

Effect of Students' Competence in Using ICT Tools on the Implementation of the O' Level ICT Curriculum in Government Secondary Schools in Mbale District, Uganda



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ABSTRACT: The study established the relationship between students' competence in using ICT tools and implementation of the O' Level ICT curriculum in government-aided secondary schools in Mable District. The study used a survey study design whereby 192 students were interviewed. Data analysis was done descriptively using SPSS Version 22.0 and findings indicate a significant positive correlation between students' competence in the use of ICT tools and implementation of the ICT curriculum ($r=0.727$, $N=192$, $p=0.000<0.05$). The study concludes that majority of the students were not having basic ICT tool use knowledge and skills due to a number of challenges that ranged from lack of technical support, limited enough access to ICT tools, poor ICT tool maintenance, lack of enough time to practice ICT skills, lack of administrative support, poor internet connectivity inadequate ICT soft wares, outdated ICT tools, teachers lacking enough ICT skills, negative students' attitude towards learning ICT, teachers' lack enough ICT skills, to teachers having a negative attitude towards teaching ICT. The study recommends an increase in ICT resources to boost student competencies in using ICT tools.

KEYWORDS: ICT tools, Student Competence, O' Level ICT Curriculum

INTRODUCTION

Today's fast-paced world is being influenced by technology-driven management of social, economic and political affairs and the education sector is being looked at for efforts to address the situation. The Federal Ministry of Education, Nigeria (2010) defines ICT as encompassing all equipment and tools (inclusive of traditional technologies of radio, video, and television to the newer technologies of computers, hardware, and firm-ware.), as well as the methods, practices, processes, procedures, concepts, and principles that come into play in conducting of the information and communication activities. The United Nations Educational, Scientific and Cultural Organization (UNESCO) define the three dimensions of ICT literacy as knowledge, skills and attitude (UNESCO, 2018). The skills dimension consists of the ability to use digital tools and processes, generic and advanced professional application software, Internet-based services, and the ability to define, access, evaluate, and use information (UNESCO, 2018). Knowledge and understanding of students' learning experience would provide insight into the extent the curricula support their skill development. This study describes students' competencies in terms of knowledge and skills in ICT and the challenges faced in developing ICT knowledge and skills in relation to the implementation of the O' Level ICT curriculum in government-aided secondary schools in Uganda.

Regardless of the quantity and quality of technology available in classrooms, the key to how ICTs tools are used is the student who has to be instructed by competent teachers that have positive attitudes towards teaching ICT. Competence is defined as the ability to combine and apply relevant attributes to particular tasks in particular contexts. These attributes include high levels of knowledge, values, skill, personal dispositions, sensitivities and capabilities, and the ability to put those combinations into practice in an appropriate way (Commonwealth Department of Education, Science and Training, 2002). Similarly, Tobón (2013) defines competency as the integrated actions performed by a person in order to carry out activities and solve problems, based on certain eligibility criteria, continuous improvement and ethics. So, it can be said that ICT competencies are a group of skills, knowledge and attitudes that are applied to the use of information and communication systems, as well as the devices that the activity involves. In this context, an ICT competency describes what a student should know to be able to use technology in his/her learning encounters. These competencies are related with students' knowledge and technical training on how to use and maintain ICT equipment and

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software. These competencies involve the skills to operate modern technologies such as computer, and internet among others. Akpabio and Ogiriki (2017) highlighted some major ICT competencies students require and these include competency in: making personal use of ICT; mastery of a range of educational paradigms that make use of ICT; making use of ICT as minds tools; using ICT as tool for learning, mastering a range of assessment paradigms which involves use of ICT; and understanding the policy dimensions of the use of ICT for learning.

