

Students' Perception of Utilization of ICT in Teaching and Learning in Post Covid-19 Era in Nigeria

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Abstract

The role of Information Communication Technologies (ICTs) has increased since during and after Covid-19 lockdown. ICTs have been seen as catalysts for change especially in education; change in handling and exchanging information, teaching methods, learning approaches and scientific research. Many schools were able to continue academic activities during the Covid-19 lockdown and in the post Covid-19 period, with the help of ICTs. The present study examined students' perception of utilization of ICTs in teaching and learning in post Covid-19 era in Nigeria. Many Nigerian students are not conversant with the use of ICTs, especially as a means of teaching and learning. This has posed a challenge in their learning in post Covid-19 period. The objective of this study is to highlight the students' views on teaching and learning with ICTs in the period of post covid-19. Two research questions guided the study. The population of the study comprised the 6,420 students of public secondary schools in Awka South Local Government Area of Anambra State. Survey research design was adopted for the study. Simple random sampling technique was used to select 255 students from the population. Structured questionnaire duly validated by experts was used for data collection. Mean rating was used for data analysis. The findings of the study showed among others that students have developed interest in the use of ICTs since post covid-19. This has helped them in developing quality interest in learning. The study concluded that the use of ICTs in the teaching and learning during covid-19 has created an avenue for students to enhance their learning skills and personal academic development. Based on the findings, the study recommended among others that there should be ICTs equipment provided for

students in different schools, this will help them to get more familiar with learning with uses and benefits of ICTs in the present time.

Keywords: *Students, Students' Perception, Utilization of ICTs, Information Communication Technology, Teaching and Learning, Covid-19*

Introduction

The presence of corona virus which came in towards the end of year 2019 in Wuhan, China, caused a lot of changes in the world's activities. The emergence of the virus has so far disrupted economic, social, political as well as educational activities. The devastating effects of the pandemic on life, health, education and economy globally cannot be over-emphasized. It has affected more than 180 countries across the continents of Europe, Africa, Asia, North America, South America and Australia (Ali, 2020). COVID-19 is a menace that has bedeviled and ravaged the world in many ways. It has retarded the economy, ravaged health system, destroyed hospitality business, and disrupted socio-political interaction and now, inducing an unannounced shift away from the traditional classroom settings in the educational sector. Sequel to the rising concerns about the spread of COVID-19 and the need to contain the virus, a growing number of tertiary institutions have shut down in regards to conventional classroom delivery (Akther, 2020). This is courtesy of the fact that a major strategy in the containment of coronavirus was through imposition of lockdowns which automatically retrained people from partaking in

social activities. This situation has particularly been of a great challenge to the education system across the world. Globally, educational sector has never witnessed such disruption in a colossal manner before (UNESCO, 2020a). COVID-19 posed serious consequences for students by depriving them of their fundamental rights to education and exposing them to risk of child labour, early marriage, exploitation, and poor academic abilities (Baytiyeh, 2018). As attested by UNESCO (2020a), more than 1.5 billion students globally which represents 87% of the global student population, were deprived of education. More worrisome is the threat of extended closures which paved way for the need to rethink traditional teaching (UNESCO, 2020b).

As a result of the devastating effect on the citizens of the planet by the increasing cases of the Corona virus around the world, the World Health Organization on March 11th 2020 declared the Corona virus as a global pandemic. The implications of the corona virus pandemic saw the abrupt shutting down of schools by government, and students were told to vacate as one of the measures to curb further infections. Such effect curtly

