Effectiveness of Information and Communication Technology in the Teaching and Learning of Creative Arts in Nigerian Secondary Schools.

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Abstract

The study appraised the effectiveness of Information and Communication Technology in the teaching and learning of Creative Arts in Nigerian Secondary Schools. The study sought to find out how ICT can improve the teaching and learning of Creative Arts at the Post-Primary School level. Eighty (80) students and twenty eight (28) teachers of both public and private secondary schools were involved in the study. Two structured questionnaire were developed for both the teachers and the students. The questionnaires were administered to collect data. Data gathered were analyzed by employing simple percentage. Some recommendations were made which bother on how ICT could be used to enhance the teaching and learning of Creative Arts in the Nigerian secondary Schools.

Introduction

Information technology is the term used to describe the items or equipment (hardware) and computer programs (software) that allow us to access, process, organize, manipulate, transmit, retrieve and present information by electronic means. It is a technology that merges computing with high speed communication links carrying data, sound and video. Examples include the use of personal computers, televisions, scanners, projectors, spreadsheets, multimedia software programs and different hand held devices such as personal digital assistants. However, teaching is an act of instructing or giving knowledge to train. Learning on the other hand is an act of obtaining knowledge, facts or ideas about how things are done. Thus, classroom teaching and learning can be likened to the communication process where someone gives and the other one receives. In this case, the teacher is the fountain of knowledge while the students are empty vessels waiting to be filled with knowledge and wisdom imparted by the teacher. The importance of communication to the teaching and learning process therefore cannot be underestimated. In fact, classroom communication is a strong pillar on which teaching and learning solely rest on. The information technology revolution that has taken place over the years as a result of globalization has affected every spheres of life including the teaching and learning process. The role of technology in teaching and learning is rapidly becoming one of the most important and widely discussed issues in contemporary education policy. Experts in the field of education agreed that when properly used, ICT holds a great promise to improve teaching and learning in addition to shaping workforce opportunities (Rosen & Well 2015). Mac-Ikemenjima (2020) says that ICT has become key tools in the realization of effectiveness in classroom teaching and learning and it is having a revolutionary impact on educational methodology globally. According to him, Information Communication Technology is becoming more important in the recording and analyzing of student achievement. The process of planning classroom programs through implementation and assessment can be managed effectively with ICT. Mac-Ikemenjima (2020) went further by revealing that ICT works most efficiently when used in solving problems that are

important and interesting to students in their private lives and especially in their learning activities. In other words, ICT enhances the development of student problem solving capability. A student who is capable of solving problems can identify potential problems, conceive a range of possible solutions, design the most appropriate solution, implement and evaluate its effectiveness.

Bada (2018) postulated that learning acquisition in technology helps to increase the student's confidence and self-esteem. By using technology to teach students, they also have the opportunity to learn about technology itself. Furthermore, ICT in teaching and learning is used to enhance the development of students' information literacy. A literate student is able to gather information, process information, publish information and communicate information within a range of context across all learning areas. Thus, teachers can assist students to enhance the development of their information literacy by providing opportunities for them to use a range of ICT during the teaching and learning process. Stamen, (1995) corroborated this assertion by explaining that the power of technology to increase the level of communication within the learning environment is

a key to making the student level of literacy to increase. The needs for ICT in secondary schools may appear too simplistic but it is necessary to develop a thorough rationale before beginning to use computer in classrooms. The importance of ICT is quite evidence from the educational perspective. Although the chalkboard, textbooks, radio, television and film have been used for educational purpose over the years, none has quite impacted on the educational process like the computer. ICT has the capacity to provide higher interactive potential for students to develop their individual, intellectual and creative ability. The main purpose of ICT as postulated by Bada (2021) consists in the development of human mental resources which allow people to both successfully apply the existing knowledge and produce new ones.

Today, computers perform a host of functions in teaching and learning as many nations are adding computer literacy, reading and writing literacy as skills students will need for succeeding in a technologically developed world. At the instructional level, computers are used by pupils to learn Mathematics, Social Studies, English language, Art, Music and some other subjects. Historically, technology has been developed to find solution to problems, increase productivity and improve standard of living.

Aduwa-Ogungbaen, (2015) therefore submits that we should expect educational technology to be developed with the objective to increase learner's productivity and solve problems in the teaching and learning process.

It has been discovered over the years that the teaching of Creative Arts in Nigerian secondary schools has been devoided of technology – based teaching aid unlike other secondary school subjects like Physics and Chemistry. This is mainly because the subject has been viewed as an art-based subject and it has been seen as unnecessary to use computer – based methods in teaching it. It is against this backdrop that the researcher has been prompted to examine the influence of Information Communication Technology on the teaching and learning of Creative Arts in Nigerian Secondary Schools.

