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Teachers Perspectives on Information and Communication Technology Use among Secondary Schools in Ede South Local Government, Osun State, Nigeria

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ABSTRACT

The adoption of ICT in teaching depends on how well a teacher accepts it. A lot of work had been done on attitudes of teachers but little is known about teachers' perspectives of using ICT in schools. This paper therefore, draws on the teachers' perspectives survey of secondary schools in Ede South local Government area, Nigeria on ICT use. The study was designed to investigate the public secondary schools teachers' knowledge of ICT, the types of ICT available to teachers, the ICT skills possessed by the teachers and the attitudes of teachers towards ICT use. The study adopted descriptive survey research design. The population of the study covered the 133 teachers in senior secondary schools of the local government. A well self-designed questionnaire with r value of 0.843 was developed to collect data. Descriptive analysis of frequency count distribution and mean score were used to answer the research questions raised. The results showed that many of the teachers have idea and knowledge of what ICT is but not many of them can use it effectively. It was also discovered that most of the teachers need to upgrade their knowledge on ICT use and skilled-based application. Teachers also showed positive attitudes towards the use of ICT in enhancing teaching and learning. The study recommended that there should be workshops, trainings, conferences and seminars for the public secondary school teachers on ICT usage; different packages that are skilled based application should be introduced and Internet facilities should be made available in schools.

Keywords: Teachers, ICT, Secondary Schools, Perspectives Ede, Nigeria

Aims Research Journal Reference Format:
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1. BACKGROUND TO THE STUDY

Ede South Local Government is one of the thirty (30) local governments under the three Senatorial districts of State of Osun in the Southwest of Nigeria. It covers an area approximately 14,875 square kilometers and it lies between longitude 04^0 00E and 05^0 5, and latitude $05^0$55 8N and 08^0 07W. The State of Osun was created on the 27th of August 1991 out of the old Oyo State with a population of 3,423,535 (NPC, 2006). The major language and ethnic group is Yoruba with sub-ethnic groups such as Oyos, Igbominas, Ijeshas and Ifes. The people are mostly traders, artisans, farmers and civil servants. The traditional system of teaching and learning with white chalk and blackboard is still in vogue in secondary schools of State of Osun. The system is characterized by dedicated teachers, individualized and learner-centered teaching, and self- motivated students eager to learn despite the economic situation of the state. As a result of this, the government of State of Osun took an initiative in 2013 on innovation to enhance teaching and learning by equipping both staff and students with tablets known as "Opon-Imo," not less than 90,000 tablets were distributed which literally translated to mean 'Tablet of Knowledge'. The tablets of knowledge were given to only the students in their final year of study. It is a digital educational and learning tablet, a pace-setting e-learning tablet, an initiative to give education a boost in the state. It is no internet enabled, has study materials on subjects taken by students in senior secondary school 1-3.

The computer tablet is solar powered and they are pre-loaded with lesson notes on seventeen (17) subjects offered by the students in West African Secondary School Certificate Examination (WASSCE), NECO and SSCE. It also contains six (6) extra-curricular subjects such as sexuality education, entrepreneurship, civic, computer education, Yoruba, History and traditional religion. It also contains practice questions in text zone and past questions and revisions notes for ten (10) years. This initiative would afford the students free access to recommended textbooks and thereby making teaching and learning exciting to teachers and students. The innovative idea was introduced by the governor as fallout of education summit hosted by the state and in line with best global practices to assist in preparation for both internal and external examinations, in which this system is expected to improve the academic performance in developing countries like ours. This is also in line with the philosophy and goals of education in Nigeria as stated in the National Policy of Education (FRN, 2013) that 'the specific goals of education in Nigeria are to promote information and communication technology capability at all levels, then ensure and sustain unfettered access and equity to education for the total development of individuals'. In view of this, teachers in the state embraced this new initiative in teaching and learning process through new training and seeking of assistance in using the tablets. Embracing this new innovation by teachers to enhance teaching and learning process depends on their perspectives of using ICT device which in turn entails their knowledge of ICT use, types of ICT use, ICT skills as well as their attitudes towards ICT use.

