

**AN APPRAISAL OF INFORMATION AND COMMUNICATION
TECHNOLOGIES AS NEW MEDIA TOOLS FOR LANGUAGE TEACHING
AND LEARNING IN TERTIARY INSTITUTIONS IN NIGERIA**

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Abstract

Today, information and communication technologies (ICTs) have redefined the way communication is carried out and further pushed the envelope with regard to the way information is disseminated, creating more channels of interaction between stakeholders in the society. Studies are ongoing on how ICTs can be useful in language teaching and learning in tertiary institutions today. The impact ICTs have had in improving governance, agriculture, medicine, banking and commerce, education, inter alia, so far, is being predicted to have the same impact when utilised for language teaching and learning. Thus, ICT tools like PowerPoint, e-conferencing, compact disks (CDs, VCDs and DVDs), technology-aided distance learning, among others, are instruments that can facilitate knowledge acquisition, language teaching and learning in tertiary institutions. Through ICTs, the teacher-student interaction in the learning process is situated within a dynamic pedagogical context that could go beyond the four walls of a traditional classroom. This situation forebodes better days for teachers and students alike as more channels of interaction are created, thus enhancing language teaching and learning. It now behoves teachers and students to take advantage of these technologies in furthering knowledge acquisition with regard to language teaching and learning. Among other things, in this paper, the authors have critically appraised the use of ICTs in language teaching and learning in tertiary institutions in Nigeria, identified the various limitations to

this process and made recommendations that can be useful to policy makers and stakeholders involved in tertiary education.

Keywords: *Information and communication technology; Language; teaching; learning; tertiary institution*

Introduction

Information and communication technologies have been said to have positively impacted the various sectors of the society such as governance, agriculture, medicine, banking and commerce, education, transportation, inter alia (Imhonopi, 2009; Imhonopi, Urim & Igbadumhe, 2013), and they are being predicted to have the same impact in enhancing language teaching and learning in tertiary institutions in Nigeria. This enthusiasm had been shared by Barad (2009), who contends that a gale of change is blowing in the pedagogy of English Language Teaching (ELT) and that ICTs have initiated new possibilities in the classroom, challenging and redefining the role of the teacher, the nature and context of learning, as well as the function and relative importance of course contents.

The influence of technology in education has been recognised as a widespread phenomenon. According to Yuvienco and Huang (2005), within English or Foreign Language Teaching, the rapid development of Information and Communication Technologies (ICTs) has prompted changes in the ways and methods of teaching and preparing students for continuous learning and effective use of the language to communicate with people from various parts of the globe. These technologies also provide various types and forms of information ranging from sound, video, images to animations; thus ICTs have quadrupled the possibility of language learning.

Consequently, rapid advances in the development of ICTs (Information and Communication Technologies) have simultaneously been seen to offer new opportunities for enhancing the quality and effectiveness of language teaching and learning even in developed countries (Edewor, Imhonopi, & Urim, 2014; Imhonopi, 2009; Imhonopi, Urim & Igbadumhe, 2013; Kumar & Tammelin, 2008). Generally speaking, ICTs have brought about a revolution in education

and training, as new technologies have enabled new and accessible communication which has had a profound impact on learning processes and has led to innovative learning approaches such as the use of social networks or virtual worlds. In particular, this trend is especially notable within the field of language learning, where new ICTs have allowed for increased interaction between teachers and learners (key factors for the acquisition of language competencies) and broadened the options and contexts used in this interaction. Such options useful for language pedagogy and learning include but are not limited to social software like blogs, wikis, and podcasting and others like PowerPoint, teleconferencing, Compact Disks (CDs), internet, webquests, e-portfolios, digital storytelling and participation in various web projects.

The development of ICTs, undoubtedly, influences the process of using them in everyday classroom teaching and learning. Thus, ICTs provide an array of new possibilities of using them in the modernisation and flexibilisation of the teaching-learning process and they help to increase the quality of education and to meet the requirements set by the contemporary knowledge society. This is true whether for professionals bent on building/developing their career as it is important for teachers and students alike. ICTs no longer serve to be a simple additional means but are an indispensable part of the modern and contemporary learning environment.

