

Teachers' perception on the challenges of using e-learning in teaching primary school pupils in this era of COVID-19 Pandemic in Anambra State

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Abstract

This study examined teachers' perception on the challenges of using E-learning in teaching primary school pupils in this era of COVID-19 pandemic in Anambra State. Two research questions and one hypothesis guided the study. The study used survey design. The population for the study comprises of all the schools and teachers in Anambra State. Purposive sampling techniques was used to sample two Local Education Authorities, one for urban area and the other for rural area. Using stratified random sampling techniques, 5 schools were selected from each local education authority, making it 10 schools, with 30 teachers randomly selected (15 teachers each) from the two Local Education Authorities. A 36-item questionnaire developed by the researchers titled 'Challenges of using E-Learning in Primary Schools (CEPS) was used to collect data. The questionnaire was validated by three experts. The reliability of the instrument was determined using Cronbach Alpha Formula. A reliability of 0.76 was obtained for the entire instrument. Data collected was analyzed using Mean (X) and Standard Deviation (SD). T-test was used to test the hypothesis at 0.05 level of significance. Findings revealed that inadequate fund among others are the challenges of using E-Learning and the provision of E-learning facilities among others are the possible solutions to the challenges of using E-learning in teaching primary school pupils in this era of COVID-19 pandemic in Anambra State. The finding on hypothesis shows that the null hypothesis was rejected. The researchers recommended among others that government and other stakeholders in education should provide E-Learning facilities in primary schools.

Keywords: E-learning, COVID-19, ICT, primary school, pupils

Introduction

Education is an indispensable tool for national development. The nations of the world pay greater attention to education sector. Education is a process for human transformation through acquisition of knowledge and necessary skills for human development. According to Iwuanyanwu and Uwadiegwu (2019) ^[1], education is a developmental process initiated in the individual which collectively influences the societal values. Through education, the society continues to discover changes that are to be adopted for better living. In the context of this study, education is the process of human transformation through equipping the individual with necessary skills that will enable the individual adapt to the changing world.

Nigeria as a nation has three levels of education, early childcare and primary education, secondary education and tertiary education. Primary education which is the focus of this paper is the foundation of the Nigerian educational system on which the other educational levels rest on. Any mistake made at this level of education will either make or mar the entire system, that is why the Federal Government of Nigeria pay greater attention to primary education. Primary education as defined by the Federal Republic of Nigeria (FRN) in her National Policy on Education (NPE) (2013), as the education given to children from age of 6years to 12 years. Any information given to the child at this stage lives with the child throughout life. This is why it is necessary for proper knowledge to be impacted to the child at this stage in life. It should be a place where children's views and needs are addressed.

Primary education in Nigeria has been facing a lot of challenges in recent times and this has resulted to different

national conferences on how to reform the primary education level. According to Daniels (2020), in the last 50 years, education has seen a huge growth worldwide at all levels until recently in 2019 when COVID-19 pandemic started ravaging the whole world all sectors are being affected. COVID-19 Pandemic is one of the greatest challenges facing the whole world presently. The COVID-19 pandemic has done more harm than good throughout the whole world. It came at a very critical moment when different things are beginning to take shape for the year 2020 to take off, when people were still trying to make plans on how to face the new year. School children were already at the middle of the school year, almost rounding up the second term school work about to take their exams before the shut down as a result of COVID-19 pandemic. COVID-19 pandemic came and put everything on hold. The havoc which it created in all sectors in life is nothing good to write home about. Emphasising the negative impact of COVID-19 further, the Interim Economic Assessment in Chakraborty and Maity (2020) ^[2], stated that in almost all the COVID-19 stricken countries, entire educational, commercial, sports and spiritual institutions are closed. Economy of many powerful countries are now facing the threat of high inflation and increasing unemployment as a result of lack of productivity and excessive expenditure for the treatment and rehabilitation of the COVID-19 victims and their families.

Education is also one of the sectors that is affected in this era of the pandemic. According to Daniels (2020), education which in the last 50 years have seen huge growth worldwide at all levels is now placed at a crossroad, still pondering on which way to take off as a result of COVID-19 pandemic.

