

INFORMATION AND COMMUNICATION TECHNOLOGIES (ICTS): A PANACEA TO THE DEVELOPMENT OF NIGERIAN LANGUAGES.

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Abstract

Information and communication technologies have provided society with a vast array of new communication capabilities to achieve phenomenal strides. Although the deplorable situation of Nigerian languages has been so affirmed, very little has been done, in spite of the high faulting rhetoric to rectify it. Indigenous Nigerian languages have struggled with the problem of relevance in a changing world, especially when juxtaposed with the languages such as English, Arabic and French. In view of the above, this paper attempts to examine the roles of ICTs in the development of Nigerian languages. This is done by examining the status of Nigerian Languages and its classification, concept of ICTs, the roles of ICTs in the development of Nigerian languages, and challenges. The study concludes that ICTs are resources for the development of Nigerian Languages and finally recommended among others proper funding for ICTs resources.

Keywords: Information, communication, technology, language

Introduction

Various groups, linguists, governments both the Local, National, Continental, Statesmen and women (ACALAN, AU, Crozier and Blench) have long recognized the fact that Nigerian languages have been and that the languages needed to be re-invented or to 'reinvent' themselves, as it were. Nigeria is a multilingual nation with many people speaking a minimum of two languages, one of which is a second language. Many indigenous Nigerian languages have negative attitudes within the community, the speakers are usually older, many never receive regional nor national recognition and many young people rarely get to learn the language at home or in the school, since these languages do not serve as a passport to attractive and enhanced economic opportunities (Urua, 2016).

Although the deplorable situation of Nigerian languages has been so affirmed, very little has been done, in spite of the high faulting rhetoric, to rectify it. In all the various editions of the national policy on education, plans are being made to utilize the indigenous languages to achieve developmental goals/targets. Yet many of the languages are yet to be used as vehicles for instructions, many are yet to be established as official languages and few are promoted as national or regional languages. Even many more are yet to be documented and described (Bamgbose, 2002). In this regard, the goals of the language policies have been denied, leaving the indigenous languages at the mercy of the world's major languages like English and French. Having clearly seen the position of the Nigerian languages, the next step is to re-position it in order to take their rightful place in the development and integration of Nigerian citizens as is stated in African academy of language's (ACALAN) plan of action. The ACALAN has the following objectives:

- To encourage each and every member state to have a clearly defined language policy;
- To ensure that all languages within the boundaries of member states are recognized;

- To liberate the African peoples from undue reliance on the utilization of non-indigenous languages as the dominion/official language of the state in favour of the gradual takeover of appropriate and carefully selected indigenous African languages in this domain;
- To ensure that African languages, by appropriate legal provision and practical promotion, assume their rightful role as the means of official communication in the public affairs of each member state in replacement of European languages which have hitherto played this role;
- To encourage the increased use of African languages as vehicles of instruction at all educational levels;
- To ensure that all the sectors of the political and socio-economic system of each member state are mobilized in such a manner that they play their due part in ensuring that the African languages prescribed as official languages assume their role in the shortest time possible (Baba, 2016).

Languages must be empowered to remain alive before they can be used as media of instruction or thought as subjects in schools. It becomes imperative for our languages to be empowered to meet the various functions they must perform in various societies in order to be relevant. There is also the need to step up the visibility and status of Nigerian languages.

Repositioning the Nigerian languages can be achieved through the use of information and communication technologies (ICTs). ICTs are the current research tools utilized in virtually all areas of human endeavour to achieve phenomenal strides (Baba, 2016). It involves all forms of evolving technologies that help in facilitating information, collection, processing, usage, transfer, storage, retrieval, sharing, interpretation and adoption. It includes: mobile devices, computers, tablets, podcast, internet, scanners, printers, ubiquitous computing and www (Igi-global dictionary, 2019). In view of the above, this paper examines the roles of information and communication technologies in the development of Nigerian languages.

Status of Nigerian Languages and its Classification

Nigeria is a multilingual nation with many young people speaking a minimum of two languages, one of which is a second language. Many indigenous Nigerian languages have negative attitudes within the community, the speakers are usually older, many never receive regional nor national recognition and many young people rarely get to learn the language at home or in the school, since these languages do not serve as a passport to attractive and enhanced economic opportunities (Urua, 2016).

