

COMPUTER ASSISTED LANGUAGE LEARNING (CALL): ITS PROSPECTS AND CONSEQUENCES FOR NIGERIAN LANGUAGES / L'APPRENTISSAGE DE LA LANGUE À L'AIDE DES TIC: PERSPECTIVES ET CONSÉQUENCES POUR LES LANGUES NIGÉRIENNES / ÎNVĂȚAREA LIMBII CU TIC: PERSPECTIVE ȘI CONSECINȚE PENTRU LIMBILE NIGERIENE¹

Abstract: *The shift in language learning today is from “classical teaching environment” to “self-learning environment”. In Nigeria today, although CALL efforts are made by schools and individuals, these effort are geared towards the English language learning other than Nigerian languages. This paper seeks to explore the development of CALL for Nigerian Languages and the challenges of running CALL in Nigeria. The results indicate that CALL for Nigerian languages is needed and should be promoted. CALL in Nigerian can only be successful if the shortcomings of CALL are recognized and the mitigating circumstances tackled. Adequate arrangements must be made to manage CALL and Teacher-Assisted language learning (TALL) in consideration of the socio-economic impact of CALL on the teachers Nigerian languages. The attitude of Nigerians towards Nigerian languages should be positive. The government, corporate bodies and individuals must intervene in CALL programs in schools so as to control the resulting high tuition fee.*

Key words: *Nigeria, Languages, Learning, Computer Assisted Language Learning (CALL), Self-learning, Teacher Assisted Language Learning (TALL), environment.*

1.0 Introduction

Computer Assisted Language Learning (Henceforth CALL) is a form of learning based on artificial intelligence. By Artificial Intelligence, it is implied that the work cognitively tied to the human intellect has been transferred to machines that have no cognition, but have the patience and consistency for teaching. This may be boring to some learners who are fast learners, while it will be just what another learner needs for understanding. Bailin (1988) while connecting language learning with artificial intelligence remarks that Computer Assisted Language Instruction (Henceforth CALI) is not just an effort towards advanced programming but a reproduction of important traits of human cognitive abilities by the computer, verifiable via Turing Test (interacting with the computer as if it is human: receiving and encoding near human responses as a suggestion of intelligence); as well as human social activity replication. In essence it considers the possibility of making the computer able to teach language in a manner close to the way human beings teach a language. He distinguishes CALI from other Artificial Intelligence systems by its ability to simulate human behavior.

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There are many people in the world today, who would have loved to learn how to speak the different languages in Nigeria, but have little or no time to attend formal lessons or immerse themselves in the environment in which the languages are spoken. Their need could be born out of business or school or for pleasure. There are also —Foreign Nigerians—who strive to learn or improve their command of their native languages. Since time and other factors constrain them, computer assisted language learning would have assisted them to learn the language and have a good command of it. However, the effort been made towards digital language learning is more concentrated on the English language, while Nigerian languages suffer. People cannot learn the Nigerian languages at their convenience. This has indirectly extended the linguistic imperialism suffered by Nigerian languages to the digital world. This paper generally seeks to explore the avenue of making Nigerian languages more available for learners at the convenience of their location and schedules.

This mode of learning has its own deficiencies, yet, the aim of this program is to give human beings an extended ability to speak and use languages which are/different from their native languages at their convenience. Learning a language is possible when it takes place in an appropriate learning environment, using the right methodology. This paper is organized as follows: Section one introduces the paper. Section Two addresses the question: Why CALL for Nigerian Languages? Section three gives a brief history of CALL. Section four examines the linguistic situation in Nigeria. Section five examines the prospects and consequences of CALL in Nigeria. Section six looks at the shortcomings of CALL. Section seven highlights the mitigating factors to CALL in Nigeria. Section eight examines the consequences of CALL for Nigerian languages. Section nine draws the conclusion and suggestions.

