A Survey Study On the Availability of Information Communication Technology (ICT) Resources And Utilization in Lagos State Owned Basic Schools

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Abstract: Education is an indispensable tool in nation building and Basic education occupies an important place in any Nation's Education System. However, despite the commitments of Nigerian government agencies and regulation bodies to provide quality Basic education for pupils, scholars have agreed thatthe quality of Basic education in Nigeria was very low, which is a gap that underminedthe attainment of 21st Century BasicEducation in Nigeria. The low quality of Basic education suggests that Nigerian Basic schools may not be utilising ICT resources to their advantage.While there are numerous studieson quality of Basic education in Nigeria, there are few studies on availability of ICT resources and utilization in Lagos State owned Basic schools. Hence this study investigated the availability of ICT resources and utilization in Lagos State owned Basic education. The study employed survey research design. The population of the study comprised 14,650 Basic school teachers in all the education districts of Lagos State, Nigeria. The sample size of 391 Basic schools was determined from a population of 14,650 government Basic schools in Lagos State by using Taro Yamane (1967) formula. Stratified and simple sampling techniques were used to select 3 teachers from each school making a total of 995 Basic school teachers used for the study. Data was collected with structured and validated questionnaire and Cronbach Alpha reliability coefficient for the constructs ranged from 0.82 to 0.95. Data were analysed by using descriptive analysis. Findings showed that ICT resources were available in the Lagos State owned Basic schools but not adequate. It was also found that the available ICT resources were adequately utilised. Respondents also identified the challenges facing the utilization of ICT resources to include inadequate funding to procure ICT infrastructure and modern ICT resources, lack of policy on ICT utilization, unstable network and power supply. The study recommended that Lagos State government should provide ICT infrastructures such as broadband access that will facilitate speedy internet access as well as alternative power supply to resolve the challenges of unstable power supply for enhanced teaching learning process.

Keywords: Availability, Basic Schools, ICT resources, Utilisation, Teaching Learning Process.

Introduction

Education is an indispensable tool in nation building and Basic education occupies an important place in any Nation's Education System. It is the level at which children from 6 and 11 years above are taught Basic knowledge in mathematics, English Language, Science, Social studies Religious knowledge and one of the three popular languages so as to acquire Basic literacy, numeracy to read meaningfully, write legibly, compose, do Basic calculations and form their attitude towards learning. NPE (2004) describes Basic education as the key stone of the whole educational structure that empowers the pupils with the relevant skills, knowledge, ideas values and attitudes needed to make informed decisions and live a self-sustaining life. For effective curriculum implementation in the Lagos State Owned Basic schools, successive governments had made significant effort to put it on a sound footing through various education acts, ordinances, developmental plans, policies and strategies implementation, promotion of ICT Policy in schools by encouraging utilization of ICTresources in schools through building ICT centers, mounting of broad-wagon facilities for enhanced internet services,creation of Quality Assurance units to monitor implementation of programs accomplishments in schools, in-service training of teachers as well as establishment of TETFUND to facilitate enhancement of educational infrastructure in tertiary institutions. In addition to the above, efforts were also made by government to position manufacturing sector that supports schools with ICT resources for instructions in Lagos State owned Basic schools.

With the emergence of digitization*,* utilization of ICT resources in schools continues to change the process of education such that teachers become facilitators of learning by making use of variety of methods, skills and apply them to create positive classroom environmentrather than just providing knowledge and skills. Recent developments in the field of education and technology has shown that utilization of ICTresources for instructions has become the most acceptable process to make teaching-learning process student-centered, dynamic and interactive.However, despite the transformation in the educational systemto make the students compete favorably with their counterpart in the developed countries of the world, the state of utilising ICT resources in schools still leaves much to be desired. Statistics over statistics ((Nordin, Davis &Ariffin, 2013; Aina&Olanipekun, 2015; Abdalla & Ali, 2017; Lawal and Braimoh ,2018; Okafor &Obikwelu (2019) pointed inadequacy of ICT resources in schools as one of the gaps that deserves immediate attention. IntegratingICT utilization into teaching and learning process remains the key to sound education in all learning institutions and every stakeholders in education accept that technology is central to 21st Century education. The situation

however is that many of our public institutions across all levels either lack ICT instructional resources required to facilitate enhanced teaching learning process orthe resources were inadequate.

