Assessment of teachers' awareness and proficiency in utilization of information and communication technology (ICT) packages in classroom instruction

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Abstract

The teaching and learning landscape keep changing since the adoption of Information and Communication Technology (ICT). This led to teachers trying to fit into the ICT-supported teaching/learning environment. The Government, Old Students' Associations and other stakeholders have tried to ensure through trainings that teachers meet up with the requirements posed by the adoption of ICT in education. In this study, teachers' awareness and proficiency in utilization of ICT packages for classroom instruction in Modella Secondary School, Ijebu-Ode, Ogun State, was examined. The study adopted the descriptive survey research design. Three research questions were raised. The study adopted the Technology Acceptance Model (TAM). "Teachers ' ICT Awareness and Utilization Proficiency Scale (TIA UPS) " (r = . 98) was used for data collection. Simple percentage, frequency count and mean (2.50) were used to answer the questions raised. The findings showed that, to an extent, teachers are aware (X= 2.73) of ICT packages but possess low level of proficiency (2.46) in utilization. Also, teachers face challenges including irregular power supply and inability to integrate ICT packages in their subjects. It was recommended, among others that more awareness should he created for the teachers and there should be provision for in-house trainings and workshops.

Keywords: Awareness, Proficiency, Utilization, ICT Packages, Classroom Instruction

Introduction

There is no gainsaying in the fact that Information and Communications Technologies (ICTs) have permeated all areas of human endeavor and notably, it has infiltrated almost all parts of the educational system. Importantly, ICTs are not just relevant in education, the tools have also transformed and still transforming the education sector all over the world. Information and Communications Technologies (ICTs) have brought unprecedented progress to how the processes of education are being operated in schools.

The need for Information and Communications Technologies (ICTs) in education have not been more prominent in history than recently when the COVID-19 virus emerged globally and nobody knew that it would lock all schools all over the world out of the classroom. Many advanced nations took to the Internet to reach their students but the case was not in Nigeria where personal observations have shown that there are no standard and efficient infrastructures in place to handle the large number of students and teachers and the teaching-learning activities are mostly done formally in the classrooms. With the advantages in ICT, teachers can reach students who are not physically present in the classroom and teach them the contents of their lessons, In addition, students' works can be graded at the press of a button while scores are also recorded where appropriate in the teacher's personal databases. Furthermore, effective communication could take place between teachers and school administrators, teachers and students, teachers and parents, parents and school administrators and between employers and the employees in the educational setting where ICTs are leveraged on. All these and more have been facilitated through the introduction and utilization of relevant ICT packages in educational setting. Some of these ICT packages include spreadsheets like Microsoft

Excel, word processors like Microsoft Office Word, database app like Microsoft Access. Other ICT facilities and equipment used overhead projectors, radio, television, computers, optical fibers, fax machines, CD Rom, the Internet, electronic notice boards, slides, digital multimedia, video/V CD machines and so on (Apagu & Wakili, 2015).

In addition, personal observations reveal that classroom application of ICT packages reduce teachers' workloads by making their tedious tasks easier and faster to perform just as they assist students in learning at their own pace. ICT packages utilization also improve the generality of the educational systems of countries that embrace and implement the packages effectively. In the area of evaluation which some teachers consider tedious, ICT packages are now effectively deployed and used to evaluate students' performance, grade them automatically and also perform some statistical collation of students' scores for easy interpretation; provide direct feedbacks to teachers, students, school administrators and other stakeholders in education. In view of these, awareness and relevant utilization of ICT packages for educational use therefore become imperative for teachers in Nigeria (Oyeronke & Fagbohun, 2013).