2.0 Why CALL for Nigerian Languages

First, the progression of learning habit(s) is the primary determining factor for suggesting CALL for Nigerian languages. In Nigeria today, the reading culture which existed as a learning habit prior to the advent of computers has died. With the advent of computer, the interest has moved from just getting information to getting information and entertainment – infotainment, which is achievable through digital technology. Few people spend their time reading but prefer to listen to information (audio), or read concise information on their compatible mobile phones and PCs offline and/or online.

Secondly, there is a need for virtual linguistic communities for Nigerian languages. This point is sequel to the above mentioned point. As the knowledge and use of computer grows, there is an exponentiation in the level of interaction using digital means, which consciously or unconsciously triggers the formation and sustenance of virtual communities. These communities bring into one fold like linguistic minds. With this sustaining trend, it is pertinent to adjust the course of Nigerian language teaching and learning from analogue means to the use of digital technologies which would make them part of the broad virtual community. The sustainability of the virtual trend is so crucial and imperative that Raji-Oyelade (2012, p. 2) observes that —in spite of the low level of the appropriation of available technologies in Nigeria and other African countries, virtual communities continue to emerge with varying degrees or levels of interaction!.

3.0 A Brief History of CALL

The history of CALL (aka Technology-enhanced Language Learning TELL) can be traced to when the first generation computers were invented. Prior to this period, machine language was in vogue, but it was not used for communication but for programming. By estimation therefore, CALL must have began in the 1960s. CALL in the 1960s and 1970s was characterized by the drill and practice approach or Behavioristic tutorial-and-test approach, which was as a result of the inadequacies of the technology at that time, and computer programmers never understood how language learning works (Henson-Smith, 2003). Until with the advent of Micro computers in 1970s, the use of computers from primary to secondary schools was not widespread. During this era students sat before their computers learning what was programmed in the computer, as opposed to the interactive approach contemporary CALL has taken as its dimension.

Prior to the name CALL, CALI was used in relation to language learning and instruction, but this term was dropped in the early 1980s following criticisms from scholars such as Higgins and Davies and Higgins (1982) that CALI was more teacher-oriented than student oriented. CALL in the 1980s and 1990s was shaped with the quest to keep language learning in line with technological changes (Henson-Smith, 2003). Also in the 1980s came the question of interaction between the computer and the student or among students. This was the communicative language learning era.

In the 1990s the era of multimedia cum interactivity began. Hyper-card brought relief to the teachers who were aching to incorporate multimedia and interactivity into language learning. Hyper card is software developed for the apple Macintosh that consists of a series of cards collected together in a stack; each card can contain text, graphical images, and sound. Users can link items together in many ways: by implementing various types of text searches; by providing controls that permit traveling from card to card by clicking with the mouse on objects called buttons; and through scripts (programs and routines) coded in an object-oriented language called HyperTalk. Hyper card made it possible to develop programs that would accommodate both multimedia and interactivity features comfortably.

The switch into the present form of CALL makes use of two forms of learning: the content-based Learning and the task-based learning. The content based learning makes use of gadgets like CD within a tiny space to carry bulky information such as encyclopedias. It also makes use of the internet where information of different importance could also be downloaded at a limited space and time. Task-based learning activities such as trying to reveal information in playing games is involved in language learning. While the student executes such tasks, s/he learns more about the language.

Multimedia contributes in its own way to enhancing CALL by making the use of multiple instruction strategies that combine pictures, audio, video and animations available for an engaging and interactive language learning on the computer. Henson -Smith (2003) explains that trouble-free computer programs enable learners to document their own voices, draw pictures; import graphics, photos, and videos they have created or transferred from the Internet. Creating Web pages is itself a major task-based learning component in many technology-enhanced classrooms.

Multimedia can help students discover their own best learning strategies because it's multiple instructional strategies such as the use of audio, video, can stand instead of real objects for illustrations. Some students learn better when there are illustration materials

such as pictures or animations, while others can cope without illustrations. Students who can do without illustrations would only make use of the audio while those that need illustrations will make use of the video and/or animations; hence students can adopt instructions and strategies according to their individual needs. Both simulations and multimedia projects have provided the grounds to use groups to generate solutions to problems, improve communication skills, as well as written and oral language.

