

Assessment of Secondary School Teachers' Utilization of Internet Facilities For Instruction In Ilorin, Nigeria

Janet Adenika Aderogba*

University of Ilorin, No C2, Studiopedia, Off Ministry of Health, Fate Tanke Rd, behind Lgea Primary School, Ilorin, Nigeria

Abstract

Internet is the design and development of a computer-based information system that deals with electronic computers and computer software to convert, store, process, transmit, and retrieve information, browse, or surf. The objectives of this study were to: identify Internet facilities available for secondary school teachers, determine whether secondary school teachers are able to utilize Internet facilities, and investigate how teachers' gender influences the utilization of internet facilities in secondary schools in Ilorin. The population of the study was limited to secondary school teachers in Ilorin, Nigeria. Two hundred and fifty-one (251) respondents were randomly selected from the eighteen secondary schools in Ilorin, Nigeria. A structured questionnaire was drawn and administered to the teachers. A reliability coefficient of 0.89 was realized when the questionnaire was administered on twenty-five (25) secondary school teachers in Ogbomoso, Oyo State, using Cronbach's alpha. The research questions were answered using mean, while the t-test statistic was used to test the two hypotheses. The findings of the study revealed that there was no significant difference between male and female teachers' level of utilization of internet facilities for instruction. The study concluded that teachers utilize the available internet facilities for instruction. It was recommended that Teachers should be encouraged to utilize internet facilities to prepare their lesson plans.

Keywords: Assessment, Gender, Internet Facilities

1. Introduction

Education in Nigeria is the shared responsibility of the Federal, state and Local governments. The Federal Ministry of Education plays a dominant role in regulating the education sector, engaging in policy formulation and ensuring quality control. The national educational aims and objectives for all levels of education are: the inculcation of national consciousness and national unity; the inculcation of correct types of values and attitudes for the survival of the individual and the Nigerian society; and training for understanding the world around. ICT has initiated a transition from analogue to digital operations in all aspects of human endeavour making it possible for a lot of activities to be carried out speedily, easily and accurately (Justina, Faben & Michael, 2018). The Federal Government through the National Policy on Education (FRN, 2014), adopted education as an instrument for change and

development for both individual and nation.

In order to place the Nigerian teachers to face the global competition and promote the quality of education, there is need for appropriately planned and deployed teachers' use of computer for instructional purposes in schools. In Nigeria, teacher education has been bedeviled with a lot of challenges in the modern day technology of imparting knowledge in the teaching and learning process. Information and Communication Technology (ICT) is relatively a very new development in Nigerian educational system. Without similar prioritization and attention as done in the developed world, our educational institutions will be totally incapacitated and unable to compete favorably in the global education market (Ogundipe, 2012). ICT is the means of accessing or receiving, storing, transferring, processing, sending ideas, perception and transmitting of information through electronic based tools (Fakomogbon, Ogunlade, & Adeshina, 2017)

The information age has permeated all aspects of human existence (Spies, 1988). This has brought certain challenges to academics the world over (Pitfield, 2001 &

*) Corresponding Author.

E-mail: temiladeadenike2015@gmail.com

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Rader, 2001). It is therefore clear that any attempts to have meaningful academic communication can only be successful through the use of information and communication technologies (ICT). Nwosu (2002), stated that the internet is an abbreviation for International Network for communication. It is a worldwide computer network which links millions of computer users by standard telecommunication lines. Tealer and Gray (2002), referred to it as cyber space, an electronic library and the digital revolution. The internet was founded in 1960 by U.S defence department. It has opened up opportunities for finding out information, electronic commerce and fun. Others are; e-mail, World Wide Web (WWW), satellite, teleconferencing, database; telephone etc. The Internet is an important product of information and communication technology. It is a collection of vast information sources of interlinked computer networks. It is usually referred to as a network of networks. Millions of computers worldwide are interconnected and the information in each computer is made available to all users who have access to the internet (Adomi, 2009).

The efficacy of internet facilities in secondary schools has been proved beyond reasonable doubt. It has been known to enhance educational opportunities of individuals and groups constrained from attending traditional universities as well as the use of computers as tutors for drills and practice as well as instructional delivery (Pasternak & Capper, 1998 and Font, 2002, in Umoren 2006). The field of secondary education has been affected by internet access, which has undoubtedly affected teaching, learning, and research (Yusuf, 2005).

