

**ABSU**  
**JOURNAL OF**  
**CURRICULUM AND TEACHER**  
**EDUCATION(AJCTE)**  
**Vol.2.No.1 (November),2022**

**THE IMPACT OF DIGITAL TECHNOLOGY SKILLS OF TEACHERS ON THE  
IMPLEMENTATION OF UNIVERSAL BASIC EDUCATION (UBE)  
PROGRAMME**

By

**Nwaham Caroline Obioma (Ph.D)**  
Faculty of Education, University of Delta Agbor  
08037452333

**Abstract**

Digital technology have been sources of remarkable development in all sectors of the economy including education. They have imparted meaningfully on the growth, efficiency and quality of the educational sector with the implementation of UBE inclusive. Digital technology skills are set of knowledge and competence for using computer system, surfing the internet and engaging in the use of other electronic technology for information management activities. Teachers effectiveness and efficiency in utilization of digital learning tools in the classroom can increase students participation and performance. But they are confronted by numerous problems as regard the use of digital technology skills in the classroom among which are; incompetence among teachers, inadequate funds, inadequate facilities and unconducive environment. Some recommendations have been made which include: government to provide adequate funds, facilities, training and re-training of teachers in digital technology among others.

**Keywords:** Digital technology, skills, teachers, Universal Basic Education.



## Introduction

Teachers are indispensable in the entire educational system of any nation. They are the pilot on which educational wheels revolve. They are saddled with the responsibility of imparting knowledge, attitude and skills to the learners. For effectiveness and efficiency, teachers need to be innovative and calibrate their teaching pedagogy to meet up the current teaching standard. Thus, digital literacy training equip teachers with the basic skills of information and technology. Digital skills guarantee better performance in teaching/learning process and invariably advances the education industry.

Digital technology skills are set of knowledge and competence for using computer systems, surfing the internet and engaging in the use other electronic technologies for information management activities (Emenike, Ojiaku and Onyejele, 2021). Creation of awareness on the significance of digital technology educational programme, in the words, several measures had been adopted to facilitate acquisition of digital technology skills by enhancement of teachers training programmes to enable teacher play effective role in teaching and learning at the basic education level.

## Concept and types of digital technology

Digital technology has made the world a global village. They are technological tools and resources used to communicate, create, organize, disseminate, store and manage information. Johnson (2021) states that “digital technology include all electronic tools, automatic systems, technological devices and resources that generate, process or store information. Examples are website, online buying and selling, smart phones, cloud computing among others.” VIRLAN (2022) opines that digital technology are “electronic tools, system, devices and resources that generate, store or process data.” Well known examples include social media, online games, multimedia and mobile phones.” John (2021) listed the following as the best 25 examples of Digital Technology.

- Website
- Online Buying and Selling
- Smart phones
- Blockchain Technology
- Cryptocurrency



- Artificial Intelligence (AI)
- Cloud Computing
- 5G Data
- Voice interfaces or chat-bots
- Video streaming
- e Books
- Digital music
- Geo-location
- Blogs
- Social media
- Gadgets
- 3D printing
- Self-scan equipment
- Digital cameras
- Cars and other vehicles
- Digital clocks
- Robotics
- Drones and missiles
- Banking and finances

## **What is Digital Technology Skills**

Digital technology skills training and development for teachers is very important for future academic activities including the implementation of Universal Basic Education. UNESCO (2018) sees “Digital skills as a range of abilities to use digital devices, communication applications and networks to access and manage information.” Digital skills make individuals to create and share digital content, communicate and collaborate, and solve problems for effective and creative self-fulfillment in life, learning, work and social activities at large. Emenike et al (2021) state that “Digital skills are the abilities possessed by an individual which is necessary to understand, navigate through, and make use of digital technologies and the internet, with little or no assistance. According to Atsumbe, Raymond and Duhu (2012) “Digital technology skills are important means of promoting contemporary methods of instruction and new approaches of curriculum delivery thereby facilitating learning environment that are not only stimulating and attractive but also inviting and interesting to both teachers and learners”. The transformation to digital technology education involves the integration of digital tools and technologies as well as the adoption of new pedagogical



approaches. It requires updating the skills of teachers in instructional design by digital education experts (Joseph, 2012).