Similarly, Johnson (2019) opined that the level of utilising ICT resources to engage students for teaching enhancement in Nigerian tertiary institutions was still in its infancy and very low. The above assertion was supported by Lawal and Braimoh's (2018) study which noted that critical among the gaps in teaching education in Nigeria is the challenge of integrating technologies into classroom instruction and argued that this continued to jeopardize the effective utilization of ICT resources for teaching learning process and ill-prepared the teachers for 21st Century Basic education. Further to the above Kafyulilo, Fisser, Pieters and Voogt (2015; Egesah&Wahome, 2016; Teschler, 2016; Uthman & Muhammed, 2018) observed that despite the many benefits of integrating technology into teaching identified in the developed world schools, the quality of Basic education in Nigeria was very low due to inadequate utilization of ICT resources in teaching learning process and this continue toundermine the objectives of providing21st Century quality education in the Lagos State Owned Basic schools.While numerous studies (Baishakhi& Kamal, 2016; Uthman & Muhammed, 2018; Olaiya, 2019) have revealed the advantages derived from using ICT resources by schools in the developed countries for smooth delivery of instructions, it is possible that all the stake-holders including the teachers recognize the significant role of utilizing ICT resources in driving effective academic engagement but may not be using it to teach in schools.

Given the potentials of ICT resources utilization to achieve effective teaching learning process, it becomes imperative for Lagos State Owned Basic schools' teachers to use ICT resourcesto supplement their work in this digital era. The utilization of ICT resources provides the learners with realistic experience, which capture their attention and assist in understanding the historical phenomena (Baishakhi& Kamal, 2016). It promotes profound innovations, encourages the use of diversified approaches aimed at increasing flexibility of academic engagement, affords students opportunity to learn anytime and anywhere and interact simultaneously with ease and convenience. This underscore the need forutilizing appropriateICT resources to make teaching-learning process simple, interesting and easy to apply the required 21st century skills. There is death of literature on theavailability and utilization of ICT resources in Lagos State Owned Basic schools and this is thegap that this study filled.The study was carried out with a view to find out the level of teaching learning process, ICT resources available, its adequacy, benefit of use and the challenges of using ICT resources for enhanced teaching learning process so as to proffer solution that will put Basic school education digitally at learning par with their counterparts in the developed countries of the world.

Research Questions

1. What are the perceptions of the teachers inLagos State Owned Basic schools on the ICT resources availablefor enhanced teaching/learning process in Lagos State Owned Basic schools?
2) What are the perceptions of teachers inLagos State Owned Basic schools on the adequacy of ICT resources utilization d for enhanced teaching leaning processin Lagos State Basic schools?
3) What are the perceptions of teachers on the utilization of ICT resourcesfor enhanced teaching learning process in Lagos State ownedBasic schools?
4) What are the challenges of utilizing ICT resourcesfor enhanced teaching learning process in the Lagos State Owned Basic schools?

Literature Review

Education is considered globally as the instrument per excellence for social and economic transformation of the society. Hence, many nations of the world strive to commit much wealth to the establishment and management of educational institutions at various levels. Globally, schools are established for training and production of skilled manpower for national development and teachers are the center to which the task is accomplished.According to George (2019), teachers are mandated to equip students with the cognitive, affective and psychomotor behaviors required to effectively cope as a member of the society and hence, are indispensable instrument in educational system.Students are trained to acquire skills, knowledge, positive value by engaging in academic activities offered by academic institutions.

Engaging students with effective teaching goes a long way to influence students' achievement (Kahu, 2013). The core of educational engagement is teaching and learning processand this is more efficient when learning is reinforced to stimulate, motivate and as well as arrest learners' attention with instructional materials of different varieties.In the 21st Century era, the emergence of technology has made it possible for teachers to improve students' engagement.ICT resources constitute important tools for driving instructional delivery in the 21st Century. More importantly, development in the educational sector has made it mandatory for lecturers to engage students digitally so as to participate actively and acquire the knowledge and skills required to be at per with their counterpart internationally. Coleman, Gibson, Cotten, Howell-Moroney and Stringer (2016) argued that appropriate utilization of ICTin teaching

had transformed the learning environment from teacher-centred to learner-centred. The authors stressed further that the shift in the role of the teacher from knowledge transmitter to that of a facilitator, knowledge navigator and a co-learnercreated more interactive learning environment for teachers and learners and opened new opportunities for learners to engage in critical thinking.

However, Oyefar, Adejoh, Adisa, Abdulsalam and Alabi (2021) noted that towards the end of the twentieth century, Nigeria and many other African countries, including South Africa, Kenya, Ghana, Uganda, Nigeria and Senegal keyed into the global reform of utilising ICT for teaching, learning and research.Oyefar et. al. explained further that while it was easy for some countries such as South Africa to facilitate ICT-based education through National Research and Education Networks (NRENS), majority of African countries including Nigeria have not succeeded in creating conducive policy and institutional environments for ICT-based learning in their Educational system. According to Nwankwoala (2015), Nigerian government acknowledged the importance of integrating ICT into education as emphasized in the revised National Policy on Education (FRN, 2004),section 11 subsections 102 (d) that 'Government shall provide facilities and necessary infrastructure for the promotion of information and communication Technology at all levels of education, but yet to record any significant success.