In essence, the level of development of indigenous Nigerian languages shall be examined by using certain indices such as:

Language documentation and description, language use and relevance, language standardization, language of instruction and media participation.

- **Language documentation and description.** Given the number of indigenous languages, very few of them have proper documentation or description (Urua and Dafydd, 2004). For some time now, the best documented and described indigenous Nigerian languages are Hausa, Igbo and Yoruba. About a handful more have been added to that list but the number remains insignificant in comparison to the total number of endoglossic languages spoken in Nigeria (Baba, 2016).

- **Language use and relevance.** Fishman (1991) advocates that one way of maintaining endangered languages is by utilizing it at home. Many indigenous languages are relegated to domestic use only, that is, at the level of the family. But in recent times, even that role is being threatened. In a bid to provide children with what parent's regard as a head start in the fluency and mastery of the English language, parents who share a common indigenous language now use the English language at home and indirectly encourage visitors to speak English to the children on the pretext that the children do not understand the local languages. Another factor that encourages the use of English language as a means of communication among Nigerians is Inter-ethnic marriages among Nigerians. Therefore, people argue that, there is a need for the use of common language widely understood by the different parties-like English language. These instances and more, suggest the rapid erosion of the traditional functions of indigenous languages in Nigeria as a result of the changing linguistic landscape and language shift in Nigeria (Baba,2016).
- **Language standardization.** A large percentage of indigenous Nigerian languages have not been codified in terms of having orthographies, dictionaries or grammars and are therefore neither standardized nor codified in any way. Hudson (as cited in Baba, 2016) agrees that for a language to be considered developed, it should be standardized with orthography, literary works, reference materials used as language of instruction and of the media. However, only a limited number of the indigenous Nigerian languages have been standardized. When a language is standardized, It has achieved the first stage of its development and other development manifestations can take root from there.
- **Language of instruction and media participation.** Although the National Language Policy on Education (NPE, 2004) says that "every child shall learn the language of the immediate community, many of our indigenous languages have not been equipped for that exercise. As has been observed in section 2 and 3, many of our endoglossic languages have neither been codified nor standardized, described or have reference materials as a result lack trained personnel to assist the children in learning the language of his/her immediate community. As a medium or language of instruction in schools, it is only three languages via, Hausa, Igbo and Yoruba (and few others) that enjoy the status. But more is still needed in the area of information and communication technologies resource utilization.

Classification of Nigerian languages

Languages spoken in Nigeria can be classified into different groups according to different criteria. For example, Nigerian languages can be categories into two such as endoglossic and exoglossic. The endoglossic languages are those that are considered to be indigenous to Nigeria and they include about 500 of the languages listed in Grimes' ethnologue while Crozier and Blench on their own listed over 400 (Urua and Dafydd, 2004). The exoglossic ones are those introduced into Nigeria over the years by reason of colonization/political interactions, diplomacy, commerce and religion. They are English, French and Arabic. Besides, there is also Nigeria Pidgin English.

Information and Communication Technologies (ICTs)

Technology has remained the most outstanding human invention. The impact of technology in all aspects of human endeavour has been widespread and felt. Thus, we have witnessed technological breakthrough in communication, human endeavours, to mention but a few. The term “Information and communication technologies” will be better understood if the words are explained fully. Information according to Wendy (1997) “is knowledge derived from data. Data, in turn is recorded as facts or figures”. Buttressing, he identifies three qualities of a good information thus:

- (a) Information must be pertinent: The information statements must relate to the business at hand and to the matters that are important to the person who had requested the information. Information should help the person deal, in some way, with the issues in his or her world,
- (b) Information must be timely, it must be available when needed,
- (c) Information must reduce uncertainty. In short, good information involves differences that make a difference.

Technology of the other hand is man’s answer to a great deal of his cosmic and environmental limitations. According to Okafor (as cited in Owuamanam, 2011) technology connotes “the practical arts ranging from hunting to animal husbandry, from agriculture, transportation and communication mechanism to production of military hardware. Therefore, information technology is concerned with the management technique used in information handling and processing.

Stephen, Maeve and Donald (as cited in Adiele, 2005) define information technologies as “a set of tools for working with information and the process of improving knowledge by acquiring information”. It is the acquisition, processing, storing and dissemination of vocal, pictorial, textual and numeric information by a micro-electronic based combination of computers and telecommunication (Adiele, 2005).