distorted the ongoing face-to-face classes programs of the various institutions of learning. Without an iota of doubt, the closure of these institutions would have a dramatic impact on the students, especially secondary schools and countries' economic development (Tamrat & Tehferra, 2020). The ripple effect of such action according to Ikegbusi and Iheanacho (2016) includes disruption of student cognitive learning process, delay in student graduation, tendencies of postponing academic sessions, and likelihood of student indulging in unwholesome behavior during the lockdown known as juvenile delinquency amongst others. This continued even in the time of post covid-19. In order to bridge the gap and ensure uninterrupted educational delivery, school across Nigeria adopted the use of Information Communication Technology (ICTs) for easy delivery of education. However, this has met some of the students with different feelings, given the fact that many of them have no prior knowledge of the use of ICTs gadgets in learning (World Bank, 2020). Also, some teachers who are meant to teach with the ICTs gadgets have little or no knowledge of how to use it. Nwoko (2020) noted that teachers must have the knowledge and skills to use new digital tools to help all students achieve high academic standard. The quality of professional development of teacher education depends on the extent of ICTs integration in teacher education

programme (Ikegbusi & Iheanacho, 2016a)

Poor knowledge of the use of ICTs in teaching on the side of some teachers is the major reason some students are losing interest in learning with ICTs while some are finding the use of ICTs a welcomed development (Warder, 2020). This showed different perceptions of the use of ICTs in teaching and learning by the students. The present study intends to examine these perceptions, especially as regards the use of ICTs in the present post covid-19 era in senior secondary schools in Awka South Local Government Area of Anambra State.

Education has remained the bedrock of any nation being an instrument for national transformation and development. In this regard, Ikegbusi and Iheanacho (2016b) asserted that a country that toys with the education of her citizens is going to experience dwindled development and will invariably be ranked low among the developed nations of the world. School closure experienced in many countries during the period of covid-19 affected many schools and students. More than 1.5 billion students worldwide were affected by the problem. During the period of covid-19 lockdown, many schools introduced online teaching and learning through the help of ICTs. This method of learning continued in post covid-19 period. However, many students, especially secondary students in Nigeria, had not had any idea of the use of ICTs in learning, prior to the

covid-19 period. This led to many challenges in the use of ICTs in teaching and learning even in post covid-19. Many students, even the ones who are intelligent were making poor academic performances as a result of lack of adequate knowledge on the use of ICTs in learning while some who have prior knowledge of the use of ICTs are becoming very conversant with using ICTs in teaching and learning. This has left students with different feelings about the use of ICTs in learning. The present study therefore examined students' perception of utilization of ICTs in teaching and learning in post covid-19 era in Nigeria, using public senior secondary schools in Awka South Local Government Area of Anambra State as a case study.

Purpose of the Study

The main purpose of the study is to examine students' perception of utilization of ICTs in teaching and learning in post covid-19 era in Nigeria, using senior secondary schools in Awka South Local Government Area of Anambra State as a case study. Specifically, the study intended to:

1. Identify the relevance of utilization of ICTs in teaching and learning in post covid-19 era in public senior secondary schools in Awka South Local Government Area of Anambra state.
2. Examine students' views on the use of ICTs in learning in post

covid-19 era in public senior secondary schools in Awka South Local Government Area of Anambra State.

Research Questions

The following research questions guided the study:

1. What are the relevance of utilization of ICTs in teaching and learning in post covid-19 era in public senior secondary schools in Awka south Local Government Area of Anambra State?
2. What are the students' views on the usefulness of ICTs in learning in post covid-19 era in public senior secondary schools Awka south Local Government Area of Anambra State?

Information and Communication Technology

Information and Communications Technology (ICT) according to Ikegbusi (2016) and Goek (2019), is an extensional term for information Technology (IT) that stresses the role of unified communications and the integration of telecommunications (telephone lines and wireless signals) and computers, as well as necessary enterprise software, middleware, storage and audio-visual, that enable users to access, store, transmit, understand and manipulate information.

According to Iwuoha (2015) the term ICT is also used to refer to the convergence of audio-visual and

telephone networks with computer networks through a single cabling or link system. There are large economic incentives to merge the telephone network with the computer network system using a single unified system of cabling, signal distribution, and management. According to Ikegbusi (2016), ICT is an umbrella term that includes any communication device, encompassing radio, television, cell phones, computer and network hardware, satellite systems and so on, as well as the various services and appliances with them such as video conferencing and distance learning. Ikegbusi (2016) explained further that ICT is a broad subject and the concepts are evolving. It covers any product that will store, retrieve, manipulate, transmit, or receive information electronically in a digital form (e.g., personal computers including smartphones, digital television, email, or robots).

