

Influence of Information Communication and Technology in Teaching of Senior Secondary School Students in Ekiti State, Nigeria

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ABSTRACT: The research is based on the influence of information Communication and Technology (ICT) facilities in teaching senior secondary school students and the challenges encountered in the use of the facilities. The use of Information Communication and Technology (ICT) in learning institutions is an order of the day in various parts of the world. The study examined the availability, functionality and utilization of ICT facilities for effective teaching by the teachers. The study adopted descriptive research design of the survey type which was questionnaire based. Findings from the study show that there are provisions for ICT facilities in the schools and there are provisions for studying staff development in ICT. Based on the findings, appropriate recommendations were made.

Key Words: ICT, Secondary School, academic performance

Introduction

Information and Communication Technology (ICT) increase motivation, achievement and students' learning opportunity. Information and Communication Technology (ICT) can also assist the students in acquiring essential occupational skills.

Information and Communication Technology is one of the foremost technologies among the emerging technologies that play an important role in every sphere of human endeavour. It has witnessed a massive transformation over the years which makes teaching and learning easier and more enjoyable, and has changed the ways people live, learn, work, and play. Consequently, the internet has been a vital tool to the present information society, and a world without the internet is unimaginable (Adelakun et al., 2020).

The introduction and the use of ICT resources in teaching and learning is facing the challenge that hinders the spread of ICT technology in different schools; hence, teaching through ICT becomes ineffective. These ICT tools could be of different forms which include; language laboratory, computers, audio and audio visual machines; websites, CD ROMS software and hardware as well as social network gargets. All these are an ICT tool that aids learning. The ICT based instructional material helps to concretize abstract ideas in the minds of the students (Azubuike, 2019).

The use of computers in the learning environment has been growing and its applications are indispensable to computers in education today and into the future. Information and Communication Technology (ICT) is changing the face of the contemporary world. Liberalization, Privatization, Globalization are closely related to the Information and Communication Technology (ICT) and its strategy of a nation is very crucial to put it on a global map. Introducing Information and Communication Technologies into a rural area through got disrupted at times, happened smoothly at every site.

Michael (2018) opined that one of the major setback of education the third world countries like Nigeria is lack of ICT tools, lack of adequate computer hardware and software as well as a reliable internet access. He also noted that with the availability of ICT tools like projectors, for internet access in the schools there will be a great transformations in the educational sectors of the third world countries.

Statement of Problem

ICT tools have been adjudged to be a veritable instrument in learning all over the world. It has been noted that ICT is an important tool for learning and as well a road map to educational transformation of the Ekiti State and of the country at large. Learning method in the class rooms in this local government still adapt the old traditional method of learning where the teachers act at repertoire of knowledge while students are busy and furiously copying what is said and are expected to rewrite them verbatim during exam. In addition, many students fail woefully during their examinations. This is because the method of teaching adopted by teachers does not encourage educational growth in the country. It appears that ICT tools like projectors, computer software and hardware, internet access for easy communication among students, teachers, and students from other schools are lacking.

The inadequate supply of those ICT tools is adversely affecting learning in Ado Ekiti local government area of Ekiti State. The researcher therefore tries to investigate the use of ICT tools in learning amongst secondary school in Ado Ekiti local government area of Ekiti State. This is to find out ways of improving education in the local government in particular and the state in general.

Benefits of Information and Communication Technology to Students

The use of ICT gives students a better understanding and enhances their retention capability by using different information technology tools such as videos, graphics, animation etc and also generally in a complete and entertaining way. Some benefits of ICT also includes:

- It enhances interactivity
- It enhances student ICT capability and ICT literacy
- It enhances easy distribution of learning resources.
- It enhances the retention capability of the students
- It helps in easy creation of study materials
- It promotes interaction between students

Challenges of Information and Communication Technology to Students

There are so many challenges arising from ICT adaptation most especially from developing nations. These challenges varies from weak internet connection and high cost of using the internet which makes so many students lose interest in the technology especially students from rural communities. Some major challenges faced by ICT are:

- Complexity of the system and adaptability struggle due to the lack of experienced technical personnel.
- Financial restriction
- Social Isolation
- Lack of self-motivation
- Low level of computer literacy
- Lack of self-motivation
- Limited Feedback

Sandholtz et al. (2019) worked on 'Teaching with technology, creating student-centered classrooms'. They reported that there were positive changes in student attitude. Their interest and motivation typically extended to the last week of school and as students became involved in working on computers, the time they spent on assignments and projects often increased.

