

# Basic Technology Teachers' Awareness and Attitude Towards the Use Of Information and Communication Technology For Sustainable Development in Lagos State Education Districts: I, IV and VI

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## Abstract

In this era of globalization, the world at large are looking towards integrating information and communication technologies into the education sector to promote economic and technological advancements and make education available to all. It is against this backdrop this study examines Basic Technology Teachers' awareness and attitude towards ICT. The data for the study were collected through questionnaire and analyzed using descriptive statistics. Findings showed that Basic Technology Teachers' have the right attitude towards ICT but lack adequate information integration methodologies.

**Keywords:** Awareness, Attitude, ICT

## 1 Introduction

Information and Communication Technologies are the major contemporary factors shaping the global economy and producing rapid changes in the society. They have fundamentally changed the way people learn, communicate and do business. This development has given rise to new educational needs and as well as teaching methods and strategies which contemporary teachers in Nigeria must not refuse to part of. This is conceivable when teachers have right awareness, attitude and accept the integration of modern technologies into the teaching process. The contemporary traditional teachers tend to be pessimistic in their perception and attitude towards change, Lawal (2006). This pessimism can be attributed much to lack of awareness about ICT policies and the potential benefits of ICT as a tool for teaching and learning. Teachers' awareness is centered on their understanding, recognition and appreciation of the benefits woven around ICTs in education and their inclination towards its adoption (Oladosu 2011). The awareness about policies forms the backbone of the utilization and productivity of a program. When an individual is aware of the guiding principles, he then cultivates the right attitude which will result in improved productivity. This will urge the individual to yearn for skills to improve competency. Teachers demand special attention because they have special needs and interest that must be addressed with respect and ingenuity in order to make them embrace the new technologies placed in the classroom (Lawal, 2006). This is important because the effective use of ICT requires peculiar demands which they must be aware of and perceived well for efficient use. Among these demands are: the need have personal computer, access to internet services, how to integrate ICTs into the instructional process, how to use technology to evaluate learning performances. It is easy for computers to be seen as a learning resource in the classroom without clear objectives as to how they will facilitate children's learning. Putting computers into schools is not enough to impact on student learning, there is the need to be able to use and evaluate ICT purposefully which is the key alleviation from information poverty (Oladosu 2011). The Nigeria National policy on Information Technology (2001) created some awareness through the various areas outline for competency in computer for educators at all levels of education. In recent years, there has been attempt to equip schools with computer hardware and software. The Federal government ordered one million laptop computers for 24 million public primary schools and also launched the schoolnet Nigeria to create learning communities for educators and learners, (Osei, 2007). Also in South Africa, there was the teacher laptop initiative policy aimed to ensure that every teacher in the country owns and uses a laptop. Ofsted (1995) opined that a pupil-to micro computer-ratio does not guarantee high quality work with IT. It should be acknowledged that, lack of meaningful integration may be the result of absence of awareness or lack of confidence on the part of the teachers. Successful integration of ICT into curriculum depends on teachers' conviction of the relevance of ICT as a means of providing better access to richer range of resources for themselves and their pupil, (Yusuf, 2005). Information and Communication technology have been infused into schools without fundamentally changing the way we learn and teach. In most cases they were adapted to traditional school structures, classroom organization and existing practices failing to address comprehensive educational reform, (Eva, 2005). The bane to successful

integration of ICT and new pedagogies lies in teachers' awareness and attitude to the new innovations. This Udo (2005) noted requires urgent understanding of skills, knowledge and awareness.