Similarly, World Bank Report (2016) also found that subsequent review of National Policy on Education in Nigeria had not radically taken into consideration the need to use public–private partnerships to support digital education. This lack of clear-cut policy framework has continued to limit the capacity of Basic school heads toutilise ICT resources for teaching learning purposes in schools. In addition, Commonwealth of Learning (2017) report argued that Nigeria suffers from a combination of lack of comprehensive policy on ICT in higher education, poor funding, poor supply of ICT infrastructure, poor power supply and lack of training for lecturers and students. The report stressed further that Nigerian government has attributed poor funding to the dwindling nature of the economy and hence has not developed any policy to rapidly use ICTs to change the face of teaching and learning in higher education in Nigeria.

Several other studies (Achimugu et al. 2010; Ajayi 1996; Akpan 2014; Idowo et al. 2004; Okafor et al. 2011; UNESCO 2015) have been conducted on ICT adoption, availability, accessibility, integration and policy support in higher institutions of learning in Nigeria. Current researches (Ghavifekr&Athirah 2015; Yusta, 2016; George, 2019, Sani, Alabi, Danjuma & Momoh, 2021) have also shown that various types of ICT resources are available in Nigerian tertiary institutions for smooth delivery of instructions.The utilization of ICT resources provides the learners with realistic experience, which capture their attention and assist in understanding the historical phenomena (Baishakhi& Kamal, 2016). Utilization of ICT resources promotes profound innovations, encourages the use of diversified approaches aimed at increasing flexibility of academic engagement, affords students opportunity to learn anytime and anywhere and interact simultaneously with ease and convenience.

However,some set-backs are identified in literature as constraints to availability and utilization of ICT resources. Edumadze, Ossei-Anto, Edumadze, Tamakloe, Asamoah &Boadi (2014) identified the challenges of ICT resources use to include lack of adequate funding for ICT, lack of adequate knowledge of the benefits of ICT in the teaching and learning process, and lack of support and training. Similarly, Suleiman, Yahya and Tukur (2020) found that high cost of ICT resources, exorbitant internet access fees and the peripherals such as printers, monitors, documents, modems, extra disk drives and other devices including Basic computers were not available in a lots of higher institutions in Nigeria. In addition, several studies (Albirini, 2006; Ghavifekr& Wan Athirah, 2015) have also identified technical faults, lack of effective training, non-availability of some ICT infrastructures such as broadband access as factors that can hinder utilization of ICT resources for teaching learning process.In addition to the above, Nwakile (2018) identified challenges of ICT resources use to include lack of time to adequately use the tools, its unavailability in schools, users'resistance to change, poor maintenance culture, technical problems and lack of required skills on the part of the students and teachers.

The above challenges notwithstanding, Larondeet al. (2017) highlighted the benefits of using ICT resources to include teaching and enhancing students' retentive memory, explaining complex instructions and ensure comprehension of complex instructions, creating interactive classes and making lessons more enjoyable to improve student attendance and concentration. Laronde et. al. added that utilization of ICT resources afforded distance learners the opportunity to access online instructional materials easily for resource-based learning. Also, in their studies Suleiman, Muhammad, Zakari, Jyoti, Shitu and Ukashatu (2020) identified the advantages that students benefit from utilization of ICT resources to include motivation, cooperative learning, fast communication, e-conference, e-learning and collaborative research.The utilization of ICT resources adds new dimension to learning experiences because concepts were easier to present and comprehend when the words are complemented with utilization of ICTdevices.In addition, research findings around the world (Suleiman,Yahya& Tukur, 2020) had shown that using ICT resources has led to improved learning and better teaching methods for students, make dynamic learning experience more concrete, relevant, realistic and improves students' critical and analytical thinking.This study therefore investigated the utilization of ICT resources in South West Universities, with a view to discovery how best to optimize it for enhanced teaching learning process.