COVID-19 is the greatest challenge that faces the national education systems. Education in the period of pandemic is indeed pathetic and totally off the line. According to Saavedra (2020) ^[16], the world is living in one of the greatest threats in our lifetime to a gigantic educational crisis. COVID-19 pandemic is causing more than billions of children and youth to be out of school. The pandemic absolutely switched off the whole sockets of education from tertiary level down to the pre-school level. Due to the total lockdown of schools taken as a measure to control the spread of the virus, many children, youth and adults were displaced out of school. Many school children seem to be idle. This idleness triggered some of them into wandering about, engaging in misdemeanours, and some mistakenly got corrupt as a result of bad influence. The lengthy period of total disengagement from school and any school related activities have resulted to some children losing track of what they have learnt before the outbreak of the pandemic. For this to be averted, the state and federal government mandated both primary, secondary and tertiary schools to start E-learning (online learning) in order to help the school children learn using technology as a result of being in computer age. This will also help the children keep to pace with the session and school calendar in other not to miss out of the school session in this year 2020.

This era of computer age is associated with information explosion and that is technically called globalisation. This has called for increased awareness in the use of Information and Communication Technology (ICT). In recent times, a lot of attention has been given on how internet can best be involved to improve the efficiency and effectiveness of education at all levels. This made every sector of human endeavour to embrace technology for positive advancement and continuous advances in information technology has enabled the realisation of more distributed structure of knowledge transfer through the development of E-Learning. The developing nations of the world seems to have embraced ICT and consequently E-Learning so as to keep pace with unimaginable speed in the area of technology in all sectors of which education is one of them. This made government all over the world play key role in developing, funding and regulating ICT infrastructure as well as promoting internet connectivity.

Achukwu and Nnajioffor (2012), pointed out that ICT provides a window of opportunity for educational institutions and other organisations to harness and use technology to complement and support teaching and learning process. E-learning method is part of ICT used for effective teaching and learning. E-learning has a great potential to contribute positively towards knowledge dissemination, effective learning and quality learning output. E-learning is an extended form of classroom teaching where learning, either online or offline is facilitated by the use of computer, telecommunication devices, networks, and storage capacity (Tunmibi, Aregbesola, Adejobi & Ibrahim, 2015) ^[18]. It is an online delivery of information which can be accessed from anywhere. Hedge and Hayward (2004) ^[10], defined E-learning as an innovative approach for delivery electronically, well designed, learner centered and interactive learning environment to any one, any time, any place by utilizing the internet and digital technologies in line with instructional design principles. Clark and Mayer (2011) ^[3], define E-learning as instruction

delivered by any technological mode intended to promote learning. According to Dargham, Saeed and Mcheik, (2013) ^[5], states that in addition to its easy delivery of information and interactive nature, the main benefit behind using the E-learning instead of the traditional way is that learners develop communication as well as personal skills such as autonomy, analytical perception, abstraction among others.

E-Learning has the advantage of developing student's computer skills, encourages a student way of learning, have infinite access to unlimited information of varying degrees, helps students study contents in a way that shows connection between subjects, allows students to use various kinds of technology to conduct research and communicate and create knowledge. Other advantages include; enables students to collaborate with peers, experts, community members and teachers, enhance student's interest and involvement promotes intrinsic motivation and efforts, makes a classroom environment resemble a work place, encourages very high and critical thinking, helps teachers and students share accountability for learning and achievement and helps students learn faster. Also, E-learning helps students who do not learn best by listening to learn better; is the best method for learning, prepares students for life after school, makes teaching easier and efficient and introduces technology skills in a practical way that results in the creation of tools and documents that can help increase teacher's productivity. Similarly, E-learning helps to further develop teacher's computer skills, helps teachers teach more effectively and increase productivity; makes delivering lectures in an electronic way bring out the best in students; helps teachers get the full attention of their students; helps the teacher provides opportunities for students to apply their skills and construct their knowledge. According to Tunmibi, *et al.* (2015) ^[18], E-learning help students to have access to unlimited source of information; reveals connection between subjects; promotes critical thinking and encourages students' way of learning. The authors further sates that E-learning helps teachers in the following way; E-learning is easier and effective; helps to further develop teachers' computer skills and brings out the best in students. Also, E-learning helps teachers and students to share accountability for learning and achievements.

