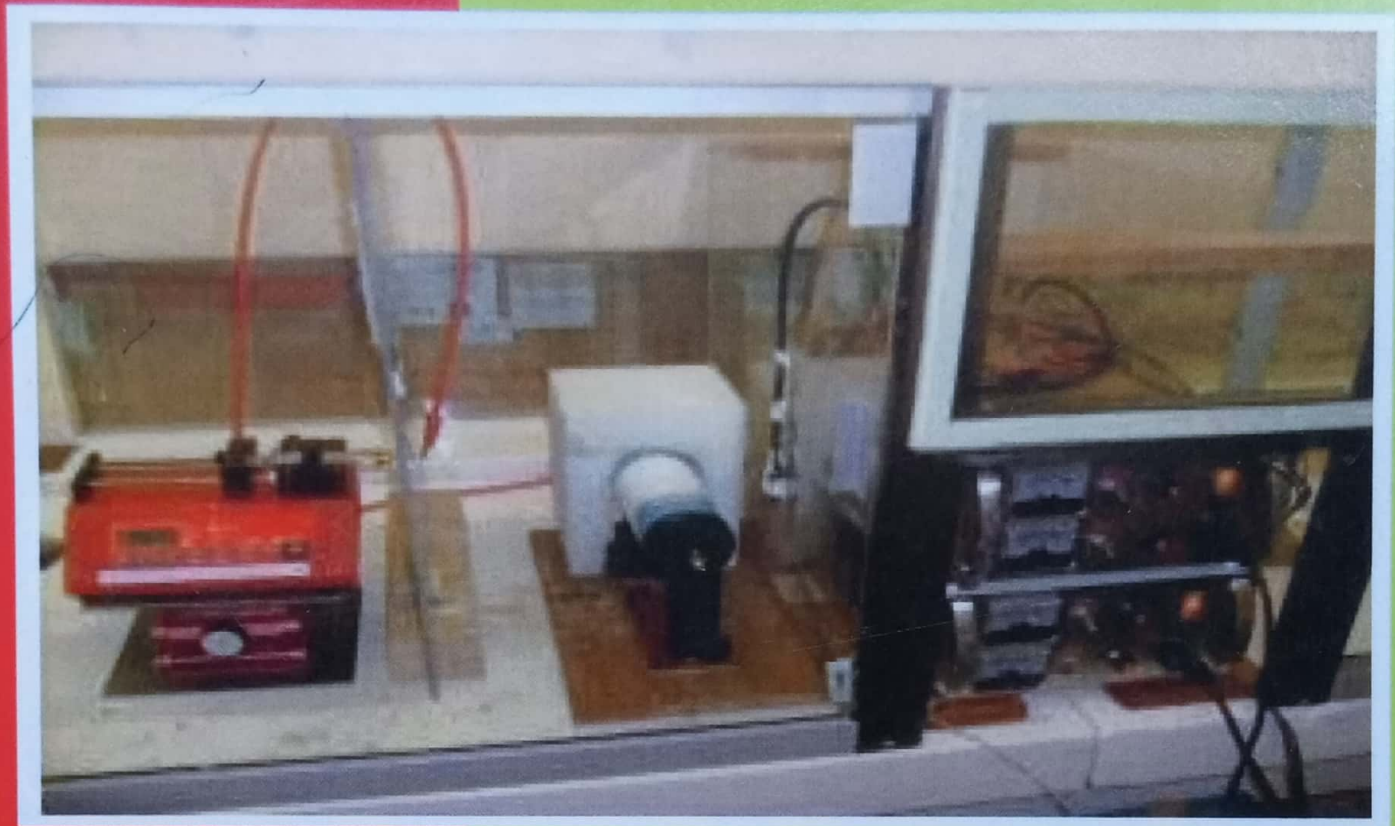


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Harvest of Research Outcomes to Confirm Achievement of the Millennium Development Goals

Edited by:

Prof. Simeon O. Jekayinfa



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HARVEST OF RESEARCH OUTCOMES TO CONFIRM ACHIEVEMENT OF THE MILLENNIUM DEVELOPMENT GOALS

Edited by:

Professor Simeon O. JEKAYINFA

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March, 2017

FROM THE EDITOR

In 2000, the leaders of member states of the United Nations adopted the Millennium Declaration, which set out a series of clear commitments, goals and targets to achieve Human Development. These ambitious goals were subsequently refined into eight Millennium Development Goals (MDGs), designed to provide a framework for accountability, donor coordination and resource mobilization. The MDGs are: Eradicate extreme poverty and hunger; achieve universal primary education; promote gender equality and empower women; reduce child mortality; improve maternal health; combat HIV/AIDS, malaria and other diseases; ensure environmental sustainability; and develop a global partnership for development.

The first seven of these Goals are concerned with outcomes, identifying the progress towards certain standards of human well-being and decent living which should be achieved globally and nationally by 2015. The eighth Goal is concerned with relationships, identifying various aspects of a “global partnership for development” which must be forged to support the realization of these poverty reduction, human development and environmental sustainability standards. The MDGs provide opportunities to start working from real-life development problems. Addressing these problems requires multidisciplinary approaches that combine the natural sciences, the life sciences and technical approaches with social-science approaches. The challenge is to integrate social, economic, political and institutional concerns into research strategy. To be able to achieve this, there is a need to establish a linking pin between research, policy and practice in Nigeria. The aim of such a linking pin would be to synthesize research outcomes on specific MDG-related topics and to translate these into implications for policy – and decision – making through easily accessible gathering where individual stakeholders can air their views. The articles contained in this book address research outcomes from stakeholders (Sociologists, Economists, Agronomists, Agricultural Engineers, Civil Engineers, Environmental Scientists and Engineers, Geographers, Geologists, Microbiologists, Medical Practitioners, Policy Makers, Educationists, etc.) to confirm achievement of Millennium Development Goals in Nigeria and other neighboring countries.

Professor Simeon O. Jekayinfa

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NIGERIAN BASIC SCHOOL TEACHERS' KNOWLEDGE AND LEVEL OF USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES FOR TEACHING AND LEARNING

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Abstract

The pivotal role of quality teachers in the implementation of the Universal Basic Education Science, Technology and Mathematics Curriculum is undebatable. In this survey study, an attempt was made to examine the Basic School teachers' knowledge and use of ICTs for teaching and learning tasks. Three and fifty-five Basic School teachers, drawn from all the 16 Local Government Areas in Kwara State, Nigeria took part in the study. We designed and used two instruments to gather data in the study, namely; (1) Basic School Teachers' ICTs Self- assessment Test and (2) Basic School Teachers' Use of ICTs Self-assessment Scale. Findings of the study revealed that most of the Basic School teachers lacked adequate knowledge of ICTs for teaching and learning tasks. Results of the study also indicated that Computer, Internet and Cell phone were the most frequently used ICT tools for teaching and learning tasks by the Basic School teachers. Significant gender difference existed in Basic School teachers' knowledge of ICTs for teaching and learning tasks. We advocated for the introduction of e-education as a core course into teacher education programmes in the country and the implementation of the mandatory Teacher Professional Development scheme, which emphasizes training in the use of ICTs. We equally called for the provision of ICTs facilities in all Basic Schools to enhance effective teaching and meaningful learning.

Keywords: Teaching, Learning, Basic School, Nigerian Teachers, Information and communication Technologies (ICTs), e-Education.