However, although technology is increasingly prevalent in everyday life and has permeated different sectors in society, many educational institutions in Nigeria have been perceived as either lagging behind in fully recognising, implementing and utilising these ICTs or struggling with the poor state of infrastructural development in the country including lack of stable energy provision, which has made it very difficult for the adoption and maximisation of ICTs within tertiary institutions (Edewor, Imhonopi, & Urim, 2014; Imhonopi, 2009; Imhonopi & Urim, 2010).

In this paper, the authors are concerned about the role of new media tools as an aid to language teaching and learning in tertiary institutions

in Nigeria. It is the position of the authors that adopting and utilising ICTs in the pedagogy and learning of language is in line with the development of technology in the wider society and helps to increase the options and possibilities open to the teacher-student interaction within tertiary institutions in Nigeria. The paper also investigated the various limitations involved in the language learning and teaching process and mooted workable solutions that could help teachers as well as learners maximise the process. The paper then provides recommendations that can be useful to institutional decision- and policy makers including heads of language institutions, departments and units in addition to ICT managers, head teachers and other language teachers in charge of developing ICT-enhanced teaching, and to students in tertiary institutions in Nigeria.

Conceptual Clarification

It has been noted that information and communication technology (ICT) is the technology that has made positive impact in information generation, storage, retrieval, transmission and communication (Edewor, Imhonopi & Urim, 2014; Imhonopi, 2009; Imhonopi, Urim & Igbadumhe, 2013). For Adeyinka (1999), the whole concept of ICT encompasses all those technologies that enable the handling of information and facilitate different forms of communication among human actors between human beings and electronic system and among electronic systems. According to him, ICTs enable users to record, store, process, retrieve, transmit and receive information. They are an amalgam of modern technologies/tools such as computers, facsimile transmission, macro graphics telecommunication, macro electronics, office information and control engineering. ICTs carry out their communication activities via resources and services that affect the local or global accumulation and flow of public and private knowledge. Tsubira and Kyeyune (2001) define information technology as hardware, software, the method and the know-how required in acquiring, storing, processing and displaying data and information. They also see communication technology as the hardware programmes and the methods used in ensuring that messages or information is transmitted correctly, efficiently and cost effectively. According to them, the convergence of these two technologies refers

to information and communication technology i.e. a technology that allows for, benefits from and reinforces the interaction between information technology and communication technology.

ICT is also seen from the angle of globalisation, because globalisation has greatly influenced the variety, complexity and use of information and communication technology. ICT revolution has contributed immensely to shaping and accelerating globalisation, enriching its global perspective and goals, so also globalisation and ICT have combined to bring about changes in the integration of world affairs by encouraging a new vista of opportunities in the global economy. Aluko (2004) sees ICT differently. He considers ICT as the enabling technology (both hardware and software) necessary for the delivery of voice/audio, data (high speed and low speed), video, fax and internet services from point A to point B (or possibly to multiple points BCD); using wired and wireless media and associated equipment that are connected via internet protocol (IP) and non-internet protocol (NIP) networks, where the option exists that any or all of the communication points may be fixed or mobile during the communication process.

From the above, it is patent that ICTs are modern technologies that enable information gathering, processing, transmission and storage, and they can be useful in language teaching and learning by providing more options and opening up more contexts for teacher-learner interactions whether online or offline. Language can be seen as the system of communication in speech and writing that is used by people of a particular country or area including its vocabulary, syntax and grammar. Learning, on the other hand, is relatively permanent change in, or acquisition of, knowledge, skill, understanding, or behaviour. The area of technology-based learning is assigned by different acronyms. Originally referred to as CALL (Computer Assisted or Aided Language Learning), it is now also known as TELL (Technology Enhanced Language Learning). WELL (Web Enhanced Language Learning) is a component of CALL and TELL, with an exclusive focus on web-based resources (Delcloque, 2000). Technical equipment in the assistance of the daily work of learning and teaching is well-known to language teachers. However, over the years, they

have battled variously with tape machines and the acquisition of language laboratories, audio and video cassette recorders and later Dictaphones. While some of these tools are by no means outmoded, ICTs have emerged as the new media tool driving the present teacher-learner interaction in the area of language teaching and learning.