Emiri (2015) states that “digital skills enable teachers to develop competencies that add to their status and improve their overall performance in the classroom full of digital devices.” Teachers need to be trained on the importance of the pedagogical knowledge and skills they will require to teach the Universal Basic Education programmes and also strengthen the teachers capability and capacity.

## Teacher and Digital Technology

The utilization of digital technology in education can play a crucial role in providing model and innovative forms of support to the teachers, students and the learning process more broadly. The efficiency and effectiveness in the utilization of digital technological tools in the classroom by the teacher can no doubt increase the students involvement and can also help the teachers to improve their lesson presentation and aid their personal learning. Hyndman (2018) states that “digital technologies can enhance learning through accessing information and improving communication, as well as providing self-directed and collaborative learning opportunities.” Digital technology can also help develop capable, and future ready citizens. Teachers have no option to integrate digital technologies because they are needed for his enhancement in the classroom. As it is stated in the curriculum, teachers are needed to develop students general information and communication technology capabilities in all fields of study including technological curriculum.

Universal Basic Education Commission, under Federal Ministry of Education has made frantic efforts to integrate technology in the classroom, but many teachers have struggle with disruption that devices can bring, and this has negative impact on their performance. Some times, the excuses may be inability to purchase some of the devices like laptops or android phones. Hyndman (2018). Observe that teachers want to improve student performance, and technology can help them accomplish this goal. “He advised that the administrators should help reduce the challenges teachers face, to enable them gain the competencies needed to enhance learning for students through technology. Digital technology no doubt is useful to both



teachers and students. He noted the following as some importance of technology to students: (1) increased collaboration and communication (2) personalized learning opportunities (3) curiosity driven by engaging content (4) improved teacher productivity and efficiency (5) become a leader in enriching classroom through technology

Other benefits of technology in the classroom include:

- Creation of a more conducive and engaged environment
- Opportunity to incorporate different learning styles
- It improves collaboration between teachers and students
- It prepares the learners for better future
- It connects the teachers with the students.

## **Universal Basic Education**

The Universal Basic Education (UBE) programme in Nigeria was launched in 1999, with the goal of providing “free, universal and compulsory basic education for every Nigerian child aged 6 – 15 years”. The programme, however, was not able to take off immediately after its launching as it did not have legal backing. There, initial UBE-related activities were carried out only in areas of social mobilization, infrastructural development, provision of instructional materials and others. The UBE programme only took off effectively with the signing of the UBE Act in April 2004.

The main beneficiaries of the programme are:

- Children aged 3 – 5 years, for Early Children Care and Development Education (ECCDE)
- Children aged 6 – 11+ years for primary school education
- Children aged 12 – 14 years for junior secondary school education

Its scope include the following:

- expansion of activities in basic education
- programmes and initiatives for ECCDE
- Programmes and initiatives for the acquisition of functional literacy, numeracy and life skill, especially for adults (persons aged 15 and above)
- Out-of-school, non-formal programmes for the updating of knowledge



and skills for persons who left school before acquiring the basics needed for lifelong learning.

- Special programmes of encouragement to all marginalized groups: girls and women, nomadic populations, out-of-school youth and the Almajiris (Qur'anic students).
- Non-formal skills and apprenticeship training for adolescent and youth who have not had the benefit of formal education.



## Objectives of UBE Programmes

- Develop in the entire citizenry a strong consciousness for education and a strong commitment to its vigorous promotion.
- Provide free, universal basic education for every Nigerian child of school-going age.
- Reduce drastically the incidence of drop-out from the formal school system (through improved relevance, quality and efficiency)
- Cater for the learning needs of young persons who, for one reason or another, have had to interrupt their schooling, through appropriate forms of complementary approaches to the provision and promotion of basic education.
- Ensure the acquisition of appropriate levels of literacy, numeracy, manipulative, communicative and life skills, as well as the ethical, moral, and civic values needed for laying a solid foundation for lifelong learning (FRN 2004).

## Digital Technology Skills of Teachers and Universal Basic Education

Universal Basic Education was officially recognized in Nigeria by the enactment act 2004 by Federal Government. This is necessitated to achieve the laudable objectives of the programme. Thus, Egede and Asabor (2019) state that in recognition of the role of information and communication technology in advancing knowledge and skills necessary for effective functioning in the modern world, there is urgent need to integrate Information and Communication Technology (ICT) into education in Nigeria.” Hence the subject Information Technology was included in the basic education curriculum as from primary one to all levels of education.