Research Methodology

Descriptive survey design was used for the study because the study dealt with the survey of the present availability of ICT resources and utilization in Lagos State owned Basic schools.The target population were the teachersin all the Basic schools owned by Lagos State Government. They were the focus of this study because they are well funded by Lagos States and adequately monitored by the Quality Assurance units of the Ministry of Education. The sample size of 391Basic schools weredetermined from the population of 14,650 Basic schools in Lagos State by using Taro Yamane (1967) formula. Stratified and simple sampling techniques were used to select the 1,173Basic school teachers used for the study in all the Educational Districts of Lagos State. Three teachers were selected from each Basic school by using simple random sampling techniques to ensure equitable representation of the sample.The researcher gave more attention to the disciplines of the teachers, hence all the teachers used for the study were graduates of Primary and Childhood Education because they are in a better position to provide information on the subject matter. In all, nine hundred and ninety five (995) teachers, making 85% of the administered questionnaire were selected from all the three colleges. The instrument used for data collection was self-constructed structured questionnaire which was validated using Cronbach's alpha test. A 14 item Questionnaire on each of Availability of Resources (QAVR), Adequacy of Resources (QADR), utilization of ICT resources and 12 item Questionnaire on the challenges of utilising ICTResources (QCHR) were used to elicit responses onthe issues raised. The instruments were personally administered and collected by the researcher and four assistants. Both the content and construct validity of the instruments were ascertained after subjecting the instruments to responses of a comparable group of sample. Cronbach alpha was used to determine the reliability of the study instruments and reliability coefficient which ranged between 0.75 and 0.95 was obtained and these were considered adequate and of high level of inter-item consistencies. Descriptive statistic was used to analyze the data collected from the research questions. The instruments were validated by five academic staff of educational management and experts in educational Test and Measurement. Responses to the items were adapted on the 4point Likert type of either Highly Available, Available, Sometimes Available and Not-Available; Very Adequate, Adequate, Sometimes Adequate and Not-Adequate; Strongly Agree, Agree, Disagree, and Strongly Disagree. The criterion for decision making was determined by finding the mean of the nominal values assigned to the options in each questionnaire items using the formula; $X = \frac{\sum X}{N}$

Where X=mean score; X=score; N= Number of items; Thus, for four Likert scale, Mean Score(X) = $\underline{4+3+2+1}=\underline{10}/4$=2.50. Hence, the bench-mark used for this study were 2.50. Therefore, the decision rule was that responses above the mean scores of 2.50 are either agreed, available, adequate or frequent while responses below 2.50 are either disagreed, non-available, or inadequate.

Presentation of Results
The results of data analysis are presented in tables according to the questions that guided the study.
Research Question One: What is the perception of Basic school teachers on the availability of ICT resources in Lagos State owned Basic schools?
Table 1: Type of ICT resources available for use in Lagos State owned Basic schools.

S/NO	ITEMS	Population	Mean	Decision
1	Instructional White Board	995	2.75	Available
2	Television Access	995	2.65	Available
3	Public address system	995	3.35	Available
4	LCD/Film projector	995	2.95	Available
5	Laptop computer/Handset	995	2.85	Available
6	Sound system e.g. speaker	995	3.52	Available
7	Digital Camera	995	2.68	Available
8	CD ROM/DVD Player	995	2.65	Available
9	Internet Facility	995	2.55	Available
10	Laser Printer	995	2.65	Available
11	Photocopy Machine	995	2.68	Available
12	Optical disks CD/DVD	995	2.50	Available

13	Desktop Computer	995	2.70	Available
14	Digital Scanner	995	2.65	Available
	Grand Mean		**2.72**	

Table 1 shows that with the grand mean of 2.72 obtained, which is greater than the bench-mark of 2.50, Basic school teachers responses show that ICT resources were available. The result shows further that all the ICT resources investigated had mean scores above the bench-mark of 2.50 and therefore available in all the Lagos State owned Basic schools investigated. Implicitly, all the ICT resources were available in the schools investigated but in different proportions.

Research Question Two: What is the perception of the Basic school teachers on the adequacy of ICT resources used for teaching learning process in Lagos State owned Basic schools?

Table 2: Adequacy of ICT Resources available

S/NO	ITEMS	Population	Mean	Decision
1	Instructional White Board	995	2.35	Not-Adequate
2	Television Access	995	2.75	Adequate
3	Public address system	995	3.25	Adequate
4	LCD/Film projector	995	2.40	Not-Adequate
5	Laptop computer/Handset	995	2.27	Not-Adequate
6	Sound system e.g. speaker	995	2.40	Not-Adequate
7	Digital Camera	995	2.36	Not-Adequate
8	CD ROM/DVD Player	995	2.45	Not-Adequate
9	Internet Facility	995	2.30	Not-Adequate
10	Laser Printer	995	2.35	Not-Adequate
11	Photocopy Machine	995	2.40	Not-Adequate
12	Optical disks CD/DVD	995	2.35	Not -Available
13	Desktop Computer	995	2.28	Not-Available
14	Digital Scanner	995	2.40	Not-Available
	Grand Mean		**2.45**	

Table 2 shows that with the overall mean score of 2.45, which is below the bench mark of 2.50, the ICT resources used inBasic schools were generally not adequate. The result shows further that apart from Television access (n=2.75) and public address system (n=3.25) that had mean scores above the cut-off value of 2.50, all other ICT resources had mean scores below the cut-off value of 2.50 and hence not adequate. Implicitly, the ICT resources available in Lagos State owned Basic schoolswere not adequate.