The use of E-learning in schools is very important. The National Policy on Education (2013), states that government shall provide necessary infrastructures and training for integrating ICT into the schools' system. Reason being that ICT has a great potential to contribute positively towards knowledge dissemination and effective learning. Teachers in the bid to give quality learning to primary school children at home in this era of COVID-19, need to be up to date with the latest technological development in teaching and learning. For teachers to implement E-learning teaching effectively, they must be computer literate which is lacking in the majority of the teachers in primary schools in Anambra State. Oyenike (2010) ^[15], states that two important features for integration of E-learning are human resource development in terms of skilled teachers to use ICT in teaching and learning processes, as well as ICT infrastructures. Offorma, Eze and Egbe (2008) ^[13], noted that what is lacking in schools is ICT materials. Okiki (2011) ^[14], reported the following challenges of E-learning as high cost of hardware in Africa; high import tariffs and

less price competition; transmission cost is equally high in Africa; internet access in Africa is through a foreign gateway; shortage of skilled manpower and existing telecommunication infrastructure is in very poor condition. Other challenges according to the author includes; computer technology illiteracy among the students; cost of acquiring and installing the gadget required for e-learning; incessant power supply; maintenance culture and bandwidth limitations. Limited band-width means slower performance for sound, video and intensive graphics, causing long waits for download that can affect the ease of the learning process (Okiki, 2011)^[14]. There is need for the teachers who are the personnel that will drive the cart of E-learning to be technologically advanced but that has been an issue of concern in Nigeria with particular reference to Anambra State.

There are a lot of challenges that affects the use of E-learning in teaching pupils in primary schools. Teaching and learning in an E-learning environment happens differently than in the traditional classroom and can present new challenges to instructors and learners particularly in this online learning environment (Higley, 2014)^[9]. These challenges made dysfunctional the provision in the National Policy on Education (NPE, 2013), that government should provide basic infrastructures and training for the realisation of ICT goal at the primary school level. This policy is yet to be implemented. Using E-learning platform for teaching especially in this period of COVID-19 will make pupils not to lose out in this period of pandemic and also make them to keep to pace to education and make them to be able to complete the sessions without any hitch or losing the session. But with the challenges of E-learning achieving this is very slim.

Anambra State has both rural and urban settings and these two areas have basic schools. Rural schools are school located in villages where there is no much government presence as seen in urban areas, in terms of adequate social amenities like good roads, electricity, good schools, good hospitals among others. Poverty level is higher because a lot of people, men and women leave their villages to urban area in search of better life leaving mostly the uneducated with their children behind. They are known mostly for farming because of large expanse of land in the place. Urban schools are those schools located in developed areas. There is government presence, have industries, better schools, teeming population, consist of the indigenes and people from other towns who came to look for good life, have more quality schools both public and private than the rural area, better security, wealthy people and power supply may not be a major trait. These children in the two areas need to be educated like other children in the world. The children in urban and rural areas in Anambra State like their counterparts in the world need to be taught using E-learning in this era of COVID-19 pandemic.

E-learning is very efficient in the Western world, where there are sufficient facilities and their government is paying attention to it. There is need for the Nigerian government to be proactive in finding out how to extend the E-learning teaching in Nigerian public primary schools especially in both rural and urban areas by providing the possible solutions to the challenges. Against this backdrop therefore, the researchers carried out this research to determine teachers' perception on the challenges of using E-learning in

teaching primary school pupils in this era of COVID-19 pandemic in Anambra State.

Statement of the Problem

From extensive, global and national studies, it has been proved that societies which invest in children education as overriding priorities are the ones that make major strides in development. Introducing E-learning platform in primary schools in Anambra state and Nigeria as a whole is one of the ways to invest in children education. Having seen the benefits, there is the need to ensure that all primary schools both in urban and rural areas get involved in such learning but can only be possible if all the necessary facilities both material and human materials are available. The main crux of the matter is that the E-learning facilities that will be used for the online teaching are nowhere to be seen. In order words, there are several problems that hinder the use of E-learning for teaching in primary schools. Many schools if not all are deficient in the availability of Information Communication and Technology (ICT) equipment and facilities, lack of fund, teachers not ICT compliance among others. Although some schools in the urban area may have computer and printer but the usage is even a problem. Also, majority of the schools do not have other E-learning and ICT facilities like projectors, scanning machines, digital camera, radio, television, power point and fax machines which makes it impossible for effective teaching and learning using E-learning. This is an indication that ICT materials are not vigorously provided for the schools and the State is not fully ready to use Information Communication and Technology. On this Gyang (2008)^[7] found out from a study on ICT education reform in Nigeria that non availability of hard ware facilities, lack of funds, lack of skilled manpower and societal/cultural attitude as impediment to implementation of ICT in schools. Against this backdrop therefore the researchers dim it fit to determine teachers' perception on the challenges of using E-learning in teaching primary school pupils in this era of COVID-19 pandemic in Anambra State.