Theoretical Framework

According to Gyamathy (2002), the two comprehensive models to describe teaching and learning using technology tools are Constructivist and Conversational Models. According to the constructivist model, knowledge is constructed by the learner by drawing on prior knowledge and personal experience. Within the constructivist paradigm, knowledge is not external to the learner or imposed on him. It is the process, not the product, which is crucial to the learner's construction of knowledge, and the way the learner arrives at the solution is of more importance than the solution itself. This process requires the active use of a wide variety of materials or ICT options to support the learning, e.g. raw data, secondary sources, interactive materials. Real tasks, including case studies and problem-based learning methods, are used to anchor the learning process in realistic contexts. In addition, rather than being simply spoon-fed with answers by the teacher or instructor, the learner is prompted to relate concepts to pre-existing knowledge and experience in order that new ideas become meaningful in the learner's own frames of reference (Jonassen, 1999). Therefore, for the constructivist, the teacher uses ICTs in his or her role as a task/content designer and knowledge facilitator and creates the learning environment in such a way as to enable the acquisition of new knowledge. According to Tam (2000), within the constructivist perspective, the primary responsibility of the teacher is to create and maintain a collaborative, problem-solving environment, where students are allowed to construct their own knowledge, and the teacher acts as facilitator and guide. This perspective supports some of the advantages of ICTs in language teaching and learning as they aid learners towards autonomy, repetitive learning and pacing the process of learning.

However, the conversational model is helpful because it accentuates the importance of the teacher-learner interaction as being fundamental to the learning process. In this theory, the teacher not only acts as a guide and facilitator in the learning process but also plays a key role in the learner's acquisition of knowledge. This is because at the start, the learner comes into the learning process with his or her own preconceptions of the given subject but by setting a task, the teacher then engages the learner in further exploration of the subject. This interaction with the teacher helps the learner to reconsider prior understandings and knowledge and form new conceptions of the subject matter. This improves the learner's understanding and guides him or her towards having meaningful responses in the learning process (Entwhistle & Ramsden, 1983; Pask, 1975). Thus, the teacher and learner must make their conceptions of a topic and task meaningful to one another. They must respectively generate and receive feedback on these descriptions. The teacher must adapt his or her tasks in light of the learner's actions to enable knowledge to be constructed in meaningful terms. The learner must receive feedback on the task in order for understanding to be achieved. The teacher must reflect on the way in which his or her feedback to the student is linked to the original task. The learner must be able to control the pace of the learning process in order for him or her to consider feedback and reformulate a new response (Laurillard, 1999). Thus, according to the conversational model, the challenge the teacher within the technology-based and –enhanced learning process faces is no longer that of mastering program languages in order to fashion his or her tools, but rather, of manipulating and exploiting pre-existing technological resources so as to construct meaningful interactions in the learning process. Consequently, while the constructivist model advocates the independence of the learner in the learning process via the aid of ICTs, the conversational model contends that the teacher's understanding and use of ICT tools in his or her interactions with the learner would construct meaningful frames of reference for the learner.

The Shifts in ICT-Enabled Language Teaching and Learning

The technological change over the past thirty years has created a new global economy. The introduction of this new process has serious

implications for the nature and purpose of educational institutions. The knowledge and skills thus acquired make learning possible continuously throughout the lifetime. Information and Communication Technologies (ICTs) have become powerful tools for educational change and reform in general and for language teaching and learning in particular. Computer-Aided Language Learning (CALL) started in the 1960s (Davies, 1997; Davies, 2003; Ely, 1984) and has passed through three phases. According to Warschauer (1996), these phases include when the computer was behaviouristic, serving as a tutor and mainly as a vehicle for delivering instructional materials to the learner; when it was communicative, used only for skill practice with a greater degree of student choice, control and interaction and the last phase which is integrative, where there was an introduction of two important innovations: (a) multimedia tools (b) the internet. The main advantage of multimedia packages is that they enable reading, writing, speaking and listening to be combined in a single activity, with the learner exercising a high degree of control over the path that he/she follows through the learning materials. The Internet builds on multimedia technology and in addition enables both asynchronous and synchronous communication between learners and teachers. Kirubahar, Subashini and Santhi (2011) have also identified the three phases in the utilisation of ICTs in language teaching and learning. According to them, the first phase was characterised by the use of computers as tutors in language teaching and learning followed by computer being used as a pupil and the last phase where the computer has become a tool box. These descriptions are close to describing how ICTs have emerged as dependable allies aiding the teacher-learner interaction in language teaching and learning. Therefore, the shifts in perspectives on language learning and teaching through the aid of ICTs have parallel developments in technology from the mainframe to the personal to the networked computer and the internet technology.