Research Question Three: What are the perceptions of teachers on the utilization of ICT resources for enhanced teaching learning process in Lagos State ownedBasic schools?
Table 3: Teachers' Perceptions on utilisation of ICT resources for teaching learning process

	ICT resourcesutilisation for teaching-learning process	N	MEAN	DECISION								
1	Instructional White Board	995	3.66	Well Utilised								
2	Television Access	995	3.65	Well Utilised								
3	LCD/Film projector	995	3.60	Well Utilised								
4	Public Address System	995	3.67	Well Utilised								
5	Laptop computer/Handset	995	3.37	Well Utilised								
6	Sound system e.g. speaker	995	3.35	Well Utilised								
7	Digital Camera	995	3.80	Well Utilised								
8	CD ROM/DVD Player	995	3.14	Well Utilised								
9	Internet Facility	995	3.36	Well Utilised								
10	Laser Printer	995	3.27	Well Utilised								
11	Photocopy Machine	995	3.43	Well Utilised								
12	Optical disks CD/DVD	995	2.80	Well Utilised								
13	Desktop Computer	995	2.71	Well Utilised								
14	14. Digital Scanner	995	3.17	Well Utilised								
	Grand Mean	**3.36**										

Source: Field Survey, 2021

Teachers were asked to indicate their views on the utilisation of ICT resources in their schools for enhancement of teaching learning process.The result in Table 3 shows that theall the ICT resourcesavailable in Basic schools were well utilized and beneficial with Grand mean score of 3.36. Implicitly, the Basic teachers considered all the investigated ICT resources as beneficial and well utilized by the teachers to enhance teaching learning process in Lagos State owned Basic schools.

Research Question Four: Identify the various challenges faced in utilizing ICTresources in Lagos State owned Basic schools?

Table 4: Challenges of utilizing ICT Resources

S/NO	ITEMS	Population	Mean
1	Poor attitudes of lecturers towards the use of ICT resources for teaching process	995	2.25
2	There are improper management and maintenance of ICT resources	995	3.35
3	Inadequate Knowledge and skills in utilising ICT resourcesfor instructional purposes	995	2.40
4	Lack of commitment by lecturers to use ICT resources	995	2.25
5	Lack of National Policy on utilization ofICT (NICI) in the Lagos State Basic Schools	995	3.80
6	Inadequate funding to procure ICT resources	995	3.65
7	Lack of motivation on the part of management to encourage use of ICT resources for instruction	995	3.45
8	There is inadequate infrastructure to support the use of ICT resources in Lagos State Basic Schools.	995	3.35

9	Inadequate time in teachers' schedules to use ICT resources	995	2.42
10	Unstable power supply	995	3.45
11	ICT resources are not accessible in Lagos State Basic schools.	995	3.85
12	Lack of enabling environment to promote innovation and risk taking.	995	3.65
	Grand Mean		**3.16**

Table 4 shows the challenges of availability and utilization of ICT resources in Lagos State owned Basic schools. The grand mean of 3.16 obtained was above the bench-mark of 2.50 for decision taking. Hence, Basic school teachers agreed that the listed items posed challenges to availability and utilisation of ICT resourcesin Lagos State owned Basic schools. However, responses topoor attitudes of lecturers towards the use of ICT resources for teaching process (n=2.25), lack of commitment by teachers to utilise ICT resources (n=2.25) and inadequate time in teachers' schedules to use ICT resources (n=2.42) show that they were not hindrance to utilization of ICT resources Lagos State owned Basic schools.

Discussion of Findings

This study investigated theavailability of ICT resources and utilization in Lagos State owned Basic schools, with a view to find out theICT resources available, its adequacy, benefits of utilisationand the challenges of availability and utilization of ICT resources for enhanced teaching learning processto position our pupils digitally at learning par with their counterparts in the developed countries of the world. Lagos State owned Basic schoolsare the choice of this study because they are regularly being funded by Lagos State Government and therefore expected to model the private Basic schools in standard.

Twelve (12) question items were used to measure the availability of ICT resources in Lagos State owned Basic schools as shown in table 2. Findings in table 2 reveals the ICT resources available for teaching learningin Lagos State owned Basic schoolsinvestigated to include Interactive white board, television access, Digital Scanner. Desktop Computer, Optical disks CD/DVD, Photocopy Machine, Laser Printer, Internet Facility, CD ROM/DVD Player Digital Camera, Sound system and speaker, Laptop computer/Handset, Public Address System, LCD/Film projector. The overall mean scores of teachers' responses revealed that ICT resources were available with2.72. Public address system was considered as the most available ICT resources in Lagos State owned Basic schools investigated, followed by television access, sound system and laptop/handset. The utilization of ICT resources enablepupils to be active and take more parts or roles for their best learning experience.