Tertiary institutions in Nigeria are mandated to train and produce quality teachers for the basic education programmes. This is necessitated because teachers are the key actor as far as the implementation of any school curriculum is concern. Thus, the capacity building and development of the teacher should be guaranteed in the implementation of the basic education curriculum on a continuing basis by re-training serving teachers and upgrading the curriculum of potential teachers concurrently to take care of any change. The empowerment of the teachers with the required skills, knowledge, information will act as motivation factors to ensuring that all the required infrastructural facilities are provided by appropriate authorities. Teachers effectiveness in utilization of digital learning tools in the



classroom can increase students engagement and participation which can also help in the improvement of teachers in the effective classroom delivery. Teachers need digital technology skills to carry out their activities in the classroom. These technologies will create the conducive environment that fosters collaboration, participation and the inquisitiveness of the students in the classroom and their performance.

The relevance of the digital technology skills in the universal basic education and other programmes made Obioma (2019) to outline the components of the education sector reforms that will make the recipients skill oriented. These according to him include:

- Synchronizing the contents and delivery processes of education with the major strategic goals of the National Economic and Development Strategy (NEEDS).
- Re-alignment of both the content and structure of Basic Education Curriculum (EEC).
- Inclusion of new subjects in Basic Education Communication.
- Restructuring of the secondary education curriculum.
- Establishment of the post-basic vocational enterprises institutes.
- Establishment of post-secondary innovative enterprise institutes.

Consequently, there is no doubt that digital technology has tremendous potentials for the effective implementation of Universal Basic Education in Nigeria. The teacher is the key implementer of the curriculum, so his knowledge in digital technology is inevitable.

According to Mbah (2017) 'E-learning is made possible through the use of various information, communication technology (ICT) facilities such as computer, electronic book, digital cameras, video, overhead projector, internet, radio, fax machines, teaching machine. ICT is gradually controlling every field of human endeavour including education. Its facilities are revolutionary tools on educational pedagogy and methodology. It has the capacity to facilitate acquisition of basic skills, promote inquiry and exploration skills." So there is need to re-train UBE teachers on the application of E-learning facilities in order to be abreast with current issues in their teaching profession.

## **Role of Digital Technology at Basic Education Level**





This is the age of digital technology which is seen as the light at the end of the dark tunnel, thus enhancing the standard of learning with respect to basic education in Nigeria. Some of the roles of digital technology in Basic Education in Nigeria are discussed as follows:

- Improvement of the standard of learning: There is no gain saying that digital technology has made learning very easy, for both the teachers and the learners. A good example is the use of computer, laptops and projector.
- Easy assessment of information: Digital Technology has made information easily accessible for both teachers and students. Students can use computer or any other internet device to learn. For instance, students can use google search to gain wide access to educational materials to do their school work and assignment. And teachers can as well consult the google search for vital information concerning their courses and topics.
- Access to a variety of learning resources: Digital technology helps in provision of many resources to enhance the teaching skills of teachers and the learning ability of students through audio-visual education.
- It fosters interactive learning: Digital technology has enhanced active participation of students in the classroom through interactive learning. It also promotes easy communication between the teacher and the learners.
- Positive impact in school administration: It has help in record keeping in the school, since school records act as information bank for the administrators, teachers and students.
- It broadens the mind of students: The utilization of digital technology has help to widen the mind of students by exposing them to a wide range of information which the traditional methods of learning would not cover.
- Accessibility to online libraries: Vital information can be gotten in detail from online libraries and this has reduced the visit to the local library in the school. It makes learning to be more detailed and comprehensive as information from online libraries is more explanatory, easy and understandable.
- It promotes exciting ways to educate students. The use of digital technology makes learning interesting and motivating. The digital technology has help to arouse the interest of students in basic education.
- Promotes collaborative learning. Digital technology promotes collaborative and participative learning amongst the students.



- Preparation of students for the future. Digital technology in basic education has made a career path for students to be easily decided and determined.

Ajudeonu (2021) listed the following as the roles of digital technology to both teachers and students.