### 1.1 Teachers Attitude towards Information and Communication Technology

Information and Communication Technology has enhanced teachers' professional knowledge, skill and capabilities by extending their subject knowledge, enabling planning and preparation for teaching to be more efficient. To foster classroom ICT integration, teachers have been identified to be a major factor in fostering classroom integration. This is because teachers constitute the facilitators and entrepreneurs in classroom ICT learning environment, (Jegede, 2008). Teachers are the key change agents of educational development in any country. A change in teachers permeates to all aspect of growth and advances needed in teaching-learning processes and scientific developments. Teachers' knowledge of ICT for teaching and learning, problem solving skills, capacity building and other germane issues relating to education cannot be undervalued. For teachers to be able to cope with these functions of electronic technologies or ICTs there is the need for the right attitude to be cultivated towards ICTs as a tool for teaching and learning. Attitude is the general feeling or opinion of an individual about something (Oladosu, 2011). It is the controller of the actual behavior of an individual consciously or unconsciously. Attitude is a part of cognitive structure people use to organize, systematize their experiences and behaviors. Guoyuan et al (2009) described attitude as predisposition to respond favorably or unfavorably to an object, person or event. To support this definition, Okoli (2000) expressed attitude as established mental set that a person use to evaluate something favorably or unfavorably. He went further to say that, attitude are inferred from overt behavior both verbal and non-verbal which could be appropriate or inappropriate. Teachers' attitude towards ICT is their opinion of acceptance or rejection of ICT as tool for learning. For teachers to have the right attitude there should be a forum for teachers to develop their ICT skills. Daniela and Mark (2006) indicated that teachers in schools show great interest and motivation to learn about ICT potentials and in practice, its use is relatively on the low side. Also in the Scottish schools, teachers recognize ICT benefits for themselves and their pupil but often fail to ingrate in their teaching. Lack of proper integration according to Pelgrum (2001) is due to teachers' competence and confidences in skills. These are major factor that conditions teachers' willingness to integrate technology in their teaching. Guoyuan et al (2009) argued that teachers have both constructivist and traditional beliefs about learning and teaching and that constructivist philosophers are highly active computer users while teachers with traditional beliefs are less likely to use computers and ICTs. Teachers stocked-up with traditional beliefs needs gradual re-orientation and one – on- one practical interaction with ICTs for concrete understanding of the ICT potentials. Teachers' attitude towards using knowledge outside their talent and desire tend to be a factor impeding ICT integration and successful integration of ICT requires competences and skills essential for designing, delivering and evaluating instruction, Yasemin (2008). Teachers' pedagogical beliefs and philosophies play an important role in transmuting traditional classroom into an ICT based classroom. When teachers at last develop the right attitudes and are inclined towards the adoption and integration of ICT into classroom instruction, there are factors that militate against its successful integration.

### 2 Methodology

The reliability of the test instrument was tested using test-retest methods. The scores obtained from two administrations in the period of three weeks intervals were analyzed using Pearson product correlation coefficient at 0.65 coefficient consistency.

$$R_{xy} = \frac{\sum(x - \bar{x})(y - \bar{y})}{\sqrt{\sum(x - \bar{x})^2 \sum(y - \bar{y})^2}}$$

The formula produce the consistency score of 0.91 to adjudge the instrument as reliable for the study. The data collected were analyzed using calculated mean scores to determine the degree of Agreement and Disagreement.

$$\bar{X} = \frac{\sum fx}{n}$$

Where:

$\bar{X}$  ----- Actual mean

A ----- Assumed mean

$\Sigma fx$ ----- Total frequency

n----- Number of items

$$\text{Mean score} = 0.5 + \frac{5+4+3+2+1}{5} = 3.5$$

### 2.1 Decision Rule

Hence, responses with a mean score of 3.5 and above will be regarded as agree while those below 3.5 will be regarded as disagree.

Table 1 Basic Technology Teachers' awareness of ICT as tool for teaching and learning

SN	STATEMENTS	Agree	Disagree	Undecided	X	Remark
1	Basic Technology Teachers are not aware of Nigeria National Policy on Information and Communication Technology (ICT)	30	59	5	2.74	Disagree
2	Teachers are aware that the use of ICT tools aid learners to learn at their own pace and convenience	82	17	2	3.93	Agree
3	Basic Technology Teachers are aware that knowing how to surf the internet is a worthwhile skill	87	4		4.32	Agree
4	Basic Technology Teachers' have attended seminar on how to use the computer to teach	51	40	3	3.19	Disagree
5	Teachers believe that ICT can improve students' learning style and performance	73	2	2	4.79	Agree
6	Teachers personal access to the internet at home has improved my teaching skills in Basic Technology	82	11	9	4.10	Agree
7	Teachers are aware that ICT can promote lifelong learning	97	1	0	4.62	Agree
8	Teachers are not adequately aware of the methods of using ICT to teach Basic Technology	72	24	5	3.68	Agree
9	In my school Basic Technology Teachers often discuss computer related topics and exchange ideas about computer hardware and software	56	35	10	3.29	Disagree
10	Teachers are aware of software that can be used to teach Basic Technology	57	35	7	3.41	Agree

The findings reflected that, teachers are aware of the National policy on IT, ICT enable learners to learn at one's pace, internet surfing is a worthwhile skill, ICT improve students' learning and promote life-long learning but are not aware of the methodologies of using ICT to teach, do not discuss computer hardware and software. It can be said that the teachers are very well acquainted with the potentials of ICTs in education but are not well informed of its utilization: when to use, how to use and select appropriate media. This finding avows the statement of Timothy et al (2000) that, meaningful integration of technology knows when, why and how specific tools should be used to facilitate overall learning, requiring ability to plan, select optimal application tools, skill to plan, implement and evaluate effectiveness.