Similarly, communication as a concept has its origin from a Latin word “communicare” which means to share or to establish commonness. Communication can be seen as the transfer of a message to another party so that it can be understood and acted upon. Daramola (2005) stresses that communication is a process involving the passing of message through the use of symbols which all parties in the communication share meaning. It is not just the given of information, it is the given of understanding of information, receiving and understanding the message and this is what makes the output of information technology available to people.

When information technology is combined with communication the result is an integrated package of data gathered, organized, processed, stored, retrieved and made available to users (Owuamanam, 2011). The fusion of information technology and communication gave rise to “information and communication technologies (ICTs).

Hence, information and communication technologies (ICTs) are forms of evolving technologies that help in facilitating information collection, processing, usage, transfer, storage, retrieval, sharing, interpretation and adoption. It includes: mobile devices, computers, tables, podcast, internet, scanners, printers, liquid crystal displays, World Wide Web, LCDs, Ubiquitous computing and www (Igi-global, 2019). In the past few decades, information and communication technologies have provided society with a vast array of new communication capabilities. For example, people can communicate in real times with others in different countries using technologies such as instant

messaging and video conferencing. Social networking websites like facebook allow users from all over the world to remain in contact and communicate on a regular basis. Modern information and communication technologies have created a “global village” in which people can communicate with others across the world as if they were living next door (Tech-terms, 2010).

Similarly, United Nations Educational, Scientific and Cultural Organization (UNESCO, 2005) defines ICTs as “the combination of the computer telecommunication and media technology”. Telecommunication systems are systems for communication over a distance. They embrace a wide variety of media configurations, including radio, telephone, television (broadcast, wired, satellite and computer). ICTs have the potential for not only introducing new teaching and learning practices, but also for acting as a catalyst to revolutionize the education system. It can empower teachers and learners and promote the growth of skills necessary for the 21st century workplace (Trucano, 2005).

ICTs include communication devices or application encompassing: radio, television, cellular software, satellite systems as well as the various services and applications associated with them, such as video-conferencing and distance learning (Ministry of Education, 2010). Finally, ICTs are indispensable part of the contemporary world. In fact, culture and society have to be adjusted to meet the challenges of the knowledge age. The pervasiveness of ICTs has brought about rapid technological, social, political and economic transformation, which has eventuated in a network society organized around ICT.

Roles of ICTS in the development of Nigerian Languages

There are obvious roles of information and communication technologies in the development of Nigerian languages: An important function is that of storage of information and data. Information and data pertaining to different aspects of our languages and cultures can be stored in a limited space thereby reducing cost (Owolabi, 2000). It will raise the level of awareness of the language speakers about their languages and materials available for teaching and learning this language. The resources and materials available on the various languages are readily and easily accessible with a click of the mouse or button. Owners of these languages will also have a sense of pride that their language is part of a recognized and appreciated global cultural heritage. When Nigerian languages are easily accessible, it means that these languages and cultures are given wide promotion and publicity, thus generating more interest from people to carry out research on various aspects of local languages for national development.

Research results and projects including students’ works on Nigerian Languages could be stored electronically. In other words, in addition to having paper reports, researchers and students could provide diskette copies of their project on Nigerian Languages in a diskette or CD Rom (Compact Disc-read only memory), with minimal space and cost.

Secondly, these reports and projects on Nigerian Languages become more easily accessible to other users. Thirdly, in the era where students move from university to another to plagiarize other students’ projects especially on Nigerian Languages would be easy to keep track of project titles, abstracts and where such work has been done, thereby reducing the incidence of plagiarism. For instance, the University of Uyo, department of linguistics and Nigerian languages has embarked on

this on collection of data in local languages collection with the 2001/2002 graduating students' projects (Baba, 2019).

Provision of reliable language statistics is another function of ICTs in the development of Nigerian Languages. Of the 515 Nigerian languages; very few have been documented or described (Grimes, 2000). Tapping into the ICT resources available can minimize the problem. We can now document these Nigerian languages computationally using ICT resources. Computationally documenting these languages will have a spiraling effect on other areas of language development. For instance, it will be possible to provide useful descriptions of the languages and development of various language resources based on the information obtained in the documentation project. Computational documentation of Nigerian languages presupposes the presence of computers and other ICT tools such as the internet and the World Wide Web (www).

