Assessment of Teachers' Competence in Computer Software In Model Primary Schools In Rivers East Senatorial District

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ABSTRACT
This study was aimed at assessing teachers' computer competence in model primary schools in Rivers East Senatorial District. The study was a descriptive survey research design with population of 1779 teachers and a sample size of 726 teachers drawn through simple random sampling technique. A structured instrument named "Teachers' Computer Competence Questionnaire (TCCQ)", designed in a 4-point Likert format was used for data collection. A reliability co- efficient of 0.97 of the instrument was obtained using Cronbach's Alpha. Mean and standard deviation were used to analyze the data. The result showed that teachers in model primary schools in Rivers East senatorial District were competent in the use of word processor, fairly competent in database, email and internet browsing, but not competent in excel and presentation software. It was therefore recommended that head teachers should organize computer training and retraining programs on computer skills for teachers and also provide effective technology leadership in their schools.
Keywords: Assessment, Computer Software, Competence, Model primary school

INTRODUCTION
The acquisition of computer competence is a very important issue in the educational system of most countries. This is as a result of its usefulness in teaching and learning. Computers are used just as pen and paper for writing and for communicating. They are preferred today because of their speed, ability to duplicate information and easy to edit. They also enable effective communication through the use of emails, blogs and groups over the internet. For instance, 'multimedia' that is a combination of text, graphic art and sound, is used to compile thoughts and ideas into slideshow presentations and videos (Basel, 2017).
Computer competence is valued today because it is integral to all areas of study and work. It is needed in reading, writing and arithmetic, communication and calculations. Teachers and pupils need this competence to do their work and search for online solutions to problems.
Computer competence is defined as skills, knowledge and attitude that enable teachers effectively use Information Communication Technology (ICT) in the classrooms. Evers (2018) see it as an integrated set of knowledge, skills and attitudes for functional use of Information Communication Technology (ICT) in schools. ICTs are transformational tools which have great impact on learning and when used properly, reinforce existing pedagogical practices as well as change the way teachers and students interact in the classroom (Trucarus, 2005). The most effective use of computers are those in which they teachers aided by ICT tools can challenge pupils' understanding and critical thinking through class discussions or individual work. (Trucarus, 2005). Information communication technology also help teachers and students to dig deeper into a given subject matter by moving beyond cognition to application of knowledge.

Fort (2017) in his study on computer skills noted some basic computer competence that every professional teacher should aim at acquiring. They are: word processing skills, spreadsheet skills, database skills, electronic presentation skills, internet navigation skills, email management skills and touch typing skills. He maintained that it is mandatory for every teacher to master them (Fort, 2017).

Basic Computer Skills

Word Processing skills: Word Processor is a computer software used to manipulate, format text, write letters, and create memos. It provides a wide varieties of features such as thesaurus, Font options, word Art options and many more. A teacher can use the knowledge of this skill to create weekly reports, lesson notes and assignments. Yildirim (2007) observed in their study that most teachers in Turkey feel competent with word processor than any other computer skills. It is known to make lessons easier, interesting and motivating.

Excel skills: This software allows teachers conduct some of the most important aspects of their teaching duties in a convenient and methodical way (Fort, 2017). Excel is used to compile large amount of data into organized spreadsheets. It provides formula and functions to perform calculations. Some of the skills are ability to enter data in cells, use SUM functions, OR functions and IF functions. Most of these functions help teachers compile grades for pupils.

Database Skills: This software is used to create a collection of data stored in electronic form. The skills needed by a teacher in database are the ability to create database tables, storing and retrieving data from the tables. Also important, is knowing how to create queries for information found in your school's databases (Fort, 2017).

Electronic Presentation Skills: It is a software application needed to showcase lessons in form of slides. Graphics, videos and images can be added to slides to make them interesting and informative. Teachers should master the skills of creating electronic presentations for their classes and also know how to showcase them to their students.

Internet Navigation Skills: The internet is a great repository of information and a good source of teaching resources. This software is used to locate, retrieve and display content on the World Wide Web (Beal. 2020). The teacher should be conversant with launching a web page; navigating a webpage; closing a webpage and downloading from a webpage.