With the launching of the World Wide Web in 1992, which was made public in 1993, CALL took a more unified and substantial form. Though this development was majorly for computers, it has moved over to mobile phones leading to a stage which will be called Mobile-web CALL. In summary, the historical development of CALL can be divided into 5 periods:

a. **Traditional CALL:** This is in the stimulus and response era, where stimulus were presented on the screen in the form of text and students were required to respond to it. This gave birth to feedback issue of identifying and analyzing a learner's response and errors and suggesting corrections.

b. **Explorative CALL:** This is the drill and practice era characterized by concordance or Data-driven Language Learning in the sense that, the programs of this era let you create word lists and search natural language text files for words, phrases, and patterns from a large corpus. By concordance for instance, a user could identify words and phrases using a particular affix, or affixation pattern. For example; mbà- is a noun class 2 plural prefix in the Tiv language¹, therefore all words with the prefix mbà would be identified as nouns. This makes it possible to create wordlists. It also makes it possible for users to define the method of reading text, the types of symbols used in the text. It is still used today, but it is defective in that it does not include audio, video or other graphics.

c. **Multimedia CALL:** This is the voice and image era where personal computers (Henceforth PCs) were upgraded to a level that they could record voice and display recognizable pictures – a feature which earlier computers never had. Interactive videodiscs for language learners such as Montevideo and Expodisc were designed as simulations in which the learner played a key role as the listener and viewer in a combination of two senses.

d. **Web-Based CALL:** This is the era when World Wide Web began was made public and began to flourish - from 1993. Here, people have access to multimedia resources, linguistics resources and can chat using interactive mediums like Yahoo messenger.

e. **Mobile-Web CALL:** This is the latest CALL development identified by this paper. This is a blend Web based CALL and Mobile-phone Assisted Language Learning (MALL). MALL is an approach where language learning is enhanced using Mobile Phones. Mobile phones today are built with almost all the features discussed in the developmental stages above such as mobile web, MP3or4 players and other mobile games that enhance language learning and interactive mechanisms such as mobile telephony, text messaging, audio and video logs via Yahoo, Google, Windows Live, Facebook, LinkedIn, Socialcam, Twitter, Nimbuzz, TwitBird, eBuddy XMS, eBuddy, ooVoo, Skype, as

¹ The Tiv language is a minority language in Nigeria spoken in the Benue Valley. It is a Benue Congo language with over 5 million speakers

well as mediums without audio and video logs like Black Berry messenger, 2go interactive, whatsApp, etc.

4.0 The Linguistic situation in Nigeria

Nigeria is a nation with —linguistic ovaries! that hatch new languages as time goes by and research continues. This means that Nigeria as a multilingual and highly diglossic country continues to have a growing number of estimated languages to the extent that there is no precise number of languages in Nigeria. Tiffen (1968) estimated the number of languages in Nigeria to be over 150. Bamgbose (1971) estimates the number of languages in Nigeria to be about 400, in fact between 400 and 500. However, according to Ajayi (2012), the number of languages in Nigeria currently estimated and catalogued is 512. According to Ajayi, this includes 510 living languages, 2 second languages without native speakers and 9 extinct languages.

These languages can be broadly categorized into the dominant, the dominated and the neutral languages. The dominant languages are —the Big three! which are Igbo, Hausa and Yoruba drawn from the eastern, northern and southern regions of Nigeria respectively. The dominated are the languages those that are not mentioned among —the Big three! stated above, usually characterized by the cry of marginalization by —the Big three!. Generally though, Ajayi, (2012) claims that only 12 of the Nigerian languages enjoy the favor of the government, and are hence recognized as the major languages in Nigeria and are allowed to feature in the education system of the country. These are: Hausa, Igbo, Yoruba, Tiv, Edo, Fulfulde, Ibibio, Idoma, Igala, Ijo, Kanuri and Nupe. It would have been good for this to be true. On the contrary, only the tagged —Big three! are taught and examined in the education system of Nigeria. All Nigerian languages need to be actually taught and learned. This can only be achieved if these languages are available to interested learners at their convenience, hence our clarion call for CALL for Nigerian languages.