INTRODUCTION

Revolutionary changes in cultural heritage, technology, socio-economic and political development usually characterize every epoch in human history. Modern digital Information and Communication Technologies (ICTs) is certainly the dominant feature of the current post-modern epoch. ICTs are electronic technologies used for receiving, storing, processing and retrieving information. It ushered in the era of globalization and the emerging global e-society. There is hardly any aspect of human enterprises and daily life that is now not driven by ICTs. Globally, every nation is racing towards the attainment of an e-society, a society driven primarily by digital devices in the form of modern ICTs. Nigeria is not standing aloof in this global race. For instance, the nation is now embracing a cashless economy and may soon join the Bitcoin Exchange market. This race is ushered in by the seemingly infinite applications of modern ICTs in nearly every aspect of our daily activities. Jegede (2004, November) opined that ICT is a reflection of "the growth in the technological convergence of information, communication and broadcasting technologies" (p.2). Also, further noted that the global community is witnessing a paradigm shift on how knowledge and information is transmitted, distributed, accessed and processed. According to Jegede (2004, November) the postmodernist now viewed knowledge as non-linear, socially negotiated and constructed, and accessible to everybody within the vicinity of the internet, amongst other ICTs devices.

The responsibility of the education industry in every society is to ensure sustainable growth and development of human capital. Hence, it is at the center of the race toward attainment of e-society. Indeed, the emergence of new paradigms, such as, e-education, e-learning, e-library, e-classroom, and smart books, among others, are clear testimony to the fact that in recent time the education industry has become modern ICT driven. Indeed, Nigerian secondary school students and teachers are gradually becoming accustomed to the delivery of educational services through modern ICTs. Such services include; e-registration for public examinations, online Computer Based Test, {CBT} and online result checking, among others. Recently, the Nigerian Educational Research and Development Council (NEDRC) developed and launched an e-Curriculum Portal to provide primary and secondary school teachers and students access to varieties of curricular materials (NEDRC, 2014). In view of the emergence of educational software and facilities like the e-Curriculum, CBT, Automated Essay Scoring (AES), and e-whiteboard, it is not likely that the next generation of students will rely too heavily on paper and pencil. It is, therefore, imperative for teachers to possess adequate knowledge of modern ICTs for efficient teaching and meaningful learning. Hence, the focus of this study is on the Basic School teachers' knowledge and level of use of modern digital Information and Communication Technologies (ICTs) for teaching and learning.

Education is the most potent tool to bring about sustainable growth and development in every facet of the society; consequently every nation utilizes it to usher in revolutionary changes. In the words of (Babalola, 2001) "All over the world, education has been recognized and used as a tool for Socio- economic development of the society" (p1). The education industry is, therefore, at the center of the evolving e-global society. The United Nations Educational, Scientific and Cultural Organization (UNESCO) (2002a) also noted that globally, educational systems are under intense pressure to employ modern ICTs to deliver educational services in the 21st century. The UNESCO (1998) World Education Report, indeed "predicts the transformation of the teaching-learning process and the way teachers and learners gain access to knowledge and information" (p.1) as noted in UNESCO (200a). Today teachers and students no longer rely exclusively on textbooks as sources of knowledge; they now have arrays of ICT facilities, such as the Internet, to search for knowledge and equally contribute to knowledge construction.

A staggering number of Websites are now dedicated to the service of teachers in the cyberspace. Teachers can now download and upload lesson plans, quizzes, and instructional materials on varieties of topics in different school subjects. They can equally collaborate with other teachers in many nations to conduct research projects and share professional ideas. Students and teachers can now embark upon virtual field trips and conduct virtual experiments right inside the classroom. Similarly, the Webinar now provides an opportunity for teachers to upgrade their professional development by actively participating in seminars, workshops, and conferences without getting out of their office. These developments are clear indications that service delivery in the education industry is now ICT driven. Indeed some researchers (Abimbola, 1988; Brakel and Chisenga, 2003; Yusuf, 2005) concluded that ICTs have a significant impact on every facet of human endeavor, including teaching, learning, and research.