According to Ogunsola(2005) Information Communication Technology (ICT) is an electronic based system of information transmission, reception, processing and retrieval which drastically changed the way we think and the environment we live. ICT has no doubt changed the face of teaching and learning globally (Torruam and Abur, 2013). In support of this, Wong (2015), added that the advancement of ICT in the past decade has had a great impact on education and research shows that ICT can potentially benefit teaching and learning if used appropriately. In the same vein, University of Sydney (2015) asserted that effective integration of ICT in the school and classroom can both transform pedagogy and empower students in as much as the teachers are able to successfully weave methodology into learning and teaching but the level of familiarity with ICT will naturally differ among teachers. However, Barolli, Gorishti, Karamani and Haveri (2012) professed that in realizing the process of teaching and learning through ICT, can be achieved inter alia through some factors such as; infrastructure relevant to technologies and preparation accompanied by training of human resources that will work with the technology. The use of ICT can add value in teaching and learning by enhancing the effectiveness of learning, or by adding a dimension to learning that was not previously available. Technology has driven the way teachers teach, the way students learn.

The ICT devices range from software to hardware devices such as personal computers, tablets, smartphones, digital cameras, internet, email, video conferencing among many others. Defining Secondary education in this sense, comprises of junior secondary education (Middle school) and the senior secondary education (High school). At post primary level or secondary education, ICT has been the focus of the review and implementation of junior and senior levels. Implementation of ICT as a teaching and learning requires knowledge, skills and pedagogy. The most important issue here is the need for acceptance of ICT by the teachers who in turn will acquire the knowledge and skills through appropriate training needed that will bring about positive attitude towards the use of the ICT for teaching and learning. In corroborating this statement, Bakr (2011) asserted that the users acceptance is considered an important element in the successful implementation of technology in the instructional /educational settings and which is greater influenced by the users attitudes towards technology.

Also, Koro (2012) emphasized positive attitudes as an enabling factor to use of ICT. However, Al-Zaidiyeen, Mei and Fook (2010) in their study discovered that in the process of teaching and learning to pre-service teachers, emphasis is placed on the teachers ICT skills, knowledge and competence. These are very important to ICT use. West and Turner (2010) in their views however, see knowledge as what is created when information is integrated into our minds in a way that we are able to adapt it to different circumstances and apply it to analyzing and solving problems. Cox, Preston and Cox (1999) asserted that the level of resources available will motivate teachers to use IT and also found out that there are whole range of other factors attributed by the teachers to using ICT such as making the lesson notes more interesting for teachers, increasing pupils motivation, improving presentation of materials, making the teaching more enjoyable, as well as making the lessons more fun for the pupils. Cox et al (1999) further emphasized that the uptake of ICT in one's teaching will depend upon the teacher's positive intention to use ICT. In corroborating Cox et al, Faizi, Shakil and Muntaha (2013) opined that providing the knowledge to understand the basic tools for the development of individuals will ultimately prepare such person for challenges ahead in which education is known for. In contrary, West, Waddoups and Graham (2006) reported limited and selective adoption of ICT_s among teachers, who regarded technology as unnecessary, time consuming, inflexible, and difficult to use. It will always be difficult to use ICT for teaching and learning if the schools do not have necessary facilities without which learning can become more challenging since the teachers would not have any way to .implement ICT in the classroom and also become skillful in using it for teaching.

2. STATEMENT OF PROBLEM

The knowledge of ICT, ICT skills, types of ICT use as well as teachers attitudes influence the use of modern information and communication technology in teaching and learning process. But in real sense, ICT use is very low among secondary school teachers. Could low ICT use be as a result of poor knowledge; no skills possessed by the teachers and poor attitudes towards the use of ICT? The study therefore, asses the knowledge of teachers on ICT use, determines the level of ICT skills, attitudes towards use of ICT and identify types of ICT made available to them for use.

3. OBJECTIVES

1. To assess the knowledge of teachers on the use of ICT in secondary schools
2. To identify the types of ICT use among secondary school teachers
3. To determine the level of ICT skills among secondary school teachers
4. To determine teachers attitudes towards use of ICT in secondary schools.