Based on a constructivist view of learning, the curriculum guidelines for Uganda (MOEST, 2020), state as an aim that students should develop their knowledge and understanding of the subjects, and independence and self-reliance in their learning. The students should be stimulated to find solutions by explorative, experimental activities, be encouraged to ask questions and investigate different representations and present arguments during their work. ICT Tools are explicitly mentioned in the curriculum and instructors are encouraged to ensure that learner-centred learning (NCDC, 2018). High subscription and ICT infrastructure costs coupled with the poor quality of service providers and the lack of basic infrastructure such as electricity can act as barriers to the use of ICT in education. Lee (1997) found that a great number of students were not equipped with basic computer operational skills. Altun (2018) study revealed that there is a low level of skillfulness in the use of ICT among students of Ugandan schools. Similarly, Yusuf (2005) reported that students in Ugandan secondary schools were not competent in basic computer operations and in the use of ICT software. This implies that the O' Level ICT curriculum may not be fully implemented when students register low knowledge levels and inadequate skills in ICT. Altun (2018) that lack of adequate training, experience and negative teacher attitudes towards instruction using ICT tools was one of the main factors why students did not perform well in the use of ICT tools. This may also result in students' negative attitude towards computer and technology, hence affecting ICT curriculum implementation. Education stakeholders are therefore challenged to ensure that students acquire and use ICT skills in the best way possible in order for the current society to stay abreast in the current dynamic world. It also became imperative that an investigation be carried out to establish the relationship between student competency in ICT tools and the implementation of ICT curriculum in order to exploit information resources that the new digital age produces.

Problem Statement

Information communication technologies have become indispensable in the academic world as they help students create access, edit and disseminate information in a shorter time. This is facilitated by students' ability to get well acquainted with the ICT knowledge and skills. However, given the fact that ICT is relatively new in the educational settings of most developing countries, schools have not acquired enough human and material resources that enhance students' knowledge and skills in using ICT tools. Majority of the government-aided secondary schools in Mbale district have been experiencing serious shortages of human and material resources (ICT tools) to facilitate effective acquisition of relevant ICT knowledge and skills For instance many schools do not have a functional computer laboratory, while those that are existent are poorly facilitated with ICT tools (MOEST, 2022). This situation has greatly affected learning as has been seen in situations where O' Level students failing to explain basic ICT concepts as well as basic ICT skills (Mbale District school inspection report, 2022). The government of Uganda tripled salary increment for science teachers and among them were ICT teachers in order to promote effective learning but recent reports indicate that little has changed in the implementation of school curricula and more so the O' Level ICT curriculum. Also existing studies show that little has been done to investigate other factors that may influence the ICT curriculum. Hence this study sought to establish whether students' competence in using ICT tools had any influence on the implementation of the O' Level ICT curriculum in government-aided secondary schools.

Purpose of the Study

The study investigated the effect of students' competence in the use of ICT tools on the implementation of the O' Level ICT curriculum in government-aided secondary schools in Mbale District, Uganda.

Objectives of the Study

The study was guided by three objectives, thus;

To establish the level of competence in using ICT tools among O' Level students in government aided secondary schools in Mable District.

The explore the challenges faced in enhancing students' competence in the use of ICT tools among O' Level students in government aided secondary schools in Mable District.

To examine the relationship between students' competence in using ICT tools and implementation of the O'Level ICT curriculum in government-aided secondary schools in Mbale District

Hypothesis

H₁: There a statistically significant relationship between students' competence in using ICT tools and implementation of the O' Level ICT curriculum in government-aided secondary schools in Mable District.

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LITERATURE REVIEW

ICT can enhance teaching and learning process by increasing student's motivation if used effectively by competent teachers. In line with this, Dave and Tearle (2010) asserted that ICTs when used in teaching and learning have the likelihood to speed up, enrich and deepen skills, to inspire and engage students as well as to help relate school experiences to work practices. Therefore, to motivate students to learn and teachers to teach effectively, Altun (2018) and Oommen (2012) opined that ICT resources such as computers, PCs, laptops, overhead projector, internet, interactive white board (Smartboards), cell phones, videos, games, music players should be used in the English language classroom for effective instructional delivery.

In Anambra State, almost all the secondary schools were provided with ICT resources such as computers and internet access for teaching and learning effectiveness. Providing computers to schools is one thing but using it effectively in teaching is another thing. For technology to be used for effective teaching, teachers must possess adequate ICT competencies and be knowledgeable in their classroom usage. In support of this, Malinina (2014) asserted that in order to make best use of ICT in teaching and learning, teachers must be equipped with adequate ICT competencies. Most at times, failure in the integration of certain innovative pedagogies in education is because teachers who are to implement them lack the competence for effective performance. In the views of Akpabio and Ogiriki (2017), one of the major challenges confronting the education system is lack of capable teachers who are literate or proficient in the use of ICT. Effective teaching of English language with ICT therefore is dependent on the teachers' ICT competence.