### For Teachers

- Digital technology offers the teacher new roles that prepare learners to manipulate information for solving social political and economic problems.
- Jokins and Sprinter (2000) state that digital technology is willingly instructional tool which the teacher can use to present information and manage class activities in order to help students achieve educational goals
- It facilitates the sharing of resources among the students
- It encourages critical thinking and offers unlimited means of achieving educational goals.
- It enhances efficiency and effectiveness in teaching at the Basic Education level.
- It enhances the knowledge on the part of the teachers on problem solving skills thereby improving the delivery and access to knowledge and improve the curriculum.
- It helps the teacher to get students do more task, and computers used during lesson motivates students to continue learning outside school hours.
- Digital usage in teaching enhances professional image of the teacher (Ajudeonu and Idiaghe, 2014).

### For Students

- Digital technology increases the flexibility of delivery of education so that learners can access knowledge anytime and from any where.
- It increased learner motivation and engagement by facilitating the acquisition of basic skills.
- It gives students opportunities to address their work to an external audience and to collaborate on assignments with people outside or inside school.
- It provides the encouragement of independent and active learning and self responsibility for learning.
- It helps learners to develop their individual intellectual and creative abilities by providing higher interactive potentials (Samuel and Ede,



2005).

## **Barriers of Effective Digital Technology and Learning at Basic Education Level**

Despite the relevance of digital technology to all sectors of the economy including education. There are numerous barriers to effective learning at basic education level. Wright (2014) listed some of the barriers to technology adoption in education in the developing world. They include

- **Electrical power.** It is a fact, you need power to run technological devices and until power is widely available, reliable, and affordable in Nigeria, educational technology update may not be possible or slow. There is epileptic power supply in Nigeria, and this has actually hindered the use of some devices like computer, laptops and projector.
- **Training and professional development.** Electrical power, internet bandwidth and electrical devices may all be present in the school, but teachers need to know how to use them effectively. Teachers who have been brought up in a world with limited technology find it difficult to use technology to engage and support learning.
- **Sustainability.** Most technological projects are not sustained. The implementation of educational technology could facilitate and support effective teaching and learning, but there are many challenges involved in implementing technology in developing countries like Nigeria.

Amy, Matthew, Devin, & Christian (2016) listed the following as the barriers to digital technology.

- **Access constraint:** Teachers are faced with the issues of surrounding insufficient equipment or connectivity. If a teacher's school does not possess adequate computers and fast internet connection, the implementation of educational technology is not feasible.
- **Inadequate training:** If teachers are not provided with effective professional developments on new technologies, they will not be capable of using it to its full potential.
- **Support constraints:** Support barriers to technology integration include inadequate technical support and administrative/peer support.

Other Barriers are

- **Lack of competency and skills status:** This can affect the teachers performance on his daily activities.
- **Inadequate digital technology facilities:** The relevant digital technology,



such as power supply, telephone lines, air conditioned classroom and ventilated classroom may be lacking or inadequate.

- High cost of facilities: The cost of digital technologies like computer, laptop and phones are very expensive, hence teachers may not afford them.
- Lack of awareness: Teachers and students in the rural areas, may have low awareness of the digital technologies and their uses.
- Lack of technical knowledge: This may affect the maintenance of devices needed in the classroom
- Poor school environment: The nature of the schools environments – (rural areas) may affect the accessibility of the common devices like computers, and others. Khalid (2009) also listed the following as the barriers to effective digital technology integration into teaching and learning: “Lack of teacher competence, lack of time, lack of technical support, lack of accessibility, lack of effective training, resistance to changes and negative attitudes and lack of teacher confidence.”

## Suggestions

For the effectiveness and efficiency of the teachers, digital technology skills are inevitable. Based on the discourse, the following suggestions have been made:

- Government should allocate adequate funds for education and ensure that the funds are judiciously utilized for its purpose.
- Education minister should develop policies and programmes that specifies the importance of technology to the teaching/learning process.
- To eradicate the problem of low level digital literacy amongst teachers, government should always organize in-service training for teachers on digital technology education.
- School management in conjunction with the government to provide an enabling environment for teachers to adopt and integrate digital technology in the classroom.
- Community practice is also recommended among teachers by expert teachers in digital technology to be encouraged and arrange to teach their colleagues who do not have these skills.
- Government should provide incentives for teachers to improve their digital technology capabilities
- Computers laptops, projectors and other devices should be provided in the school for teaching and learning.



