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DEVELOPMENT OF BASIC EDUCATION IN NIGERIA: THE PLACE OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT).

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Abstract
The importance of Information Communication and Technology (ICT) in all aspects of education cannot be underestimated. ICT in education has been continuously linked to higher efficiency, productivity, and educational outcomes, including quality of cognitive, creative and innovative thinking. In response to the global imperative of education for all, the Nigerian Universal Basic Education is focused on integrating ICT into the mainstream of education and training. The study explores Nigeria's ICT in education policies, implementation efforts and availability of ICT tools in schools teacher's knowledge and experience in use of ICT for classroom activities. The survey research method was adopted and validated and 50 item-questionnaire was administered to education teachers in the three senatorial districts of Delta State. A population of 400 subjects was used and findings showed that Nigeria is yet to full, commit to ICT integration in basic education. Finally, conclusions and recommendations were drawn.

Introduction
The emergence of Information and Communication Technology (ICT) as tools of micro-electronic and telecommunication has made easy the automatic acquisition, analysis, storage, retrieval, manipulation, management, control, movement, display, transmission, reception and interchange of quantitative and qualitative data (Cheta, 2003). Haddad (2002) divided ICT in education into three categories: instruments (TV, DVD, computer) instructional (Video and multi-media modules) and dissemination (TV, broadcast, CD or Web),but emphasized that the choice of technology and the way it is used is partially determined by what is expected in terms of education, learning and teaching objectives. According to him, the major concern is how to use the power of ICT to make education more relevant, responsible and effective for school settings and lifelong learning. To compete successfully in a competitive global economic environment, a highly skilled and educated workforce with aptitude and skills in the application of ICT is very essential. This makes knowledge and use of ICT central to education in this 21st century (Wolff and Mackinnon 2002). People need to be effective and efficient in the use of ICT for success in today's rapidly changing and highly competitive world which depends on such knowledge and skills; hence the concern for Africa to take the best advantage of the knowledge economy

(Obanya, 2004). Nigeria, like many other countries around the world, has, over the years, sought to improve its education system by introducing reforms and making plans based on the education needs of the country, hence the development of Universal Basic Education (UBE). The broad aim is to give a solid foundation for lifelong learning through the inculcation of appropriate learning to learn, self-awareness, citizenship and life skills (FGN 2003). With this in focus, it can be argued that belong increasing access to education, and ensuring quality is a key goal of basic education in Nigeria. This is in support of the Dakar Framework for Action (2000) in Education for All (EFA) that quality is at the heart of education, a fundamental determinant of enrolment retention and achievement.

Quality improvement has two important dimensions. First is an increase in the number of subjects covered by the existing curriculum, and second is through better pedagogy (changes in the learning process). The latter includes developing new types of learning: the ability to gather and manipulate information, problem-solving, higher-order thinking, critical and creative thinking and other necessary skills to interact in knowledge-based economics. The need for changes in the learning process paved way for the use of ICT in the teaching and learning processes where students are expected to play more active roles than before (Alabi, 2004); especially if basic education should target the four pillars of learning use when, not hyphen learning to learn, learning to be, learning to live together and learning to become (Delors, 1996).

Beyond the benefits, a practical application of ICT in the achievement of Education For All (EFA) goals and especially in the context of Nigeria's UBE is demonstrable in the following ways. Among them, as noted by Haddad (2002) are:

- Provide access to education beyond the formal schooling environment, as being used in some radio, television and web programmes to reach others who have no access to it.
- Within the classroom, ICT tools can be used for creative, communicative collaborative and task-based activities during instruction in various school subjects and it also encourages set discovery by learners.
- In teacher professional development, ICT has proven to be very significant. Teachers achieve this professionalism through access to online journals, joining discussion forums, downloading lesson ideas and plans.

However, in Nigeria, there is the problem of achieving easy access to the use of ICT despite all the justification for the need and use of it in the teaching/learning process.

Statement of the Problem

The study is aimed at determining Nigeria's vision for ICT in basic education and to examine its implementation in terms of the availability of ICT tools in schools and their application in improving teaching and learning in basic

school subjects. This issue arises as a report of the E9 meeting held in Indonesia in April 2008. Nigeria is one of the only two countries that were at the risk of not meeting the targets of EFA because the quality of teaching and learning in our schools remains a great challenge. Also, the Millennium Development Goals Report (UN 2005) acknowledges that quality assurance in education is yet to be adequately addressed in terms of teachers, curricula, teachers' support and teaching learning materials. The study, therefore, is to determine Nigeria's vision for ICT in basic education and examine its implementation in terms of the availability of ICT tools to schools.

Research Questions

The following research questions were raised to guide the study

1. Is Nigeria's vision for integrating ICT in basic education, especially in teaching and learning processes articulated in any policy?
2. What has the government proposed and implemented to integrate ICT in basic education in terms of access and infrastructure and human resource development?
3. What are the available ICT tools in teaching and learning in basic schools in Nigeria?
4. What is the teacher's background in the use of ICT as well as the teachers' ICT attitude?
5. What are the challenges to ICT integration in the teaching/learning process?