According to Oyeronke and Fagbohun (2013), ICTs are packages that are utilized to access, collate, analyze and present information in various settings of human life. These ICT packages are made up of hardware, software's, and infrastructures for local networking as well as video conferencing. The use of ICT packages in education has been recognized and documented (Kumar, Che &DSilva, 2008). Okolocha and Nwadiani (2015) were quick to add that the use of ICT in classroom instructions can be done with or without the physical presence of both teachers and students physical as seen in traditional instructions to teaching/learning. Hence, human input is lowered while students are able to learn effectively. However, this does not connote that ICT would eventually replace teachers completely from the classrooms. In view of the relevance and effectiveness of applying ICT packages in education, the 21st Century teachers are expected to be aware of corresponding ICT packages which are specifically developed or adapted for use in education and the classroom specifically. Hence, the ability of classroom teachers to find out and effectively utilize ICT packages for teaching and learning purposes has become an

important pan of education systems. In view of this, classroom teachers are expected by their employers to be better users of IT packages for educational purposes and some of these packages or apps include spreadsheets like Microsoft Excel, word processors like Microsoft Office Word, database like Microsoft Access, CorelDraw, the Internet, to mention a few. Babajide & Bolaji, (2003) and Bamidele (2006) listed some examples of educational packages and equipment to include optical fibers, television, overhead projectors, slides, computers, radio, the Internet, electronic notice boards, digital multimedia and so on.

Research Objectives

The study aims at determining the experiences of the teachers in the school in relation to their level of awareness of ICT packages for classroom instruction; their level of proficiency in utilizing ICT packages for classroom instruction and also find out the challenges to their utilization of ICT packages for classroom instruction in the school. This study was undertaken in view of the need to assess the skills of the teachers of Modella Secondary School who have had several training geared toward the use of ICT in education. This study was also borne out of the interactions that the researcher have had personally with most of the teachers in the school on technology use in education in which some of the responses were not too good especially when such responses come from teachers who have been trained to use technology in education.

Theoretical Framework

The Technology Acceptance Model (TAM) This study employs the Technology Acceptance Model (TAM) as developed by Davis in 1989. The TAM was built on the Theory of Reasoned Action (TRA) by Fishbein and Azjen, (1975). According to Fishbein and Azjen (1975), the model is founded in the theory of Social Psychology and particularly in the Theory of Reasoned Action (TRA). The Theory of Reasoned Action (TRA) proposed that attitudes and perceptions are influenced by beliefs and this leads to intentions and behaviour. In view of this, Davis in 1986 and 1989 introduced the constructs in the original TAM as Perceived Usefulness (PU), Perceived Ease of Use (PEOU), attitude, and behavioral intention to use. Among the constructs, PU (perceived usefulness) and PEOU (perceived ease of use) form an end-user's beliefs and perceptions on a technology (CBT) and therefore predict his or her attitude and perceptions toward the technology, which in turn predicts its acceptance.

Based on the propositions of this model, Perceived Usefulness (PU), what teachers whose ICT facilities are being introduced to or trained on will accept the ICT facilities for use if they perceive that it will assist their work and aid their students' learning just as their Perceived Ease of Use (PEOU) of the technologies being introduced will aid their beliefs and perceptions on technology. Therefore, their conclusions on perceived usability and ease of utilization of ICT packages for teaching and learning will predict their effort to learn more about ICT packages for classroom instructions and the need to acquire skills to be proficient in their usage and both of

