

***Innovations and Best Practices: Language Teachers' Perception of
Information, Communications Technologies (ICTs) in the
Nigerian ESL Context***

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Abstract

In any fast-growing economy, the potentials of ICTs with attendant innovations of the 21st century must be fully explored for the enhancement of language development. More importantly, teachers remain the portal to any classroom innovation and diffusion as they play a key role in determining what students learn. This survey, therefore, investigated teachers' perception of the use, adequacy, and availability of Information and Communications Technologies (ICTs) in English language classrooms. Utilising questionnaire and interview schedule in data sourcing, 84 teachers were randomly selected from 15 secondary schools in Lagos State, Nigeria. Analysis of data involved mean, standard deviation and chi-square, correlation coefficient (r) and ANOVA. Results indicated that English language teachers appreciate the potentials of technologies but lack the confidence and initiative to use them. The perception of teachers differs more on awareness of existence than on its use in language classroom as depicted by standard deviation of 3.05 and 1.99 respectively. Furthermore, the perception of technologies by male teachers varied greatly than those of the females as indicated by the standard deviation of 4.4 and 3.422 for males and females respectively. Finally, teachers were enjoined to prepare earnestly for the best futuristic practices by embracing the challenges of ICT facilities in language pedagogy through continuous training and retraining.

Keywords: Innovation, information, communication, technology, language, teachers, perception.

Introduction

The role of Information and Communications Technology in the development of educational innovations and practices has been highlighted in modern literature (Cajkler, 1993; Kennings, 1993; Postman, 1993; Coombs, 1995; Sotunwa, 1998; Iteboje, 2000; Tihamiyu, 2000; Ekweagwali, 2003). Ekweagwali, responding to claims made for communications technology as a key factor in education in Nigeria, stated that: "IT application will affect education process in three main ways - as productivity aid; enrichment of content and facilitator for student initiated learning" (p. 10). In the context of school curriculum, Information and Communications Technology (ICT) refer to the range of tools and techniques relating to computer - based hardware and software, communication including both directed and broadcast, information sources such as CR-Rom and the internet, and associated technology such as robot, video conferencing and digital; television (Hard, 2000). All these potentials constitute vital consideration in the planning, development and implementation at all levels of education.

Hodge and Miller (1997) concluded that in all categories of advanced countries: United States of America, Canada, Brazil, Mexico, Europe, Japan and South Africa, communication technology remain the most important to executives' plans for future success in education. Developing nations like Gambia, Ghana, Togo, Uganda, and Ivory Coast are also engaging in initiatives and formulating policies to maximise their potentials to exploit the new technology. Nigeria, the giant of Africa is not an exception in this direction. Nigeria has already embarked on building strengths to overcome weaknesses in current application of technology, communications, infrastructure and human resources nationwide. In the light of this, education at primary, secondary and tertiary levels has initiated the provision of basic and computer literacy skills. Furthermore, computing facilities within schools have continued to depend on financial resources provided through state government funding and donations by private and corporate bodies. Learners are eager and excited to embrace the new technology. However, few schools have adequate number of computers to cope with the challenges of the millennium. Connectivity over the internet is still limited due to high cost and unsteady power supply.

Researchers like Aminu, (1989), Alao, (2000), Gbenga, (2001) continued to offer considerations for employing technology - enhanced inquiry in the language classroom. The more technologies are integrated in normal language work, the more students are encouraged to become active participants and contributors rather than passive recipients in language learning. In this respect, authoring programmes are invaluable, as they allow teachers to tailor contents to learners' current needs in grammatical, lexical, free-oral or skill-based activities. The internet services for instance, provide students with great opportunities to engage in conversations, obtain information, express feelings and emotions, exchange opinion and transact

with others. As well, the resources of different communication tools of World Wide Web (WWW) such as e-mail, video-conferencing, web-cast, telephone and online have helped to facilitate English as a foreign and second language acquisition. Hardy (2000) lists the advantages of technologies to language classroom teaching as follows:

Automatically: Involves speed and automation facilities of IT which enable pupils to perform mundane operations quickly and easily and so focus attention on the main purpose of learning.