Benefits of ICTs in Language Teaching and Learning

According to Becta (2004) and Imhonopi and Urim (2010), several benefits of the utilisation of ICTs in language teaching and learning have been identified. They include:

- Learning environments can be extended beyond the physical constraints of the classroom.
- Creative use of ICT in the classroom can promote inclusion and reflect cultural and linguistic diversity.
- Learners can showcase and share their work which has positive motivational effects and raises self-esteem.
- Resources and activities can be created quickly and easily. Many online resources in this case include for instance, online newspapers, webcasts, podcasts, newsroom, video clips or even video sharing websites such as YouTube,
- Errors can easily be reversed encouraging experimentation, inter alia.
- Current information relating to linguistic and cultural diversity can be made accessible to all.
- Learner independence and group study are enabled.
- Multimedia Projects provide excellent opportunities for cooperation and collaboration between learners and other first language speakers. Language teachers all over the world are introducing myriads of ICT-enhanced language learning projects, including simulations, between their students and groups in other countries, thus widening the language learning perspective into that of learning about the cultural context of the language being used. Previously, students or classes would write letters or e-mails to each other. Today, using ICT they can “Skype” or chat online, where they can not only write to each other in real-time, but also see each other and speak to each other online.
- ICT-based tools help language teachers to effectively tutor their learners more through the constantly growing a number of available educational language resources whereby teachers are able to give individual and personalised guidance to learners. The use of several media – audio, video, authentic contexts,

and real-world experiences help language learners with different learning styles to assimilate the content according to their needs.

- Multilingual word processing enables learners to write in the first language.
- Bilingual multimedia stories bring paper based bilingual books to life.
- Online translation facilities can be used to facilitate understanding and build bridges between languages
- Learners have immediate access to content rich sources of materials that draw on the previous learning and experiences of students. Information and images from a variety of cultures can be found on the internet and on CD-ROM.
- Assessment information can be collated to inform future planning and differentiation.
- ICTs can open up a new range of self-access and distance learning opportunities, thereby making access to learning more widely available to students who have to study outside normal hours, who live in remote areas, or who have special needs.
- Email, local network links, user groups and video conferencing facilities provide opportunity for learners to communicate with proficient speakers of English and also of their first language across the world.

New Media Tools Available for Language Teaching and Learning

ICT has helped a lot in improving teaching and learning skills as many authors have acknowledged (Barad, 2009; Edewor, Imhonopi & Urim, 2014; Imhonopi, 2009; Imhonopi & Urim, 2010; Njamanze, 2010). Language teachers are used to dealing with a range of "traditional" media: printed texts, images, audio materials and video materials. They are familiar with the characteristics of each of these media and what they can do best in terms of supporting language teaching and learning. However, ICTs in the context of Language classrooms can manifest itself in many different ways as a tool for assisting the development of the four key skills: Listening, Speaking, Reading and Writing. Some of these technologies have been identified as follows:

1. Web 2.0 components are a variety of online resources, tools, software and platforms that can enable language teaching and learning within and outside the classroom. They include the internet, blogs, *e*-groups, SMSs, emails, socialising portals, *e*-dictionaries, *e*-encyclopedia, PowerPoint presentations with audio and video clips, webcasting, and audio-video materials.
2. Teleconferencing (text-based, video and audio conferencing). This is a system of video and audio conferencing that uses a restricted band of frequencies and allows participants to be connected by telephone lines.
3. Interactive television.
4. Digital Satellite Television.
5. Audio graphics (combination of audio conferencing, fax and transfer of information between computers).
6. Internet chat and multiple user environments like Multi-User Domain (MUDs) and multi-user domain, object-oriented (MOOs) are virtual online spaces in which several participants can meet at a given time to discuss a given topic or contribute to a communal project such as a collaboratively written story or a game for several players.
7. Computer-mediated communication (bulletin boards, discussion lists) refers to good resources for discussions between and among language students and their teachers.
8. A blog is a term derived from 'web log' which is a journal available on the web. The activity of updating a blog is called "blogging" and someone who keeps a blog is a "blogger". Blogs range in scale from the writings of one occasional author, to the collaboration of a large community of writers. They enable visitors to leave public comments, which can lead to a formation of a community of readers centred around the blog and can be used for submitting pieces of writing in writing classes, publishing results of surveys and for international and cultural exchanges. By far the most popular free tool for blogs was Blogger.com.
9. Wikis - A wiki is a public website which any visitor is able to change. Instead of being a static webpage or a website it has the potential to be a dynamic one, which anyone can edit. The