Research Questions

The following research questions guided the study

1. What are teachers' perceptions on the challenges of using E-learning in teaching primary school pupils in this era of COVID-19 pandemic in Anambra State?
2. What are the possible solutions to the challenges of using E-learning in teaching primary school pupils in this era of COVID-19 pandemic in Anambra State?

Hypothesis

H₀₁: There is no significance difference between the mean ratings of urban and rural teachers on the challenges of using E-learning in teaching primary school pupils in this era of COVID-19 pandemic in Anambra State.

Method

This study was carried out to determine teachers' perceptions on the challenges of using E-learning in teaching primary school pupils in this era of COVID-19 pandemic in Anambra State. Two research questions and one hypothesis guided the study. The study adopted the descriptive survey design. The population for the study comprises of all the schools and teachers in Anambra State.

The sample for the study consists of two Local Education Authorities within Anambra State which were purposively sampled to represent schools in the urban and rural areas. The sampled Local Education Authorities are Awka North Local Education Authority (Rural) and Awka South Local Education Authority (Urban). The population of the study consist of 82 primary schools in the two local education authorities with 947 teachers. Using stratified random sampling, 5 schools were selected from each local education authority, making it 10 schools, with 30 teachers randomly selected (15 teachers each) from the two Local Education Authorities. A 36-item structured questionnaire titled ‘Challenges of using E-Learning in Primary Schools (CEPS)’ was used to collect data. The questionnaire was validated by three experts two from the Department of Early Childhood and Primary Education Nnamdi Azikiwe University and one from Odumegwu Ojukwu University both in Awka, Anambra State. The questionnaire was constructed on a 4-point Likert scale of Strongly Agree = 4

point, Agree = 3 points, Disagree = 2 points and Strongly Disagree = 1 point. To test for the internal consistency of the items on the questionnaire, Cronbach alpha method was used. The overall reliability coefficient of 0.76 was obtained and this was considered suitable for the study. Data obtained were analysed using Mean (X) and Standard Deviation (SD). Any item with mean score of 2.50 and above were agreed and any item below 2.50 were disagreed. T-test was used to test the hypothesis at 0.05 level of significant. When the calculated t-test is higher than the critical value the null is rejected and when the calculated t-test is less than the critical value, the Null is accepted.

Results

Research Question 1: What are teachers’ perceptions on the challenges of using E-learning in teaching primary school pupils in this era of COVID-19 pandemic in Anambra State?

Table 1: Mean ratings of respondents on the challenges of using E-learning in teaching primary school pupils in this era of COVID-19 pandemic in Anambra State.

S/N	Challenges of E-learning	URBAN X	SD	DECI.	RURAL X	SD	DECI.
1	Inadequate of ICT compliant personnel	2.78	0.54	A	3.85	0.36	A
2	Lack of ICT facilities	3.05	0.31	A	3.72	0.45	A
3	Lack of electricity /Generator	3.78	0.38	A	4.45	0.76	A
4	Lack of community support	2.39	0.77	D	3.69	0.47	A
5	Illiterate parents	2.34	0.54	D	3.73	0.75	A
6	Inadequate of fund	4.32	0.84	A	4.23	0.85	A
7	Lack of visionary head teacher	3.85	0.36	A	3.78	0.38	A
8	Lack of storage facility	2.75	0.57	A	3.52	0.37	A
9	Government inability to enforce policy	3.87	0.36	A	2.80	0.83	A
10	Lack of conducive environment	2.56	0.68	A	3.47	0.47	A
11	Lack of internet connections	4.23	0.76	A	3.79	0.76	A
12	Pupils lack of knowledge of computer usage	2.33	0.32	D	3.34	0.79	A
13	Lack of personal computers for the children	3.84	0.37	A	3.00	0.61	A
14	Lack of security	2.66	0.56	A	3.84	0.38	A
15	Poor community attitude to ICT	2.14	0.85	D	3.85	0.38	A
16	Inadequate salaries for teachers	2.25	0.42	D	3.22	0.53	A
17	Inadequate teacher motivation	2.43	0.74	D	3.74	0.43	A
18	Inadequate time for teaching on time table	3.84	0.37	A	3.80	0.66	A
19	Poor teaching of computer lesson in school	2.60	0.51	A	3.76	0.57	A
20	Lack of government interest in education	3.75	0.70	A	3.74	0.71	A
21	Lack of interest on the part of teachers	2.34	0.64	D	3.85	0.36	A
22	Lack of interest on the part of pupils	2.23	0.49	D	3.84	0.38	A
23	Lack of awareness of ICT by community members	2.21	0.45	D	3.73	0.41	A
	Cluster Mean	2.98	0.54	A	3.68	0.55	A

