Olatoye, O.O. (2015). Challenges of e- learning technologies in Nigerian University education. *Journal of Educational and Social Research. 5* (1), 301-305

Okonji, E. (2019). Digital Transformation: how ready is Nigeria? Retrieved on 25th June, 2022 from https: // www.thisday live.com

Pallavi, D (2019). Adult learning. Retrieved from slidestone.net on 11th July, 2023.

Schmarzo, B (2017). What is digital transformation? Retrieved from www.makinsey.com on 9th July, 2022.

Traxler, J (2010). Will student devices deliver innovations inclusion and transformation? *Journal of the Research Centre for Educational Technology, 6* (1), 3-15.

Trevor, M (2016). Digital technologies and implications for education in 21st century digital technologies: implications for educational organization and settings in the 21st century. Retrieved from researchgate.net on 13th June, 2023.

Ugwoegbu, I.T, Adebola, H.E, Ewelum, J.N & Madu, C.O. (2011). E- learning: a new trend for improving teaching and learning in adult education in tertiary institutions in Nigeria. Review of Bahavioral Sciences: *A Journal that Cuts Across all Behavioral Issues. 3* (2), 41-46

Wagner, T.& Dintersmith, T. (2016). *Most likely to succeed: Preparing our kids for the innovation era.* New York: Scribe Publishing

Walsh. C.J. (2014). Digital culture embraces slow citizenship into the future. *Digital Culture and Education. 6* (4), 389-392

Walters, H. (30th January, 2022). The top 10 benefits of digital learning. Retrieved from https:// elearningindustry.com on 10th September, 2023.