 The finding of this study corroborates the findings ofSani Alabi, Danjuma, and Momoh (2021) in Federal universities, Lokoja, Kogi State, Nigeria, which reported availability and accessibility of computers and internet for faculties and departments. The findings also agrees with earlier findings of Ghavifekr and Wan Athirah, 2015) who acknowledged availability of ICT resources in his study conducted in Malaysia but found that teachers lacked enough training opportunities in the utilization of ICT resources in the classroom. Since the findings revealed that ICT resources were available, it implies that the lecturers engage the students digitally and they participated actively and acquired the knowledge and skills required to be at per with their counterpart internationally. However,Ghavifekr, Kunjappan , Ramasamy and Anthony (2017) was quick to point out that availability of ICT resources does not determine utilization of ICT resources due to factor such as limited connection and network, technical support, limited time and lack of effective training of staff on IT skills as revealed in Malaysia. Hence there is need for the ICT resources to be adequate for enhancement of effective teaching learning process.

The finding on inadequacy of ICT resources revealed teachers' responses that the available ICT resources were less adequate. The result showed further that apart from the public address system and television access that was adequately available, all other ICT resources investigated wereless adequate with mean score below 2.50. The responses that ICT resources were inadequate showed that both the government and school heads in Lagos State owned Basic schools need to improve their policies and focus their programs onmaking ICT resources adequately available. The finding corroborates Johnson's (2019) study which noted that the level of utilising ICT resources for teaching enhancement in Nigeria schools was still in its infancy and very low. The finding is also in agreement with the report of Commonwealth of Learning (2017) study which noted that, although, there had been a steady increase in internet connectivity between 2012 to 2016 (from 16.1 per cent to 25.67 per cent) and engagement in ODL, at best, access to the internet in most higher institutions of learning is still very poor. The finding also agrees with the study of Edhereveno, Oniovosa (2014) which reported that the challenges of lecturers in tertiary institutions was no longer in covering the course contents or in adopting appropriate teaching pedagogy, but having accessibility and adequacy of ICT resources required to embrace teaching and learning. Similarly, the finding also agrees with Yusta (2016) that infrastructural requirements for the application of ICT in our educational system are presently not adequate due to constant power shortage which mostly discourages people from acquiring the

ICT equipment. The study also aligned with Akyol and Erdem's (2021) study which revealed that equipment and facilities for effective teaching and learning are deficient in Nigerian schools.

Findings on the benefits of utilising ICT resources forteaching learning process Lagos State owned Basic schools shows that using ICT resources are beneficial with overall mean scores of 3.36. The finding reveals further that all the available ICT resources investigated were beneficial and well utilised for teaching learning process with none that is not beneficial. This implies thatadequate utilization of ICT utilization in the classroom is important for giving Basic school pupils opportunities to learn and apply the required 21st century skills in this digital era. The responses suggest that students were happy learning with digital technologies and this is in agreement with World Bank (2016) study that reported much enthusiam among African students to apply digital technologies to learning, particularly following the rapid increase in mobile technologies in the continent. This finding is in agreement with that of Teng and Wang (2021) which found that the utilization of ICT resources such as LCD/Film projector, internet, digital camera assisted students to remember the concept taught for longer period of time and provided opportunities for effective communication between teacher and students. The finding is also in agreement with George's (2019) study which found that the utilization of ICT resources such as sound system, desktop computer, public address system and instructional white board enabled students to have better understanding of the taught behaviours thereby bringing effectiveness into learning. Also in agreement with this finding is Suleiman, Yahya and Tukur's (2020) study which found that utilization of ICT resources had introduced innovation in teaching, facilitates smooth delivery of instructions and saves time and energy.

Findings on the challenges of availability of ICT resourcesand utilization showed with overall mean score of 3.16, theavailability and utilization of ICT resourcesin Lagos State owned Basic schoolswas faced with some challenges. This study identified the major challenges to include inadequate funding to procure ICT resources, lack of policy on utilization of ICT resources, inadequate Broadband access broad base access, exorbitant internet access fees,unstable power supply, inadequate experts to handle technical faults arising from using ICT resources, insufficient infrastructure to support the utilization of ICT resources and insufficient time for utilisation of ICT resources. The finding wasin agreement with Nwakile' (2018) study which identified challenges of ICT resources utilization to include lack of time to adequately use the tools, poor maintenance culture, technical problems, space and lack of required skills. The finding also corroborates report of Commonwealth of Learning (2017) study which revealed that Nigeria suffers from a combination of lack of comprehensive policy on ICT in higher education, poor power supply and poor supply of ICT infrastructure such as broadband access that was not accessible in a lots of Nigerian schools.

Conclusion

The studyconcluded from the responses of the Basic school teachers thatavailability of ICT resources and utilization enhance teaching learning process in Lagos State owned Basic schools. ICT resources were available in the Lagos State owned Basic schoolsinvestigated but not adequate. The study also established that the use of the available ICT resources was beneficial and well utilized to teaching learning process thereby facilitating effectiveness in teaching learning process. However, the effectof utilisingICT resources was not felt much due to its inadequacy in the Lagos State owned Basic schools under study. The study also established that the utilization of ICT resources wasalso beneficial to the teachersin that it enables them to introduce innovation in teaching, which in turn facilitates smooth delivery of instructions.