Table II Basic Technology Teachers' Attitudes towards the use of ICT

SN	STATEMENTS	Agree	Disagree	Undecided	X	Remark
1	<i>I believe that the use of computer and other electronic technologies will take-over my profession from me</i>	25	74	7	2.29	Disagree
2	<i>The abusive use of computers and ICT tools has negatively affected my attitudes towards ICT as tools for teaching and learning of Basic Technology</i>	28	74	7	2.45	Disagree
3	<i>My peers enthusiasm about computer and ICTs changed my reservations towards acceptance of ICT as an effective tool in the teaching and learning of Basic Technology</i>	51	47	8	2.98	Disagree
4	<i>The provision of short and long-term staff development programs on ICT integration has boosted Basic Technology teachers opinion of ICT as a tool for improving the teaching of Basic Technology</i>	85	5	5	4.30	Agree
5	<i>The lack of confidence affect Basic Technology Teachers attitude towards ICT-Basic Technology teaching and learning</i>	51	42	14	3.07	Disagree
6	<i>Basic Technology Teachers develop phobia in operating computer and other instructional electronic device</i>	18	77	7	2.31	Disagree
7	<i>Students negative attitude towards ICT based teaching technique discourages Basic Technology Teachers to use of ICT in teaching</i>	50	40	14	3.13	Disagree
8	<i>Learning Basic Technology software will make me feel nervous and uncomfortable</i>	73	15	6	3.71	Agree

It was gathered that, techno phobia, ICT dismal use, operational skills in electronic devices and students' negative attitude does not have anything to do with teachers' attitude towards ICT while staff development program is considered germane to attitudinal change. Goktas (2006) posits that, to help teachers perform more effectively and achieve goals, they should be equipped with ICT competencies in education. Yasemin (2008) opined that, Teachers' attitude towards using knowledge outside their talent and desire tend to be a factor impeding ICT integration and successful integration of ICT requires competences and skills essential for designing, delivering and evaluating instruction as well as the students' performances to learning.

### Conclusion

Information and Communication Technologies are electronic devices that have come to reshape the world in all aspects of human endeavor with its stronghold in the provision of education for all. Pivotal to the provision of education for all are teachers who have been trained professionally to educate, improvise and integrate emerging technologies into the paradigm of education. Unfortunately the case is not the same with basic technology with Basic Technology for Nigeria teachers who are impaired by a lack of ICT in the Junior Secondary School due to poor funding, inadequate monitoring and over population over the available computers. It was observed during the field work that, the few Junior Schools that has Vsat is connected to the administrative unit. In some schools computer technologies are available, these computers are not connected to the internet and the teachers can hardly access the computer not to talk of impacting the technological knowledge on to the students. In spite of the adequate awareness of the teachers towards ICT, the concepts, methods and applications involved are constantly evolving on almost daily basis, the quick changes in ICT makes it difficult for these teachers to keep up with or even ICT impact the knowledge into the students as a result of lack of internet connection where the computers are available. The sustainability and development of ICT in Nigeria school is a vital aspect of education that cannot be over-emphasized due to the unarguable merits of ICT in the production, storage, retrieval, manipulation, transmission and reception of electrical information in digital form. To bridge the digital divide between Nigeria and other developed countries, professional development of teachers should be germane to sustainable development.

## References

Federal Republic Nigeria (2001). Nigeria National Information Technology Policy.

Guoyuan, S., Martin, V., Johan, V.B., & Jo, T. (2009). Factors Supporting or Preventing Teachers from Integrating Information and Communication Technology into Classroom Teaching: A Chinese Perspective. Proceedings of the 17<sup>th</sup> International Conference on Computers in Education Hong Kong. Asia-Pacific Society for Computers in Education.

Jegede, P.O. (2008). Information and Communication Technology Attitudinal Characteristics and Use Level in Nigerian Teachers. Issues in Information Science and Information Technology. Vol.6

Lawal, M.B. (2006). Energizing the Nigerian Teacher Trainer for Electronic and Virtual Education. A Paper Presented at the COEASU South-West Zonal Delegates Academic Conference in e-learning.

Ofsted, (1995). Information Technology. A Review of Inspection Finding 1999-2004 London HMSO.

Okoli, C.O. (2000). Educational and Psychological Measurement. Behenu Press Printer, Shomolu-Lagos.

Osei, T.A. (2007). Emerging Trajectories and Sustainability of ICTs in Educational Reforms in Africa: Exploring the Prospects of the Teacher Laptop Policy in South Africa. *Journal of Education for International Development*. Vol.4 (2).

Udo, R.O. (2005). Five Strategies for Sustainable Teacher ICT Platforms for Nigerian Teachers 2<sup>nd</sup> Nigeria e-learning Capacity Building Int'l Associates in Collaboration with national Commission for Colleges of Education.

Yasmin, G. (2008). ICT Usage in Higher Institution: A Case Study on Pre-service Teachers and Institutions. *Turkish online Journal of Education Technology*. Vol.7 (1). ISBN1303-6521.

Yusuf, M.O. (2005). Integrating Information and Communication Technologies in Nigeria Tertiary Institutions. *Journal of African Educational Research Network*. Vol.5 (2). Retrieved from <http://www2.nesu.edu/nesu/aem/INDEX.HTML>.

Pelgrum, W.J. (2001). Obstacles to the Integration of ICT in Education: results from a worldwide Education Assessment. *Computers & Education*, 3(2), 157-161

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