Therefore, this study attempts to provide answers to the following research questions:

- Does Information Communication Technology have effects on the learning of Creative Arts?
- How often do Creative Arts teachers use Information Technology in the teaching of the Subject?
- What are the difficulties encountered by teachers who use Information Communication Technology in teaching Creative Arts in Secondary Schools?
- Do Secondary Schools have the facility for the teaching of Creative Arts with Information Technology?

Population and Sample

The population of this study consists of both teachers and students in Secondary Schools in Ile-Ife. Eighty (80) students and twenty-eight (28) teachers were randomly selected from two thousand secondary school students in Ife Central Local Government Area of Osun State, Nigeria. Eight secondary schools were randomly selected from twenty secondary schools in the area for the study. The eight schools comprise of four private and four public secondary schools.

Research Instrument

The instruments used for this research were structured questionnaire. The questionnaire were developed to find out the availability and effectiveness of ICT in the secondary school from both the teachers and the students.

Both questionnaire have two sections. The first section deals with the bio-data of the respondent and the second section contains questions on the effects of ICT on the teaching and learning of among secondary school teachers and students. The questions were carefully constructed to ensure that appropriate and unbiased responses were obtained. The data gathered were analyzed using simple percentage.

Students' Survey

Table 1 – Age Distribution of the Respondent

Age	Frequency	Percentage	Cumulative Percent
10 – 15 yrs	47	58.8	58.8
15 – 20 yrs	32	40.0	98.8

20 above	1	1.3	100
Total	80	100	

Table 1 above shows the age distribution of the respondents. From the table, 58.8% of the respondents are between 10 – 15 years, 40% of the respondents are between 15-20 years, the remaining 1.3 of the respondents are 20 years and above. This means that the age bracket of the student is between 10 – 20 years.

Table 2 – Sex Distribution of the Respondents

Sex	**Frequency**	**Percentage**	**Cumulative Percent**
Male	34	42.5	42.5
Female	46	57.5	100.0
Total	80	100	

Table 2 above shows the sex distribution of the respondents; from the table, 57.5% of the respondents are female, while just 42.5% of the respondents are male. This means that there are more female than male.

Table 3 – Class Distribution of the Respondents

Class	**Frequency**	**Percentage**	**Cumulative Percent**
JSS 1	4	5.0	5.0
JSS 2	11	13.8	18.8
JSS 3	14	17.5	36.3
SS 1	13	16.3	52.5
SS 2	18	22.5	75.0
SS 3	20	25.0	100.0
Total	80	100.0	

Table 3 above shows the class distribution of the respondents; from the table, 20% of the respondents are from SS 3, 22.5% of the respondents are from SS 2, 17.5% of the respondents are from J.S.S. 3, 16.3% of the respondents are from S.S. 1, 13.8% and 5% are from J.S.S 2 and J.S.S. 1 respectively. This means that the sample frame covers from J.S.S. 1 to S.S. 3, which are the classes in the Nigerian Secondary Schools.

Table 4 - Do you know what Information Communication Technology is?

Do you know what Information Communication Technology is?	**Frequency**	**Percentage**	**Cumulative Percent**
Yes	60	75.0	75.0
No	19	23.8	98.8

Neutral	1	1.3	100.0
Total	80	100.0	

Table 4 above shows whether the students know what Information Communication Technology is 75% of the respondents state that they know about Information Communication Technology, while 19% of the respondents state that they don't know about Information Communication Technology, and 1.3% of the respondents refused to disclose their opinion. This means that the larger percentage of the pupils in both public and private secondary schools in Ile-Ife know about Information Technology.

Table 5 – Are there computers in your school?

Are there computers in your school?	**Frequency**	**Percentage**	**Cumulative Percent**
Yes	45	56.3	56.3
No	35	43.8	100
Total	80	100.0	

Table 5 above shows whether there is computer system in their various schools. 45% of the respondents state that they have computer system in their various schools, while 35% state that they do not have computer system in their school. Invariably, this means that most of the schools under study have computer system.

Table 6 - Do you have access to the computer in your school?