Provisionality: This is the quality of information technologies that allows for ease of correction so that items can be edited, changed and rearranged with minimum

Interactivity: These qualities of IT, particularly multimedia facilities, allow children to be more actively involved with their learning. The interactive nature of IT can improve concentration, motivation, independence and self-esteem as well as developing problem solving, thinking and communication skills.

Capacity: Capacity allows for ease of storage, retrieval and manipulation of information. In this form, a vast quantity and range of reference material can be customized to suit the needs of an individual student.

Sociability: Social attributes of computer use are associated with learning through co-operative interaction, interpersonal and social skills gained from group work.

Scrimshaw (1993) contended that computer use is a social practice and it is through cooperative learning that the greatest gains are to be made. Each of these qualities can contribute to aiding curriculum access within specific circumstances relating to a particular student's needs. However, while acknowledging the fundamental impact of communications technology in rational pedagogical modes, it is important to emphasise that the effectiveness of the new technology in the learning process depends on the centrality of the teacher. Merely providing access to hardware and software does not guarantee effective integration of technology into the language classroom setting without also the teachers' inclination to use the technology. This idea was encapsulated by Maduekwe (2006) that:

Ideally, teachers should not only provide an introduction and regular access to a range of hardware and software but also act as good role models by demonstrating the appropriate use of IT applications in their training activities
... the trainer must be nonthreatening either by personality or by position (p. 185).

Teachers' responsibilities must, therefore, change and will continue to change as classrooms are infused with technology. They remain pivotal in identifying software and activities as well as structuring the sequencing of learning activities. In other words, teachers are to decide what is taught and how it is taught. Such a challenge lifts the teacher from "magister" (instructor) to pedagogical (facilitator

of student learning) (Haggins, 1988; Pachler, 1999). It becomes essential that every language teacher must be receptive and learn to establish new and high quality professional practice. Unfortunately, this is not necessarily so in most developing countries, including Nigeria.

Statement of the Problem

Studies indicate that the use of ICTs for educational purposes has the potential to bring positive changes for teaching practice (Sotunwa, 1988; Oliver, 1993; Akudolu, 2000; Maduekwe, 2006). Despite this potential for training and support, ICTs have not been accepted among teachers. Some complain that scripted lessons take away their ability to address students' individual differences and improve their own strategies. Others fear that technologies will reduce the role of teachers in defining curricula and educational strategies or totally replace those (Haddad & Jurich, 2002). Since the adoption of ICT in Nigerian classrooms is yet to be fully institutionalised, language teachers' perception concerning the provision and use of technologies becomes imperative.

Purpose of the Study

This study seeks to determine how English language teachers in Lagos State perceive the use of information technologies in language classrooms. The knowledge and insights gained from the teachers' perception can spur significant reflections and improvement of teacher preparation programmes and can be used to leverage resources for the much-needed investment in the new demand.

Research Questions

This investigation was expressed in the question form as outlined below:

1. To what extent do English language teachers in Lagos State, Nigeria perceive the availability, adequacy and use of Information and Communication Technology materials in improving teaching and learning in English language classrooms?
2. To what extent are the teachers' technological knowledge applied in English language classrooms?
3. How adequate are the technological facilities provided in language classrooms?

Research Hypotheses

The following hypotheses were tested in this study:

HO₁ There will be no significant differences in teachers' perception of the availability, adequacy and use of technological materials in Lagos State,

Nigeria, by (a) gender, (b) qualification, (c) specialization, and (d) experience.

HO₂ There will be no significant difference in teachers' knowledge of and Communication Technology application on English language teaching in Lagos State, Nigeria.

HO₃ There will be no significant difference in teachers' perception and availability of Information and Communication Technology in language.

Methodology

This study is a descriptive survey design, which covered teachers in the selected 12 private owned secondary schools in Lagos State, Nigeria.