Although the Universal Basic Education scheme (UBE) was launched in the country on the 30th September, 1999, its curriculum at inception excluded ICTs as a core subject. It was in the 4th edition of the National Policy on Education (FRN, 2004) that ICT was listed as a vocational elective subject at the Basic Education level. Curiously, the nation had earlier initiated a National Policy on Computer Education as far back as 1988 (FRN, 1988). While in the year 2004 the Federal Ministry of Education also launched a ministerial initiative on e-Education for the nation's education system (FME, 2004). The ministerial initiative on e-Education clearly noted "education delivery all over the world is moving towards the adoption of the e-Education framework" (p.20). The United Nations Educational, Scientific and Cultural Organization (UNESCO, 2002 b) noted that

ICT has become, within a very short time, one of the basic building blocks of modern society. Many countries now regard understanding ICT and mastering the basic skills and concepts of ICT as part of the core of education, alongside reading, writing and numeracy. (p.3)

These facts, among others, most probably informed the Nigerian Educational Research and Development Council (NERDC) to introduce a new curriculum structure for the 9-year Basic Education scheme in the month of May, 2008 (FGN, 2008). The 9-year Basic Education new curriculum structure makes computer studies/ICTs a core compulsory subject throughout the nine years duration of Basic Education scheme. The making of computer studies/ICTs a core compulsory subject is to ensure that the nation is not lagging behind others in socio-economic, cultural, scientific and technological advancements in the emerging global e-society. It is equally a strategy to bridge the digital divide between the nation and the developed nations.

The teacher as a facilitator of learning is the hub of the education industry, and as rightly observed by Omar (November, 2004), "e-literate teachers are the pivot of e-society." (p.4). It is, therefore, not amazing that a relatively large quantity of empirical studies had been conducted on the use of ICTs by classroom teachers for teaching and learning. Among the studies is that conducted by Tella, Tella, Toyobo, Adika, & Adeyinka, (2007). They examined Nigerian secondary school teachers' uses of ICTs. The study was conducted in Ibadan among 430 males and 270 female teachers that were purposively selected from twenty-five private secondary schools. The researchers employed a modified version of an instrument tagged 'Teachers ICT Use Survey' adapted from UNESCO (2004) and New Zealand Ministry of Education MINEDU (1999). Findings from the study indicated that although teachers had access to ICTs in their schools, they had no access to the Internet and also lacked technical support services. Results of the study showed that the teachers lacked expertise in using ICTs during lessons. According to the researchers, "the teachers perceived ICT as being easier and very useful in teaching and learning" (p.5).

The focus of the study conducted by Obakhume (September, 2011) was on the availability and usability of ICTs among secondary school teachers in Oyo Metropolis, Nigeria. The researcher used a questionnaire to gather data from 120 secondary school teachers that participated in the study. Descriptive statistical technique was employed to analyze the data gathered in the study. Results of the study revealed that most of the teachers lacked basic skills in using ICTs while many schools did not have ICT devices. Yusuf and Balogun (2011) examined empirically, student-teachers' competence and attitude towards ICTs. The influence of gender on the student-teachers' competence and attitude towards ICTs was also investigated in the study. The sample for the study consisted of 382 student-teachers selected from the Faculty of Education, University of Ilorin, Nigeria. The researchers designed a questionnaire to gather data in the study. They analyzed the data using percentages, means, and chi-square statistics with the aid of the SPSS package. Results of the study indicated that although most of the student-teachers had a positive attitude towards the use of ICTs, they were competent in using only few basic ICT tools. Findings from the study established no significant gender difference in the student-teachers' attitudes and use of ICTs. The researcher called for improvement in the ICT contents of teacher education programmes.

Adebowale and Dare (2012) investigated the level of awareness and use of ICTs for teaching and learning by Nigerian primary and secondary school teachers. Two hundred teachers from all the Local Government Areas of the state took part in the study. The researchers used a questionnaire to collect data in the study and analyzed the data using t-test, and ANOVA statistical techniques. The study revealed that 35.1% of the teachers were either completely ignorant of the nation's educational policy on ICTs or possess poor levels of its awareness. Results of the study also showed that previous ICT training attended by some of the teachers had no significant influence on their awareness of the country's educational policy on ICTs. Oyeronke and Fagbohun (2013) also conducted a similar study among Nigerian secondary school teachers in Ota, Ogun State.