According to UNESCO (2018), ICT Competency refers to knowledge, skills, and ability to take advantage of ICT for the purpose of gathering, processing and presenting information in support of activities among different groups of peoples for working purposes. Competence according to Sampson and Fytros (2008) is the individual characteristics (skills, knowledge, attitudes) that one has or needs to obtain, in order to carry out an activity within a specific context. In the views of Klein, Spector, Grabowski and De la Treja (2004), competence is a set of related knowledge, skills and attitudes that helps an individual to effectively accomplish the activities of a given occupation or job function to the standards expected in employment. In this study, competence is the ICT knowledge and skills possessed by English language teachers for effective teaching of English language in secondary schools. Sequel to the above, these skills are the real pedagogy tools for effective classroom teaching. Cakici (2016) is of the view that the knowledge of these ICT skills is very essential because they can appeal to learners' visual and auditory senses if used effectively. They can as well provide an effective learning experience to students through motivation and retention. On this note, the problem of the study is posed as a question thus: what are ICT competencies needed by teachers for effective teaching of English language in secondary schools in Awka South Local Government Area, Anambra State, Nigeria.

Kopaiboon, Reungtrakul & Wongwanich (2014) refer competency to the ability resulting from an individual's knowledge, skills, characteristics and attitudes to carry out work to achieve success. Competency is made up of knowledge, skills, and attitudes. Knowledge connotes what a student has learned in class or in a workshop as an apprentice. This learning is subject to experience and understanding of a particular subject. Skill means to derive from knowledge the ability to perform work, in an appropriate and accurate manner, meeting a pre-determined standard. Attitude, on the other hand, refers to stance, feeling, or internal characteristics of individuals that express a sense of realizing the benefit and value of a particular thing. Information communication technology competencies represent the skills and knowledge that support the practical operations expected from the teachers and students in an educational organization (Jabbarova, 2020). ICT competencies have a unique role in performing the organizational process at the workplace (Murawski & Bick, 2017). Higher education institutions are concentrating on offering various computing programs at different levels to improve the ICT competencies of professionals (Husam et al., 2018). Chae et al. (2018) explained the ICT competencies role in strategic decision-making among ICT leaders in the organization and highlighted the significance of ICT competencies for professionals. The curriculum content, TS, and CM are also the main ingredients in higher education to enhance learning ICT competencies (Sabin et al., 2018).

Theoretical Framework

This study has been underpinned by the constructivist and transformative learning theories. The constructivist learning theory considers the main purpose of education is to engage students in meaningful learning (Jonassen *et al.*, 1999). It emphasizes the role of the individual in learning and regards technology as a means to facilitate thinking and knowledge construction. Technology will result in meaningful learning if it is used as a tool that helps students think (Jonassen *et al.*, 1999). Competence in ICT tools can support the learning process by providing opportunities for students to learn, think critically and discuss with their peers (Olsen, 2000). The constructivist learning theory also holds that new knowledge is built on the foundations of previous learning and that learning environments should be student-centered (Kanuka and Anderson, 1999). According to the constructivist learning theory, every student actively constructs his or her unique and subjective understanding of new experiences or content in a given learning situation or context (Brown, Collins and Duguid, 1989; Lave and Wenger, 1990). Thus each student would have his or her own level of knowledge and skills in ICT tools. This study explores the relationship between student competency in the use of ICT tools and the implementation of the O' Level ICT curriculum.

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According to transformative learning theory, learning process is enhanced through reflective thinking and making an interpretation of one's experience (Mezirow, 1997). The goal of learning is to develop autonomous thinking by critically reflecting and assessing one's purposes, assumptions, beliefs, feelings and judgment. For effective implementation of the ICT curriculum, students should possess the required knowledge and skills in the use of ICT tools. Critical reflection helps students to not only construct new knowledge and information, but more importantly to transform their approach to thinking and learning. Reflecting on how much their skills have progressed, identifying which skills need to be polished and taking remedial action could eventually help students learn independently (Boud, 2003).