Participants

The population studied was English language teachers and sample included 96 teachers randomly selected from 12 participating schools from both Island and Mainland Local Government Areas of Lagos State, Nigeria, in the second semester of 2007. Most of the public or state-owned secondary schools do not have any technological gadgets. Hence, the criteria for selection of schools were based on awareness and the availability of technological facilities in these private schools. The total number of ESL teachers sampled in the selected schools N = 96).

Instrumentation

The major data collection instruments used in this study were questionnaire and oral interviews. The questionnaire contained twenty-one items. It was divided into section: Sections A and B. Section A of the questionnaire, containing six items, deal with the teachers bio-data details in terms of (a) professional qualifications (b) area of specialisation (c) teaching experience (d) teaching periods and (e) number of students taught in class. Section B contained 15 items, which probed into the teachers perception of information technologies in English language classroom as well as problems and challenges faced in the new dispensation. The items were structured on a five- point Likert scale. All the statements were positively worded and the scores of 1 - 5 were awarded to the items. The interview schedule, which comprised seven semi-structured items, sought further information on teachers' experiences with computers, the challenges and future prospects of information technologies in English language classroom.

Validity of the Instrument

According to Kerlinger (1986), validity is the extent to which response or answer given is the true measure of what the researcher expects it to mean. Three

professors from the Department of Arts & Social Science Education, Educational Technology and Computer Science at the University of Lagos, Akoka, Lagos, Nigeria established the validity of the instruments. The panel of judges was asked to assess the content of each item and of the test as a whole. Furthermore, the panel of judges were asked to respond to each item of the test by employing a scale of zero to two (zero meaning the statement is not valid, one meaning the respondent is unsure, and two meaning the item is valid and measuring what it is supposed to measure). The panel (n=3) supported the content validity of the instruments, standards and indicators that were the foundation of the instrument. Additionally, this study was based on a broad review of research and related literature. The research questions and hypotheses had sound theoretical underpinning, thus assuring construct validity.

Reliability of the Instrument

Reliability is synonymous with consistency. An instrument is said to be reliable if it consistently demonstrates the same result within the same period. In order to establish the reliability of the questionnaire, the researchers conducted a pilot study in the first semester of 2008. A split-half method was used to ascertain the reliability of this instrument. The questionnaire was re-administered on 40 secondary school English language teachers after a period of two weeks since the initial piloting. Reliability index of 0.84 and 92 were obtained respectively when the Pearson Product Moment correlation coefficient was applied between the two sets of scores. This suggested that the internal consistency of the constructs and overall scale were satisfactory.

Data Collection Procedure

This study utilised survey and questionnaire research methods. A total sample of 84 (n = 84) English language teachers were selected from a total population of 96 (N =96) teachers in 12 secondary schools in Lagos State. The researchers completed the survey in the second semester of 2008. The researchers with the help of two research assistants administered the questionnaire to the respondents. It took approximately one and a half month, and several trips to the selected schools to receive the 84 responses which resulted in 87.5% response rate. Each interview, which lasted 30 to 45 minutes, was transcribed and the teachers were given an opportunity to check their responses for accuracy. The response was later analyzed using independent t-test and chi-square.

Results

The analysis of data yielded the following findings:

Table 1: Teachers’ Perception of Information Technology by Gender

variable	Number	SD	DF	Fcal	Ftab
Gender					
Male	34	4.4	82	0.108	3.92
Female	50	3.422			
Total	84				

Table 1 shows that the calculated value of F is less than the critical F value at 5% level of significance. Hence, we accept null hypothesis implying that the perception of the adequacy or availability of information technologies shows no significant difference based on the gender or teachers. It further reveals that there are more female English language teachers than their male counterpart and that the perception of technologies by male teachers varied more than the females as suggested by the standard deviations of 4.4 and 3.422 for male and female respectively.

Teachers’ Perception of Technology by Specialisation

Table 2: Teachers’ Perception of Technology by Specialisation

Specialization	N	X	SD	DF	Fcal	Ftal
English	72	49.93	3.651	82	0.109	3.92
Non - English	12	49.167	5.024	82	0.108	3.92
Total	84					

Table 2 shows that Fcal is less than Ftab at 5% level of significance. We, therefore, accept the null hypothesis. The standard deviation of non-English specialists is higher than that of the English specialists, which suggests that there is a higher variation in the perception of the non-specialists of the availability of ICT materials in the selected schools in Lagos State, Nigeria.