3.1. Research Questions

The study provided answers to the following research questions:

1. Do the teachers have knowledge of what ICT is?
2. What are the types of ICT use available to the teachers?
3. What are the ICT skills possessed by the teachers?
4. What are the attitudes of teachers towards ICT use?

4. METHODOLOGY

4.1 The Research Design

The study is a survey type of descriptive research design. The population of the study consisted of all Nine (9) senior secondary schools in Ede South local Government of State of Osun. This includes all the one hundred and thirty three (133) teachers in the local government.

Table 1: List of High Schools and Number of Teachers in Ede South Local Government

S/N	NAME OF HIGH SCHOOLS	NUMBER OF TEACHERS
	Adventist High School 1	15
	Adventist High School 2	17
	Agboran High School (1) Science	14
	Agboran High School (2) Ansarul	18
	Akoda Model Middle/High School	21
	Alajue High School	8
	Baptist High School	21
	Laminisa Middle/High School	10
	Sekona High School	9
	Total	**133**

Source: National Union of Teachers Office, Ede South Local Government

4.2 RESEARCH INSTRUMENT

The instrument used for the study was a well-designed self- questionnaire titled "Teachers Perspectives on ICT use for Teaching and Learning among Secondary Schools Questionnaire (TPIUTLSSQ)".It was divided into four sections: Section A consist of the biographical information of the respondents while sections B,C, D & E. Section B consist of 6 items that addresses teachers knowledge on ICT use, section C has 9 items addressing types of ICT use, section D has 13 items on ICT skills possessed by the teachers and section E, 9 items on attitudes of teachers towards ICT use. The instrument was validated and found to be valid and reliable (r value = 0.843 using Cronbach Alpha). The statistical tools used to analyze the data were frequency percentage for analysis of bio-data information of the respondents and descriptive analysis of frequency count distribution and mean score to answer the research questions.

5. DISCUSSION OF FINDINGS

The analysis of bio data information of the respondents is presented as follows:

Table 2: Distribution of Respondents by Gender

GENDER	FREQUENCY	PERCENTAGE (%)
Male	72	54.1
Female	58	43.6
No Response	3	2.3
Total	**133**	**100**

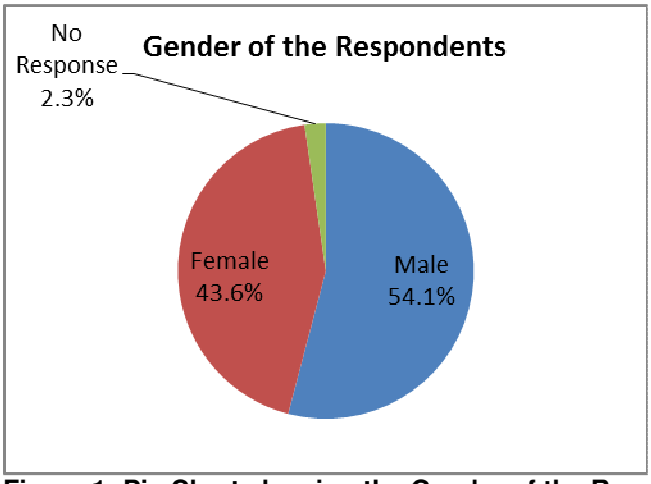

Figure 1: Pie Chart showing the Gender of the Respondents

Table 2 and figure 1 showed that out of 133 teachers sampled for the study, 72 given as 54.1% were male, 58 given as 43.6% were female while the 3 respondents given as 2.3% did not indicate their gender. The implication is that there are more females teachers in Ede South Local government public schools than male teachers.