METHODS

Design and Sampling

The study used a survey and adopted likert scale in order to establish the relationship that existed between students' competency in using ICT tools and implementation of ICT curriculum. The study was conducted in government-aided secondary schools in Mbale District. It consists of four government aided secondary schools in Mbale District. The study population comprised of 'O' Level students and the target population of the study was 210 students (Mbale District Education Office, 2021). The sample was determined by simple random sampling per school using Krejcie and Morgan (1970) table for determining a sample size for a given population. Consequently the researcher sampled 136 students for the study.

Data Collection and Analysis

The instrument used for data collection was a five-point likert scale structured questionnaire. The instrument has two sections. Section one covered the demographic information of the respondents while the other sections covered the items for each of the respective research objective. The instruments were validated by two specialists from in curriculum affairs from Islamic University in Uganda. An estimate of 0.78 reliability coefficient of the instrument was determined with Cronbach alpha. The researcher visited the various sampled schools to give the questionnaire to the respondents. Mean rating was used to answered research questions with mean of 3.0.

Data analysis was done using descriptive and inferential statistics by use of the Statistical Package for Social Sciences (SPSS) 22.0 for Windows. Descriptive statistical analysis involved the use of means and percentages, while a Pearson Product Moment correlation analysis was run to obtain the relationship between students' competency in using ICT tools and implementation of the O'Level ICT curriculum in government-aided secondary schools. The researcher endeavored to cite every secondary source of data as a way of avoiding plagiarism.

RESULTS

This section deals with the presentation of results that have been arranged to key themes in the study objectives and starts with the demographic characteristics of the respondents. The key demographic characteristics were; gender, age and level of education. The frequencies have been based on the 192 respondents that returned the fully filled questionnaires.

Table 1: Demographic Characteristics of Respondents

Characteristic	Description	Frequency	Percentage
Gender	Male	93	48.4
	Female	99	51.6
Age	12-16 years	35	12.2
	17-20 years	134	69.8
	21 years and above	23	12.0
Class	S1	48	25.0
	S2	48	25.0
	S3	47	24.5
	S4	49	25.5

Source: Primary Data 2023

According the above findings, there was a higher female representation in the study (99%) as compared to the males (93%). This good representation of both sex indicate that O' Level education is becoming more gender balanced and that there was a significant representation of both sexes.

When it came to the age distribution, majority (69.4%) were aged between 17-20 years, with the least (12.0%) falling in the age bracket of 21 years and above. This shows that secondary education was becoming dominated by teenagers and adolescents which

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age bracket is more industrious and always adventurous, hence having the ability and zeal to venture into the new technological world.

According to the respondents' representation by class, all classes were equitably represented hence giving an opportunity for the study to have a cross section of different O' Level classes from where various perspectives of O' Level ICT curriculum implementation would be expressed for appropriate intervention.

Research Objective 1: Competence in using ICT tools among O' Level students in government aided secondary schools in Mable District.

The study sought to establish students' level of competence in using ICT tools in government-aided secondary schools in Mbale district.