The focus of the study was on teachers' computer and ICTs literacy level and use of ICTs for teaching. The researchers designed a questionnaire to collect data for the study. Sixty-eight teachers from four secondary schools took part in the study. Results from the study showed that the majority of the teachers were computer and ICT literate. Results of the study also indicated that one in every two teachers used spreadsheet package in preparing student results, while 51.47% surf the internet when preparing for lesson notes.

Salman, Ogunlade, Ogunlade and Adegbelemi (2013) conducted a study on secondary school teachers' professional development in the use of ICTs for teaching mathematics in Ejigbo, Nigeria. Purposeful sampling method was used to select 80 mathematics teachers that took part in the study, but simple random sampling technique was employed to select 122 students that took part in the study. The t-test statistical technique was employed to analyze the data gathered in the study. Findings from the study revealed that the students and their teachers were aware of the use of ICTs in teaching Mathematics at the secondary school level.

There seems to be some inconsistencies in the findings of the studies conducted on Nigerian teachers' knowledge and use of ICTs to teach as indicated in the reviewed studies among others. Most of the studies on teachers' knowledge and use of ICTs also focused on secondary school teachers. In view of these observations and the importance of the Basic education as the foundation of formal education, it is imperative also to conduct more research on the Basic school teachers' knowledge and use of ICTs.

Purpose of the Study

The purpose of this study was to examine the Basic School teachers' knowledge and use of ICTs in teaching and learning tasks in Kwara State. Specifically the study attempted to examine:

- a) The Basic School teachers' knowledge of ICTs in teaching and learning
- b) If the Basic School teachers in Kwara State are making use of ICTs in teaching and learning
- c) Gender difference in the Basic School teachers' knowledge of ICTs in teaching and learning
- d) Gender difference in the Basic School teachers' use of ICTs in teaching and learning
- e) If the Basic School teachers' qualifications and teaching experience influence their knowledge of ICTs in teaching and learning.

Research Questions

The following research questions were generated to guide this study;

1. Do the Basic School teachers possess adequate knowledge of ICTs in teaching and learning tasks?
2. Is there gender difference in Basic School teachers' knowledge of ICTs in teaching and learning tasks?
3. Do the Basic School teachers' qualifications influence their knowledge of ICTs in teaching and learning tasks?
4. What types of ICT tools do the Basic School teachers frequently use for teaching and learning tasks?
5. Is there gender difference in the level of use of ICTs by the Basic School teachers?
6. Do the Basic School teachers' qualifications influence their level of use of ICTs for teaching and learning tasks?

Research Hypotheses

The following hypotheses were raised and tested in this study;

1. There is no significant gender difference in the Basic School teachers' knowledge of ICTs in teaching and learning tasks.
2. Statistically, a significant difference does not exist in the Basic School teachers' knowledge of ICTs in teaching and learning tasks based on their qualifications.
3. Male and female Basic School teachers do not differ significantly in their level of use of ICTs for teaching and learning tasks.
4. Statistically, a significant difference does not exist in the Basic School teachers' level of use of ICTs for teaching and learning tasks based on their qualifications.

METHODOLOGY

The researchers adopted the descriptive research procedure in carrying out this study. The population of the study consisted of all the Basic School teachers in Kwara State, Nigeria. Purposive sampling technique was used to select all the 355 Basic School teachers that attended a Universal Basic Education Board for the Basic School teachers in Kwara State. The teachers were drawn from all the 16 Local Government Areas in the state. Two instruments were designed and used for data gathering in the study namely: (1) Basic School Teachers ICTs Self-assessment Test (BSTIST) and (2) Basic School Teachers' Use of ICTs Self-assessment Scale (BSTUISS). The instruments were subjected to assessment for content and construct validity. The reliability coefficients of the instruments were 0.76 and 0.83, respectively. The researchers personally administered the two instruments to the selected Basic School teachers. Appropriate descriptive and inferential statistical tools were used to analyze the data gathered in the study.