The neutral languages are the English language and the French language. The English language is the first official language in Nigeria and the language of wider communication, while the French language is the second official language in Nigeria. The French language was made the second official language of Nigeria by Late General Sani Abacha in 1996. The English language is being investigated within the sociolinguistic circle for Linguistic imperialism because it is one of the legacies of colonialism in Nigeria. Colonialism left behind English language for the integration of Nigeria (Adedimeji 2012, Igboanusi and Ohia 2001). However, this language legacy has negative influence on the Nigerian languages by taking over the domains in which the indigenous Nigerian languages would have been used. For example: the Nigeria language policy requires that an indigenous Nigerian language should be used as a media of instruction at the primary level of education, but English is the language of instruction at the primary level of education (Kikelomo 2011).

5.0 The prospects of CALL in Nigeria

CALL is an important methodology for indigenous language learning in Nigeria emanating from the needs of the citizens as it pertains to education and global communication. In the world today, one has a greater advantage if s/he commands at least two languages, one of which must be a national language and the other an international language. For a language to be learned it must be available and accessible which at the

global level would imply bringing such a language into the digital village. This would enable people to learn, encode and decode information of people with whom they would come in contact but do not share the linguistic knowledge of their native language(s). There are a number of favorable conditions in Nigeria which when taken advantage of, and properly harnessed will foster the growth of CALL.

The reduction in the cost of purchasing computers, the portability of computers, adaptability and handling ease is one of the conditions that favor CALL. In Nigeria today, the prices of computers have been drastically reduced. A survey of Ibadan metropolis indicates that a computer can be bought for as low as #25,000. Computers these days are portable in the sense that they can be carried about from one place to another comfortably, which provides the presence of a mobile and convenient English language instructor available for Nigerians in all areas of the economy.

The development of smart phones and applications also enhances the effectiveness of CALL of Nigerian languages. For instance, *dotCasda* and *Talkasoft* applications for Hausa and *isabi* for Igbo and Yoruba are the popular applications developed for smart phones. The portability of mobile phones in this case would also license the development of CALL materials in the portable forms of applications. This limited number should also encourage the production of more competing applications because competition stokes qualitative productions.

The increase in computer literacy in Nigeria is a positive situation for CALL. The internet is a channel of information exchange and transfer. Also, it is used as an environment of self equipment for encoding and decoding of information. This is where the technology environment in the form of CALL comes into play to better people's expressions and imagination. Ahiakwo (2002) traces the issue of low computer literacy to the lack of technical know-how, poor telecommunication infrastructure, awareness, finance and competitive regulatory policies. This has greatly affected language education. Ahiakwo also observes that connectivity to the internet and proper utilization of the facilities it has to offer will boost education development; in which case, CALL will also find its foot in Nigeria.

CALL for Nigerian languages can be introduced in Nigerian schools. Computers can easily get the students' attention because the general (but specifically languages learning) programs are interactive and the interest of student is spurred if they get to play computer games and earn high scores for successful tasks. The Nigerian curriculum for education has made provision for at least the three major languages in Nigeria to be taught in secondary schools, and they are offered in Nigerian universities as courses. Other than this, some Nigerian universities such as the University of Ibadan receive international students on exchange programs to study Nigerian languages. The learning of the Nigerian languages by local and foreign students would be accelerated if there is computer assisted media for the learning of the language(s).

