Evaluation of Basic ICT Facilities for Teaching and Learning in Secondary Schools in Ekwusigo LGA of Anambra State, Nigeria

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Abstract
The study examined the basic ICT facilities available for teaching and learning in Ekwusigo LGA of Anambra State, Nigeria. A survey research design was adopted for the study. Three research questions guided the study while the population of the study was three hundred and twenty five (325) teachers in secondary schools in the area. Using simple random sampling technique, two hundred (200) teachers were drawn and used for the study. A structured questionnaire with 15 items was the instrument for data collection that was duly validated by 3 experts and its reliability determined using Cronbach Alpha Procedure. An index value of 0.73 was obtained showing that the instrument was reliable for the study. Mean statistic and standard deviation were used to analyze the data collected. The findings showed that there were basic ICT facilitated in the schools and that the interest and performance of the students were enhanced using these facilities to teach and learn. The study also revealed obvious challenges in the application of these facilities. Implications of the study were drawn and recommendations made to enhance proper utilization of the facilities to boost learners’ interest.

Keywords: Evaluation; ICT Facilities, Teaching, Learning and Secondary Schools.

Introduction
Information and Communication Technology (ICT) is often used as an extended synonym for Information Technology (IT), but it is a more specific term that stresses the role of unified communication and the integration of telecommunications (telephone lines and wireless signals) computers as well as necessary enterprise software, middleware, storage and audio-visual systems which enable users to access, store, transmit and manipulate information (Murray, 2011). ICT is generally accepted as a modern instrumental tool that enables educators to modify the teaching methods they use in order to increase students’ performances. ICT enhances educational processes whereby teachers can handle large classes conveniently using computer-aided gadgets; aids skill acquisition and enhances problem-solving skills; make the evaluation of students’ works a lot easier; create room for individualized instruction for different learning styles, and collaborations with peers and colleagues globally. It introduces easier ways of searching for research/study materials at
anytime and anywhere. So there is the need to build up these areas of interest into teacher education programme (Abubakar, 2012).

Commenting on the loaded benefits of ICT application, Mbachu (2008) stated that most of the developed countries have explored the potentials of ICT to transform their educational landscape at all levels of education, particularly in instructional process. ICT accordingly is a capacity building tool that can empower our youths as they yearn for more knowledge through their inquisitive search. The author now concluded that with the pathway created by ICT, teaching and learning become more dynamic in nature. ICT has been regarded as a powerful tool in education reform that has influenced the way knowledge and information are generated, developed and transmitted. It has also reduced the entire world into a global village and replaced the use of physical strength in performing task with automation. UNESCO (2009) took a holistic and comprehensive approach to promoting ICT in education. The Organization’s Inter Sectoral Platform for ICT in education have been addressing challenges of access, inclusion and quality among others through the joint work of three of its sectors namely: Communication and Information, Education and Science. A good number of researches have shown that the quality of teaching and learning can be significantly enhanced when ICT is approached and utilized as an intellectual multi-tool. In view of the importance attached to ICT, relevant authorities in Nigeria have made the acquisition of basic ICT skills and capabilities part of a national minimum standard for certification and practice at all levels of education in Nigeria (Njoku, 2008).

In this era of digitalization, teachers and students alike are bracing up in order to be digitally competent in order to fit into the global economy (Emesini, 2009). The use of ICT in education leads to wealth creation, sustainable development, global competitiveness, poverty alleviation and job creation (Nworgu, 2006). The need for ICT application in Nigerian secondary schools cannot be underrated. This is because secondary school is the bedrock of any solid human development. Evoh (2007) rightly stated that secondary education is essential for the creation of effective human capital in any country. There are developments in the Nigerian education sector which indicate emphasis in some levels of ICT applications in secondary school teaching and learning processes. The Federal Government of Nigeria in its National Policy on Education (FGN, 2013) recognized the prominent role of ICTs in the modern world and emphasized its integration and use in Nigerian education when it stated that “government will provide basic ICT infrastructure and training at the primary and junior secondary education levels; as a vocational elective at the senior secondary level and as a General Study Course at the tertiary education level”(NPE, sec 8, sub sec. 127b: 72).To make this vision a reality, the Federal Ministry of Education launched an ICT-driven project known as school net. Adomi, (2005) and Okebola (2005) explained that this initiative was to equip all schools in Nigeria with computers and other communication technologies.