Key: A=Agreement, D=Disagreement
DECI: DECISION

Table 1 above shows the mean responses of both the urban and rural teachers on the challenges of using E-learning in teaching primary school pupils in this era of COVID-19 pandemic in Anambra State. The teacher respondents in the urban area agreed to majority of the items except items number 4,5,12,15,16,17,21,22 and 23 as the challenges of using E-Learning in teaching primary school pupils in this era of COVID-19 pandemic in Anambra State. The cluster mean for teachers in the urban area shows 2.98 which is above the decision rule of 2.50. The teacher respondents in the rural area agreed to all the listed items as the challenges of using E-Learning in teaching primary school pupils in

this era of COVID-19 pandemic in Anambra State. The cluster mean for teachers in the rural area shows 3.68 which is above the decision rule of 2.50. The differences maybe as a result of location and extent of exposure to civilization. Despite their differences, the cluster standard deviation of 0.54 for urban and 0.55 for rural shows that the respondents are not wide apart in their ratings.

Research Question 2: What are the possible solutions to the challenges of using E-learning in teaching primary school pupils in this era of COVID-19 pandemic in Anambra State?

Table 2: Mean ratings of respondents on the possible solutions to the challenges of using E-learning in teaching primary school pupils in this era of COVID-19 pandemic in Anambra State.

S/N	Possible solutions to E-learning challenges in primary schools	URBAN X	SD	DECL.	RURAL X	SD	DECL.
23	Provision of internet facilities in the schools	3.76	0.56	A	3.12	0.94	A
24	Provision of E-Learning facilities	2.72	0.66	A	2.81	0.93	A
25	Retraining of old teachers to be ICT compliant	3.69	0.47	A	2.91	0.97	A
26	Employment of ICT compliant staff	2.52	0.71	A	3.33	0.81	A
27	Adequate power supply in schools /Generating set	3.84	0.35	A	3.20	0.83	A
28	Technical support	3.72	0.45	A	3.25	0.95	A
29	Creating conducive learning environment	2.70	0.62	A	3.14	0.85	A
30	Adequate policy implementation	3.79	0.76	A	3.01	0.91	A
31	Involvement of NGOs in schools for assistance	2.60	0.66	A	3.33	0.81	A
32	Adequate time for course development and planning	3.73	0.74	A	3.06	0.98	A
33	Adjustment of the time table to be enough for E-learning teaching	3.78	0.38	A	3.04	0.81	A
34	Sensitization and involvement of parents about E-learning teaching	2.65	0.68	A	2.91	0.97	A
35	Provision of personal lap tops to pupils /schools	3.79	0.76	A	3.06	0.95	A
36	Teaching and practicing computer studies in schools	2.52	0.42	A	3.44	0.77	A
	Cluster Mean	3.27	0.58	A	3.11	0.89	A

Table 2 above shows the mean responses of teachers on the possible solutions to the challenges of using E-learning in teaching primary school pupils in this era of COVID-19 pandemic in Anambra State. Both urban and rural teachers agreed to all the listed items as the possible solutions to the challenges of using E-learning in teaching primary school pupils in this era of COVID-19 pandemic in Anambra State. The cluster mean for teachers in the urban and rural areas shows 3.27 and 3.11 respectively. The cluster standard deviation of 0.58 for urban and 0.89 for rural shows that the respondents are not wide apart in their ratings.