- most famous example of a wiki is Wikipedia.org, a wiki - encyclopedia on which anyone can edit any of the entries. On a side note, editing entries in Wikipedia is a wonderful language exercise on its own and one that teaches caution in accepting the reliability of online resources.
10. Podcasting is a technology used to distribute (broadcast) audio content from websites to consumers, who typically listen to it at their convenience on their iPod (hence the “pod”) or other audio player that supports MP3. Another piece of technology, called RSS enables listeners to “subscribe” to podcasts and receive them even without visiting the particular podcast website. There have also been some examples mentioned of student-produced “podcasts”, or sound files, which were either attached/embedded to a blog or sent out as an email or e-mail alert (Chylinski, 2006). Webheads have experimented a lot with a free tool Podomatic.com which is also a voice blog (vlog).
 11. Electronic portfolios or e-portfolios are a collection of someone’s digital records or documents of various descriptions. These records can be personal or professional in nature and are managed and displayed for the purpose of presenting one’s skills, achievement records and one’s learning development. Application of e-portfolios to education is wide: e-portfolios are being used from primary to tertiary settings and they seem to lend themselves well to foreign language training.
 13. WebQuests - A WebQuest is a constructivist lesson format, which has been used widely for over a decade now. The WebQuests are seen as one of the most involving and challenging of web-based lessons. They are usually based on current events, controversial social or political issues or scientific hypothesis. Students work in groups, where members have to analyse and master a particular aspect of an issue. Each member becomes an ‘expert’ in their role, later contributing to an in-depth understanding of their given aspect to the final group task. Webheads recommended Webquest.org as a must-visit site which features searchable databases of ready-made WebQuests.

14. Digital Storytelling is a multimedia version of a cartoon or a picture story affording teachers/students the opportunity to arrange digital photos or other images into a story, complement it by captions, voice and music and publish them online. In digital storytelling, the tools most often reached for by webheads are MS Photostory, OurStory.com and Slidestory.com. Slidestory.com seems to be particularly promising, both as a source of listening, reading and watching of stories (for the development of receptive skills), but also as a easy to use and a free tool for making picture, voice and text stories and publishing them online (Chylinski, 2006).
15. Web portals like Youtube.com and video.google.com help students/teachers to make their own videos and/or watch videos that enhance the quality of class sessions.
16. Use of Overhead Projector (OHP) with printed transparencies of sketched images related to important scene from a novel can bring new meanings to a plot or storyline. An inclusion of online references, PowerPoint, Word files, e-encyclopaedia when projected on the OHP can help collective reading of websites and these resources and enhance students' understanding and act as a motivation for commitment to language learning.
17. CD/VCD/DVD player with TV for viewing movie downloaded from web portals can also enhance language classes. VCDs/DVDs/Audio books and Video libraries from web resources can be good resource materials for language classes.
18. Synchronous and asynchronous mode with the help of emails, short messaging services (SMSs), Yahoo e-groups and chat applets (Yahoo Messenger, Skype and Google Talk) provide opportunities for interactions between a class and the outside world.
19. MS Office Word for editing, Encarta e-dictionary and e-encyclopedia, other e-dictionaries and e-thesaurus for drafting SMS and Email to the editors of newspapers and magazines or first speakers of a language and the feedbacks received can further enrich language classes.