Table 1: Students' Competence in using ICT Tools

Statement	Strongly Disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly Agree (%)	Mean
I know how to operate a computer	8(4.2)	56(29.2)	-	104(54.2)	24(12.5)	3.42
I can create documents of various types.	24(12.5)	36(18.8)	8(4.2)	72(37.5)	52(27.1)	3.48
I can save documents in the desired location.	28(14.6)	76(39.6)	8(4.2)	48(25.0)	32(16.7)	2.89
I can retrieve existing documents from the saved location.	32(17.4)	96(52.2)	8(4.3)	44(23.9)	4(2.2)	2.41
I can edit work using a computer	16(8.3)	64(33.3)	4(2.1)	76(39.6)	32(16.7)	3.23
I can install and use ICT software.	28(14.6)	76(39.6)	8(4.2)	54(28.1)	28(14.6)	2.89
I usually print work on my own	16(8.3)	64(33.3)	4(2.1)	86(44.8)	22(9.85)	3.23
I can use word processors like MS Word	36(18.8)	128(66.7)	4(2.1)	24(12.8)	-	2.71
I can do my exams on a computer	64(38.3)	80(41.7)	8(4.2)	28(14.6)	12(6.3)	2.50
I can use ICT to process data.	28(14.6)	76(39.6)	8(4.2)	48(25.0)	32(16.7)	2.89
I can use ICT tools to present data.	36(18.8)	88(45.8)	4(2.1)	40(20.8)	24(12.8)	2.71
I can use ICT tools for personal private learning	28(14.6)	76(39.6)	8(4.2)	56(60.9)	24(12.5)	2.89
I can use ICT to search for information	8(4.2)	56(29.2)	-	114(59.4)	14(7.3)	3.42
I can teach fellow students basic ICT skills	44(22.9)	80(41.7)	8(4.2)	48(25.0)	12(6.3)	2.50
I can use ICT to communicate with people	16(8.3)	64(33.3)	4(2.1)	76(39.6)	32(16.7)	3.23

Source: Filed Data 2023

Findings from the different statements regarding students' competence in using ICT Tools reveal that majority (66.7%) expressed that they knew how to operate a computer, with another majority (64, 6%) being able to create documents of various types, 56.3% could edit work using a computer, then 56.2% could print work on their own, while another 66.7% were able to use ICT to search for information, and 56.3% could use ICT to communicate with people. However, it was noted that majority of the respondents (54.2%) were not able to save documents in the desired location, 66.7% could not retrieve existing documents from the saved location, 54.2% could not install and use ICT software, 85.4% could not use word processors like MS Word, 75% could not do their exams on a computer, 54.2% could not use ICT to process data, 64.6% could not use ICT tools to present data, another 54.2% could not use ICT tools for personal private learning, and 64.6% could not teach fellow students basic ICT skills.

These findings suggest that as much as a few students in the study area where having basic ICT knowledge and skills, majority were missing, implying that majority of the students were not having the basic ICT competences, a situation that may affect effective curriculum implementation in the target secondary schools.

It can therefore be stated that the level of students' competence in using ICT tools was low as seen in the overall mean of 2.96, hence creating a need to establish the reasons why students' level of competence in ICT was as low as that.

Research Objective 2:

Challenges faced in enhancing students' competence in the use of ICT tools among O' Level students in government aided secondary schools in Mable District.

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Table 2: Challenges Faced in Enhancing Students' Competence in using ICT Tools

Statement	Frequency	Percentage
Students do not have enough access to ICT tools	167	87.0
The school lacks some ICT soft wares	87	45.3
Negative students' attitude towards learning ICT	43	22.4
Lack of enough time to practice ICT skills	125	65.1
Poor internet connectivity	102	53.1
Teachers lack enough ICT skills	44	22.9
Teachers have a negative attitude towards teaching ICT	39	20.3
Poor ICT tool maintenance	133	69.3
Lack of technical support	178	92.7
Outdated ICT tools	75	39.1
Lack of administrative support	121	63.0

Source: Field Data 2023

According to the above table, there were a number of challenges limiting students' competence in using ICT tool as; 92.7% mentioned lack of technical support, followed by 87.0% that mentioned that students did not have enough access to ICT tools, then 69.3% mentioned poor ICT tool maintenance, while 65.1% mentioned lack of enough time to practice ICT skills, 63.0%, stated lack of administrative support, poor internet connectivity (53.1%), the school lacking some ICT soft wares (45.3%). outdated ICT tools (39.1%), with 22.9% mentioning teachers lacking enough ICT skills, 22.4% mentioned negative students' attitude towards learning ICT, 22.9% mentioned teachers' lack enough ICT skills and the least (20.3%) stating that teachers had a negative attitude towards teaching ICT. The above findings indicate that ICT departments were facing enormous challenges that may hamper the effective implementation of the O' Level curriculum in the study area,

Research Objective 3:

The study also sought to establish the relationship between students' competence in using ICT tools and implementation of the O'Level ICT curriculum in government-aided secondary schools in Mbale District.