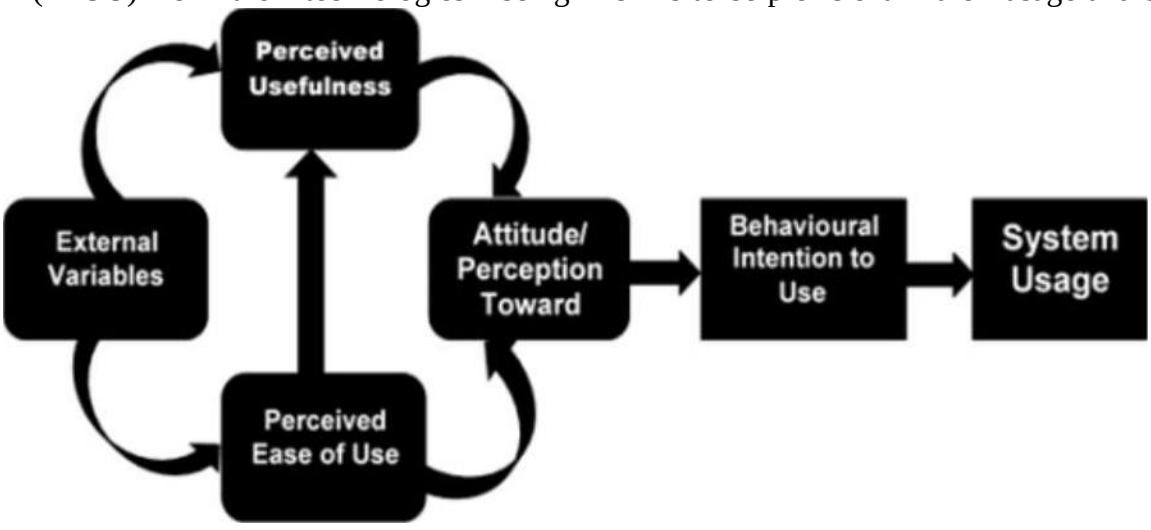

Figure 1: Technology acceptance Model (TAM), (Source: Davis, 1989)

these will finally predict its (ICT, technology) acceptance. In view of the trainings for developing ICT skills for teaching and learning purposes and in addition to the continuous provisions of ICT packages and equipment for use in the school under study, the need therefore arises to assess the level of ICT awareness and proficiencies of the teachers in the school in order to find out their level of awareness and proficiencies in using ICT packages at their disposal for classroom instructions.

For teachers to use ICT packages at all, awareness, alongside good understanding of the technologies is very essential. According to Shikden (2015), adequate awareness assists teachers to be critical of selecting and using the necessary ICT packages to support teaching and learning in their classrooms. Also, teachers' awareness of ICT packages for classroom instruction will enable them to compare specific devices based on performance, affordability, reliability amongst other criteria. Awareness is essential for effective technology integration in education. This offers teachers various opportunities to complete their works with greater flexibility which were strenuous manually (An, Sharif, Wong, &Marriappan, 2014, in Chukwuemeka & Samaila, 2019). In the area of proficiency in usage, Jacobsen (2012) reported that proficiency in the use of ICT packages by teachers provide many possibilities for them and their students to experience opportunities which had previously been nonexistent or, at best, limited to them. Successful teachers understand the needs of students, the requirements of classroom tasks, and how ICT packages can be used to foster independence (Constantinescu, 2015). Research has also shown that there is a high level of underutilization and abandonment of ICT facilities. ICT facilities are sometimes only kept in schools but not utilized in addition to underutilization in some cases (Coleman, 2011). Also, it has been reported that potentials of ICT technologies for teaching and learning are likely to be seen not in the technological facilities but rather, in the abilities of teachers to utilize them (Chukwuemeka & Samaila, 2019). Hence, the extent of teachers' use of ICT packages is determined by their attitude, experience and quality (Onivehu, Ohawuiro & Oyeniran, 2017). On the challenges of the use of ICT packages by teachers, Shikden (2015) reported that the fear of adopting and using technologies, especially when newly introduced, is a challenge. Chukwuemeka and Samaila (2019) also reported that many teachers have limited knowledge of ICT packages for classroom instruction and this has brought some difficulties to identifying and using the technologies for the benefit of students. Furthermore, absence of trainings has been identified as one of the challenges to using ICT. Majority of teachers and some staff who support them are not adequately trained to use the technologies just as large classes also negatively affects the opportunities for teachers to utilize technologies (Mede, 2016, in Chukwuemeka et. al., 2019).