An article titled "History of the internet" explained that the internet allows greater flexibility in working hours and location, especially with the spread of unmetered high-speed connections. The internet can be accessed almost anywhere by numerous means, including through mobile internet devices. Mobile phones, data cards, handheld game consoles and cellular routers allow users to connect to the internet wirelessly. Within the limitations imposed by smallscreens and other limited facilities of such pocket-sized devices, the services of the internet, including email and the web, may be available. Service providers may restrict the services offered and mobile data charges may be significantly higher than other access methods (Kleinrock Leonard, 2003).

Librenix, (2004) affirmed that internet allows computer users to remotely access other computers and information stores easily, wherever they may be. Users may do this with or without computer security, i.e. authentication and encryption technologies, depending on the requirements. This is encouraging new ways of working from home, collaboration and information sharing in many industries. An accountant sitting at

home can audit the books of a company based in another country, on a server situated in a third country that is remotely maintained by Information Technology specialists in a fourth. These accounts could have been created by home-working bookkeepers, in other remote locations, based on information emailed to them from offices all over the world. Some of these tasks were possible before the widespread use of the internet, but the cost of private leased lines would have made many of them infeasible in practice.

A research on internet usage for teaching among student teachers showed that male gender rarely use internet resources for classroom teaching and learning and sports resources/educational games while female student teachers rarely use internet resources for classroom teaching and learning, references and research, sports resources/educational games, as well as in search of trainings, scholarships and grants. The significant challenges of internet resource usage among student teachers, irrespective of gender are; power outage; lack of computer skills among teachers; poor internet connectivity, lack of skilled manpower and financial constraints (Adebo, Adekunmi & Daramola, 2013).

Okwudishu (2004), discovered that the unavailability of some ICT components in schools hampers teachers' use of ICTs. Lack of adequate search skills and of access points in the schools were reported as factors inhibiting the use of the internet by secondary school teachers (Kaku, 2005). The survey on factors inhibiting the use of the internet facilities by secondary school teachers further identifies poor telecommunication system, unreliable electrical supply, lack of internet services providers in some parts of the country, and poor funding of the secondary school system as major problems militating against and use of internet facilities.

Nigeria's education system contemporary still faces challenges on the quality of education provided for students. National Policy on Education (Federal Republic of Nigeria, 2013) identified obsolete facilities as one of the numerous indicators of the poor state of education in Nigeria. Most primary and secondary schools have inadequate support services that enhance teaching and learning. Also, federal government recognized low funding for capital investment projects such as classrooms, ICT facilities, laboratories and so on.

Although previous studies have examined availability of internet facilities among teachers or students for teaching and learning in either secondary schools or universities but none of these studies known to the researcher focused on its utilization in Ilorin, Nigeria. To fill this identified gaps, this study therefore assessed the utilization of internet facilities for

instruction among secondary school teachers in Ilorin, Nigeria.

The main purpose of this study was to assess the utilization of internet facilities among secondary school teachers in Ilorin, Nigeria. Specifically, the study identified: (a) internet facilities available for secondary school teachers; (b) whether teachers utilize the internet facilities available in secondary schools in Ilorin; and (c) determine whether gender of teachers influence the use of internet to teach in secondary schools in Ilorin.

Nigeria and African countries generally is improving in the use of ICT, while there is still great need to know how developed countries utilize internet facilities, yet get enough information on how they are being introduced into schools in developing countries (Beukes-Amiss & Chiware, 2006). Government did not supply computers/laptops to its teachers, many of them owned personal laptops/computers which were not connected to the internet and as such could not access internet services in schools for instructional development purposes. They mostly relied on personal mobile devices to access the internet. The poor availability level of internet facilities in schools also means accessibility will be hindered for instructional development purposes. This confirms the observation of Ezeoba, (2007) and Fakeye, (2010) who also found that internet facilities were not available in primary and secondary schools. A few decades earlier, we had to scour the public libraries, newspaper archives, and old records and files section if we wanted to find some information. However, with the leaps that technology has taken since then till today, information is available, quite literally, at the fingertips of anyone and everyone. It is the one place in the world that can provide the user with that immense, infinite scope of information, without the restrictions of space and capacity. The advantages of internet have been so many that lives today is unimaginable without it. Even the sector of education has benefited in many ways because of the internet. Under proper supervision and guidance, the internet can help in many ways to facilitate learning and communication.