Do you have access to the computer in your school?	**Frequency**	**Percentage**	**Cumulative Percent**
Yes	26	32.5	
No	54	67.5	
Total	80	100.0	

Table 6 shows whether the students have access to computer system in their various schools. 67.5% of the respondents state that they don't have access to computer system in their various schools; while the remaining 32.5% of the respondents state that they have access to computer system in their schools. This means the majority of the secondary school students in Ile-Ife do not have access to computer system. This result is in line with Bada (2018) who observed that many Nigerian Secondary School students do not have access to computer system.

Table 7 – Have you ever been to the Cybercafé before?

Have you ever been to the Cybercafé before?	**Frequency**	**Percentage**	**Cumulative Percent**
Yes	55	68.8	68.8
No	25	31.2	100
Total	80	100.0	

Table 7 above shows whether the students have been to the cybercafé before. 68.8% of the respondents state that they have been to Cybercafé while the remaining 31.2% of the respondents state that they have never been to cyber café before. This means that most of the students are exposed to Cybercafé.

Table 8 – Does your teacher use computer in teaching you Creative Arts?

Does your teacher use computer in teaching you Creative Arts?	**Frequency**	**Percentage**	**Cumulative Percent**
Yes	17	21.3	
No	63	78.8	21.3
Total	80	100.0	100

Table 8 above shows whether the teachers use computer in teaching their students Creative Arts. 78.8% of the respondents state that their Creative Arts did not use computer to teach them, while the remaining 21.3% of the respondents state that their English teachers use computer to teach them Creative Arts. This means that most of the schools in Ile-Ife do not make use of computer to teach their students Creative Arts.

Table 9 – Do you encounter any problem while using computer in the Creative Arts class?

Do you encounter any problem while using computer in the Creative Arts class?	**Frequency**	**Percentage**	**Cumulative Percent**
Yes	19	23.8	23.8
No	60	75.0	98.8
Neutral	1	1.3	100
Total	80	100.0	

Table 9 above shows whether the students encounter any problem while using computer in Creative Arts class. 75% of the respondents state that they don't have any problem since their teacher doesn't teach them with computer. While just 23.8% of the respondents state that they face some problems using the computer system, and just 1.3% of the respondents stand neutral. The implication is that majority of the students are not taught Creative Arts with computer system, the few ones that are taught still have little problems using the computer system. This result is in line with Bobby (2016) who observed that most Nigerian students are not taught with computer.

Table 10 – Do you think the use of computers has improved the method of teaching Creative Arts in your school?

Do you think the use of computers has improved the method of teaching Creative Arts in your school?	**Frequency**	**Percentage**	**Cumulative Percent**
Yes	34	42.5	42.5
No	44	55.0	97.5

Neutral	2	2.5	100.0
Total	80	100.0	

The table above shows whether the use of computers has improved the method of teaching Creative Arts in selected schools, 55.0% of the respondents state that it has never improved the methods of teaching Creative Arts, while 34.0% of the respondents state that it has improved the methods of teaching Creative Arts, and 2.5% of the respondents stand neutral.

Table 11 – Has the use of ICT contributed to your better understanding of Creative Arts?

Has the use of ICT contributed to your better understanding of Creative Arts?	**Frequency**	**Percentage**	**Cumulative Percent**
Yes	36	45.0	45.0
No	41	51.2	96.3
Neutral	3	3.8	100
Total	80	100.0	

Table 11 above shows whether ICT contributed to the better understanding of Creative Arts. 51.2% of the respondents state that it has never contributed to the better understanding of Creative Arts, while 45% state that it has contributed to better understanding of Creative Arts and just 3.8% of the respondents stand neutral.

Teachers' Survey

Table 1 – Age distribution of the Teachers

Age	**Frequency**	**Percentage**	**Cumulative Percent**
20-30 years	3	10.7	10.7
30-40 years	17	60.7	71.4
Above 40 years	8	28.6	100.0
Total	28	100.0	

Table 1 above shows the age distribution of the teachers. From the table, 60.7% of the respondents are between 30 – 40 years, 28.6 are above 40 years; the remaining 10.7% are between 20-30 years. This means that majority of the Creative Arts teachers are between 30 – 40 years.

Table 2 – Sex distribution of the Respondents

Sex	**Frequency**	**Percentage**	**Cumulative Percent**
Male	15	53.6	53.6
Female	13	46.4	100.0

Total	28		

Table 2 above shows the sex distribution of the Creative Arts teachers from the table, 53.6% of the respondents are male while 46.4% of the respondents are female. This means that majority of the respondents are male Creative Arts teachers.