Table 3: Relationship between students' competence in using ICT tools and implementation of O' Level ICT Curriculum

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean
Knowledge of the ICT skills has made it easier for me to learn ICT	8(4.2)	56(29.2)	-	104(54.2)	24(12.5)	3.42
I can learn on my own and catch up with my friends because of the knowledge of ICT	4(2.1)	48(25.0)	4(2.1)	92(47.9)	44(22.9)	3.65
Knowledge of the ICT skills has made it easier for us to complete the school syllabus	16(8.3)	64(33.3)	4(2.1)	86(44.8)	22(11.5)	3.23
It is easy to learn and perform well in ICT because of the ICT knowledge and skills I have acquired	16(8.3)	64(33.3)	-	80(41.7)	32(16.7)	3.23

Source: Field Data 2023

Responses regarding the statement that knowledge of the ICT skills had made it easier for students to learn ICT indicate that majority (66.7%) were in agreement, with 33.3% that disagreed with the statement. This suggests that majority appreciated the fact that knowledge of ICT skills had a positive relationship with the implementation of ICT curriculum.

Findings on the statement that students could learn on their own and could catch up with their friends in case they missed lessons show that majority (70.8%) were in agreement, while 27.1% disagreed with the statement. This implies that competence in the use of ICT tools enabled students to learn by themselves and able to catch up with their peers in case they missed lessons.

Responses on the statement that knowledge of the ICT skills had made it easier for students to complete the school syllabus show that majority (56.3%) were in agreement, while a significant number (41.7%) were in disagreement with the statement. This suggests that as much as acquisition of ICT skills to a certain extent enhanced completion of the O' Level ICT syllabus, there might have been other factors that limited the effective completion of the O' Level ICT syllabus.

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On the other hand 58.3% of the respondents were in agreement, while 41.7% were in disagreement with the statement that it was easy to learn and perform well in ICT because of the ICT knowledge and skills the students had acquired. This suggests that knowledge of ICT facilitated better learning and performance in ICT.

According to the above findings it can be stated that there was a significant positive relationship between students' knowledge and skills in using ICT tools and the implementation of the O' Level ICT curriculum in the study area as witnessed by the overall mean of 3.38.

Correlation Analysis

In order to determine the strength of the relationship between students' competence in using ICT tools and implementation of the ICT curriculum, a Pearson product moment correlation was carried out and the following was established.

Table 4: Correlation between Students' competence and ICT curriculum implementation (N = 192)

Correlations		O' Level ICT Curriculum Implementation	O' Level ICT Curriculum Implementation
Students competence	Pearson Correlation	1	.727**
	Sig. (2-tailed)		.000
	N	192	192
Curriculum implementation	Pearson Correlation	.727**	1
	Sig. (2-tailed)	.000	
	N	192	192

** . Correlation is significant at the 0.05 level (2-tailed).

The table shows results of a Pearson product moment correlation. The findings are that the correlation between students' competence in using ICT tools and implementation of the O' Level curriculum is positive, significant and strong ($r = .727$, $N = 192$, $p = 0.000 < 0.05$). The relationship is strong since the r value is above .7 which is the yardstick as per Cohen (1988) who states that correlation scores below .3 indicate weak relationship, those between .3 and .6 are moderate and those in the region of .6 and above are strong. Accordingly, the null hypothesis set that, there is no statistically significant relationship between students' competence in using ICT tools and implementation of O' Level ICT curriculum is rejected and the alternative hypothesis is accepted in the process. The strong relationship affirms the fact that students' competence is an important factor in the realization of curriculum goals.

DISCUSSION

The findings on the level of students competence are in harmony with the views of Asabera and Enguah (2012), who stated that ICTs are the tools, facilities, processes and equipment that offer the required environment with the physical infrastructure and services for the generation, transmission, processing, storing and disseminating of information in all forms including texts, voice, data, graphic and videos. Relatedly Yunus, Nordin, Salehi, Sun and Embi (2013), posit that ICT is the technological tools and resources which are engaged to communicate, create, circulate and manage information. In this context, competence in the use of ICT tools can be seen as instrumental in promoting the ICT curriculum implementation.