Teachers’ Perception of Technology by Experience

Table 3: Teachers’ Perception of Technology by Experience

Sources	df	SS	MS	Fcal	Ftab
Between Gps.	2	1468.3	734.15	0.29	3.92
Within Gps.	77	194.692.19	2528.47	0.108	3.92
Total	79	196,160.49			

Table 3 shows that F_{cal} is less than F_{tab} at 5% level of significance. Hence, we accept the null hypothesis. It implies that the perception of teachers in the schools regarding information technologies programme is not influenced by their years of experience.

Teachers’ Perception of Technology by Qualification

Table 4: Teachers’ Perception of Technologies by Qualification

Sources	df	SS	MS	F_{cal}	F_{tab}
Between Gps.	3	748.166	249.389	0.095	2.68
Within Gps.	80	208984.83	2612.31		
Total	83				

Table 4 indicates that F_{cal} is less than F_{tab} at 5% level and we therefore accept the null hypothesis. It implies that the teachers’ perception of ICT is not influenced by their qualification.

Comparison of Awareness and Applicability of Technology

Table 5: Comparison of Awareness and Applicability of Technology

Sources	N	X	SD	R
Awareness	84	32.73	3.05	0.127
Use	84	17.1	1.99	

Table 5 shows that the calculated correlation coefficient $r = 0.127$ is less than critical value = 0.21 at 5% level of significant. Hence, we accept the null hypothesis. The value of r shows that there is a very low positive relationship between awareness of ICT and use by teachers of English language in the secondary schools. The standard deviations of 3.05 and 1.99 for awareness and use respectively indicate that perception of teachers differs more on awareness of ICT than its use in language classroom.

Teachers’ Perception of Availability of Technology in Language Classroom

Table 6: Teachers’ Perception of Availability of Technology in Language Classroom

Specialisation	n	X	SD	Chi-square (X ²)	P
Availability of ICT in language	84	49.82	3.85	1	Ns

Table 6 shows that the calculated chi-square 1 is less than the critical chi- square, 101.88 at 5% level of significance, we therefore accept the null hypothesis. It implies that teachers’ perception of the level of availability of technologies in

language classroom did not differ significantly. The standard deviation of 3.85 low when compared to a mean of 49.82 depicting low variability in opinion of richers about ICT.

Discussion

In this study, the perception of teachers towards the adequacy, availability and provision of ICT materials in teaching English as a second language at the secondary school level in Nigeria is established in terms of gender, specialisation, experience and qualification. Table 3 indicates that hypothesis 1 was accepted in spite of the categorisation. The result also shows that there were more female English language Teachers than males. The perception of ICT by male teachers varied more than those of females as indicated by the standard deviation of 4.4 and 3.422 for male and female respectively (see table 1). This corroborates Hernes' (2002) viewpoint that though schools are increasingly well equipped and connected, perception varies within countries with educational level, type and gender. The same trend, he noted, applies to teacher training and skills. As well, this finding also supports farther discussion noted by Hernes (2002) that males are more active than girls in using technological tools (p.34). Implicitly, thus, the findings tend to give credence to the stereotypical view of computers as male tools existing even in developed countries as expresses by Carlson & Gadio (2002). The fact remains that English language teachers seem enthusiastic to appreciate the potentials and relevance of ICT but they are reluctant to use them for „fear“, and, uncertainty.“ Towards this end, Maduekwe (1998) confirms that „the sphere of the practical remains the sphere of the unknown. Little wonder that Machiavelli rightly wrote that „there is nothing more difficult to take in hand, more perilous to conduct, or more uncertain in its success than to take the lead in the introduction of a new order of things“.