Akudolu (2007) affirmed that despite the significant importance of internet in education which are generally known by people, however, there are several harmful effects on the students as well. The excessive commercialization of the World Wide Web, thus decreasing its educational value is a major disadvantage. There is also the problem of youngsters giving out too much about themselves to strangers in the world of internet. Besides, there is also the presence of a large variety of adult rated content, which may not be suitable for all kinds of audiences in the internet. Access to such content may affect the mentality and attitude of

the children and hinder their education. Nevertheless, the role of internet in education is very important.

One of the major advantages of internet in the field of education and studies includes the development of skills on the computer of the children to a very large extent. Computer is an indispensable component of our day to day lives in the present technological era. The development of practical skills and knowledge of computers is, naturally, very important as well. This is something, which the internet facilitates. The importance of internet in education is also increased by the fact that regular usage of internet and the computer for writing essays and projects improves the writing skills as well as the thinking abilities of the student to a considerable extent. Critical thinking skills and simultaneously putting it in writing is a skill that proves to be very useful later in life, while the person is doing a job (Abdul-Salaam, 2007).

Manir (2007), stressed that writing out essay and other projects on the internet helps the student to sketch a clean draft and learn the art of filtering out unimportant and irrelevant information from their essays. The immediate effect of this affects the thinking skills, enabling the person to be able to think clearly and concentrate on the points effectively. Gradually, this also helps in developing effective communication skills too. The role of internet in education, however, does not end here. The internet is a virtual encyclopedia. There is not one field of study or information in the world of which there is no record in the internet. This is one of the very important advantages of internet, as it provides an endless library of information to the students from where they can do research for home works, projects and essays without having to spend unnecessary time of travelling to the libraries and archives and searching for relevant information amidst a sea of data. This is one major advantage of internet in education, because if a book is not available in a particular place, city, state or even country due to some reasons, it may be very easily accessed from the internet in a soft copy. The same is applicable for news and other such things. Apart from the above mentioned role of internet in education, there is also the major factor of e-learning courses or electronic learning courses, and distance education. Among all other advantages of internet, this is a sector where we are able to witness not only the benefits but also a very active and constructive role of internet in education. E-learning and distance education is a kind of education that is conducted relying entirely upon the internet for facilitating communication between the teachers and the students who may be sitting in the opposite corners of the world. Yet, education is facilitated in the smoothest possible way.

Often, schools, colleges and other educational institutes rely completely on the internet for studies.

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This means that not only will the classes be conducted over internet, but the materials for study, texts, projects, assignments, home works, tests, quizzes and so on and so forth will be available on the virtual world of the internet. The advantage of internet in education through e-learning has taken good care of twisting the ways around inflexible schedules of teachers as well as students and made it possible to attend classes according to one's convenience (Teo, 2008).

Teaching in the Nigerian primary and secondary institutions is dominated by both male and female gender. According to the Ministry of Education Digest of Statistics (2010), the percentage distribution of school teachers in Nigeria secondary schools from 2006-2010 was 58 males to 42 females while that of the primary school teachers at the same period was 51 males to 49 females. Also, the NBS (2011) factsheet indicated the percentage of male/female enrollments in National Certificate of Education (NCE) as 51.1 males to 48.9 females. For polytechnics, there were 72.3 to 27.7 females, while the University had 61.6 males to 38.4 female students' enrollments. Despite the high percentage of women involved in teaching, studies have shown that female student teachers in tertiary institutions have less access to the usage of internet.