Recommendations

The following recommendations were made based on the study findings.

1) Lagos State government should improve on the funding of Basic school educationto facilitate provision of ICT infrastructures such as broadband access for enhanced stable internet facility.
2) Heads of Basic schools should make available adequate ICT resources and these should be properly maintained by the libraryso as to optimize its use.
3) Lagos State government should also provide alternative regular power supply to resolve the challenges of unstable power supply for enhanced teaching learning process.
4) In addition, heads of Basic schools should sensitize and encourage their teachers to use tutorial hours for teaching learning process to resolve the challenge of limited hours allocated to courses.

References

Ajayi, G. O. (1996). Full Internet connectivity in Africa: The journey so far and the way forward', In M.A. Sanni and O. Adagunodo Ed., Telematics for Development in Infotech '96, Ife; National Centre for Technology Management (NACATEM), Telecommunications Foundation of Africa. 17-34.

Akpan, C. &Ita, A. A. (2015). Teacher's professional development and quality of universal Basic education in Lagos State, Nigeria. Global Journal of Arts, Humanities and Social Science. 3(9), 65-76

Akyol, T., &Erdem, H. (2021).*Behavioural engagement of elementary school students in Turkey: A mixed method study*. IGI Publisher of Timely Knowledge. DOI: 10.4018/978-1-7998-4658-1.ch006

Albirini, A. (2006). Teachers' attitudes toward information and communication technologies: The case of Syrian EFL teachers. *Journal of Computers & Education, 47* (4), 373-398.

Alile, E. (2018). Educational system in Nigeria, primary, secondary and tertiary institution.

Amparado, M, A. & Son, A. L. (2018). Integration of information and communication technology (ICT) tools in the instructional program of a university: *International Journal of Social Sciences and Educational Studies. 5(1), 62-85.*

Baishakhi, B. & Kamal, D. (2016). Role of ICT in 21ˢᵗ Century's Teacher Education. *International Journal of Education and Information Studies;* 6 (1), 1-6.

Bede, B.C.O., Termit, K.R.S and Fong, S.F. (2015). Need for ICT integration for effective instructional delivery in Nigerian collage of education. *Journal of Education and Practice*. 6 (3), 51-56

Coleman, L., Gibson, P., Cotten, S. R., Howell-Moroney, M., & Stringer, K. (2016). Integrating computing across the curriculum: The impact of internal barriers and training intensity on computer integration in the elementary school classroom. *Journal of Educational Computing Research*, 54(2), 275-294.

Commonwealth of Learning (2017). *Open Educational Resources Policy for Education in Nigeria.* Columbia: Commonwealth of Learning.

Delfino, A.P. (2019). Student engagement and academic performance of students of Partido State University. *Asian Journal of University Education. 15* (3),42-55

Doglas, M. (2017). *ICTs in the 21ˢᵗ century business.* Boston; Flat world Knowledge Press.

Edhereveno, S. E. Oniovosa, O. E. (2014). Imperative of information technology in tertiary education; Asian *Journal of Education and e-learning;* 2(6), 419-422.

Edumadze, J. K. E., Ossei-Anto, T. A., Edumadze, G, Tamakloe, W. K., Asamoah, E., &Boadi, E. (2014). Evaluating the awareness and perceptions of lecturers in using e-learning tools for teaching in university of Cape Coast *(IJCAR).* 3 (1), 1-11.

FRN (Federal Republic of Nigeria), 2004, National Policy on Education, Yaba: NERDC Press.

George, G. K. (2019). Information and communication technology use and academic achievement in tertiary institution. *Information Technology for Development,* 25(6), 715-732.

Ghasemi, M.R., Moonaghi, H.K., &Heydari, A. (2018). Student-related factors affecting academic engagement: A Qualitative Study Exploring the Experiences of Iranian Undergraduate Nursing Students. *Electronic Physician,* 10 (7), 7078-7085.

Ghavifekr, S., & Wan Athirah, W. R. (2015). Teaching and learning with technology: Effectiveness of ICT integration in schools. *International Journal of Research in Education and Science,* 1 (2), 175-191.

Ghavifekr, S., Kunjappan,T., Ramasamy, L. & Anthony, A. (2016). Teaching and learning with ICT resources:Issues and Challenges;from Teachers' Perceptions: *Malaysia Online Journal of Educational Technology*,4 (2), 38-52.

Gideon, W. Z. (2019). Teacher's professional development and quality assurance in Nigeria Lagos State Owned Basic schools. British Journal of Education, 8(2), 95-105.

Graduate Un-employability." *Journal of Educational Review, 8* (3), 231–239.