Table 3: T-test analysis of Urban and Rural teachers on challenges of E-learning in primary schools

Sources of variation	population	X	SD	DF	t-cal	t-crit	P>0.05	Dec.
Rural	15	89.27	12.66	28	5.35	2.05	5.35	Significant
Urban	15	64.67	12.53					

The finding in table 3 shows that the calculated t-value of 5.3 is greater than critical t-value of 2.05 at 0.05 level of significance. Thus, the null hypothesis is rejected. The decision therefore is that there is a significant difference between the ratings of urban and rural teachers on possible challenges of E-Learning in primary schools in time of COVID-19 pandemic.

Discussion

The findings in table 1 which is on the challenges of using E-learning in teaching primary school pupils in this era of COVID-19 pandemic in Anambra State indicated that both urban and rural teachers agreed that inadequate of ICT compliant personnel, lack of ICT facilities, lack of electricity/generator and inadequate fund among others are the challenges of using E-Learning in teaching primary school pupils in this era of COVID-19 pandemic. This is in tandem with earlier findings of Gyang (2008) [7], who posits that non-availability of hard ware facilities, lack of funds, lack of skilled manpower and societal/cultural attitude as impediment to implementation of ICT in schools. The findings are also in line with that of Oyenike (2010) [15], who posits that two important features of integration of E-learning are lack of human resource development in terms of skilled teachers to use ICT in teaching and learning

processes, as well as ICT infrastructures. Similarly, the findings are in consonance with that of Ugwu and Aleke (2012) [19], who posits that lack of skilled teachers, lack of instructional time to effectively use E-learning tools within a forty-minute lesson usually allocated in basic schools, limited E-learning infrastructures, poor internet connectivity and lack of funds are the impediments to the utilisation of E-Learning in primary schools.

The findings in table 2 equally indicated that both urban and rural teachers agreed that provision of internet in facilities in the schools, provision of E-learning facilities, retraining of old teachers to be ICT compliant and employment of ICT compliant staff among others are the possible solutions to the challenges of using E-learning in teaching primary school pupils in this era of COVID-19 pandemic in Anambra State. This supports the earlier findings of Terry and Leppa (2009) [17]; Hastie, Hung, Chen and Kinshuk (2010) [8], posits that one way to overcome the challenge of time developing an online course is for instructors to collaborate often within their E-learning professional communities. Collaborating with other instructors should be spent sharing, developing and creating. This collaboration and discourse helps minimize the time spent planning and designing. The findings are also in line with that of Li and Irby (2008) [12]; Clark and Mayer (2011) [3], posits that providing learners with the opportunity to collaborate, share, and create will increase the learner’s use of various technologies, enhance their E-learning experience and support self-directed and ongoing learning.

The findings in table 3 shows result of the hypothesis on there is no significance difference between the mean ratings of urban and rural teachers on the challenges of using E-learning in teaching primary school pupils in this era of COVID-19 pandemic in Anambra State. The finding shows that the calculated t-value of 5.3 is greater than critical t-value of 2.05 at 0.05 level of significance. Thus, the null hypothesis is rejected. The decision therefore is that there is no significant difference between the ratings of urban and rural teachers on the challenges of using E-learning in teaching primary school pupils in this era of COVID-19 pandemic in Anambra State.

Conclusion

This era of computer age is associated with information explosion and that is technically called globalisation. This

made every sector of human endeavour especially education to embrace technology for positive advancement. That is why the federal government planned to implement E-learning in schools beginning from primary schools. This has called for increased awareness in the use of Information and Communication Technology (ICT). The researchers

are of the opinion that for this to be achieved, the government should in conjunctions with other stake holders in education provide E-Learning facilities in primary schools especially in this time of COVID 19 for actualisation of global educational objective.

Recommendations

Based on the findings, the following recommendations were made

1. The government and other stakeholders in education should provide E-Learning facilities in primary schools.
2. Capacity building workshops should be organised by ministry of education to empower the old teachers in school with ICT knowledge at least biannually.
3. The head teachers and teachers should during Parents' Techers Association meetings make ICT information a topic of discussion. This will help to educate the parents on issues concerning ICT and E-learning.

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