Table 3 – Teaching Experience of the Teachers

Teaching Experiences	**Frequency**	**Percentage**	**Cumulative Percent**
1 – 5 years	5	17.9	17.9
6 – 10 years	10	35.7	53.6
11 – 15 years	7	25.0	78.6
16 above	6	21.4	100
Total	28	100	

The table above shows the teaching experience of the Creative Arts; from the table 35.7% of the respondents have been teaching for between 6 – 10 years, 25.0% have been teaching for between 11 – 15 years, 21.4% of the respondents have been teaching for 16 years and above, and just 17.9% of the respondents have been teaching for 1 – 5 years. This means that majority of the respondents have the minimum of 6 years experience.

Table 4 – Position held by the Creative Arts teachers in their various schools.

Position	**Frequency**	**Percentage**	**Cumulative Percent**
Vice Principal	2	7.1	7.1
Teacher	26	92.9	100
Total	28	100	

The table above shows the position held by the Creative Arts teachers in their various schools. From the table, 92.9% of the respondents are teachers and at the same time the Vice Principals of their school. This means that most of the Creative Arts teachers are employed to teach Creative Teachers alone.

Table 5 – Do you use ICT in your school as a form of Instructional Material in teaching Creative Arts?

Do you use ICT in your school as a form of instructional material in teaching Creative Arts?	**Frequency**	**Percentage**	**Cumulative Percent**
Yes	6	21.4	21.4
No	21	75.0	96.4
Neutral	1	3.6	100.0
Total	28	100	

Table 5 above shows whether the teacher uses ICT in their various schools as an instructional material to teach Creative Arts. From the table above, 75% of the respondents say they don't while 21.4% of the respondents say they do, and just 3.6% of the respondents say refuse to make their view known. This means the majority of the respondents don't use ICT as an instructional material to teach Creative Arts.

Table 6 – Do you think that the use of ICT in teaching Creative Arts will enhance better understanding on the part or the student?

Do you think that the use of ICT in teaching Creative Arts will enhance better understanding on the part of the student?	**Frequency**	**Percentage**	**Cumulative Percent**
Yes	24	85.7	85.7
No	3	10.7	96.4
Neutral	1	3.6	100
Total	28	100	

The table above table shows whether the teachers think the use of ICT in teaching Creative Arts will enhance better understanding on the part of the students. From the table, 85.7% of the respondents say they think so, while 10.7% of the respondents say they don't think so, and just 3.6% of the respondents refuse to make their views known. This means that if the teachers make use of ICT in teaching Creative Arts, this will enhance better understanding on the part of the students.

Table 7 – Do you encounter any challenge in the use of ICT in teaching Creative Arts?

Do you encounter any challenge in the use of ICT in teaching Creative Arts?	**Frequency**	**Percentage**	**Cumulative Percent**
Yes	12	42.9	42.9
No	6	21.4	64.3
Neutral	10	35.7	100
Total	28	100	

Table 7 above shows whether the teachers face any challenge in the use of ICT in teaching Creative Arts. From the table 42.9% of the respondents say they face challenges in the use of ICT in teaching Creative Arts; 21.4% of the respondents say they don't face any challenge in the use of ICT to teach Creative Arts, while 35.7% of the respondents refuse to make their views known. This means that some of them face problem while most of them do not face any problem in the use of ICT to teach Creative Arts.

Table 8 – Are you motivated via the use of ICT in teaching Creative Arts students?

Are you motivated via the use of ICT in teaching students Creative Arts?	**Frequency**	**Percentage**	**Cumulative Percent**
Yes	15	53.6	53.6
No	3	10.7	64.3

Neutral	10	35.7	100
Total	28	100	

The above table shows whether the teachers are motivated via the use of ICT in teaching their students Creative Arts. From the table, 53.6% of the respondents state that they are motivated via the use of ICT in the teaching of Creative Arts, while 10.7% of the respondents state that they are not motivated via the use of ICT and 35.7% of the respondents refuse to disclose their view.

Table 9 – Do you think that the use of ICT in teaching Creative Arts will improve students' performance in the subject?

Do you think that the use of ICT in teaching Creative Arts will improve students' performance in the subject?	**Frequency**	**Percentage**	**Cumulative Percent**
Yes	25	89.3	89.3
No	2	7.1	96.4
Neutral	1	3.6	100
Total	28	100	

The table above shows whether the teachers think that the use of ICT in teaching Creative Arts will improve students' performance in the subject. From the table, 89.3% of the respondents felt that the use of ICT will improve the performance of the students in the subject while 7.1% of the respondents felt that ICT cannot improve the performance of students in Creative Arts, and 3.6% of the respondents stand neutral. This means that ICT has a great role to play in teaching the students Creative Arts. This result supports Maxwell & Tecta (2014) who agree that computer is an effective tool in teaching and learning.