Table 3: Teaching Experience of the Respondents

TEACHING EXPERIENCE	FREQUENCY	PERCENTAGES (%)
1-5 years	56	42.1
6-10 years	38	28.6
11-15 years	24	18.0
16 and Above	12	9.0
No Response	3	2.3
Total	**133**	**100**

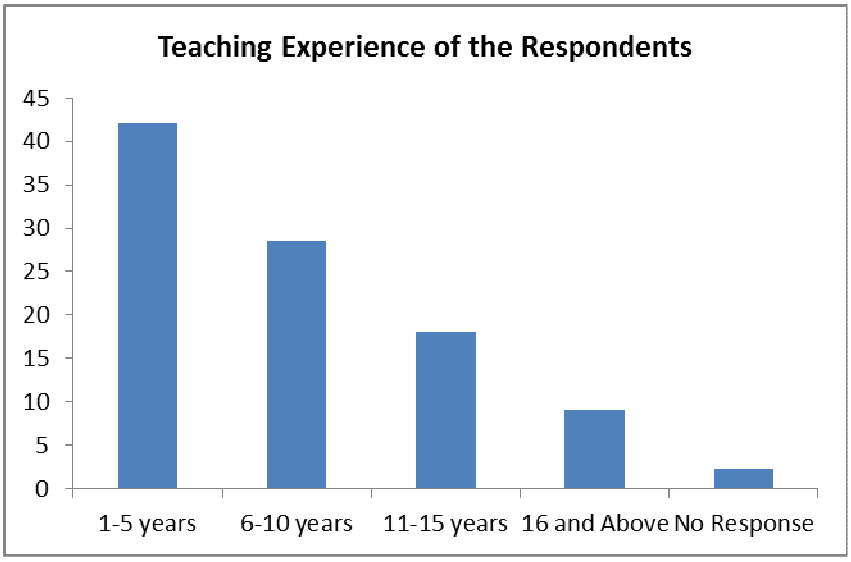

Figure 2: Bar Chart Showing the Teaching Experience of the Respondents

The teaching experience of the respondents presented in table 3 and figure 2 showed that 56 respondents representing 42.1% indicated they had between 1 and 5 years of experience, 38 respondents given as 28.6% indicated having 6 to 10years of experience, 24 respondents given as 18.0% had 11 to 15 years of teaching experience while 12 respondents indicated they had 16years and above experience. The table further shows that 3 respondents given as 2.3% did not indicate their years of teaching experience. The findings implication is that a larger percentage of the teachers in the field of study have less than 5 years teaching experience (42.1%) and 70.7% of them in total have less than 10 years of experience while 9.0% of the respondents have over 16 years of teaching experience and above.

Research Question 1: Do teachers have knowledge of what ICT is?

Table 4 : Responses on the knowledge of Teachers on ICT

ITEMS	AGREE	DISAGREE	NO RESPONSE	MEAN	STANDARD DEVIATION
1	27	104	2		
	20.3%	72.2%	1.4%	1.71	0.909
2	43	90	-		
	32.3%	67.6%	0.0%	2.05	1.043
3	115	16	2		
	86.5%	12%	1.4%	3.25	0.924
4	58	70	5		
	43.6%	52.6%	3.8%	2.35	1.015
5	59	74	-		
	44.3%	55.7%	0.0%	2.32	0.974
6	104	27	2		
	77.9%	20.3%	1.4%	3.04	0.883