According to Alison Gillwald, Anne Milek and Christoph Stork (2010), women internet users in almost all developing countries are very few, and not representatives of the countries. In the developed World, evidence shows a higher proportion of internet usage among the people, irrespective of gender and ages. For instance, Nancy (2003) report shows that 69 percent of all American adults have access to internet usage while on gender basis; it is a ratio of 73 men to 65 women. However, gender differences in internet usage predominate in India, Indonesia and Korea (Nancy, 2003). In India, the proportion of males to females' internet users was 77:23 NASSCOM, (1999). In 2001, a few (20%) of internet users in Indonesia were women (Indonesian Association of Internet Service Providers, 2001), also at the same period in Korea, the proportion of males to females was 57.1:42.9 (KRNIC, 2001). The same report showed that less than 10 percent of people in Mozambique, Rwanda, Uganda, Ethiopia and Tanzania know what internet is while less than 5 percent utilize it, with more men than women. However in Cameroon, significantly, more women than men know what internet is, but there is equity in internet and email usage among them (Alison, 2010). The 'ICT Africa report' did not have accurate data on internet usage in Nigeria. It is evident that data on gender and internet usage in Nigeria is limited.

2. Method

This study employed a descriptive survey method. It involved the use of questionnaire; the response to which produce the required information from the teachers. The questionnaire was used to collect necessary information on secondary school teachers' utilization of internet facilities. The population for the study consisted of all secondary school teachers in Ilorin, Nigeria. The target population consisted of the entire secondary teachers in Ilorin by purposive sampling. Over two hundred and fifty secondary school teachers based on their availability were randomly selected. An adapted questionnaire from the study of Ogunleye (2012), was used to elicit information from the respondents. It consisted of two sections. Section A required bio data of the respondents' personal information to know if their genders can have influence on their utilization of internet facilities, Section B consisting ten items was on availability and utilization of internet facilities among secondary school teachers which answer the research questions 1- 5. Likert response mode of Strongly Agreed (SA), Agreed (A), Disagreed (D), and Strongly Disagreed (SD) was used.

The instrument was validated for the face validity and content validity by the researcher's supervisor and three other lecturers in the department of Educational Technology in University of Ilorin. The various suggestions after the validation were used to modify the instrument. In order to ascertain the consistency of the instrument, the instrument was pilot tested on twenty five teachers in Ogbomoso, Oyo State which do not consist part of the study sample. Internal consistency of the instrument at 0.89 was tested using Cronbach alpha. After obtaining letter of introduction from the department, the school principals' permission was sought before the instruments are being administered with the help of a research assistant from each of the schools of the study. Data was collected through the questionnaire that were distributed to the respondents' schools within Ilorin, Nigeria. The questionnaire were collected immediately from the teachers after filling them. The respondents were not coerced in filling the questionnaire as they will be given the opportunity to fill it at their own convenient time. Also all authors cited in this work were properly referenced. Data collected through the questionnaire was subjected to descriptive and inferential statistics. Descriptive statistics (percentage, count and mean) was used to answer research questions. While inferential statistics of t-test was used for the hypotheses.

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3. Result and Discussion

3.1. Demographic Data

This chapter presents the analysis and results obtained from the data based on research questions and research hypotheses stated in chapter one. The results are preceded by the demographic information of the respondents.

Table 1. Percentage Distribution of Respondents by Gender

Gender	Frequency	%
Male	119	47,4
Female	132	52,5
Total	251	

The distribution of secondary school teachers involved in the accessibility and utilization of internet facilities for instruction according to gender showed that there was a difference in the distribution along gender lines. The results in **Table 1** shows that 119 (47.4%) were males while 132 (52.6%) were females in all the schools.

Table 2. Teachers Response Towards the Availability of Internet Facilities in Secondary Schools

No	Availability of Internet Facilities in Secondary Schools	Mean
1	There is an e-library in the school	2,33
2	Teachers are allowed to use the e-library any time.	2,34
3	The school provides other means for teachers to access information online.	1,90
4	The government supplies computers and its accessories to the school for helping teachers enhance their instruction skills.	2,29
5	There are sufficient internet centers in schools	2,26

The result in **Table 2** showed that the mean score for availability of internet facilities in Ilorin secondary schools is 2.33 meaning that e-libraries are not provided for school teachers to use. This was also reflected in their negative response to the second question on whether teachers are allowed to use e-library any time, giving mean score of 2.34. The mean score of 1.90 revealed that most teachers disagreed that schools provide other means to access information online. More so, low mean score of 2.29 indicated that many disagreed that government supplies computer and its accessories to the school for helping teachers enhance their instruction skills. Equally, the table showed that 2.26 is the mean score of sufficient internet centers in schools.