Despite the obvious benefits of ICT in teaching- learning process, there are envisaged challenges for its proper use like: proper ICT application support; funding problems; lack of proper implementation strategies by concerned authorities for effectiveness and misrepresentation and interpretation of ICT use in education (Tusubira and Mulira, 2004). In terms of proper administrative support, the authors lamented that various educational authorities lack the competencies and zeal to pioneer ICT vision and implementation. They further explained that lack of technical support to manage, maintain and operate the facilities
have not helped the situation. Again, Farrel (2009) pointed out that lack of staff development programme in ICT is a big hitch in its use in education; that the capacities of teachers and heads of schools need to be built up through workshops and seminars for effective implementation. The author emphasized that the issue of funding can make or mar the implementation of ICT in education and that proper funding is a key factor in its successful implementation. He reiterated that ICT is cost intensive as it involves proper acquisition and maintenance of human and material resources. Howbeit, Government at various levels in Nigeria are making genuine efforts to remove all bottlenecks for effective use of ICT in teaching-learning process.

Teaching in secondary schools in the 21st century requires adequate instructional facilities to make teaching and learning more effective. Aguokogbuo (2010) explained that teaching is a deliberate effort made by experienced person to impart information, skill and attitude to a less experienced person. Accordingly, Fadeyi in Emesini (2016) posited that effective teaching is the largest single school potential influence on students’ achievement. He further explained that effective teachers have high expectations that all their students will achieve the expected goals and are committed to providing quality education. In addition, they are approachable, communicate clearly in order to achieve the objectives of education; hence they are engaged in real teaching that is stimulating and this involves the use of ICT. If a teacher according to Iwiyi (2007) is to function effectively and meet the challenges of the 21st century, then teacher education must integrate ICT technology for a better output. Therefore, the need for ICT in secondary education in this technology-driven age now becomes imperative, as everyone requires ICT competence in order to gain and share information. This calls for early acquisition of ICT skills by the students as an essential part of their education (Raffel and Whitworth, 2012). This yearning has necessitated this study.

Statement of the Problem
In this era of digitalization, every nation of the world looks forward to make their citizens digitally competent in order to fit into the global village. This sincere yearning has led to the present study in Ekwoisigo LGA of Anambra State to ascertain the basic ICT facilities for teaching-learning process. Presently, most schools do have some ICT facilities, but they are not made available for teaching and learning as a result of the nonchalant attitude of the school administrators and teachers. Again, lack of technological knowhow in their use seems to be a contributory factor. The various state governments in Nigeria on their own parts do not give serious attention or are not sensitive to modern infrastructural developments of their schools; these trends are worrisome. To ascertain the true picture of digitalization in the area, the study now becomes necessary that thus ask: What is the position of basic ICT facilities for teaching and learning in Ekwoisigo LGA of Anambra State, Nigeria?

Purpose of the Study
The main purpose of the study was to evaluate the position of basic ICT facilities for teaching and learning in Ekwoisigo LGA of Anambra State, Nigeria. Specifically the study sought to:
1. Ascertain the basic ICT facilities available for teaching and learning in secondary schools in Ekwoisigo L.G.A. of Anambra State
2. Determine the impact of ICT application on students’ academic zeal and performances in Ekwoisigo LGA of Anambra State.
3. Examine the challenges in the use of ICT facilities for teaching and learning in Ekwusigo LGA of Anambra State.

Research Questions
The following research questions guided the study:

1. What are the basic ICT facilities available for teaching and learning in secondary schools in Ekwusigo LGA of Anambra State?
2. What impact has the use of basic ICT facilities made on students zeal and academic performance in Ekwusigo LGA of Anambra State?
3. What are the envisaged challenges in the use of ICT facilities in secondary schools in Ekwusigo LGA of Anambra State?