Online Learning (E-learning)

According to Smart and Sasmita (2011) the concept "e-learning", "online learning," and "web-based learning" have been used interchangeably. According to Kharve and Gogia (2016) online learning or e-learning is a process of learning by electronic means which involves the use of computer, mobile phone or other electronic devices and accessing internet. There are two types of online learning: the synchronous interactive settings where learners meet in real time (Dube, 2020). This type of

learning depends entirely on internet based resources and support systems through which anybody with connectivity can access anywhere and learn. Asynchronous online-learning on the other hand, involve interactive sessions where participants interact at different times. It is an "on demand" service providing educational content in form of virtual classroom, webinars, online course, discussions forums and many more

In the online learning, the teacher-centered has changed to a student-centered approach and conducive environment (Hrastinski, 2018) and Ikegbusi (2019). Accordingly, online learning depends critically on an electronic devices and effective library system with online resources with seamless access from across the globe. In most developing countries, learning is mostly done traditionally (face-to-face), thus adapting to online learning would require certain behavioral changes and regulatory directives in order to make it work for the learner and teachers. This becomes more important because not all the students and lecturers are adequately conversant and proficient on how to participate in online learning platform. As such, online learning can only be effective where there is adequate support system. For such support to be sustainable, both students and facilitators must have seamless access to electronic devices, internet as well the required skills to navigate the platform. Furthermore, they must be attuned to the new

environment and culture of learning (Ikegbusi, 2016). Consequently, the perception of students on online learning resources may lead to acceptance and use which may translate to good additional method of learning during the pandemic lockdown (Warder, 2020).

More recently, various studies about the subject (online learning) have been carried out globally; however, there are little or no studies that specifically address issues relating to the perception and readiness of students towards online learning in Nigeria during the Covid-19 pandemic lockdown. Jaroszyński and Wozakowska-Kapłon (2020) investigated students' perception of online learning during the Covid-19 pandemic in Poland. The result shows that majority of the students had never experienced any form of e-learning before the pandemic; hence they identified technical issues as one of their key challenges. This result might stem from the fact the students were not previously exposed to online learning due to inadequate awareness and accessibility to facilities required. Shetty *et al.* (2020) surveyed the attitude of the undergraduate students towards online learning during Covid-19 crisis in India. The result showed that the students have favourable perceptions towards online learning for sustaining their academic interest and development during the pandemic. Online learning creates a good platform for acquiring newer methods of learning with less apprehension

among students in clearing their doubts, ease of participation, good coverage and understanding of the topic by usage of 3D animations, less time investment and easy availability of resource to review the topics through the online portal. Nevertheless, they perceived many challenges during online learning like lack of face-to-face interactions, long duration of online classes can cause eye related problems, decrease outdoor activities, lack of socialization, distraction by social media, technology related issues etc. In contrast, Abbasi *et al.* (2020) surveyed the perceptions of students towards e-learning during the lock down at Liaquat College of Medicine and dentistry. The result indicated that majority of the students have negative perceptions towards e-learning. The study concluded that there is need for administration and faculty members to take crucial measures for improving e-learning for better education during the lockdown.

Readiness or preparedness of student to respond to changes and adapt to online learning, as a new way of delivering classes is a step towards the right direction (Boggiano et al., 2020). Facilitators and technology, is one of the most significant aspect in this context. It entails students' competence, confidence in using technological tools and the ability to participate in self-directed learning. Hence, it can be seen as the extent to how online learning will be effective or accepted. Chung, Subramaniam and Dass (2020) surveyed students'

readiness for online learning in Malaysia. The result shows the readiness of students to participate in online learning is slightly moderate as some of them were not ready for online learning due to lack of learners control, self-directed learning and online communication efficacy.