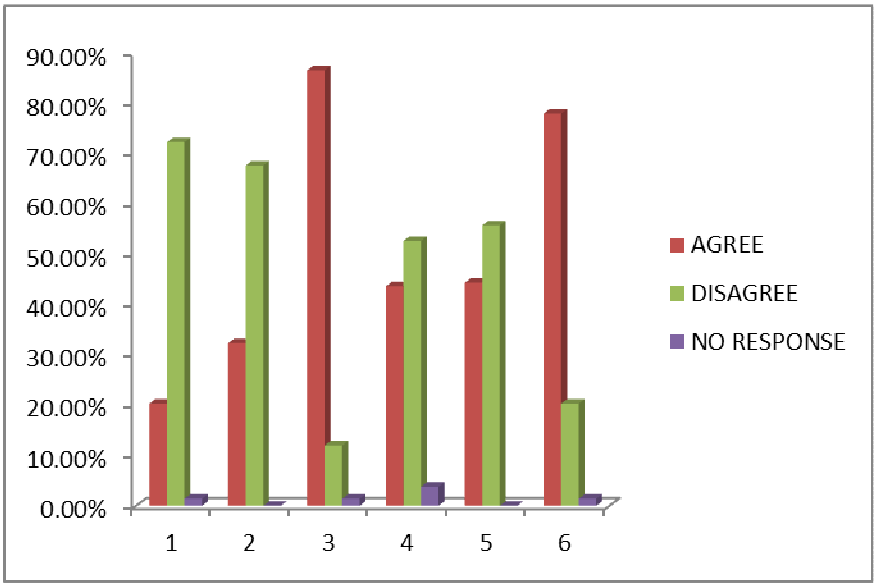

Figure 3: Bar Chart showing the Responses on the knowledge of Teachers on ICT

Table 4 and figure 3 presented the answer to research question 1. The findings revealed that 20.3% of the respondents agreed that they have no idea of what ICT means, 78% of them disagreed with the statement while 1.4% did not respond to the statement (mean=1.71); 32.3% of the total sampled respondents agreed with the statement that they have an idea of what ICT means but cannot use it; 67.7% of the respondents disagreed with the statement (mean= 2.05); 86.5% of the respondents agreed with the statement while 1.4% of them did not respond to the item (3.25).

In addition, the table shows that 43.6% of the respondents agreed that the knowledge on what they have on ICT is obsolete while 52.6% of them disagreed and 3.8% did not respond to the statement (mean=2.35). Furthermore, 44.3% of the respondents agreed that they cannot complete the task using ICT_s without someone helping them while 55.7% disagreed with the statement (mean=2.32). Finally, the table shows 78.2% agreed that they have necessary knowledge to use ICT, while20.3% disagreed and 1.4% did not respond (3.04). It shows that the teachers have the knowledge of what ICT is but there is the need for them to upgrade their knowledge.

Question 2: What are the types of ICT use available to the Teachers?

Table 5: Types of ICT use available to Teachers

ITEM SKILL BASED APPLICATION	REGULARLY	OCCASIONALLY	NEVER	NO RESPONSE
1	34	52	34	**3**
	33.1%	39.1%	25.6%	2.3%
2	39	59	31	4
	29.4%	44.4%	23.3%	3.0%
3	63	54	32	2
	33.9	40.6%	24.1%	1.5%
OPEN ENDED APPLICATION				
4	72	39	18	4
	54.1%	29.3%	13.5%	3.0%
5	47	51	29	6
	35.4%	38.3%	21.8%	4.5%
6	57	40	33	3
	42.9%	30.1%	24.8%	2.3%
7	83	38	11	1
	62.4%	28.6%	8.3%	0.8%
8	76	33	24	-
	57.2%	24.8%	18.0%	0.0%
9	73	32	27	1
	54.9%	24.1%	20.3%	0.8%