Theoretical Framework
The study is anchored on Cognitive theory initiated by Piaget, Brunner, Asubel, Lewin and Vygotsky between 1886-1959 (Ogah, 2010). The theory stems from the concept of man being born with innate abilities and potentials and that he is an intelligent being in any learning process. The theory emphasizes the nature of man who exhibits purposeful actions that are goal oriented: Again this theory believes that learning results from active and meaningful participation of learners in the learning process; that when the learner interacts with the concepts and resources in the environment, he is motivated to learn due to the utility values of what is learnt. The theory emphasizes whole learning, discovery, problem solving and insightful learning. The proponents concluded that the need to learn by the learners is driven by activity and interaction with the environmental resources which hinges now on the emphasis of motivating learners in the Nigerian classrooms to learn using ICT facilities. This theory therefore is related to the presented study as ICT is introduced in secondary schools in the study area to attract learners who are already business conscious to come back to the classroom to acquire basic education first.

Methodology
A descriptive survey design was adopted for this study because it involved using a representative sample of a population (Igwe, 2009). The study population was three hundred and twenty-five (325) teachers in Ekwusigo LGA of Anambra State (Source: Anambra State Education Board, 2016). Using systematic random sampling, ten secondary schools out of the seventeen were selected. Random sampling technique was now used to select 200 teachers; ten from each school used for the study. The study area is located near the commercial heartbeats of Anambra State of Nigeria. Here the youths are carried away by the fantasies of business to the detriment of their education. The state government now makes genuine efforts to equip most of these schools with modern technology to get these youths back to the classroom to acquire basic education. A structured questionnaire with 15 items was the instrument for data collection that was validated by three experts from Ebonyi State University, Abakaliki. It was based on a 4 point Likert Rating Scale. To ascertain its reliability for the study, the instrument was trial-tested in another LGA not used for the study where twenty copies of the draft questionnaire were administered to 20 teachers. The data collected thereafter were analyzed using Cronbach Alpha Procedure, which yielded an index value of 0.73; hence the instrument was considered reliable for the study. Two hundred (200) copies of the questionnaire were administered to the respondents with the help of assistants in the schools of study. One hundred percent return was obtained. The analysis was done using statistical mean and standard deviation. Average mean value of 2.50 was the determinant.
point. An item that scores less than 2.50 was considered not a contributing factor, while an item that measures 2.50 and above was accepted as a determinant factor.

Results
Table 1 presents the data that answered research question 1

Table 1: Basic ICT facilities available for teaching and learning in secondary schools in Ekwusigo LGA. N=200

<table>
<thead>
<tr>
<th>S/N</th>
<th>Items available</th>
<th>MD</th>
<th>SD</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Computer sets</td>
<td>3.10</td>
<td>0.60</td>
<td>Agree</td>
</tr>
<tr>
<td>2</td>
<td>Projectors</td>
<td>3.20</td>
<td>0.70</td>
<td>Agree</td>
</tr>
<tr>
<td>3</td>
<td>Projector screens</td>
<td>3.10</td>
<td>0.60</td>
<td>Agree</td>
</tr>
<tr>
<td>4</td>
<td>Printers</td>
<td>3.10</td>
<td>0.60</td>
<td>Agree</td>
</tr>
<tr>
<td>5</td>
<td>Modem/Educative CDROMs</td>
<td>2.80</td>
<td>0.30</td>
<td>Agree</td>
</tr>
</tbody>
</table>

Grand mean: 3.06

Items 1-5 in Table 1 are the basic ICT facilities available in secondary schools in Ekwusigo LGA of Anambra State. All the items rated above 2.50 criterion mean and with a grand mean of 3.06, the respondent agreed that these are the basic facilities in secondary schools in the area for teaching and learning.