Theoretical Framework

Experiential Learning Theory

Experiential Learning Theory was developed by David A. Kolb (1970). It is defined as the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming. Experiential learning is an engaged learning process whereby students learn by doing and by reflecting on the experience. It is a powerful foundational approach to all forms of learning, development and change. Experiential learning describes the ideal process of learning, invites you to understand yourself as a learner, and empowers you to take charge of your own learning and development. Learning occurs in any setting and continues throughout your life. The experiential learning process supports performance improvement, learning and development. Examples of experiential learning activities include field trips for conversation, exploring employment, group work in and out of the classroom and active and open ended questioning guidance.

Experiential learning is distinct from rote or didactic learning, in which the learner plays a comparatively passive role. Experiential learning is an opportunity for learners to apply what they have been taught to solve real-world challenges. Learners test their understanding of underlying principles, processes and procedures and can experiment and adapt to achieve best outcomes. It is related to, but not synonymous with, other forms of active learning such as action learning, adventure learning, free-choice learning, cooperative learning, service-learning, and situated learning.

Experiential learning is often used synonymously with the term "experiential education", but while experiential education is a broader philosophy of education, experiential learning considers the individual learning process. As such, compared to experiential education, experiential learning is concerned with more concrete issues related to the learner and the learning context.

Experiential learning has significant teaching advantages and teaching is of utmost importance to motivate people. Learning only has good effects when learners have the desire to absorb the knowledge. Therefore, experiential learning requires the showing of directions for learners. Experiential learning entails a hands-on approach to learning that moves away from just the teacher at the front of the room imparting and transferring their knowledge to students. By incorporating experiential

learning into curricular learning, results in a real mind-set change, through learning skills such as leadership, empathy, collaboration and communication through meaningful opportunities to practice.

The theory is important because it makes learning an experience that moves beyond the classroom and strives to bring a more involved way of learning. This theory is particularly interesting and relevant because it focuses on the learner’s perspective and on personal development. In experiential learning, the individual guides the learning process as opposed to the conventional, didactic method.

Method

Survey research design was used in carrying out this study. This is chosen because the study is set to study people, their attitudes, belief system, opinions and other behavioral manifestations. The population of the study comprised of the 6,420 students public senior secondary schools in Awka South Local Government Area of Anambra State. The sample size

was made up of 255 students randomly selected from the study area. Structured questionnaire containing 10 items was used as an instrument for data collection. The questionnaire has sections A and B. Section A was on personal data of the respondents while section B provided answers to the research questions raised for the items on a modified Likert scale of Strongly Agree = 4, Agree = 3, Strongly Disagree = 2 and Disagree = 1 which were rated as 4points, 3points, 2points, and 1point respectively. The data collected were summarized from the responses of the subjects and analyzed using mean scores. The data were analyzed using the mean rating, with a decision rule of 2.5.

DATA PRESENTATION/ANALYSIS

Research Question 1: What are the relevance of utilization of ICTs in teaching and learning in post covid-19 era in senior secondary schools in Awka South Local Government Area of Anambra State?

Table 1: Respondents’ mean ratings on the relevance of utilization of ICTs in teaching and learning in post covid-19 era in senior secondary schools in Awka South Local Government Area of Anambra State

N= 255				
S/N	ITEMS DESCRIPTION	$\sum fx$	\bar{x}	Decision
1	Utilization of ICTs creates easy access for teacher-student communication	815	3.2	Agree
2	Utilization of ICTs bridges the distance barrier between teacher and students	935	3.7	Agree
3	With utilization of ICTs, past lessons can be replayed for students’ easy understand	815	3.2	Agree

4	Utilization of ICTs enables the students to understand how to use ICT in learning	745	2.9	Agree
5	Utilization of ICTs helps to ensure that students graduated at the right time	780	3.1	Agree
Grand Mean			3.2	Agree

Table 1 above showed that items 1,2,3,4 and 5 have mean scores of 3.2, 3.7, 3.2, 2.9, and 3.1 respectively, with a grand mean of 3.2, which are all above the cut-off point. This indicated that the respondents accepted that utilization of ICTs in teaching and learning in post covid-19 era in senior secondary schools in Awka South Local Government Area of Anambra State.