Statement of the Problem

Stakeholders in education - the Government, Old Students' Association, parents, other public and private organizations invest in education to ensure that the objectives of the curriculum are not just achieved and that students pass excellently. Sometimes, the investments extend to teachers through trainings to ensure that they remain relevant and updated on the job. However, it has also been personally observed over the years that some of these investments do not yield good results for many reasons, some of which included the negative attitude of teachers toward technology acceptance and inclusion in education or their specific classrooms. For instance, in the school under study, some teachers are still being skeptical about technology utilization as some see it as threat to their work while others do not just believe that technology can support their works. As a result of this and other reasons, teachers undergo trainings but remain almost as they were before the training and the result is low level of awareness of ICT packages, poor levels of proficiencies and sometimes, outright rejection. On the other hand, those who have some level of awareness show lack of adequate pedagogical knowledge for effective utilization of the packages in the

discharge of their daily classroom instructions. This is despite some of the teachers having been trained through seminars and workshops on ICT packages application in classrooms. There is therefore the urgency of carrying out the present case study in order to find out teachers' awareness and utilization of Information and Communication Technology (ICT) packages for classroom instruction in Modella Secondary School, Ijebu Ode LGA, Ogun State.

Purpose of the Study

Generally, this study assessed teachers' awareness and proficiency in utilization of ICT packages for classroom instruction in Modella Secondary School, Ijebu-Ode, LGA, Ogun State. Specifically, the study attempted to:

l. determine teachers' level of awareness of ICT packages for classroom instruction;
2. determine teachers' level of proficiency in utilizing ICT packages for classroom instruction;
3. find out the challenges to teachers' utilization of ICT packages for classroom instruction.

Research Questions

l . To what extent are teachers aware of ICT packages for classroom instruction?
2. What is the level of proficiency of teachers in utilizing ICT packages for classroom instruction?
3. What are the challenges to teachers' utilization of ICT packages for classroom instruction?

Methodology

The study's design was descriptive survey research design. The study population was made up of all the (83) teaching staff of Modella Secondary School, Ijebu-Ode where the study was conducted. The purposive sampling technique was used to select the available teachers while others were very busy with some other official assignments as at the time of study. The "Teachers' ICT Awareness and Utilization Proficiency Scale (TIAUPS)" (r= .98), was used for data collection. Section A of the instrument requested for the demographics of teachers including sex, age, qualification, years of experience, etc. Section B contained items on teachers' awareness of ICT packages for classroom instruction with options "Not at all" (l), "To an extent" (2), "To a large extent" (3), "To a very large extent" (4). Section C contained

Results

items on teachers' proficiency in the utilization of ICT packages for classroom instruction with the options "Very Low" (l), "Low" (2), "High" (3), and "Very High" (4) while section D contained items on challenges to teachers' utilization of ICT packages for classroom instruction with the options "Not a challenge", "Minor challenge" and "Major challenge". The instrument was administered to the respondents during school hours and retrieved from them as agreed. The data from the instrument were collated and used to answer the research questions raised in the study using frequency counts, simple percentages and mean scores (2.50).

RQ 1 -To what extent are teachers aware of ICT packages for classroom instruction?

Table 1 — Showing result on extent of teachers' awareness of ICT packages for classroom instruction.

	Items		Conclusion
1.	My subject(s) can be taught using ICT packages for classroom instruction.	2.96	To a large extent
2.	ICT tools are important supports of effective teaching and learning in the classroom.	3.13	To a very large extent

3. The school authority always creates awareness of current trends in ICT packages for teaching staff in the school.	2.47	Not at all
4. The Ministry of Education always create awareness of current trends in ICT packages for teachers in the school.	2.56	To an extent
5. Screen projector is an important classroom ICT equipment.	3.13	To a very large extent
6. Computer and web-based packages like Microsoft Word, Power Point, Excel, Corel Draw, Sway, Skype, etc. can be used to facilitate teaching and learning in and outside the classroom.	3.07	To a very large extent
7. YouTube videos can be used to teach in the classroom.	2.27	Not at all
8. The Internet is a good ICT tool for classroom instruction.	2.93	To a large extent
9. Televisions/radios are useful technologies for classroom instruction.	2.40	Not at all
10. Digital camera is an important ICT tool for classroom instruction.	2.42	Not at all
11. There are better ICT—based tools/apps for grading and assessing students' work instead of manual grading processes.	2.62	To an extent
12. I am aware of curriculum relevant online resources (e.g. Wikipedia, blogs, websites etc.) for supporting classroom instruction.	2.82	To an extent

Average Mean = 2.73

Decision Rule: A mean score of 2.5 (to an extent) and above (to a large extent or to a very large extent) shows that teachers are aware of ICT packages for classroom instruction. However, a mean score of less than 2.5 indicates no awareness of ICT packages for classroom instruction.