Word processors can engage in text manipulations often required in language applications by teachers and learners. These text manipulations often include changing case (upper and lower case conversion), removing accents, removing spaces between words and so on. Computer is a set of electronic equipment that accepts data as input, processes them with the aid of predefined instructions called programme and produces useful output for management's (or any other people's) use (Owolabi, 2000). Computers can be utilized with other multi-media learning devices or it can stand alone and still serve its basic purpose as an electronic medium of language learning.

Multi-media computer have platforms like text, sound, graphics, animation and video that can be employed in communication for the benefit of teaching and learning Nigerian languages for lifting their status.

- (i. **Text:** The term word-processing is used to describe this. This term involves the manipulation of and presentation of texts through coloring, sizing, laying emphasis, underline, bold, italics and final printing (Ogunbanjo, 2003). When a user is texting, he types in language characters and generally responds to typing needs of ICTs language application.
- (ii. **Sound:** Audio sound is another component of multimedia ICTs that could be produced in multimedia language production effort platform. To make this effective, there is the need to record and format sound so that computer can understand and use it in language presentations and application. Two audio formats-the wave form (WAV) and musical instruments digital interface (MIDI) serve to provide for the incorporation of sound into multimedia applications. For the intention of recording sounds such as musical compact discs (CDs) and tapes as part of language applications, the WAV format is advisable for voice recording, which language teachers may want to do from time to time. The MIDI file format must be used to store instructions that enable devices called synthesizes to reproduce the sounds or music. **Graphics:** Graphics are either taken as photographs or drawn artistically to reflect certain scenarios. These pictures, photographs, drawings and other still images are then changed into a format that the computer can manipulate and display. These formats are mostly the bit-mapped graphics for compact manipulations on the computer. Examples of these bit-mapped graphic formats are the graphical interchange format (GIT) tagged image file format (TIFF) and the windows bitmap (BM). The digital camera is advice necessary for instance photography while scanners is useful for scanning other photographic pictures and symbols that can make language application successful.

- (iii. **Animation:** The possibility of including animation through different schemes into multimedia production has greatly expanded its scope. Generally, animation is included into multimedia applications to add motion to image. Such efforts are useful in demonstrating how language words are formed or how sentences are constructed obeying all the syntactic and semantic rules.
- (iv. **Video:** Language teaching and learning make much use of video. Avenues abound the multimedia computer for clips of full motion videos to be used for language media production.

The use of internet in language translation is perhaps one very important avenue of achieving language globalizations. The internet is a flexible computer-based global information system with many interconnected computer networks, linking thousands of computers to enable them share information (Baba, 2019). With the internet, it is now possible for people, businesses and governments throughout the world to communicate quickly and inexpensively. It has a wide range of uses including research, teaching, taxation and shopping. Its utility in language teaching and teaching cannot be over emphasized.

Websites (world-wide-web (www) could be used in the comprehension of difficult texts and the acquisition of new vocabularies. Valuable information on language, words and phrases, detailing translations, definitions, grammatical features and indeed the relevant contexts of the use of words can be stores electronically in what is known as e-dictionary. Similarly, websites could be created for the purpose of making word searches and cross word. Examples of websites already working on linguistics purposes include:

- www.linguisticlist.org. This is the foremost websites for linguistic, dedicated to providing information on language and language analysis and providing the discipline of linguistics with the infrastructure necessary to function in the digital world.
- www.rosettaproject.org. This is dedicated to the Rosetta project on language shift, language endangerment and related issues.
- www.sil.org. This website is dedicated to IPA fonts and other language specific fonts. This is the first website that is devoted exclusively to Nigerian languages from Uwe Seibert of the Summer Institute of Linguistics and the University of Jos, Jos (Baba, 2019).

Seibert (as cited in Baba, 2019) states that website serves the following purposes:

- Enlightening one on the language ecology of Nigeria.
- Gives report on ongoing research in Nigerian languages
- Informs dreamers about opportunities for studying Nigerian languages in Jos and abroad
- Emphasizes the urgent need for the documentation of the endangered languages of Nigeria.

Another function of ICTs in developing Nigeria languages is the possibility and practice of resource sharing which reduces the cost of having to replicate resources available on the internet. This makes teaching and learning of Nigeria languages on local, national and continental levels feasible and easier.