Data Analyses and Results

The t-test statistical tool and percentage computation were used to analyze the data gathered in the study. The results were summarized and presented in tables in line with the research questions and hypotheses stated in this study. The Basic School teachers' scores in the self-assessment test (BSTISAT) were subjected to descriptive statistical analysis using the percentage and mean computation. The results indicated that only 35.2% of the Basic School teachers passed the test. The result indicated that most of the Basic School teachers lacked adequate knowledge of ICTs for teaching and learning. The result provides an answer to research question 1. Also, the finding is congruent with that of Obakhume (September, 2011) and Tella, Tella, Toyobo, Adika, & Adeyinka, (2007). However, it is at variance with the findings of Oyeronke and Fagbohun (2013), among others. The result may be a reflection of the deficiencies in the Teacher Education curricula. Most of the Basic School teachers probably received no formal training on the use of ICTs for teaching and learning in their Teacher Education Institutions.

Table 1: Basic School Teachers' Knowledge of ICTs in Teaching and Learning Tasks. Analysis of the performance of the Basic School teachers in the self-assessment test

ICTs Knowledge Level	Frequency	Percentage	Sum of Score	Mean Score	Range
Inadequate knowledge	230	64.8	480	1.35	5-21
Adequate knowledge	125	35.2			
Total	355	100.0			

(BSTISAT) conducted in this study revealed that there is a significant gender difference in the performance of the teachers in favor of the male teachers. The mean score of the male teachers was found to be higher than the mean score of their female counterpart as shown in Table 2. The calculated t-test value [$t(353, 0.05) = 2.545$] was found to be significant; hence hypothesis 1 was rejected. The result suggests that significant gender difference existed in the teachers' knowledge of ICTs for teaching and learning in favour of the male teachers. The result suggests that male teachers are more knowledgeable in ICTs than their female counterpart. It provides an answer to research question 2 raised in this study. The finding is congruent with that of the study carried out by Yusuf and Balogun (2011).

Table 2: t-test of gender difference in Basic School teachers' knowledge of ICTs in teaching and learning tasks

ICT knowledge	Gender	N	Mean	Sd	df	t	Sig
	Male	175	1.4171	.49450	353	2.545	.000*
	Female	180	1.2889	.45451			

In Nigeria there are two broad categories of professional teachers namely (a) Non-graduate teachers who are holders of the Nigeria Certificate in Education (NCE) and Graduate teachers who obtained University degree in the field of teacher education. The national policy on education recognizes the NCE certificate as the minimum professional qualification for teachers in the nation (FRN, 2013). Both categories of teachers abound in classes in Basic Schools in the nation. Analysis of the scores of the two categories of teachers in the self-assessment test (BSTISAT) in this study indicated a slight difference in their mean scores. Although the mean score of the graduate teachers was slightly higher than the mean score of the non-graduate (NCE) teachers, the calculated t-test value [$t(353, 0.05) = .544$] was not significant as shown in Table 4. Consequently, the researchers failed to reject research hypothesis 2 raised in this study. The result implies that there is no significant difference in the Basic School teachers' knowledge of ICTs based on their qualification and provides an answer to research question 3.

Table 3: t-test of significant difference in the Basic School teachers' knowledge of ICTs in teaching and learning tasks based on their qualifications

ICT knowledge	Qualifications	N	Mean	Sd	df	t	Sig
	Non-graduate	189	1.3651	.48273	353	.544	.275
	Graduate	166	1.3373	.47424			

Analysis of the data gathered on the usage of ICTs by the Basic School teachers revealed that the teachers frequently used very few ICTs tools for teaching and learning. The three frequently used ICTs tools are listed in Table 4. The result is compatible with the findings of Yusuf and Balogun (2011, Tella, Tella, Toyobo, Adika, & Adeyinka, (2007) and Yusuf and Balogun (2011). It is however in contrast to the findings of the study conducted by Oyeronke and Fagbohun (2013). The result provides an answer to research question 4 in this study.