Based on the result in Table l, the Average Mean (X— 2.73) shows that the teachers studied, to an extent, are aware of ICT packages for classroom instruction. The individual result shows that the teachers believe (X— 2.96) that their subject(s) can be taught using ICT packages for classroom instruction and that ICT tools are important supports of effective teaching and learning in the classroom (R— 3.13). However, the teachers stated that the school authority does not always create awareness of current trends in ICT packages for teaching staff in the school (R— 2.47). Also, the result shows that the Ministry of Education always create awareness of current trends in ICT packages for teachers in the school (X— 2.56); screen projector is an important classroom ICT equipment 3.13); computer and web-based packages like Microsoft Word, Power Point, Excel, Corel Draw, Sway, Skype, etc. can be used to assist in effective teaching & learning (R— 3.07) but do not know that YouTube videos can be used to teach in the classroom (R— 2 27). In addition, the result shows that the teachers know that the Internet is a good ICT tool for classroom instruction (R— 2.93) but are not aware that televisions/radios are useful technologies for classroom instruction (X— 2.42). Furthermore, the result shows that there are better ICT—based tools/apps for grading and assessing students' work instead of manual grading processes (R— 2.62) and that teachers are aware that there are curriculum relevant online resources (e.g. Wikipedia, blogs, websites etc.) for supporting classroom instruction (R— 2.82).

RQ 2 —What is the level of proficiency of teachers in utilizing ICT packages for classroom instruction?

Table 2 — Showing result on level of proficiency of teachers in utilizing ICT packages for classroom instruction.

	Items		Conclusion
1.	I can set up and use projector along with computer for classroom instruction.	2.27	Very low
2.	I can perform basic computer tasks such as opening and gyypggupg gugptop or desktop computer.	2.67	High
3.	I can use e -mails in sharing links or getting feedback from	2.02	Very low students.
4.	I can us e social media networking tools like Facebook,	2.62	High to communicate with students and staff.
5.	I can use computer-based packages like Microsoft Word, Power	2.33	Very low Point, Excel, Corel Draw etc. to facilitate instruction.
6.	I can type and compose computer-based lesson notes.	3.18	Very highly
7.	I can use e-mail apps to compose e -mails, attach files, and send emails/open e-mails for classroom relevance.	2.49	Very low
8.	I can scan documents using scanning machines or smartphone- based scanning apps.	2.56	LOW
9.	I can use Computer Based Testing (CBT) and E -marking apps.	2.62	High
10.	I can use conversion apps to convert .doc to .pdf and vice versa.	2.36	Very low
11.	I can use computer -based packages (for instance, Ad obe, Web Page Design, File Stnwture, IPSO and Access).	2.24	Very low
12.	I can use computer tools such as Skype and Webcam for video calls and audio-visual recording	2.29	Very low
13.	I can use smartphones-based apps (e.g. Skype, grading apps etc.) for educational purposes in the classroom.	2.47	Very low
14.	I can use the Internet for advanced search for relevant materials for teaching.	2.09	Very low
15.	I can use applications such as MS Excel to compute students' scores for immediate feedback in the classroom.	2.76	High
16.	I can use applications such as MS PowerPoint to plan and deliver classroom instruction. Average Mean = 2.46	2.47	Very low

Decision Rule: A mean score of 2.5 (low) and above (high or very high) shows that teachers are proficient in the use of ICT packages for classroom instruction. However, a mean score of less than 2.5 indicates very low proficient in the use of ICT packages for classroom instruction. Based on the result in Table 2, the Average Mean (X— 2.46) shows that teachers of the studied school have very low proficiency in the utilization of ICT packages for classroom instruction though they show proficiency in certain areas of ICT usage which include basic use of computers. The individual result shows that most teachers cannot set up and use projector along with computer for classroom instruction 2.27) but can perform basic computer tasks such as opening and navigating a laptop or desktop computer 2.67). Most teachers cannot use e-mails in sharing links or getting feedback from students (X= 2.02) but can use networking media such as Facebook, WhatsApp, Skype and so on to interact with students' and staff (X= 2.62). Also, most teachers cannot use computer-based packages such as Microsoft Office Word, Office Power Point, Excel, Corel Draw and so on. to facilitate instruction 2.33) but they can type and compose computer-based lesson notes (X= 3.18).