20. Search engines such as bing.com and google.com are incredibly helpful for generating resource information for language students and teachers.
21. WikiEducator and Moodle both give incredible opportunities to explore web resources.
22. Authoring programs such as Hot Potatoes, TaskMagic and Fun with Texts can help to improve on students; presentation, writing and reading skills.
23. Tertiary institutions in developed societies have begun to invest in the acquisition of interactive whiteboards (IWBs) which have been helpful to teachers, providing whole-class presentation devices and software and being used with multimedia projectors to project pictures, texts, and other information during classes (Davies, 2003). This can be useful for language classes.
24. Synchronous communications and interactions can be sustained via emails, the Web, by satellite and mobile phones.

Suggested uses of ICT-enabled language teaching and learning

Information and communication technologies can be used in some of the following ways in language courses:

1. Existing on-campus language courses can be supplemented with course websites and online interactions;
2. Courses that combine classroom teaching with online modules and activities can be offered (i.e. blended learning courses) (Littlejohn & Pegler, 2007);
3. Courses can be offered completely online with no classroom-based component (online courses);
4. Mobile learning options can be used and included in the language curriculum (Kukulaska-Hulme & Traxler, 2005);
5. Virtual learning environments can be used for foreign language learning purposes.

The different ways of using ICTs listed above are not mutually exclusive and can be combined depending on the needs and the environment of institutions concerned. Also, the decisions that will be taken about infrastructure, course design, teaching and administrative

support will depend on the type of course offerings planned by institutions.

Use of ICTs in Language Teaching and Learning in Tertiary Institutions in Nigeria

As Njamanze (2010) observes, the use of ICTs in language teaching/learning in Nigeria emerged as a response to the need to create and adapt to new dimensions and tools of communication in the 21st century. As globalisation sweeps across the globe, Nigeria is not left out as a credible member of the global community. The country has begun to experience the diffusion of ICTs in the country permeating the different spheres and sectors. Furthermore, the use and benefits of ICTs in Nigeria have already been documented in academic literature (Agunloye, 2006; Ajayi, 2000; Edewor, Imhonopi & Urim, 2014; Imhonopi, 2009; Imhonopi & Urim, 2010; Imhonopi, Urim, & Igbadumhe, 2013; Jagboro, 2003). So far, ICTs have proved to be helpful in areas like banking, medicine, building and real estate, agriculture, governance, and education generally. Thus far, language teachers, especially in developed societies, have begun to see the need of incorporating the use of various ICT hard and software tools to bring more interaction, active learning, current and authentic contexts and materials, cooperation and collaboration, individual and personalised guidance the learning process, and facilitating different learning styles so that learners can assimilate contents according to their needs.

Even though ICT has transformed education in Nigeria and made it more interactive, has empowered teachers/students practically and theoretically in the use of technological facilities, has enhanced efficiency in the workplace, increased the speed of communication and has improved teacher-student interaction, when it comes to language teaching and learning as Njamanze (2010) contends, the adoption of ICTs is yet to be embraced the way they are being used in developed societies. There are some current developments in technological applications in language teaching in Nigerian schools. Current trends in the use of ICTs for language teaching and learning in Nigeria suggest central and peripheral learning processes which facilitate

person-to-person interaction (i.e. teacher/learner, peers, families, etc), through ICTs and computer networks at various parts of their locations in the country and beyond. ICTs have been seen to aid fast and comprehensive language acquisition and communication. They provide bridges to the target language and culture. The various interfaces provided by ICTs in language classes include (a) Teacher/learner physically present in the same environment; (b) Teacher/learner in different locations and time and (c) Teacher/learner standalone use, usually for learning purposes. The present ICTs utilised in language classes in Nigeria include the internet, emails, PowerPoint, Word Processing Packages, audio and visual materials, VCDs, CDs and DVDs, multimedia projectors, chat applets and teleconferencing.

Nevertheless, as Imhonopi & Urim (2010) observed, teachers and students are yet to maximise the available ICT tools for academic, research and language works because of apparent limitations facing the country. These limitations have been identified below.