Table 4: List of Frequently Used ICTs Tools for Teaching and Learning Tasks.

S/N	Frequently Used ICTs Tool	Number/ Percentage of Users
1	Computer	76 / 2.14
2	Cell Phone	74 / 2.08
3	Internet	71/2.00

Research hypothesis 3 was tested using the t-test statistical tool. The mean score of the male teachers in the use of ICTs self-assessment scale (BSTUISS) was higher than that of their female counterpart. The calculated t-test value [$t(334, 0.05) = 3.704$] was significant; hence, research hypothesis 3 was rejected. The rejection of hypothesis 3 implies that significant gender difference existed in the usage of ICTs for teaching and learning by the Basic School teachers. It seems obvious from the result of the testing of hypothesis 3 that the male teachers made use of ICTs in teaching and learning more than their female counterparts. The result provides an answer to research question 5. The result is, however, contrary to the findings of the study conducted by Yusuf and Balogun (2011)

Table 5: t-test of gender difference in the level of use of ICTs for Teaching and learning tasks by the Basic School teachers

ICT usage	Gender	N	Mean	Sd	df	t	Sig
	Male	175	1.93	.667	334	3.704	.045*
			.79	.92			
	Female	180	1.67	.636	334	3.704	.045*
			.43	.23			

In order to provide an answer to research question 6, the research hypothesis 4 was tested using the t-test statistical technique. The mean score of the Non-graduate teachers in the use of ICTs self-assessment scale (BSTUISS) was slightly higher than that of the Graduate teachers. However, the calculated t-test value [$t(334, 0.05) = .148$] was not significant; hence, research hypothesis 4 was not rejected. The result suggests that the Basic School teachers' qualifications had no influence on their level of use of ICTs for teaching and learning. It equally provides an answer to research question 6 in this study.

Table 6: t-test of significant difference in the Basic School teachers' level of use of ICTs for teaching and learning tasks based on their qualifications

ICT usage	Qualifications	N	Mean	Sd	df	t	Sig
	Non-graduate	189	1.8059	.66437	334	.148	.892
	Graduate	166	1.7952	.66531			

Summary of Major Findings

The major findings in this study are as follow;

1. Most of the Basic School teachers lacked adequate knowledge of ICTs in teaching and learning tasks.
2. The most frequently used ICTs tools for teaching and learning tasks by the Basic School teachers were the Computer, Internet, and the Cell phone.

3. Significant gender difference existed in the Basic School teachers' knowledge of ICTs in teaching and learning tasks.
4. The qualifications of the Basic School teachers did not influence their knowledge of ICTs in teaching and learning tasks, and
5. The Basic School teachers' gender and qualifications did not influence their level of use of ICTs for teaching and learning task

DISCUSSION AND RECOMMENDATIONS

The primary responsibility of the education enterprise is the development of human capital. It is, therefore, the most important element in all aspects of the society. No nation can successfully engage in sustainable socio-economic, scientific and technological development without highly developed human capital. Basic education is the first rung of the educational ladder; it is the foundation for higher education. It is thus the most crucial component of the education system and by extension it is the foundation of human capital development. The Universal Basic Education Commission (UBEC, nd.) enumerated the cardinal objectives of the Basic education in the nation, among which is to;

'ensure the acquisition of appropriate levels of literacy, numeracy, manipulative, communicative, and life skills as well as the ethical, moral and civic values needed for laying a solid foundation for life-long learning'. (UBEC, nd.p. 1)

Laying a solid foundation for life-long learning and human capital development requires the efficient discharge of professional responsibilities by the Basic School teachers. It is arguable that teachers can only teach what they know. Efficient discharge of their professional responsibilities rests on their disciplinary and pedagogic content knowledge and skills.