Most teachers cannot use e-mail apps to compose emails, attach files, and send emails/open e-mails for classroom relevance 2.49) but they can scan documents using scanning machines or smartphone-based scanning apps (X—2.56), use Computer Based Testing (CBT) and E-marking apps (R— 2.62) but cannot use conversion apps to convert .doc to .pdf and vice versa (R— 2.36). In addition to this, most teachers cannot utilize packages such as Adobe, Access; design Web Page Design and so on (X— 2.24), cannot use computer tools such as Skype and Webcam for video calls and audio-visual recording 2.29), cannot use smartphones-based apps (e.g. Skype, grading apps etc.) for educational purposes in the classroom 2.47), and cannot use the Internet to do advanced search for relevant materials for teaching 2.09). Finally, the result shows that while the teachers cab use

Table 3 — Showing results on the challenges to teachers' utilization of ICT packages for classroom instruction.

S/N	Items	Not a challenge	Minor challenge	Major challenge
1.	Irregular power supply	1 (2.2%)	5 (11.1%)	39 (86.7%)
2.	Absence of ICT packages in the school.	9 (20.0%)	13 (28 9%)	23 (51.1%)
3.	Non-availability of access to use the ICT packages in the school.	6 (13.3%)	17 (37.8%)	22 (48.9%)
4.	Poor knowledge of ICT packages for classroom instruction on the part of teachers.	11 (24.4%)	17 (37.8%)	17 (37.8%)
5.	Inability to integrate ICT packages in my subject as a result of lack of skills needed.	13 (28.9%)	15 (33.3%)	17 (37.8%)
6.	Available but outdated ICT resources.	7 (15.6%)	21 (46.7%)	17 (37.8%)
7.	Lack or poor knowledge on the inculcation of ICT packages in teaching.	11 (24.4%)	18 (40.0%)	16 (35.6%)
8.	Utilization skills available but no ICT packages in the school.	14 (31.1%)	20 (44.4%)	11 (24.4%)
9.	Lack of computer literacy skills for utilizing ICT packages.	14 (31.1%)	20 (44.4%)	11 (24.4%)
10.	Absence of standby support in case of technical need to keep ICT packages functional while in the class.	10 (22.2%)	10 (22.2%)	11 (24.4%)
11.	Insufficient time allocated on the school time table to cater for use of ICT packages in classroom.	1 (2.2%)	13 (28.9%)	31 (68.9%)
12.	Use of ICT packages for classroom instruction is too expensive,	7 (15.6%)	21 (46.7%)	17 (37.8%)
13.	Lack of government support.	4 (8.9%)	8 (17.8%)	33 (73.3%)

applications such as MS Excel to compute students' scores for immediate feedback in the classroom (X— 2.76), yet, most cannot use applications such as MS PowerPoint to plan and deliver classroom instruction (X= 2.47) RQ 3 -What are the challenges to teachers' utilization of ICT packages for classroom instruction?

According to the results in the Table 3, the major challenges to ICT utilization in the study are irregular power supply (39, 86.7%), absence of ICT packages in the school (23, 51.1%), nonavailability of access to use the ICT packages in the school (22, 48.9%), poor knowledge of ICT packages for classroom instruction on the part of teachers (17, 37.8%), inability to integrate ICT packages in my subject as a result of lack of skills needed (17, 37.8%), lack of adequate time on school time-table to cater for use of ICT packages in classroom (31, 68.9%), absence of technical supports to ensure that ICT packages continue to functional effectively (I l, 24.4%) and lack of government support (33, 73.3%). The minor challenges are available but outdated ICT resources (21, 46.7%), lack or poor knowledge on integrating ICT packages in teaching (1 8, 40.0%), utilization skills available but no ICT packages in the school (20, 44.4%), lack of computer literacy skills for utilizing ICT packages (20, 44.4%) and use of ICT packages for classroom instruction being too expensive (21, 46.7%).