Table 10 – Has the use of ICT contributed to the effectiveness of the teachers' teaching method?

Has the use of ICT contributed to the effectiveness of your teaching method?	**Frequency**	**Percentage**	**Cumulative Percent**
Yes	15	53.6	53.6
No	4	14.3	67.9
Neutral	9	32.1	100
Total	28	100	

Table 10 above shows whether the use of ICT has contributed to the effectiveness of the teachers' teaching method. From the table, 53.6% of the respondents state that ICT has contributed to the effectiveness of their teaching, while 14.3% of the respondents state that ICT has not contributed effectively to their teaching method; and 32.1% of the respondents stand neutral.

Table 11 – Will you recommend the introduction to ICT into the school curriculum?

Would you recommend the introduction of ICT into the school curriculum?	Frequency	Percentage	Cumulative Percent
Yes	25	89.3	89.3
No	3	10.7	100.0
Total	28	100	

The table above shows whether the Creative Arts will recommend the introduction of ICT into the school curriculum. From the table, 89.3% of the respondents say they recommend that ICT should be introduced into the school curriculum, while 10.7% says they don't support the introduction of ICT into the school curriculum. This means that majority of the teachers want ICT introduced into the school curriculum.

Table 12 – Will you recommend the use of ICT in teaching Creative Arts at all levels?

Will you recommend the use of ICT in teaching Creative Arts at all level?	Frequency	Percentage	Cumulative Percent
Yes	22	78.6	78.6
No	5	17.9	96.4
Neutral	1	3.5	100
Total	28	100	

Table 12 above shows whether they will recommend ICT in teaching Creative Arts at all levels. From the table, 78.6% of the respondents say they recommend that ICT should be introduced in teaching Creative Arts at all levels, while 17.9% of the respondents do not support the use of ICT, 3.5% of the respondents stand neutral. Invariably, majority of the respondents support the use of ICT in teaching Creative Arts at all levels.

Discussion

The results of this study revealed that larger percentage of the students in both public and secondary schools in Nigeria have the knowledge of Information Technology and most of the schools have computer system. In addition, most Nigerian students do not have access to computer system. The results of the study also showed that most Nigerian Creative Arts teachers do not make use of computer to teach the students. The few students that are taught Creative Arts with computer still have little problems using the computer system.

On the part of the Nigerian Creative Arts teachers, majority of them said that they faced some challenges in using computer. Erratic power failure, lack of skills necessary for the operating of ICT are also said to be some of the problems encountered by the teachers.

Recommendation

Based on the results of the study, it is recommended that every school should ensure that they have qualified and experienced teachers with a basic knowledge of computer and they should be taught how to use ICT in training colleges and universities. Adequate computer should be provided to schools and students should have access to it. Constant training in form of seminars, lectures and workshops should be organized for the teachers to enhance their efficiency in the use of ICT.

Government should make computer education a compulsory course in Nigerian secondary schools.

Conclusion

There is no doubt that teachers and students in Nigerian secondary schools have incredible resources available if they have access to the internet. By integrating information and communication technology into secondary school curriculum,

a fundamental shift in the way teacher teaches and students learn will evolve. However, to integrate computer into teaching and learning in secondary schools in Nigeria, there must be proper and adequate funding of Education.

Finally, Nigeria needs to invest heavily on the Internet business by creating enabling environment for secondary school students.

References

Bada, T.A. (2018*). Global Village through internet.* Ibadan, Onibon-Oje Press.

Becta, O. (2019). *The Impact of Information and Communication Technologies on Pupils Learning and Attainment.* England. Oxford University Press.

Bobby, T. (2016). *Go Multimedia in Our Secondary Schools*. Lagos. Onibon-Oje Press.

Mac-Ikemenjima, D. (2020). *The Integration of ICT into the school system:* Our roles. Paper presented at the Information Technology Conference, University of Benin, Nigeria.

Maxwell & Tecta (2014). *Internet and classroom teaching*. Paper presented at the ICT week held on 5th December, 2008 at the Conference Hall of Ahmadu Bello University, Nigeria.

Bada,T .A. (2007). *Introductory Computer Science for children and adult beginners*. Abuja, Aflon Limited.

Rosen, B. & Well, D. (2015). *What is Internet?* Abuja. Hiss Limited.

Stamen, R. (2017). *Using Multimedia for Distance Learning in Adult Career and Vocational Education.* ERIC Information Series. No, 362. pp.120