- Government should emphasize on the recruitment of teachers who ICT compliance.
- Workshops, seminars and conferences on digital technology should always be organized for teachers for updating their skills and knowledge.

## Conclusion

Digital technology skills are important means of promoting contemporary pedagogy of instruction and new approaches of curriculum delivery thereby facilitating learning environment that are motivating to both teachers and students. Thus digital technology in basic education can really changed the way of learning for students and also enhance teachers immensely by making teaching more, interesting and easy. But teachers are faced with numerous challenges such as inadequate funds, inadequate facilities, unconducive environment among others. Hoping that when these barriers are taking care of in the school system, teaching and learning processes will be enhanced.



## References

Ajudeonu, H. I. (2021). The Role of Information and Communication Technology (ICE) in teaching at Basic Education level in Delta State: Implications for teachers. Association for digital education and communications technology conference proceedings.

Ajudeonu, H. I. and Idiaghe, J. E. (2014). Teachers Awareness/ Competence and the use of on-line collaborative learning for students in secondary schools. JOWICE 19 (69) 74.

Amy, M. J., Matthew, E. J., Devin G. R. and Christian M. S. (2014). Challenges and solutions when using technologies in the classroom. In S. A. Crossley and D. S. McNamara (Eds) Adaptive educational technologies for literacy instruction Taylor and Frances, pp. 13 – 29.

Atsumbe, B. N., Raymond, E., Enoch, E.B. and Duhu (2012). Availability and utilization of e-learning instruction in Federal University of Technology, Minna, Nigeria. Journal of education and practices vol. 3 No. 12 , 56 – 64.

Egede and Asabor (2019). Integration of Technology in the training of Basic Education Teachers in Nigeria: Issues, challenges and prospects. ADECT, 2019 Proceedings. [open.libraries.okstate.edu](https://open.libraries.okstate.edu).

Emenike, E., Ojiaku, F. C., and Onyejele, F. O. (2021) Digital Technology skills of lecturers in tertiary institutions in Abia State, Nigeria. Being a paper presented at the Second International Conference of ADECT. Held in Agbor, Delta State.

Emiri, O. T. (2015). Digital literacy skills among librarians in University libraries in the 21st century in Edo and Delta States, Nigeria. International Journal of scientific and Technology Research. Vol. 4, No. 8 pp. 153 – 159.

Federal Republic of Nigeria (2004). National Policy on Education. 4<sup>th</sup> Edition NERDC Press Lagos.

Hyndman, B. (2018) Ten reasons teacher can struggle to use Technology in Classroom. [theconversation.com](https://theconversation.com).



Johnson, K. (2021). What is Digital Technology? 25 Best Examples. Honestproscons.com.

Jonkins, M. S. & Springer, S. M. (2002). A view of the research of C. A. I. Electronic Journal of the Integration of Technology in Education.

Joseph, E. (2021). UNIABUJUS, 5 others named centres of competence in digital education. retrieved from <https://www.vanguardng.com>.

Khalid, A. B. (2009). Barriers to the successful Integration of ICT in Teaching and Learning Environments: A review of the literature. Erurasia Journal of Mathematics, Science and Technology Education. 5(3) 235 – 245.

Mbah, A. B. (2017) Re-training Universal Basic Education (UBE) Teachers for meeting challenges of E-learning. World Applied Sciences Journal vol. 35 No. 12.

Obioma G. O. (2007). Education sector reform and the attainment of millennium development. A key note address presented at the annual conference of the faculty of education UNN.

Richard, A. (2016). Role of Digital Technology in Teacher Education. International Journal of Engineering Research and Modern Education. volume 1. Issue 1.

Samuel, E. and Ede, S. (2005): Using Information Communication Technology in Secondary Schools in Nigeria. Problems and prospects. Educational technology and society. 8(1) 104.

UNESCO (2018). Digital skills critical for jobs and social inclusion. en.unesco.org.

VIRLAN (2022). What is Digital Technology? What are commonly used Digital Technologies. Virlan.co.

Wright, C. (2014). 5 Key Barriers to Educational Technology Adoption in the developing world. Educational Technology Conferences. edutechdebate.org.