An additional problem in this direction is the seemingly comparative lack of skill in teachers to make positive judgments on the basis of professional experience and awareness. Interestingly, the value of „r“ in table 5 show's a low positive relationship between the awareness of ICT and use by the teachers of English language in Lagos State secondary schools. The standard deviation of 3.05 and 1.99 for awareness and use indicate that the perception of teachers differs more on awareness of ICT than its use in language classroom. It portrays that some teachers claimed ignorance of the availability of ICT in the schools and confirmed that even where ICT materials are available it was never used as requested because of lack of courage and confidence. This problem aligns with Haddad & Jurich (2002) idea that teachers need constant and continuous renewal to be effective, motivated and up to date in their knowledge and skills. They noted that while this is not a mandatory requirement in many schools, those that do have such requirements use and view ICT as an important vehicle for providing continuing professional development for teachers.

Table 6 further indicates that the teachers' perception of the level of availability of digital technologies in language classroom did not differ significantly. The standard deviation of 3.85 is low when compared with the mean of 49.82 depicting a low variability in opinion of teachers about ICT. This finding is in agreement with many studies that confirm that technological facilities and infrastructure have been largely inadequate in Nigerian school system, at all levels and that you cannot access what you do not have (Aghadiuno, 1909; Akinmutimi, 2000; Tiamiyu, 2000; Owhotu, 2006). This situation tells us something about the issue of equity in the use of technologies in education. Where the infrastructure exists, the opportunity to create virtual learning communities of teachers within nations and across schools often exists. Such learning communities enable and empower practising teachers to share experience, curriculum, learning materials, lesson notes and collaborative projects (Dhanarajan, 2002). In essence ICTs can be applied in basic training, upgrading and advancing pedagogical skills, content knowledge and continuous professional development.

Recommendations

Based on the findings of this study, the following suggestions are proffered for making the use of technological access and utilisation of ICT in English language classroom a reality.

1. Since ICT is an important competency in the era of knowledge and information technology, policy makers should involve not only training teachers but also retraining and constantly updating their skills to enable them to keep pace with usable technologies and applications and to harness these as tools for decision making. Perhaps, the trainings should be made compulsory if the integration of technologies into the teaching of English language is to achieve results.
2. As the awareness and use of technological materials continue to expand in Nigerian society among teachers, schools and other educational institutions will need to develop performance indicators to continually monitor the use and outcome of technologies on the part of teachers. Teachers should not be simply left to get on with the equipment but should be supported and monitored.
3. Adequate funds should be made available for the provisions of ICT materials and language laboratories in schools from primary to secondary and tertiary institutions. Towards this end, private companies and individuals should be encouraged to assist in the provision of grants and technological materials in the schools within the community where each operates.
4. The persistent fears expressed by inexperienced teachers could be alleviated

by working out modalities to stimulate their intellectual curiosity and offer a sense of enjoyment that will move them from passive role of recipients to active role of builders of technological knowledge. Teachers need to be reassured that technology in education is not to be seen as an end in itself, but as a means to promoting creativity, empowerment, quality teaching, problem solving and efficient learners.

Conclusion

This study has established that the enabling environment for the awareness and use of technological materials do not yet exist in most of the schools sampled. Where ICT materials are available it was never used because of “fear”, “uncertainty” and lack of motivation.” Technologies have gone beyond mere rhetoric to being a pivot for problem solving, thinking and communication skills. Hence, no serious nation can advance technologically and scientifically without carrying the teachers along. As the pace of technological change accelerates, teachers' involvement, therefore, must be total in order to facilitate and not hinder the development of the innovative process in an educational system. They must prepare earnestly for the future by embracing technologies and starting the process of preparing for the challenging environment of encouraging current and future thinking in language pedagogy. We conclude in line with Cornu” (1995), cited in Owhotu, 2006) suggestion that one should have in mind not to end up training „like teachers of yesterday, with tools of today or tomorrow” (p.39-104). But we must prepare a new class of teachers - the teacher of tomorrow for the students of tomorrow in the school of tomorrow. What teachers can perceive and truly believe, they only truly can achieve in an evolving interactive integration of intent and best practices in Nigerian English language classrooms.

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