Idowo, P.A., Abimbola, O.I., and Adagunodo, E. R. (2004) 'A comparative study of information and communication technologies at higher educational institutions in Africa: Case studies from Nigeria and Mozambique Journal of Information Technology Impact, Vol. 4, No. 2, pp. 67–74.

Johnson, R. M. (2019).The influence of technology on the future of educational development. *Journal of Human Resources Management Review.* 27 (5), 156-176.

Laronde, G. et al., (2017). "A Case Study of the Integration of Information And Communication Technology In A Northern Ontario First Nation Community High School: Challenges And Benefits," *Journal of International Education Research (JIER),* 13 (1), 27–34.

Muianga, X., Hansson, H., Nilsson, A., Mondale, A., Mutimucuio, I. and Guambe, A. (2013) ICT in education in Africa – Myth or Reality: A case study of Mozambican higher education institutions; *The African Journal of Information Systems,* Vol. 5, No. 3, pp. 106–17.

Nwakile, I.C. (2018). *Audio-visual in communication*; Lagos: Ike Olu Press Ltd.

Nwankwoala, H.N.L., 2015, 'An investigation of lecturers' and students' use of ICTs in Nigerian university education as a panacea for national development', Research on Humanities and Social Sciences, Vol. 5, No. 20, pp. 18–29.

Okafor, E.E., Imhoriopi, D. and Urim, U.M., 2011, ' utilization of Internet services and its impact on teaching and research outputs in private universities in Southwestern Nigeria', International Journal of Emerging Technologies and Society, Vol. 9, No. 2, pp. 135–51.

Olaiya, S. O. (2018). Quality control in Nigeria primary schools; Ibadan; Evans Brothers.

Oyefar,J. K., Adejoh, P., Waziri B. Adisa, B.W.,Abdulsalam, K.A. & Tunde Alabi, T.(2021). ICT utilization and associated barriers in teaching among Middle-level Academics in Nigerian Universities. *JHEA/RESA,* 19 (1), 295-120

Philip, W. O. (2018). Reflection on teacher's job performance in Nigeria Lagos State Owned Basic schools; Implication for planning. *Nigerian Journal of Teacher's Education*; 45 (1),56-65

Saima, R. et al. (2011). Procedia - Social and Behavioral Sciences. 28, 78 – 81

Sani, J. O., Alabi, C. O., Danjuma, S., & Momoh, J. (2021).The utilization of ICTdevices for lecture preparation and delivering in Federal University, Lokoja, Kogi State, Nigeria; *Multidisciplinary Journal* ,6 (1),144-154.

Strydom, F., Kuh, G., & Mentz, M. (2010). Enhancing success in South Africa's higher education: Measuring student engagement. *Acta Academica,* 42 (1), 259-278.

Suleiman, M., Muhammad, M., Zakari, I. G., Jyoti, S., Shitu ,U. (2020) "Role of ICT for Authentic Assessment in Higher Education,"*Tathapi Journal UGC Care, 19 (*38), 128–136.

Suleiman, M., Yahya, A. T &, Tukur, M. (2020). Effective utilization of ICT resources in higher schools; *Journal of Xidian University*, 14 (9), 586-594.

Sunday, A. F. (2015) "Effective teaching with ICT in Nigerian Higher Institutions: A Solution to

Teferra, D. and Altbach, P.G., 2004, 'Africa's higher education: challenges for the 21st century', *Higher Education, Vol. 47, pp. 21–50.*

Terchler, U. (2016). Graduate employment and work in selected European countries. *European Journal of Educatio,* 35, 2.

Toyo, O. D. (2017). "Information and communication technology adoption and educational growth of colleges of education in Agbor and Warri , Delta State , Nigeria," *International Journal of Education and Evaluation, 3* (7),19–32.

UNESCO (United Nations Educational, Scientific and Cultural Organization), 2015, Information and Communication Technology (ICT) in Education in Sub-Saharan Africa: A Comparative Analysis of Basic E-readiness in Schools, Canada: *UNESCO Institute of Statistics.*

United Nations Educational, Scientific and Cultural Organization (UNESCO). (2015). *Information and Communication Technology (ICT) in Education in Sub-Saharan Africa: A Comparative Analysis of Basic E-readiness in Schools, Canada*: UNESCO Institute of Statistics.

Uthman, S. S., Lawal, A. & Muhammed, A. Y. (2018). Quality assurance practices and institutional delivery among secondary schools. *Journals of Professional Teacher,* 1(CC1) 50-65.

World Bank. (2016) World Development Report: Digital Dividends- An Overview, Washington DC: World Bank.

Yusta, N. (2016). Impact of Instructional Resources on Mathematics Performance of Learners with Dyscalculia in Integrated Primary Schools, Arusha City, Tanzania. *Journal of Education and Practice*, 7 (3), 2222-1735.