On the whole, the grand mean score on availability of internet facilities in secondary schools was 2.22. Using a benchmark of 2.0, it could be inferred that the respondents generally disagreed that internet facilities are available in schools for instruction.

Table 3. Teachers' Response Towards The Utilization of Internet Facilities by Secondary School Secondary School Teachers in Ilorin

No	Operation of Internet Facilities By Secondary School Teachers in Ilorin	Mean
1	I can operate the computer very well.	2,23
2	I can run various applications on the computer.	3,93
3	I know the functions of all the buttons in the keyboard.	3,02
4	Teachers lack sufficient knowledge of computer input devices.	3,03
5	I use the internet to prepare lesson plan.	1,59

Table 3 showed that highest mean score of 3.93 indicated that many teachers can run various applications on the computer. Also, the table revealed that mean score of 2.23 is for teachers' ability to operate computer very well. More so, mean score of 3.02 indicated that many teachers know the functions of all the buttons in the keyboard. However, teachers lack sufficient knowledge of computer input devices as its mean score is 3.03 and this led to the lowest mean score of 1.59 for teachers' use of internet to prepare lesson plan.

Table 4. T-test of Male dan Female Secondary School Teachers Level of Utilization of Internet Facilities for Instruction

Gender	SD	Df	T	Sig (2-tailed)	Remarks
Male	2,54	249	-.898	.370	Not Sig.
Female	2,74				

From **Table 4**, it can be deduced that there was no significant difference between male and female teachers' level of utilization of internet facilities for instruction. This is reflected in the result: $t(249) = -.898, p < .05$. That is, the result of t-value of $-.898$ resulting in $.370$ significance value was greater than 0.05 alpha value. Thus, the hypothesis is not rejected. This implies that there was no significant difference between male and female teachers' level of utilization of internet facilities for instruction.

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3.2. Discussion

Research question one sought to find out the internet facilities available in secondary schools. The result obtained indicated that schools make no provision for internet facilities, likewise the government does not supply computers and its accessories to the school for helping teachers enhance their instruction skills and as a result of this, the respondents' response on the availability of e-library and sufficient internet centres in the school was low, and thereby teachers are not allowed to use the e-library any time. Research question two sought to find if secondary school teachers in Ilorin utilize internet facilities for instruction. The result of the mean value showed that the teachers can operate computer very well, know the functions of all the buttons in the keyboard and can run various applications on the computer but many teachers lack sufficient knowledge of computer input devices, so they don't use the internet to prepare lesson plan. The influence of gender on teachers' utilization of internet facilities for instruction examined. The results of the t-test established no significant difference between male and female teachers' utilization of internet facilities for instruction. In support of these findings, the findings of Olagunju (1996) also established that there was no significant difference between the male and female teachers' use of computer for teaching and learning.

Based on the findings of this study, the following implications were drawn: The findings have strong implication on the teaching process in Nigeria. It is an indication that there would be great improvement in the teaching and instruction process generally at all secondary schools if teachers could have access to internet facilities and fully utilize those facilities. Also, based on the hypothesis testing teachers' utilization of internet facilities based on gender, the result showed that there was no gender influence. Therefore, if schools and government make provision for internet facilities in schools, it could be of great help for teachers to be more competent in their use of the internet irrespective of their gender.

4. Conclusion

This research examined utilization of internet facilities for instruction among secondary school teachers in Ilorin metropolis. The result obtained from the data gathered and analyzed in this study indicated that internet facilities are not available in secondary schools. It was also revealed that since there is low availability of internet facilities in the schools, teachers' use of internet facilities is low because they are not available despite the fact that teachers have knowledge of computer. Also, many of those that are using internet use it mostly to communicate socially. However, their low usage of the internet was attributed to several

factors such as little accessibility and cost implication of the internet facilities.

Finally, it also showed that there was no significant difference between male and female teachers that utilize the internet facilities for instruction. This implies that more attention should be given to what can be done to positively improve the availability level of internet facilities in schools and seminars or training that will make them access the facilities for instruction regardless of their gender.

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