Scope of the Study

The focus of this study is on ICT use in teaching and learning activities within the Universal Basic Education (UBE) system. This system comprises nine years of basic education which according to the UBE Act is free, compulsory and functional. Basic education schools made up of primary and Junior Secondary Schools in Delta State were used. Though due to the size of the state and the terrain of most areas, some schools were selected from the three senatorial districts of the state. 240 public and 120 private school teachers were used.

Design of the Study

The design of this study is based on qualitative reviews and analysis of policy documents in education, namely, the National policy on Education (FGN 2004) National policy on computer Education (FME 1988), National Policy on Information Technology (Federal Ministry of Science and Technology, 2001) and National Policy on Teacher Education (FME,2007). These documents were used to answer questions one and two. Also, the descriptive survey design employing the random sampling procedures to select subjects and utilizing quantitative data from in-service teachers of basic schools were used.

Sample

The sample for the study was 360 basic education teachers from private and public schools in Delta State. The teachers sampled included 240 public and 120 private school teachers, all randomly selected from different schools from the three senatorial districts of Delta State.

Instrument

The instrument used in the study was a comprehensive self-designed 50-item questionnaire extracting information from the teachers about ICT infrastructures available in their schools, the teachers' background and experience in the use of ICT, how they use ICT in instructional processes, their attitude and behavior in the use of ICT as well as students' reception and competence in learning with ICT. Based on these the questionnaire had 6 sections, with each section dedicated to each theme.

Validation and Reliability of Instrument

The questionnaire was validated using Cranach Coefficient. However, the questionnaire was subjected to the opinions of experienced lecturers in the department, education, especially specialists in educational technology. Their suggestions were used to modify the instrument into a final draft.

The final internal consistency (reliability) of the instrument was found to be 0.77.400. Questionnaires were administered through face-to-face technique, while 360 were returned, signifying a return rate of 90%

Results

The result presented in the table below showed teachers' background understanding and perception of ICT.

Table: Teacher's perception of ICT

Constructs	Agreed (%)	Disagreed (%)	not applicable
Relevancy (1)			
Computer Assisted Instruction			
Tutorial lessons	27.3	31.8	28.5
Drill and practice exercises	26.5	27.4	26.5
Simulations	25.5	26.2	27.2
Games	25.0	27.5	28.2
Teachers' Perception (2)			
I am active in the use of ICT in Classroom	23.7	11.6	56.3
I make effort to upgrade my computer skills	26.9	12.6	62.2
I consider ICT useful for learning	7.3	28.4	58.9

I make allowance for ICT use	12.3	20.6	61.9
ICT is not relevant to teaching	9.6	30.7	57.6
I use ICT only for personal purposes	30.6	6.7	60.3
I use ICT for professional purposes	27.7	12.4	62.1
I do not feel threatened with the use of ICT	10.8	27.7	59.6
I use ICT to motivate and sustain students interest	10.6	29.8	59.6
I feel inadequate in using ICT	26.3	12.8	57.4
I seek out ideas about ICT always	23.4	14.9	57.6
ICT is critical to learning achievement	25.6	8.7	62.3
I am incapable of operating ICT tools independently	17.3	16.5	59.1
I always try out some learning activities with ICT	127.6	10.4	58.7
I am a major contributor to ICT Development in my school	18.4	13.6	63.6

Findings

1. Teachers' Background in Understanding and Perception of ICT

On the teachers sampled, only very few claimed to have personal computer, while only 28.5%, admitted to being introduced to some ICT during their training as teachers. Again, only very few claimed to have access to internet services. This result is in agreement with the Adeosun and Maduekwe (2008) report that Nigerian teachers possess lower skills in use of ICT. Majority of subjects, acquired their computer training course through self-efforts as organized by NGOs (Non-Governmental Organizations). These finding also support Yusuf's (2005) study where he found that most teachers in Nigeria do not have the needed experience and competence in the use of computer either for educational or professional purposes or for basic computer either for educational or professional purposes of for basic computer operations, skills and knowledge. He further observed that the existing curriculum designed for the training of preserve teachers in Nigeria does not include the practical use of ICT materials. This explains teacher's indifference to ICT shown in table above (over 50% of teachers chose "not applicable" for each perception construct).This could be attributed to a number of factors, mostly the lack of training in the use of ICT as well as the nature of training some teachers had. Many teachers in both primary and secondary are yearning for-service training on the use of ICT for enhancement of their training competence and the achievement of objectives of ICT use.

2. ICT Tools Available in Basic Education Schools

This study tries of find out the availability of computers in schools as well as its use, using the teachers of basic school.

Finding revealed that while 68.6% of the teachers claimed they have computers in their schools only 9.6% of these (26 teachers) actually have computers in their classrooms and 264% (63 teachers) use it in delivering instructions. This result is however disappointing as many have no intentions or plans for this ICT use. From the data collected, basic education students do not have adequate exposure to computers, let alone teachers' ICT tools. It was also discovered that in the very few schools where these computers are available, a total of 2 or more students are attached to one computer.