Table 2 is the presentation of the data that answered research question 2

Table 2: Impact basic ICT facilities makes on students’ zeal for learning and academic performances. n = 200

<table>
<thead>
<tr>
<th>S/N</th>
<th>Item specification; ICT use:</th>
<th>MD</th>
<th>SD</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Captures the attention of students and makes teaching easy</td>
<td>3.10</td>
<td>0.90</td>
<td>Agree</td>
</tr>
<tr>
<td>7</td>
<td>Increases active participation of students</td>
<td>3.30</td>
<td>0.70</td>
<td>Agree</td>
</tr>
<tr>
<td>8</td>
<td>Leads to students’ proper grasp of subject content</td>
<td>2.60</td>
<td>0.60</td>
<td>Agree</td>
</tr>
<tr>
<td>9</td>
<td>Facilitates clarification of points and in depth knowledge of the subject content by students.</td>
<td>3.30</td>
<td>0.70</td>
<td>Agree</td>
</tr>
<tr>
<td>10</td>
<td>Makes teaching effective and students’ easy retention of knowledge</td>
<td>2.70</td>
<td>0.82</td>
<td>Agree</td>
</tr>
</tbody>
</table>

Grand mean: 3.00

Again Table 2 presents the view points of the teachers in Ekwusigo LGA of Anambra State on the impact basic ICT facilities makes on students’ zeal for learning and on their academic achievements. The items all rated above the determinant mean of 2.50 and with a grand mean of 3.00, it is obvious that the teachers in the area are optimistic that students would be attracted back to the school to learn effectively with the use of these facilities.
Table 3 is the data that answered research question 3

**Table 3: Envisaged challenges in the use of ICT in secondary schools in Ekwusigo LGA of Anambra State**

<table>
<thead>
<tr>
<th>S/N</th>
<th>Item specification; challenges are:</th>
<th>Envisaged</th>
<th>SD</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Poor background knowledge of students</td>
<td>3.10</td>
<td>0.82</td>
<td>Agree</td>
</tr>
<tr>
<td>12</td>
<td>Teacher’s inadequate knowledge of utilizing ICT facilities for teaching</td>
<td>2.70</td>
<td>0.88</td>
<td>Agree</td>
</tr>
<tr>
<td>13</td>
<td>Bad attitude of some school management in protecting and managing the available facilities.</td>
<td>2.70</td>
<td>0.88</td>
<td>Agree</td>
</tr>
<tr>
<td>14</td>
<td>Shortage of funds for the maintenance, and procurement of more ICT facilities</td>
<td>2.90</td>
<td>0.98</td>
<td>Agree</td>
</tr>
<tr>
<td>15</td>
<td>Irregular power supply for effective use of the ICT facilities</td>
<td>3.20</td>
<td>0.72</td>
<td>Agree</td>
</tr>
</tbody>
</table>

**Grand mean** 2.92

Table 3 presented the envisaged challenges in the use of ICT facilities for teaching and learning in Ekwusigo LGA of Anambra State, Nigeria. The items from numbers 11-15 on poor students and teachers’ background in ICT usage, poor management; shortage of funds and irregular power supply all scored above the 2.50 criterion mean. The grand mean of 2.92 buttressed the point that the enlisted five areas are envisaged challenges in the use of the available basic ICT facilities in the area. On the whole, the findings of the study shows that there are basic ICT facilities available in the schools like Computers, Modems, CD ROMs, Projectors, Projector Screens and Printers. The findings portrayed that students’ interest are boosted to learn better, while teaching is made a lot easier with the use of the basic facilities. The obvious challenges discovered include: shortage of funds, irregular power supply, poor management and students/teachers poor ICT application backgrounds.

**Major Findings of the Study**

- The findings of the study in Table 1 show that the enlisted items are the basic ICT facilities for teaching and learning in Ekwusigo LGA of Anambra State. A grand mean of 3.06 confirms this as all the items scored above the determinant mean of 2.50.
- In Table 2, the findings again revealed that the use of ICT facilities impact on the teaching and learning processes in the area of study with a grand mean of 3.00.
- Finally, Table 3 showed the obvious challenges in the use of these ICT facilities for teaching and learning. With a grand mean of 2.92, it was obvious that the enlisted areas are challenges that need to be addressed.