Students' enthusiasm and interest resulted in greater on-task behaviour and they were highly involved in their assignment and frequently able to work with little assistance. The project increased student initiative as they worked beyond the requirements of their assignments, and independently explored new applications and developed new skills. Student experimentation and risk taking increased.

Training is directed at changing people's knowledge, experience, skills and attitudes. The scarcity of adequately trained and experienced analysts, software engineers, systems and network managers, restrains ICT development education system in Nigeria.

El-Hindi (2021) conducted study on 'Constructivist teaching with Internet'. He assumed that learning through the Internet is very compatible with constructivism. Constructivism assumes that learners are active and curious and the process of knowledge construction on the Internet is in keeping with these paradigms. The Internet is a powerful resource to support learners' natural curiosity. The Internet rethinks the idea of the teacher as the sole source of knowledge, by providing a vast world of information. He found that by using the Internet, teachers can focus less on being the centre of learning and allow for more discoveries on the part of the student. Instead of being passive recipients listening to their teachers, students can devise their own ways of gathering information. Effective use of the Internet can help teachers move toward facilitating constructivist learning environments.

It is through the internet that, ICT becomes immensely important globally and enlighten the mind of people, develop critical thinking, accept new ideas and show creativity. In each and every society, the nation depends largely on the quality of education which is its bedrock, ICT is becoming important in our daily lives, and part and parcel of our education and brought remarkable changes in the technological era all over the world (Umar et al, 2018).

Kiptalam & Rodrigues (2011) pointed out that the use of ICT and related technologies is still at an early stage of development and implementation. It is still inconclusive and an unending task for researchers on the issue of ICT integration in instructional delivery most especially in the secondary schools system.

Ugwu & Oboegbulem (2011) also opined that ICTs has greater prospects in enhancing interrelationships in terms of space, time and cost-effectiveness in learning activities. One thing is for the ICT facilities to be available; another thing is its functionality, and then the teachers' efficiency in using it to enhance the teaching and learning of agricultural science subject matter. To enhance means to improve in value, quality and desirability (Merriam, 2019). An enhanced instructional delivery therefore, refers improved techniques of preparing and presenting learning experiences by the teachers and utilizing resources that are in tune with global best practices.

Research Questions

The following research question guided the study:

1. Are there information communication technology (ICT) facilities in the secondary school under study?
2. Are there provisions for studying staff development in information communication technology (ICT)?
3. What are the influences of information communication technology (ICT) on the student academic achievement?

Methodology

The study adopted descriptive research design of the survey type which was questionnaire based. A simple random sampling technique was used to select the sample for this study. The sample was made up of fifty (50) teachers from selected senior secondary schools in Ado LGA of Ekiti State.

A well structured questionnaire was used to elicit relevant information from the respondents to answer the three (3) generated research questions.

The researcher administered the instrument on the respondents. The data collected were analyzed using Chi-square analysis.

Results and Discussions

Research Question 1: Are there Information Communication Technology (ICT) facilities in the secondary school under study?

Table 1: Availability of Information Communication Technology (ICT) facilities in the secondary school under study

S/N	ITEMS	SA	A	D	SD	χ^2 -cal	P	df	Remark
1.	There are information communication technology (ICT) facilities in the secondary school	19 (38%)	27 (54%)	4 (8%)	-	16.36*			
2.	It is difficult operating ICT technologies	3 (6%)	8 (16%)	21 (42%)	18 (36%)	17.04*			
3.	There are problems using ICT software for teaching Science Subjects	3 (6%)	26 (52%)	12 (24%)	9 (18%)	22.80*			
4.	There are advantages for the use of ICT to the teaching of Practicals in secondary school	31 (62%)	15 (30%)	1 (2%)	3 (6%)	45.68*	.000	3	*S
5.	Using ICT tools will minimized teacher's effort	18 (36%)	16 (32%)	10 (20%)	6 (12%)	7.28*			

P<0.05

Table 1 presents Availability of Information Communication Technology (ICT) facilities in the secondary school under study. The result indicates that, χ^2 -cal value for items 1 to 5 is significant showing that at $p < 0.05$ and $df = 3$ (i.e. χ^2 -cal $>$ χ^2 -tab) is significant. This implies that there are Information Communication Technology (ICT) facilities in the Secondary School under study.