Research Question 2: What are the students' views on the use of ICTs in learning in post covid-19 era in senior secondary schools in Awka South Local Government Area of Anambra State?

Table 2: Respondents' mean ratings on the students' views on the usefulness of ICTs in learning in post covid-19 era in senior secondary schools in Awka South Local Government Area of Anambra State.

N=255

S/N	ITEMS DESCRIPTION	$\sum fx$	\bar{x}	Decision
6	ICTs make learning difficult due to lack of prior knowledge of how to use ICTs	815	3.2	Agree
7	ICTs make learning uninteresting as the teacher is not present	935	3.7	Agree
8	ICTs encourage student to learn the use of internet and other ICT equipment	815	3.2	Agree
9	ICTs make students to research more than being taught by the teachers	745	2.9	Agree
10	ICTs help students to gain ideas from different sources	780	3.1	Agree
Grand Mean			3.2	Agree

Table 2 above showed that items 6,7,8,9 and 10 have mean scores of 3.2, 3.7, 3.2, 2.9 and 3.1 respectively, with a mean score of 3.2, and are all above the cut-off mean. This revealed that the respondents accepted that students have different views on the use of ICTs in learning in post covid-19 era in senior secondary schools in Awka South Local Government Area of Anambra State.

Discussion of Findings

In table 1, the data showed that respondents accepted that utilization of ICTs in teaching and learning in post covid-19 era in senior secondary

schools in Awka in senior secondary schools in Awka South Local Government Area of Anambra State is very relevant. This can be seen in the fact that it creates easy access for

teacher-student communication, bridges the distance barrier between teacher and students, past lessons can be replayed for students' easy comprehension, enables the students to understand how to use ICTs in learning, and helps to ensure that students graduated at the right time. This is in agreement with Ikegbusi (2016) and Kharve and Gogia (2016) who noted that ICTs are very useful for continuing educational activities in the period of post Covid-19, given that it will enhance students study horizon and help them to embrace the use of technology in learning in this digital era, even in the absence of the teacher. Kolb's (1970) model highlighted the importance of being able to learn from what have been taught even without the presence of the teacher. It entails a hands-on approach to learning that moves away from just the teacher at the front of the room imparting and transferring their knowledge to students. The learner guides the learning process as opposed to the conventional, didactic method.

In table 2, the data showed that respondents accepted that students have different views on the use of ICTs in learning in post covid-19 era in senior secondary schools in Awka South Local Government Area of Anambra State. This includes that it makes learning difficult due to lack of prior knowledge of how to use ICTs, makes learning uninteresting as the teacher is not present, encourages student to learn the use of internet and other ICTs equipment, makes students

to research more than being taught by the teachers. This is in line with Akther (2020) and Nwoko (2020) views who noted that the use of ICTs in the teaching and learning during the period of covid-19 will not favour every student in the beginning, given that most of them are yet to get acquainted with the use of some ICTs gadgets and e-learning.

Conclusion

ICTs based teaching and learning in the education system benefit the teacher and students to get the education of real value, especially in the post covid-19 era. The role of ICTs in this period of time cannot be exaggerated, given the need to continue the activities of education. Nevertheless, it is regrettable to say that Nigerian as a country is still growing in terms of application of the use of ICTs in teaching and learning. In many parts of the country, the students are yet to know the real meaning of ICTs and its uses let alone using it to interact in learning. This however, made some students to perceive the use ICTs in teaching and learning as some sort of problem. Also, some teachers seem not to have good knowledge of the use of ICTs in teaching; as a result, the students are affected in using it to learn.

Recommendations

Based on the findings, the following recommendations were made:

1. Government should provide schools with ICT facilities and

make it a compulsory for every school to incorporate it in their teaching schedule.

2. Functioning computers and ICTs gadgets should be among the facilities that must be in every school.
3. ICTs based teaching and learning must be part of schools curriculum. This will go a long way in helping students to be conversant with ICTs base learning in case there will be any future need for it.