**Discussion of findings**

The present study tends to evaluate the basic ICT facilities available for teaching and learning in Ekwusigo LGA of Anambra State, Nigeria. Research question I ascertained the available basic ICT facilities in the area. The findings showed that the five enlisted basic facilities were...
available with a grand mean of 3.06. This is in line with the view of Mkpa (2009) who stated that computer sets, projectors screens and printers are the commonly available basic ICT facilities most schools can afford. Buttressing this finding, Chukwudi and Ejita (2008), reiterated that for any meaningful teaching and learning to take place in this era of digitalization, basic ICT facilities must be present in schools.

Research question 2 was based on the impact basic ICT facilities makes on student’s zeal for learning and performance. A look at Table 2 shows that the teachers agreed that students are zealous to come to school and learn; and that the use of these facilities boost their interest, retention, proper understanding and aids the teaching process. Highlighting these findings, Njoku (2008) explained that the use of ICT facilities in teaching-learning process captures the attention of students, leads to easy clarification of points and in-depth knowledge acquisition. These findings are in agreement with the view point of Adewoyin (2009) who emphasized that the use of ICT facilities captures the attention of students during lesson; hence the need to use them constantly to enhance students’ active participation.

Finally, research question 3 addressed envisaged challenges involved in the use of basic ICT facilities in the area of study. Table 3 highlighted them like teachers’ and students’ lack of ICT background effects; management perceptions and problems; dearth of funds and irregular power supply. These challenges were highlighted by Chika (2008) when he asserted that bad attitude of school authorities in the use of ICT in teaching and learning retards the digitalization of the Nigerian classrooms. This is so because teachers and the school heads are not just keying into the global trend. Mkpa (2009) noted this trend when he stated that most teachers lack the basic skill of teaching with ICT facilities and the enthusiasm to acquire it. The trend of inadequate power supply is worrisome as ICT can only be powered and effective with constant power supply (Mbah, 2010). ICT usage and training requires huge capital investment. Dearth of funds is a major challenge as noted by Mbah and Emesini (2013). This is because money is needed for acquiring and maintaining the infrastructures, training of manpower and technical supports to ensure its proper use among others. Various state governments in Nigeria are bracing up in the digitalization process and are mapping out strategies to address these envisaged challenges.

Educational Implications Drawn from the Study
From the findings of the study, the following implications were drawn:

- Ekwusigo LGA of Anambra State, Nigeria has basic ICT facilities in their secondary schools that need to be effectively utilized. The available ones are rudimentary types and there is need to introduce other complex ICT facilities.
- The use of ICT facilities in the area seems to pay off, as students’ interest is beefed up; effective classroom teaching and learning are enhanced too.
- There are envisaged challenges in the application of ICT facilities in teaching-learning process in the area that can hamper the digitalization intents of the Anambra State Government of Nigeria.

Conclusion
The paper evaluated the basic ICT facilities in secondary schools in Ekwusigo LGA of Anambra State, Nigeria. The study findings showed that there are basic ICT facilities in the schools; that students’ interest and performance are enhanced through the use of these facilities as teaching is made a lot easier. Howbeit, there are envisaged challenges in the application of these basic ICT facilities like management issues, teachers’ and students’
approach to its utilization, dearth of funds and erratic power supply. These challenges need urgent attention in order to make the digitalization of Nigerian classrooms feasible.

**Recommendations**

Based on the findings of the study and implications drawn, the following recommendations are made:

- The authorities concerned in the area of study need to monitor the proper utilization of the basic ICT facilities in the classroom.
- Also, there is the need for Anambra State Government to procure other high grade ICT facilities for proper acquisition of ICT skills by the students and teachers.
- There is the need to re-orientate both the school principals and teachers in the area on the need to be ICT compliant and to support the programme; hence the need to build their capacities through proper training.
- The Parent-Teachers’ Association in the area should help to equip the schools by donating some equipment and help to sponsor the teaching staff to workshops to build up their capacities.
- The students on their own part should be ready to use the basic ICT facilities in their learning and prepare to use the acquired knowledge in order to be self-reliant after graduation.
- The government of Anambra State needs to look inward on how best to generate steady power supply to back up the digitalization programme. Again, the need of releasing enough funds by the state government to drive digitalization of the classroom becomes paramount.

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