Email Skills: Email has become a standard means of written communication and everyone is expected to master how to operate it. As educators, teachers are expected to be skilled in sending and receiving email messages. They are expected to use the function of mass mailing to send information to parents of pupils in their classes.

Touch Typing: Touch typing is an important skill for teachers. It actually improves typing speed as well as accuracy. In touch typing, the teachers depend on their motor reflexes as opposed to sight while typing (Fort, 2017). It makes typing bulky lesson notes easier and faster. Having the ideal posture is also needful in touch typing. The aforementioned skills are needful for effective task performance and garnering of information which are needed for production, management, research, problem solving and decision making in schools (Common Wealth of Australia, 2010).

In addition, research has noted that developed economies such as Britain, China and United States of America are built on the ICT competence of workers (Common Wealth of Australia, 2010). This prompted the government of Australia to declare the acquisition of ICT skills as a foundation for success in all school learning areas. Young Australian were informed to be creative and productive users of ICT (MCEETYA, 2008) equipped with the necessary knowledge and skills to use ICT in contemporary learning and living.

Accordingly, the Federal Government of Nigeria emphasized the importance of ICT in the education system by making computer studies compulsory in both primary and secondary schools (National Policy of Education, 2004). Since the policy statement, researchers had observed the unsuccessfulness of ICT integration in most Nigerian schools (Yusuf, 2005; Omoniyi &Quadri 2013; Eze & Akubuguo, 2014). To buttress their point, they listed teachers' computer incompetence and lack of computer facilities as major

reasons for policy failure. Another study by Omoniyi and Quadri (2013) on the competence of Nigerian public secondary school teachers on ICT, discovered that majority of the teachers do not have the required competence in the use of computer. It is therefore pertinent to say that making computer study compulsory in schools is not enough prompt to get teachers acquire ICT skills. According to Knezek, Christensen, Hancock and Soho (2000), a teachers' computer competence is one of the key element to successful integration of ICT in the classroom. The inability of teachers to acquire ICT skills will cause a failure in the use of technology for classroom teaching and learning.

The emphasis on teachers in this study is because teachers deal directly with pupils and are in the position to influence students on the use of ICT as well as to prepare them for the future. The era of teachers' ignorance on ICT skills has gone. Teachers need to equip themselves by getting the necessary computer competence required to prepare students for the world of works.

Statement of problem

With vast arrays of computer facilities in Model primary schools in Rivers State, do the teachers have the basic ICT competence to guide the pupils to become effective computer users?

This study seeks to assess the level of teachers' basic computer competence in model primary schools in Rivers East Senatorial District.

Research Questions

1. What level of competence do teachers possess in the use of word processors in Model primary schools in Rivers East Senatorial District?
2. What level of competence do teachers possess in the use of database software in Model primary schools in Rivers East Senatorial District?
3. What level of competence do teachers possess in the use of excel software in Model primary schools in Rivers East Senatorial District?
4. What level of competence do teachers possess in the use of presentation software in Model primary schools in Rivers East Senatorial District?
5. What level of competence do teachers possess in the use of email software in Model primary schools in Rivers East Senatorial District?
6. What level of competence do teachers possess in the use of internet in Model primary schools in Rivers East Senatorial District?

METHODOLOGY

The study adopted a descriptive survey research design. The population of the study comprised of 1,779 teachers in 163 model primary schools in Rivers East Senatorial District (Source: Rivers State Universal Basic Education Board, 2016/2017). A simple random sampling was used to select 726 teachers who were used for the study. The instrument used in the study was a set of questionnaire developed through intensive literature and based on six research questions. The instrument for data collection was a structured questionnaire titled "Teachers Computer Competence Questionnaire (TCCQ)". The response options were (1) Not Competent=NC (2) Fairly Competent=FC (3) Competent=C (4) Very Competent=VC. A total of 726 questionnaires were distributed but only 643 responded to the survey instrument. The instrument was validated by two experts in the Department of Measurement and Evaluation. Cronbach's Alpha was used to analyze the test and a reliability coefficient value of 0.97 was obtained. The data collected were analyzed using mean and standard deviations. A cut-off point value of 2.50 on a 4-point rating scale was used to interpret the result.