Findings from this study revealed that most of the Basic School teachers lacked adequate knowledge of ICTs and its uses in teaching and learning tasks. The finding may be a reflection of the deficiencies in Teacher Education curricula. Trainee teachers are neither taught with the use of modern ICTs nor exposed to core courses on the applications of ICTs in education. The absence of mandatory Teacher Professional Development (TPD) scheme in the nation equally denies the practicing teachers opportunity to keep abreast of new developments and best practices. In addition, most public schools lack ICT facilities as reported by Obakhume (September, 2011) among other researchers. The prevailing situation significantly contributed to the inadequate knowledge of the Basic School teachers on ICTs. It is an indication that the Basic School teachers are not laying a solid foundation for human capital development and lifelong learning satisfactorily. The introduction of e-education into the teacher education curricula would go a long way to remedy this unsatisfactory situation. In addition, there is also a need for the introduction of a mandatory TPD scheme and provision of ICTs facilities in all Basic Schools. Results from this study showed that the Computer, Internet, and the Cell phone were the most frequently used ICTs tools employed by some Basic School teachers in teaching and learning tasks. In Nigeria, there are very cheap brands of Cell phone, while all Cell phone operators provide cheap and sometimes limited free internet data bundle to subscribers. The availability of cheap Cell phone and Internet access most probably stimulated resourceful and dedicated Basic School teachers to them for teaching and learning tasks. It is obvious that with adequate training and enabling environment the Basic School teachers can successfully lay solid foundation for human capital development.

The major finding in this study uncovered the significant gender difference in the Basic School teachers' knowledge of ICTs and its applications in teaching and learning. The difference was in favour of the male teachers. Bello (2002) noted that gender difference as a socio-cultural phenomenon permeates every aspect of the society, and it tends to confound crucial issues. In economics and political arena it is characterized by under-representation of the female. Similarly, in

the field of education it is characterized by underachievement and under-enrollment of female students. There are several subtle patterns of gender inequality that often shape teacher instruction. Indeed the fact that male and female students in the same class are listening to the lesson taught by the same teacher does not mean that they are receiving the same education (Ohio Literacy Resource Center (2014, March). The significant gender difference in the Basic School teachers' knowledge suggests the existence of gender inequality in teacher education programme in the nation. Gender difference in teachers' knowledge in any subject area is a major threat to the realization of objectives of basic education and schooling in general. Teacher educators should, therefore, pay special attention to all forms of gender inequality during teacher training programme as part of measures to remediate this problem.

The qualifications of the Basic School teachers did not influence their knowledge of ICTs in teaching and learning as revealed in the findings of this study. The result seems curious in view of the fact that the graduate teachers were exposed to a higher level of professional training than the non-graduate (NCE) teachers. One would expect significant knowledge gap between the graduate teachers and their non-graduate counterparts. The result may tempt one to call to question the quality of teacher education programme at the university level. However, in doing so, one needs to take into account the fact that e-education as a core course is not included in any teacher education curriculum in the country. The few teachers who are making use of ICTs most probably learned to do so through either personal efforts or at TPD workshops. There are also few graduate and non-graduate teachers whose area of specialization is in the field of ICTs. It is imperative that e-education become an integral component of teacher education curricula in the nation. A core course in e-education will equip the teachers with knowledge and skills to successfully employ modern digital technologies to deliver educational services. Findings from this study revealed that teachers' gender and qualifications did not influence their level of use of ICTs for teaching and learning tasks. The result may be due to a number of factors such as the absence of basic ICTs facilities in most Basic Schools in the nation and teachers' incompetence in the use of ICTs for teaching and learning.

CONCLUSION

It is discernible from the foregoing discussions that Nigerian Basic School teachers lack adequate knowledge of ICTs and its applications in teaching and learning. It is arguable that teachers with inadequate knowledge of ICTs may not efficiently discharge their responsibility of utilizing education to bridge the digital divide between the developed and developing nations like Nigeria. The digital divide between the developed and developing nations has long been recognized globally as a cog in the wheel of the socio-economic and technological development of the developing the nations. The nation thus, should urgently put in place measures that would improve the quality of the Basic School teachers especially in the ICTs in teaching and learning.

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