Discussions

The findings of the study have shown that, to an extent, the teachers are aware (X= 2.73) of ICT packages for classroom instruction. The finding implies that awareness alone is not enough to apply ICT packages in education. For teachers to use ICT packages at all, a high level of awareness, alongside good understanding of the technologies is very essential. This agrees with Shikden (2015) who reported that adequate awareness assists teachers to be critical of selecting and using the necessary ICT packages to support teaching and learning in their classrooms. Also, teachers' awareness of ICT packages for classroom instruction will enable them to compare specific devices based on performance, affordability, reliability amongst other criteria. Awareness is essential for effective technology integration in education. Awareness also offers teachers various opportunities do their work seamlessly if the packages are eventually adopted. (An, Sharif, Wong, & Marriappan, 2014, in Chukwuemeka et. al., 2019).

The finding also showed that teachers in the studied school have very low level of proficiency (X= 2.46) in the utilization of ICT packages for classroom instruction though they show proficiencies in certain areas of ICT usage which include basic use of computers. Having a high-level awareness of ICT packages for classroom instruction does not amount to being able to use them effectively. This agrees with Coleman (2011) who reported that ICT facilities are sometimes only kept in schools but not utilized in addition to underutilization in some cases. Also, it has been reported that potentials of ICT for teaching is not based on the technologies themselves but on how teachers utilize them (Chukwuemeka et. al., 2019). Hence, the extent of teachers' use of ICT packages is determined by their attitude, experience and quality (Onivehu, Ohawuiro & Oyeniran, 2017). In addition, Jacobsen (2012) reported that proficiency in the use of ICT packages by teachers provide many possibilities for them and their students to experience opportunities which had previously been nonexistent or, at best, limited to them. Also, successful teachers understand the needs of students, the requirements of classroom tasks, and how ICT packages can be used to foster independence (Constantinescu, 2015).

Finally, the study reported the major challenges to ICT utilization in the study to be irregular power supply, absence of ICT packages in the school, non-availability of access to use the ICT packages in the school, poor knowledge of ICT packages for classroom instruction on the part of teachers, inability to integrate ICT packages in my subject as a result Of lack Of skills needed, shortness Of time allocated on school time-table to cater for use of ICT packages in classroom, absence of standby supports in relation to technical needs to ensure that ICT packages are functional always and lack of government support. The minor challenges are available but outdated ICT resources, absence of orientation on the integration of ICT packages into teaching, utilization skills available but no ICT packages in the school, lack of computer literacy skills for utilizing ICT packages and use of ICT packages for classroom instruction being too expensive.

According to Chukwuemeka et. al., (2019), many teachers have limited knowledge of ICT packages for classroom instruction and this has brought with it some difficulties in identifying

and utilizing ICT packages. Furthermore, absence of retraining was identified as a challenge to using ITC packages. According to Coleman (2011), most teachers and their support staff are not adequately trained to use the technologies. In addition, large classes negatively affect teachers in effectively utilizing the huge potentials of ICT packages.

Recommendations The followings are recommended based on the findings of the study:

1. More awareness should be created for the teachers in the school and this could be done through, for instance, in-house trainings, workshops, seminar and the likes.
2. In addition to the above, awareness should not just be provided for the teachers, they should also be trained, using hands-on approaches to ensure that they can apply what they have learnt in classrooms situations and also in other learning arenas.
3. Finally, it is recommended that the school authority, in relation with other stakeholders such as the Government, the Old Students Association, parents and the immediate communities should ensure that relevant solutions are proffered to the challenges facing teachers' use of ICT packages for classroom instruction in the school studied.

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