Findings on the challenges being faced in the acquisition of student knowledge and skills in the use of ICT tools show a direct relationship with what Ihmeideh (2009) stated that in Africa, the introduction of computers into primary and secondary education is a recent phenomenon. He added that high subscription and ICT infrastructure costs coupled with the poor quality of service providers and the lack of basic infrastructure such as electricity can act as barriers to students' acquisition of ICT skills. This may be similar reasons for the poor attitude among some teachers towards teaching ICT and teacher's lack of knowledge and skills being one of the main hindrances in the use of ICT in education (Tapan Ihmeideh, 2009).

Regarding the relationship between students' competence in using ICT tools and implementation of the O' Level ICT curriculum, there was clear evidence that the more the knowledge and skills in using ICT tools, the higher the chances of effective ICT curriculum implementation. The positive relationship is consistent with the view expressed by Chien et al, 2014; Ghavifekr and Rosdy (2015) that student's competence greatly contributes to realization of curriculum goals.

CONCLUSION

The results confirm that majority of the students did not have adequate ICT knowledge and skills due to; lack of technical support, limited enough access to ICT tools, poor ICT tool maintenance, lack of enough time to practice ICT skills, lack of administrative support, poor internet connectivity inadequate ICT soft wares, outdated ICT tools, teachers lacking enough ICT skills, negative

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students' attitude towards learning ICT, teachers' lack enough ICT skills and teachers having a negative attitude towards teaching ICT.

The results however, indicate a strong positive relationship between students' competence in using ICT tools and implementation of the O' Level ICT curriculum in government-aided secondary schools in Mable District relationship ($r = .727$, $N = 192$, $p = 0.000 < 0.05$).

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RECOMMENDATIONS

The findings pointed to the fact that a significant number of students were not having adequate knowledge and skills for effectively using ICT tools and this was mainly due to limited resources needed for effective learning of such skills. Relatedly it is recommended that education stakeholders identify more sources of funding like, involving parents in contributing to the acquisition of the required resources. The education stakeholders need to be sensitized to appreciate the need for facilitating ICT competencies among the students for effective curriculum implementation.

REFERENCES

- 1) Akpabio, M. E., Ogiriki, I. B. (2017). Teachers use of information and communication technology (ICT) in teaching English language in senior secondary schools in Akwa Ibom State. *Equatorial Journal of Education and Curriculum Studies*, 2(2), 28-33.
- 2) Altun, M. (2018). The integration of technology into foreign language teaching. *International Journal on New Trend in Education and their implications*, 6(1), 22-27.
- 3) Amini, C.M., & Oluyide, O. (2020). Analysis of ICT Competencies among Distance Learning Students in selected Study Centres of the National Open University of Nigeria. *Journal of Learning for Development*, 7(1), 78-89.
- 4) Federal Ministry of Education. (2010). *National policy on information and communication technologies (ICT) in education*. Abuja: Federal Ministry of Education.
- 5) Cakici, D. (2016). *The use of ICT in teaching English as a foreign language*. Participatory Educational Research, IV, 73-77.
- 6) F. M. Ihmeideh, (2009) *Barriers to the Use of Technology in Jordanian Pre-school Settings, Technology, Pedagogy and Education*, 18(3), 325-341.
- 7) Jabbarova, A. (2020). *Formation of Professional Competencies in the Course of Preparing and Conducting Business Games in English Classes*. Nairobi:
- 8) Savara, V., and Parahoo, S. (2018). *Unraveling determinants of quality in blended learning: are there gender-based differences?* Int. J. Qual. Reliabil. Manage. 35, 2035–2051.
- 9) S. M. Tapan, Using ICT in Teaching–Learning at the Polytechnic Institutes of Bangladesh: Constrains and Limitations, *Teachers World-Journal of Education and Research*, 33-34, 2009, 207-217.
- 10) Yunus, M., Nordin, N., Salehi, H., Sun, C. H., Embi, M. A. (2013). Pros and cons of using ICT in teaching ESL reading and writing. *International Education Studies*, 6(7), 119-130.



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