RESULTS

Research Question 1: *What level of competence do teachers possess in the use of word processor in Model primary schools in Rivers East Senatorial District?*

Table 1: Mean response on teachers' competence in word processor

S/N	ITEMS	M	S.D	Remarks
1	Ability to use the keyboard and type	2.85	0.70	C
2	Ability to create files	2.66	0.91	C
3	Ability to format text	2.60	0.92	C
4	Ability to use copy, cut, paste and print commands.	2.53	0.99	C
5	Ability to create folders	2.48	0.96	C
	Grand Mean	2.62	0.89	C

Table 1 above shows the mean responses regarding teachers' competence in word processor in model primary schools. As shown, grand mean of 2.62 implies that teachers are competent in word processor. The table also reveals that teachers felt most competent in the use of keyboard whereas they felt less competent in creating folders.

Research Question 2: *What level of competence do teachers possess in the use of database in model primary schools in Rivers East Senatorial District?*

Table 2: Mean response on teachers' competence in Database software

S/N	Items	M	S.D	RMK
6	Ability to find records in database software	2.31	0.97	FC
7	Ability to sort files in database	2.28	0.99	NC
8	Ability to review records in database software	2.25	1.02	FC
9	Ability to edit records in database software	2.15	1.04	FC
10	Ability to sort files	2.10	1.02	FC
	Grand mean	2.21	1.00	FC

Table 2 above shows the mean responses regarding teachers' competence in database software in model primary schools. As shown, grand mean of 2.21 implies that teachers are fairly competent in the use of database software. The table also reveals that teachers have least ability in sorting files in database.

Research Question 3: *What level of competence do teachers possess in the use of excel in model primary schools in Rivers East Senatorial District?*

Table 3: **Mean response on teachers' competence in Excel software**

S/N	Items	M	S.D	RMK
11	Ability to enter data in cells	2.04	0.91	FC
12	Ability to use the SUM function	2.00	0.91	FC
13	Ability to use IF function	2.00	0.90	FC
14	Ability to use excel AND function	1.99	0.89	NC
15	Ability to use excel OR function	1.98	0.89	NC
	Grand Mean	1.98	0.90	NC

Table 3 above shows the mean responses regarding teachers' competence in excel software in model primary schools. As shown, grand mean of 1.98 implies that teachers are not competent in excel software.

Research Question 4: *What level of competence do teachers possess in the use of presentation software in model primary schools in Rivers East Senatorial District?*

Table 4: Mean response on teachers' competence in presentation software

S/N	Items	M	S.D	RMK
16	Ability to do slide presentation	1.97	0.88	NC
17	Ability to import pictures into PowerPoint slides	1.91	0.86	NC
18	Ability to create slide	1.93	0.88	NC
19	Ability to use templates	1.91	0.86	NC
20	Ability to add animations	1.97	0.94	NC
	Grand Mean	1.93	0.88	NC

Table 4 above shows the mean responses regarding teachers' competence in presentation software in model primary schools. As shown, grand mean of 1.93 implies that teachers are not competent in presentation software.

Research Question 5: *What level of competence do teachers possess in the use of email in model primary schools in Rivers East Senatorial District?*

Table 5: Mean response on the teachers' competence in the use email

S/N	Items	M	S.D	RMK
21	Ability to create an email	2.42	1.01	FC
22	Ability to send mail	2.46	1.01	FC
23	Ability to remove email from a server	2.41	1.01	FC
24	Ability to save them to repository	2.31	1.01	FC
25	Ability to delete email	2.31	0.99	FC
	Grand Mean	2.38		FC

Table 5 above shows the mean responses regarding teachers' competence in email software in model primary schools. As shown, grand mean of 2.38 implies that teachers are fairly competent in the use of email software.