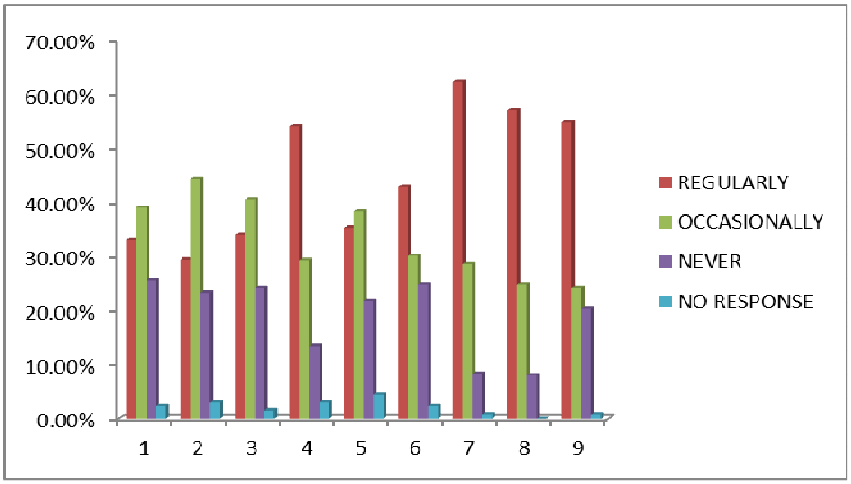

Figure 4: Bar Chart showing the Types of ICT use available to Teachers

Table 5 and figure 4 represent the analysis of research question 2.The findings showed that the open ended applications are used regularly by the teachers which amount to 54.1% and the implication is that half of the teachers are familiar with open ended application use in teaching. A total of 84 teachers representing 64.7% agreed that they had never used skilled application before or occasionally used it. This implies that the teachers are not familiar with this application.

Question 3 : What are the ICT skills possessed by the Teachers for their use?
Table 6 : ICT skills possessed by the Teachers for their use

ITEMS	HIGH SKILLS	LOW SKILLS	NO SKILLS	NO RESPONSE
1	71	36	24	2
	53.4	27.1%	18.0%	1.5%
2	84	29	19	1
	63.2%	21.8%	14.3%	0.8%
3	83	38	10	2
	62.4%	28.6%	7.5%	1.5%
4	67	38	27	1
	50.4%	28.6%	20.3%	0.8%
5	62	37	32	2
	46.6%	27.8%	24.1%	1.5%
6	57	47	26	3
	42.9%	35.3%	19.5%	2.3%
7	69	41	20	3
	51.9%	30.8%	15.0%	2.3%
8	77	34	21	1
	57.9%	25.6%	15.8%	0.8%
9	81	38	11	3
	60.9%	28.6%	8.3%	2.3%
10	69	36	26	2
	51.6%	27.1%	19.5%	1.5%
11	71	39	21	2
	53.4%	29.3%	15.8%	1.5%
	78	17	12	26
	58.6%	12.8%	9.0%	19.5%

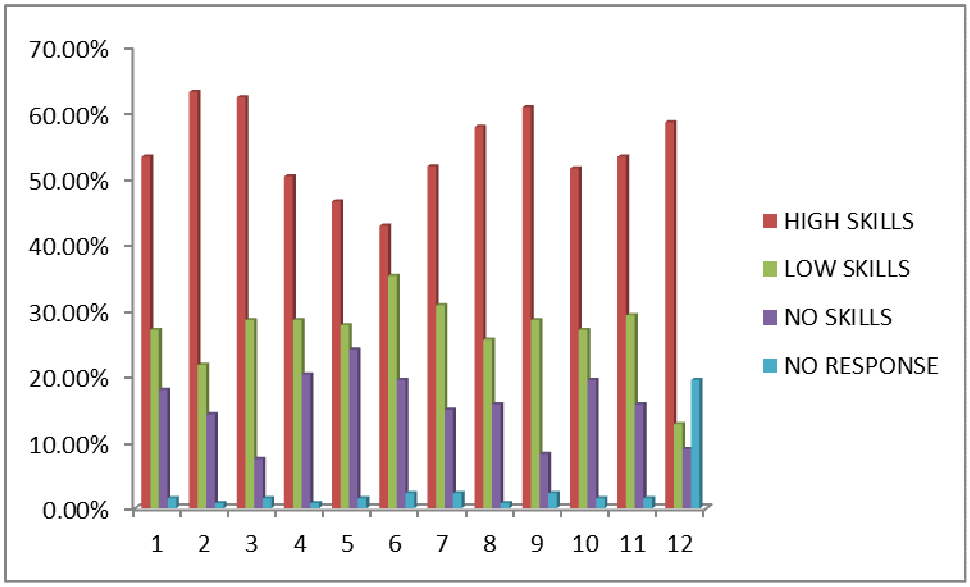

Figure 5: Bar Chart showing the ICT skills possessed by the Teachers for their use

Table 6 and figure 5 showed the analysis of the ICT skills possessed by the Teachers. The findings revealed that the majority of the teachers have high skills in the certain basic ICT skills needed for teaching and learning such as conducting a lesson using interactive white board (63.2%) while skills such as creating a power point and newsletter were low which are 46.6% and 42.9% respectively.
Question 4: What are the attitudes of Teachers towards ICT use?