Challenges

It would be naïve to think that exploiting ICT resources for the development of Nigerian languages is cheap. Such a project needs human and technological resources in addition to massive funding (Urua, 2003). From the human perspective, it will require the training and retraining, it will require the training and retraining of linguists in modern ICT application. Linguists and other resource persons working in the field of language development need to make use of computers, browse the internet and websites, utilize multimedia in teaching and research and create websites for the indigenous languages and cultural groups. All these need huge amount of money.

Another challenge facing the development of Nigerian languages is the absence of indigenous languages characters sets. The viable means of inputting characters of indigenous languages are clearly absent on the ICTs software currently available (Emenanjo, 2005). Specifically, most computers understand only foreign language characters because they were designed by these ‘foreigners’: The English and French keyboard are examples. Therefore, ICTs become nearly unusable for ordinary tasks of word-processing in the indigenous languages. Worse still is the fact that developers of some indigenous languages software have been divergent in their efforts. Igbo language, for instance, is still bedeviled with discrepancies in writing some Igbo phrases. This may make the design and development of e-dictionary in Igbo language difficult or unrealistic. Some of the efforts made in developing indigenous software have been problematic because it has been a mere adaption of English orthography and has been tasteful to adapt to the indigenous languages (Ogunbanjo, 2005).

Inadequate infrastructure is another challenge facing the development of Nigerian languages. One of the major infrastructural problems in Nigeria is inadequate power supply and telecommunication facilities like the internet service is still very low. There is also dearth of some linguistic resources such as textbooks on Nigerian Languages. A good number of the languages are variously identified as “endangered, moribund, dying, deprived or even dead” (Emenanjo, 2005).

Finally, an inadequate ICTs skill for teachers and learners is another problem. Most of the teachers and learners of the indigenous languages are grossly deficient in ICTs skills which may likely affect their application of ICTs facilities where they are available. The worst of it all is that most of teaching and learning facilities available to local language teachers and learners are even written in foreign languages. For instance, there is no Igbo, Yoruba or Hausa software running on the internet to aid language teaching and learning (Ogunbanjo, 2005). Some of the tutorials on the use of local keyboards (where they exist) are written in English language. Coding software in local Languages is an obvious challenge to ICTs professionals/developers.

Conclusion and Recommendation

The thrust of this paper is on the roles of information and communication technologies (ICTs) in the development of Nigerian languages. Information and communication technologies resources such as the internet and World Wide Web have revolutionized the approach to problem solving including language problems. Within a split second and with a clicks of the computer mouse button, it is now possible to access information thousands of miles away. It is also possible to collect and store masses of information (data) that using paper would ordinarily occupy tens of buildings on just a single (CDRom).

In fact, the positive contributions of ICTs in researches will continue to outweigh its challenges. Even with the challenges of documentation, codification and graphitization's facing the indigenous languages, the ICTs are still instrumental to surmounting them. Some of its resources can be modified to suit the Nigerian language situation as has been done in some language of the world. ICT in the areas of language teaching, learning and documentation will not be left out. All we need to do is give room to the application of the diverse resources and tools of ICTs for actual benefit to be realized. The time for the full mobilization of ICTs resources is now to give our languages a face lift.

Recommendations

1. It is unrealistic to expect that the amount of funding required can come from a single source such as the government. Funding must of necessity be multisource-government, private, industries, multinational groups, universities, research institutions, social-cultural groups and all stake holders in our local languages. When funding is derived from interested source, more accountability, probity and a desire to achieve success will be the set goal. Everyone will have a stake in the development of languages.
2. In case of developing an indigenous language characters, the way forward is for researchers to be commissioned towards developing a true indigenous language keyboard with indigenous language characters printed on it. In addition, computer interpreter/translator software should be designed to create an interface with existing software in English language. These efforts would then create rooms for the development of e-dictionaries in major Nigerian languages and provide description materials for the unwritten ones.
3. Conferences, seminars and workshops should be organized by the government, universities, and major stakeholders in education for teachers to update those who are computer literate as well as train those who are yet computer literate.
4. African countries like Nigeria, which have a serious power supply problem need to declare a state of emergency on the sector so as to resolve the problem rather than depend on generators for power.
5. Government should improve infrastructural facilities like ICTs resources for the development of Nigerian languages.

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