Research Question 6: *What level of competence do teachers possess in the use of internet in model primary schools in Rivers East Senatorial District?*

Table 6: Mean response on teachers' competence in internet

S/N	Items	M	S.D	RMK
26	Ability to launch a webpage	2.05	0.98	FC
27	Ability to navigate webpage	2.07	1.00	FC
28	Ability to close a webpage	2.32	0.86	FC
29	Ability to download a file from a webpage	2.13	1.00	FC
	Grand Mean	2.14	0.96	FC

Table 6 above shows the mean responses regarding teachers' competence in internet software in model primary schools. As shown, grand mean of 2.14 implies that teachers are fairly competent in internet software.

DISCUSSION

The study was conducted to assess the level of teachers' computer competence in model primary schools in Rivers East Senatorial District. Table 1 revealed the extent to which teachers in model primary schools are competent in the use of Word processor. It shows that the teachers are competent with a grand mean of 2.66. The reason which seems to justify these findings is connected to the fact that most teachers learn to use word processors after graduation. This is because the software is invaluable, and is used to prepare resume and various documents. These findings collaborate with Yildirim (2007) who discovered that teachers are more competent on word processor than any other computer skills but disagree with those of Omoniyi and Quadri (2013) who discovered lack of competence in basic computer skills among teachers in public secondary schools in Nigeria.

Table 2 revealed that teachers in model primary schools are fairly competent in the use of database software with a grand mean of 2.21. This could be evident in the fact that most people do not commonly have need of using database application for their everyday activity. This result was in agreement with the study of Yildirim (2007) who discovered low competence among teachers in the use of database software. The result in Table 3 revealed a grand mean of 1.98 which indicated no competence among teachers in the use of excel software. This could be as a result of most teachers' lack of interest in things that has to do with calculations and formulas. These findings agree with the findings of Afshari, Bukar, Luan, Samah and Fooi (2008) who found that most of the principals used in their study rarely use computer to construct spread sheet. Also, other studies that agree with this result are the works of Eze and Akubugwo (2016); Eze and Aja (2014). Both studies discovered that most teachers lack competence in the use of technology in secondary schools. In contrast, Bauer and Kenton (2005) found out that teachers in United States are highly competent in the use of all aspect of computer software.

The findings in Table 4 shows a grand mean of 1.93 for presentation software. This result indicates no competence among teachers for presentation software. This could be as a result of teachers' preference to using the white board and marker to teach and illustrate than presentation slides. This result contradicts that of Yildirim (2007) who found that teachers in Turkish schools are competent in the use of presentation software.

Table 5 disclosed a grand mean of 2.39 on teachers' competence in the use of email software. This result shows that teachers in model primary schools in Rivers East are fairly competent in the use of email. This could be seen in the ineffectiveness of the schools communication system. The Head teachers in most of the model primary schools hardly communicate with parents via email, as well as teachers.

The results in Table 6 revealed a grand mean of 2.14 which indicated that teachers are fairly competent in the use of internet software. This finding collaborates with the findings of Yildirim (2007) who found that teachers in Turkish schools are fairly competent in the use of internet software. In the overall analysis, it can be deduce that teachers in model primary schools in Rivers East are fairly competent in basic computer software.

CONCLUSION

This study was carried out to assess teachers' computer software competence in model primary schools in Rivers East Senatorial District? The results showed that teachers are competent in the use of word processors, fairly competent in the use of database, email and internet but not competent in excel and presentation software. The least competence was found in presentation software. It is evident that competence in word processing is not enough for effective teaching and learning to take place in this digital era. Presentation skills are very essential for teachers to effectively use LCD projectors, televisions, slides and electronic whiteboards to promote pupils' understanding and make learning more interesting and productive.

RECOMMENDATIONS

Based on the findings of this study the following recommendations were made:
1. Head teachers should provide computer training and retraining programs for teachers.

2. Ministry of education should provide personal laptops for teachers to practice at home.
3. Teachers should regularly be evaluated by a monitoring team to ascertain the effectiveness of training programs
4. School administrators should provide technology leadership in their schools.

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