Table 7 : Analysis of the Attitude of Teachers towards ICT use?

ITEMS	AGREE	DISAGREE	NO RESPONSE	MEAN	S.D
1	130 97.7%	2 1.5%	1 0.8%	3.66	0.589
2	131 98.5%	1 0.8%	1 0.8%	3.59	0.591
3	123 92.5%	7 53%	3 2.3%	3.39	0.806
4	123 92.5%	8 6.1%	2 1.5%	3.45	0.763
5	100 75.2%	32 24.1%	1 0.8%	2.95	0.924
6	39 29.3%	93 69.9%	1 0.8%	2.03	0.870
7	15 11.3%	116 87.3%	2 1.5%	1.65	0.779
8	42 31.6%	88 62.4%	8 6.0%	2.01	0.996

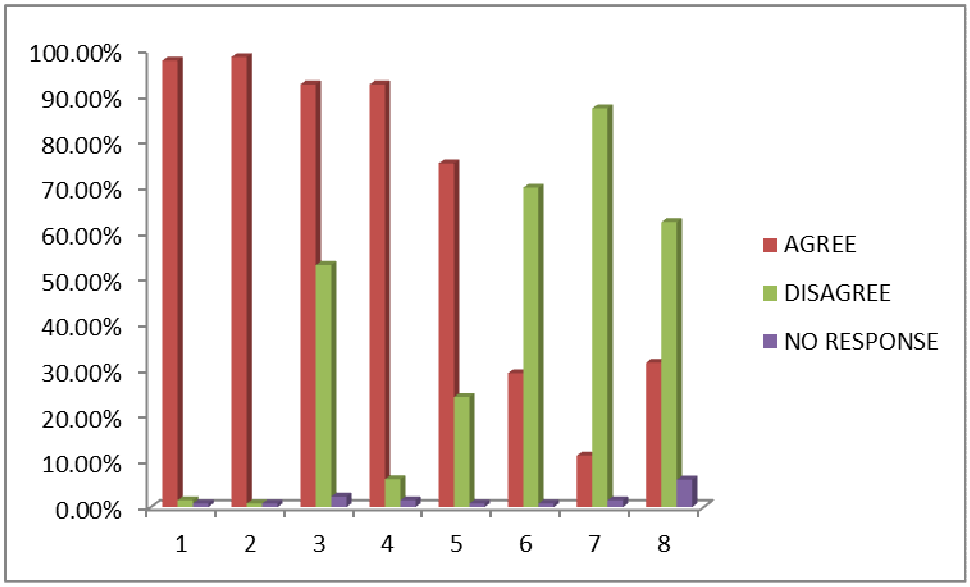

Figure 6: Bar Chart showing the Analysis of the Attitude of Teachers towards ICT use

Table 7 and figure 5 present the analysis of research question 4, The findings showed the analysis of attitudes of teachers towards ICT use and 97.7% of the total respondents agreed that using ICT is a good idea while 1.5% disagreed with the statement .They agreed that ICT use will make their work interesting (98.5%). Only 29.3% of the teachers indicated that they find it difficult using ICT in their teaching. The findings also showed that 92.5% of the teachers would like to use ICT in their teaching because it will make their teaching more effective and 116 teachers given as 87.3% disagreed that ICT use will make them lazy as teachers. The implication is that, the percentage rate of teachers having positive attitudes towards use of ICT is very high. This further indicated that the use of ICT among the teachers to aid their teaching and learning is acceptable among them.

6. CONCLUSION

The findings of the study revealed that many of the teachers in public secondary schools in Ede South local government area of Osun State have idea and knowledge of what ICT is but not many of them can use it effectively. It was also discovered that the teachers needed to upgrade their knowledge on ICT use. Also, the findings showed that the teachers are not regular with the use of skilled base application. The study also revealed that majority of the public secondary school teachers have positive attitude to ICT and they are interested in using it for effective teaching and learning but not many of them can use it. Areas for further research include acceptability of ICT by teachers, readiness of teachers to learn new methodology of teaching and availability of training facilities. Research can also be carried out on students' perspectives on ICT use considering variables such as parental involvement, eagerness to learn, accessibility to ICT devices as well as availability of internet services.