First, lack of infrastructure which includes poor power supply, lack of modern computer hardware and software facilities and technologies, unavailability of internet services, dilapidated and poorly built classrooms, lack of modern teaching aids and furniture are, among other things, major encumbrances to effective utilisation and maximisation of ICT tools in language teaching and learning in Nigerian tertiary institutions today. Until the issues are addressed, academics/learners may not be able to maximise ICT tools for their language classes. Second, poor funding of education in Nigeria is another major factor that inhibits progress and advancement in language learning and teaching in tertiary institutions in the country. Teachers are not motivated to teach because of the poor state of facilities and remuneration in place. Students themselves are demotivated as poor living conditions in their hostels, on and off-campus experiences discourage students from committing to rigorous study. Third, some academics who are technophobic may not be able to utilise ICT tools in their teaching of language and may deny their students the benefits these tools could engender in their language

classes. Some students too are not computer or internet literate and this also may encumber effective learning in their language classes. However, as Imhonopi (2009) postulates, any academic that wants to make a success of their career in the twenty-first century must embrace the use of ICT tools for their research and teaching programmes.

Fourth, lack of currency and recency in available technology in Nigeria coupled with the poor state of infrastructure is another factor that gags effective language teaching and learning in Nigeria. For instance, in browsing/surfing the internet, most times, servers are down because the technology used is landline dial-up access. Although this technology is cheap and affordable, it is limited in that the speed and download abilities are constrained unlike when broadband technology is adopted (Adeyeye, 2006).

Fifth, as Imhonopi (2009) highlighted in his research survey, many academic staff members are unable to maximise ICT tools for their research and teaching objectives because of the institutional typology they belonged to. Apparently, academics in private tertiary institutions tend to have more access to ICT technologies than those in public universities. This, as earlier mentioned, is due to the poor funding of public tertiary education in Nigeria. Many owners of private universities, on the other hand, have raised the bar in order to attract patronage with the resultant effect of making more profit and increasing their brand equity and even local and international rating.

Sixth, technical hitches like poor server and data loss are other limitations that students would have to face when dealing with ICT. It is reported that data loss can de-motivate students particularly when it comes to completing their assignments. This is confirmed by the results found by Bullock (2000) in which the respondents did feel the frustration having lost their data. Seventh, as Cuban (2001) observed, the perception of teachers and learners to ICT for language teaching and learning can help/hinder effective implementation of ICT in language classes and limit/expand teacher-learner interaction opportunities. Studies in this direction have concluded that, for instance, if teachers perceive technology as adding value to curriculum

goals, motivating learners, or augmenting learning they are more willing to teach with technology (Doering, Hughes & Huffman, 2003; Ertmer, Addison, Lane, Ross & Woods, 1999; Russell, Bebell, O'Dwyer & O'Connor, 2003).

Lastly, the prevailing culture and beliefs of teachers about language learning, teaching methods, electronic communication with students, perceptions of their role as a teacher, and their confidence with using technology can influence the ways in which they use technology in their teaching.

All of these factors, put together, go a long way in limiting the utilisation and maximisation of ICT resources by academic staff and their students in many Nigerian tertiary institutions with regards to language teaching and learning.

Recommendations

As a way of stimulating the greater use of available ICTs in language teaching and learning in tertiary institutions in Nigeria, the authors have suggested the following factors for consideration by teachers, students, policy makers and government.

1. Teachers and students alike are to shed any tendencies of technophobia, misconceptions and wrong beliefs regarding ICT use in language teaching and learning since the present era is ICT-based and –driven. The earlier teachers and students alike begin to embrace available technology tools and adapt these for their teaching and learning, the better and more results-oriented their language classes would turn out to be. In addition, since the government has not been forthcoming in the area of adequate education funding, teachers and students alike must seek ways to train themselves in the use of ICTs for their language classes.
2. Government and managers of tertiary institutions must begin to guarantee the availability of adequate technical infrastructure (e.g. hardware, software, Internet access) so that academics and their students can have access to these ICTs and also use them to further their goals in their language classes. Again,