Barriers to ICT Integration in Schools

The task of integrating ICT in basic education is facing a lot of limitations and difficulties. There are several obstacles to the societal usage of ICT in Nigeria. They include the following:

1. Inadequate Power Supply:

The epileptic, non-reliable and non-rural electrification in Nigeria does not in any form make for effective utilization of ICT equipment in schools. ICT being electricity-driven makes it difficult if not impossible for schools to use it. According to Yusuf (2005), irregular power supply in the country is a major obstacle to the use of ICT in all spheres of the economy.

2. Lack of Skilled Teachers:

The teachers' identified barriers include lack of time; this is their lack of time to engage themselves in ICT training and the lack of time for use in the short time allocated for basic school subjects in Nigeria. These have been supported by Okafor and Edet (2008), Aderogba (2009) and Efedi (2010). Others include limited ICT infrastructures, poor internet connectivity, inadequate learning resources and indeed inadequate manpower to maintain the accessories when there is a breakdown.

3. Government policies:

Due to a lack of continuity in government policies and programmes, the basic infrastructures in schools such as buildings, furniture, books, libraries, laboratories and inadequate classrooms are big challenges. This has made the blending of education and technology a child's play.

4. Poor Design and Implementation of Curriculum:

For effective use of ICT in basic schools, the curriculum should be designed to meet the needs and the technological changes of the world. The curriculum has not been formally introduced in the school system as observed by Ngwu (2009)

5. Inadequate Motivational Incentives

ICT personnel is not adequately motivated in terms of conditions of services and wage packages. They are denied in-service training which is supposed to help them update their knowledge and skills. It is also to help them improve their method of instruction and be able to meet emerging situations in the ICT world. This has resulted in many personnel resigning and seeking jobs in another lucrative environment (Ngwu, 2009).

6. **Teachers' Attitude to Innovation**

It is disheartening to note that most teachers still hold tenaciously to their traditional pedagogical methods, not willing to change. These teachers' attitude of fear, ignorance and refusal to embrace the innovative and modern trend of technological advancement has posed a great hindrance to the quality of ICT use in basic education.

Discussion

The results from the study showed that in spite of the government's vision and policies for the use and integration of ICT in basic schools, two very important features emerge. First is the human resource development in terms of skilled teachers to use of ICT in teaching and learning processes is lacking. Second is, the exclusive focus on computers by the respondents showed that to most teachers, ICT integration stopped at the use of computers, and that to be ICT compliant is to be computer literate. It is unfortunate that the teachers could not demonstrate evidence of effective acquisition and use of ICT even at the basic skills level, hence they cannot fully utilize technology in their classrooms, and the traditional chalk-and-talk approach still dominates the school pedagogy.

Some educationalists consider ICT to be the only way to go if not a substitute for conventional teaching and learning resources. But the sample of teachers from the findings of this study shows some ignorance of the trends in the 215t C. Also, in terms of collaboration with other professional colleagues and access to updated research, ICT knowledge cannot be disregarded. However, as some of the teachers made efforts to acquire computer skills, this is not helpful to their professional development as most do not have an email account, and rarely access the internet, while those who access the internet could not demonstrate effective knowledge of ICT tools as well as search engines.

Most importantly, ICT tools and equipment are grossly lacking in almost all the sampled schools. Even in areas where they exist, the existences of other subsidiary materials [infrastructures] such as electricity are not reliable. The absence of electricity has denied rural schools the opportunity to benefit from the use of electronic equipment such as radio, television, video recorders and computers. These environmental realities continue to make ICT development in Nigeria a difficult one.

Conclusion

Having x-rayed some of the benefits and good impacts that ICT can exert in basic education development in Nigeria; it is no more disputable that ICT is important in the development of quality teaching and learning in educational systems around the world. It is as well a means of a fundamental transformation of the existing school principles and practices for the preparation of students to meet the innovations in the global arena. Achievements in the ICT penetration and use in Nigerian basic education programmes are dependent on the recognition of this importance, beyond policies and disjointed efforts at ICT application to education. Lack of teacher's skill in the use of ICT made changes noted in schools less than expected. It is therefore imperative for government to demonstrate a more serious attitude to the use of ICT in schools. Olakulehin (2007) noted that it is important that teachers in the training institutions are imbued with the skills and abilities of ICT literacy and sensibilities so that the knowledge and attitude acquired will impact positively on the learners that they come in contact with in the classroom when they begin to practice.

Recommendations

1. Policymakers should be able to recognize the importance of ICT in our ever-changing world and so make effort to make policies on its integration in the school system.
2. Training opportunities should be open to teachers so that more, if not all teachers, will develop in their skills in the use of ICT in Schools.
3. Strong political will by the government should be made. This is to address key issues and to create an enabling environment for teacher education programme.

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