Research Question 2: Are there provision for studying staff development in information communication technology (ICT)?

Table 2: Provision for studying and staff development in Information Communication Technology (ICT)

S/N	ITEMS	SA	A	D	SD	χ^2 -cal	P	df	Remark
1.	There are advantages for the use of ICT to the teaching of secondary school students	37 (74%)	12 (24%)	-	1 (2%)	40.84*	.000	3	*S
2.	There are provision for studying staff development in information communication technology (ICT)	15 (30%)	16 (32%)	10 (20%)	9 (18%)	2.96			
3.	Educational ICT increases teaching and learning amongst student	32 (64%)	18 (36%)	-	-	3.92*			
4.	Teacher enjoy using ICT for teaching	25 (50%)	20 (40%)	4 (8%)	1 (2%)	33.36*			
5.	Educational ICT enhance you to learn more key topic and sub- topic	29 (58%)	18 (36%)	2 (4%)	1 (2%)	43.60*			

P<0.05

Table 2 presents provision for studying and staff development in Information Communication Technology (ICT). The result indicates that, The result indicates that, χ^2 -cal value for items 1, 3, 4 and 5 is significant showing that at $p < 0.05$ and $df = 3$ (i.e. χ^2 -cal $>$ χ^2 -tab) is significant. This implies that there are provisions for studying staff development in Information Communication Technology (ICT).

Research Question 3: What are the influences of information communication technology (ICT) on the student academic achievement?

Table 3: Influences of Information Communication Technology (ICT) on the Student Academic Achievement

S/N	ITEMS	SA	A	D	SD	χ^2 -cal	P	df	Remark
1.	The use of ICT facilities to teach improves the level of understanding of the students	31 (62%)	18 (36%)	1 (2%)	-	27.16*			

2.	ICT make educational teaching looks more easier for students	37 (74%)	11 (22%)	1 (2%)	1 (2%)	69.36*			
3.	Teachers did not have access to computer in their schools in order to teach their students	12 (24%)	17 (34%)	12 (24%)	9 (18%)	2.64	.000	3	*S
4.	Students enjoy using ICT for learning practicals	27 (54%)	20 (40%)	1 (2%)	2 (4%)	40.72*			
5.	There is sufficient reference books student can acquire through ICT	16 (32%)	21 (42%)	9 (18%)	4 (8%)	13.52*			

P<0.05

Table 3 presents influence of Information Communication Technology (ICT) on the student academic achievement. The result indicates that, The result indicates that, χ^2 -cal value for items 1,2, 4 and 5 is significant showing that at $p <0.05$ and $df= 3$ (i.e. χ^2 -cal $> \chi^2$ -tab) is significant. This implies that Information Communication Technology (ICT) will influence Student Academic Achievement.

Conclusion

The study showed that there are information communication technology (ICT) facilities in the secondary school under study. It was also discovered that there are provision for studying staff development in information communication technology (ICT). Furthermore, the study showed that Information Communication technology (ICT) has an influence on the student academic achievement. On the other hand, the way teachers are trained, the way schools are organized, the way the educational hierarchy operates suggests that one way of bringing change within an educational system is through teacher education.

Recommendations

Based on the findings of this study, the following recommendations were made:

- Students should develop more interest in the use of ICT facilities;
- the Federal and State Government should review its National ICT policies in order to ensure effective, qualitative education;
- the school management should make a provision for all students to have access to the free internet facilities;
- the school management should be able to provide infrastructure facilities, most essentially into the laboratories (equipment such as projector, white board etc.);
- finally, government should address the problem of irregular supply of electricity in the country in order to take full advantage of the opportunities offered by ICT for qualitative education in Nigeria Secondary Schools.

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