7. CONTRIBUTION TO KNOWLEDGE

The findings of this study are consistent with those of other researchers. West and Turner, 2010; Bakr,2011; Faizi et al,2013 and University of Sydney, 2015 concluded that the familiarity of ICT use, the knowledge of it, are considered good elements in using ICT. However, Al-Zaidiyeen, (2010); Barolli et al, (2012) placed emphasis on the need for teachers ICT skills, knowledge, competence and human resources in using of ICT. Many studies also concluded on the positive attitudes to ICT use by the teachers such as Cox et al,(1999); Al-Zaidiyeen et al, (2010); Bakr, (2011) and Koro, (2012).

In view of these, the following recommendations are suggested:

1. The government of Osun State should embark on workshops, trainings, conferences and seminars for public secondary school teachers on ICT usage which will really introduce new skills and help in upgrading the previous knowledge they have.
2. Different packages that are skilled based application should be introduced to the teachers
3. Working Internet facilities should be made available in schools by the government

REFERENCES

1. Al-Zaidiyeen, J.N., Mei, L., &Fook, F. S. (2010). Teachers Attitudes and levels of Technology use in classroom: The case of Jordan Schools. International Education Studies. Vol 3, No 2; May 2010
2. Bakr, S.M., (2011). Attitudes of Egyptian Teachers towards Computers. Contemporary Educational Technology, 2011, 2(4), pp; 308-318
3. Barolli, E.,Gorishti, A., Karamani, B.,&Haveri, A. (2012).DIDANTIC CHALLENGES 20 "ICT in teaching and learning: Combining theory with experience in Albanian universities" International Scientific Conference. Faculty of Education: University of Osijek, JosipajurjaStrossmyera, Slavonski Broad. May 24-25, 2012
4. Cox, M., Preston, C., & Cox, K. (1999). What motivates Teachers to use ICT? A paper presented at the British Research Association Annual Conference, University of Sussex at Brighton, September 2-5, 1999.
5. Faizi, W.N., Shakil, A.F., &Munhata, S. (2013). The effects of using Educational Technology in private secondary schools of Karachi, Pakistan.International Journal for Academic Research in Business and Social Sciences.Vol 3, No 4, April 2013
6. Federal Republic of Nigeria, (2013).National Policy on Education Manuscript
7. Koro, C.P. (2012). Factors influencing Teachers' use of ICT in Education. Education Inquiry Vol 3, No 1, March 2012, pp,93-108.
8. National Population and Housing Census Statistics, 2006
9. Ogunsola, L.A. (2005). Information Communication Technology and the Effects of Globalization: Twenty-first century "Digital Slavery" for developing countries-Myth or Reality? Electronic Journal of Academic and Special Librarianship 6 (2); pp. 1-10.
10. Torruam, J.T.,&Abur, C.C. (2013). International Journal of Basics and Applied Sciences-InsanAkademica publications- The impact of ICT-Driven Instructional Aids in Nigerian Secondary Schools.Vol 01, No 3, January 2013 pp 511-518.
11. University of Sydney.Faculty of Education and Social Work. 2015 Working Paper
12. West, R.E.,Waddoups, G., & Graham, C.R. (2006). Understanding the experiences of instructors as they adopt a course management system.Educational Technology Research and Development, 55 (1), 1-26, doi:org/10./1007/s11/423-006-9018-1.
13. West, R., & Turner, L.H. (2010).Introducing Communication Theory, Analysis and Practice, 4th edition.Mcgraw-Hill publishers
14. Wong, G.K.W. (2015). Understanding technology acceptance in pre-service teachers of primary mathematics in Hong Kong. Australasian Journal of Educational Technology, 31 (6), pp 713-735.
15. http://www.osunstate.gov.ng Retrieved on January 20, 2016