- government should take pragmatic and effective steps towards improving the state of power in Nigeria. Without power, other infrastructures like internet access, computer hard and software facilities will not work.
3. Government must improve the funding of education in the country such that Nigerian students can enjoy quality education and be prepared to face the gargantuan career and professional challenges thrown up in the present information and ICT-driven era. Adequate funding will also serve as a strong motivation for academics to give their all to their students and to effectively conduct their research and teaching activities.
 4. There is need for initial, continuous and robust just-in-time technical training for language teachers and students in the use of ICTs, online and multimedia language learning materials. Adequate support is also to be given to language teaching staff, identify the needs for digital facilities for language learning purposes at individual institutions and involve these teachers in fashioning the content, methodology and approach to language teaching and learning in their individual institutions.
 5. It is important for individual institutions to define the formats in which ICT will be used for language learning (online, blended, or to supplement face-to-face teaching) in their various institutions, and support their teaching staff to design teaching methods that suit different learning styles with available ICTs.
 6. Generally, there must be a commitment to the use of ICT-enhanced tools and materials for language teaching and learning because the constant utilisation of these tools will entrench and deepen its knowledge and diffusion within tertiary institutions in Nigeria.

Summary and conclusion

Tertiary institutions in Nigeria need to recognise and analyse the characteristics of this new generation of learners that Prensky (2006) calls the “digital natives.” According to Prensky, digital natives are the native speakers of technology, fluent in the digital language of computers, video games, and the Internet compared with those not

born into the digital world, the “digital immigrants.” Digital immigrants have adopted many aspects of the new technologies, but have retained “an accent” because they still have one foot in the past and do a great many things the old way. Prensky does not mean that teachers should master all the new technologies. Instead, he emphasises that teachers must practise putting engagement before content when teaching. He proposes that tertiary institutions should select academics for their empathy and guidance abilities rather than exclusively for their subject-matter knowledge. These abilities will be needed more than ever before in tertiary institutions in the present digital age. Language teachers who are familiar with new technologies and can integrate ICT thoughtfully and effectively in their teaching will be better able to empathise with and guide learners, preparing the “digital” Nigerian youths of the future.

As the country looks into the future of ICT use in language teaching and learning from the institutional perspective, it would be useful to remember what Kershaw (1996) wrote about the advent of new technologies such as the World Wide Web and videoconferencing in the last decade of the past century. Kershaw examined why new technologies and efforts to integrate them into teaching and learning in pedagogically sound ways seemed to make little impact on educational practices. In doing so, he underlined the importance of institutional commitment and pointed out that the teachers/students who use the new technologies must be provided with training, technology access, and encouragement to use the technology in their day-to-day academic and research work. Furthermore, educational leaders need to be aware of the future trends that may or will have an impact on teaching, studying and learning. The increasing use of Web 2.0 (e.g. wikis, podcasts, social networking, Web-based applications) provides new opportunities for learner interactions and increased contact with their peers that appear to fit in with these trends. Language learners will be able to communicate and collaborate in real-time on the Internet like never before, creating shared products and learning while doing so online. How these technologies will be integrated into language teaching and learning by institutions and language teachers and whether new technologies can contribute significantly to learner

effectiveness are areas to be worked out by stakeholders. As Lynch and Roecker (2007) suggest, the current trends show that the growth of demand for e-learning from users will grow faster than the supply capability or innovation capacity. They argue that learners will want and demand better and more interactive forms of e-learning, often becoming frustrated by what is not yet available. Furthermore, they claim that as learning becomes more integrated with technology, it will be assumed that all learning includes electronic access. Consequently, educational leaders need to be aware of these signals and trends and be proactive in preparing to educate their learners to meet the needs of the rapidly changing working environments and society.

In conclusion, although there seems to be threat to the role of teachers in the present ICT-enabled teaching-learning system, the place of teacher still remains indispensable and irreplaceable. ICTs can never replace a teacher because human agency is needed to plan, organise, operate and manage these tools. A good teacher will always be good, whether he uses these ICTs or not. However, if he or she uses them, they could improve the proficiency level of his/her students and empower them with better understanding of language. Therefore, teachers and students alike must shed every form of technophobia and fully engage themselves in the present ICT era. They should become versed in the art of using techno-gadgets, internet, e-resources and other online materials to improve their teaching, learning and research. A teacher or student who is adamant not to change will become irrelevant in this era. Again, tertiary institutions in Nigeria should have the proper infrastructure for effective and productive teaching and learning to take place. Lastly, students must be encouraged and motivated to be a part of the ongoing ICT invasion of the classroom. They should become computer and internet literate to effectively participate in their language classes. All stakeholders must be committed to making language teaching and learning a productive and rewarding experience through the adoption of available ICT-enhanced tools and materials.

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