References

- Abbasi, S., Ayoob, T., Malik, A., & Memon, S. I. (2020) Perceptions of students regarding e-learning during Covid-19 at a private medical college. *Pak J Med Sci.* 236, S57-S61.
- Akther, J. (2020). Influence of UNESCO in the Development of Lifelong Learning. *Open Journal of Social Sciences*, 8(3), 103-112.
- Ali, W. (2020). Online and remote learning in higher education Institutes: A necessity in light of COVID-19 pandemic. *Higher Education Studies*, 10(3), 16-25
- Boggiano, N., Lattanzi, O. & McCoole, M. (2020). Transitioning during COVID-19: Student Perspectives. Worcester: Worcester Polytechnic Institute.
- Chung, E., Subramaniam, G., & Dass, L. C. (2020). Online learning readiness among university students in Malaysia amidst Covid-19. *Asian Journal of University Education*, 16 (2), 46-58.
- Dube, B. (2020). Rural online learning in the context of COVID-19 in South Africa: Evoking an inclusive education approach. *Multidisciplinary Journal of Educational Research*, 10(2), 135-157. *Educational Research*, 3(1), 213-226
- Goek, R. T. (2019). Information and communications technologies and teacher education in Australia. *Technology, Pedagogy and Education*, 12(1), 39-58.
- Ikegbusi, N. G. & Iheanacho, R. C. (2016a). Factors militating against effective administration of secondary of secondary schools in Anambra State. *World Journal of Educational Research*, 3(1), 213-226.
- Ikegbusi, N. G. & Iheanacho, R. C. (2016b). An evaluation of the application of secondary schools' entrepreneurship curriculum to youth empowerment in Anambra State. *UNIZIK Journal of Educational Management and Policy*, 1(1), 67-77.
- Ikegbusi, N. G. (2016). The role of information communication technologies in education with emphasis to the use of computer and internet. *International Journal of Innovative Research and Advanced Studies*, 3 (8), 239- 245.
- Ikegbusi, N. G. (2019). Effective strategies for improving school

- environment in climate change in Anambra State. *AE-FUNAI Journal of Education*, 01 (02), 493-503.
- Iwuoha, H. (2015). Uses of information and communication technologies in teacher education. In B. Jaroszyński, A., & Woźakowska-Kapłon, B. (2020). Students' perception of online learning during the COVID-19 pandemic: a survey study of Polish medical students. Research Square, 1-14. *Journal of Educational Research*, 99(6), 371-379.
- Nwoko, I. (2020) Objectivism versus constructivism: Do we need a new philosophical paradigm? *Educational Technology Research and development*, 39(3), 5-14.
- Shetty, S., Shilpa, C., Dey, D., & Kavya, S. (2020). Academic crisis during COVID 19: Online classes, a panacea for imminent doctors. *Indian Journal of Otolaryngology and Head & Neck Surgery*. Nature Publishing Group 10.1007/s12070-020-02224-x.
- Smart, W. & Sasmita, K. (2011). Information and Communication technology in classroom instruction, *Edutracks*, 11 (1), 7-19
- Tamrat, W., & Teferra, D. (2020). COVID-19 poses a serious threat to higher education. University World News.
- UNESCO (2020a, March 13). COVID-19 educational disruption and response. Retrieved from <https://en.unesco.org/covid19/educationresponse>.
- UNESCO (2020b, May 27) UNESCO COVID-19 education response: Virtual knowledge sharing workshop on distance education programmes using radio and television. UNESCO Summary Report <https://unesdoc.unesco.org/ark:/48223/pf0000373576>
- Warder, U. (2020). ICT implementation and school leadership: Case studies of ICT Integration in teaching and learning. *Journal of Education Administration*, 41(2), 161-175.
- World Bank. (2020). Remote Learning and COVID-19 The use of educational technologies at scale across an education system as a result of massive school closings in response to the COVID-19 pandemic to enable distance education and online learning. Retrieved from <file:///E:/PC/Rapid-Response-Briefing-Note-Remote-Learning-and-COVID-19-Outbreak.pdf>.