Some of the students in the Nigerian educational system have disabilities. CALL can be used as an assistance approach to students that need special educational attention such as autistic children (Whalen, C., Liden, L., Ingersoll, E., Dallairc, E. and Liden, S. 2006; Robins and Dautenhahn 2006), blind students (Hani 2014; Wiazowski, 1996, 1998) because the students receive immediate feedback that keeps them from practicing wrong language skills. For instance, a blind student would be taught that *kill* in the Tiv language is realized as /wùà/, *guinea corn* is realized as /wúá/ and *to grind* is realized as /wùà/. The

audio aspect of Tiv language learning software (when it is developed) would spell the words as they appear on the screen. By spelling the words, the blind student would identify them as homographs distinguished by tone. The computer would realize each of the words while the blind student repeats after the instruction of the computer reinforcing what s/he may already know about the words. By this audio feature of the language learning software, the disability of blindness would be side-stepped.

Sequel to the above paragraph, CALL of Nigerian languages softwares installed on the computer can in this case assist the teacher in teaching the language. In this case, CALL can be used for illustration purposes in the classroom. Although computers are not always available in most Nigerian schools, mobile-phone CALL applications can be used by the teachers. This is a typical instance of the use of CALL within the classroom.

However, there might be a problem assessing CALL outside the classroom because not all of the students have personal computers. With the advent of smart phones, CALL of Nigerian languages applications can be developed and made available to the students for CALL to take place outside the classroom. In as much as not all students have smart mobile-phones, it is more affordable and portable than PCs.

There is a growing interest and venture into the business world. Nigeria as a country is beginning to depend on the goods and services it produces internally rather than import some goods and services. The local and foreign business men and women need the Nigerian languages for transactions, and CALL can provide useful tools for busy people who do not have enough time to go to formal schools to study the needed Nigerian language(s). Bargaining is a power of business and often, only those with a good command of the seller's native language know how to find their way(s) in bargain situations. To improve on business skills such as bargaining and general communication, businessmen in Nigeria need to expose and be exposed to CALL for Nigerian languages, by interacting on line and getting Nigerian languages teaching software.

CALL provides the means to improve the knowledge and use of Nigerian languages in the health sector of the country as well. CALL can assist health practitioners in the country to better their research and produce effective service delivery. For instance, the old men and women would be more at ease and intimate with a health practitioner if the conversation is carried out in the patients native language. The patient would also express his/herself clearly in his/her native language. Therefore, optimal health service would be delivered if the health practitioner can converse in the local language of the patient. The practitioners, due to the nature of their jobs cannot enroll in a Nigerian language class and therefore can use CALL for Nigerian languages as an alternative to achieve their goal. Although there have been no known studies published on the use of CALL to improve language skills in the medical sector (to the best of our knowledge), this section would serve as a pointer to this aspect for further research.

6.0 Shortcomings of CALL

CALL has not attained 100% efficiency and effectiveness in the world in general and Nigeria in particular. CALL can spur interest in languages especially in children who love games but it may not be able to sustain the interest. An empirical examination of Nigerian language learners suggests that this assertion is true. In the early days of the introduction of the computers, there will be a rise of interest in language learning and then the user will begin to lose interest in the computer except in cases where learning has been made semi-formal as in cases where games are used to teach a language.

CALI has the capability of automatic error detection which would in turn save the teacher from the stress of marking students' assessment. The teacher would then have more time for interaction with the students instead of trying to dictate errors from the students. The assessment of computer can be so strict as to dictate minute errors that would have passed undetected by human teachers. However, computers cannot make a distinction between errors and mistakes; it cannot give special consideration to learners with disabilities who are bound to make mistakes and errors, and the computer cannot fully analyze the mistakes made by learners (Nelson, E., Ward, H., and Kpalow, R. 1976). For instance in a situation where Nigerian language pronunciation learners have deviations with their oral structures such as tongue thrust or dental malocclusion (which affects the articulation sibilants or hissing sounds in English such as /s/, /z/, /ʃ/, /ʒ/ and affricates /tʃ/, and /dʒ/), the speech drilling software may not understand this exceptions, to recommend a necessary therapy. The computer may even go ahead to report 'lack of knowledge' for the learner, but the learner knows it but a correct realization of the sounds is hindered by oral deviations.

Language learning implies two things: learning the description of a language – which is optional – and the use of the language. In fact because of the programmed nature of softwares and applications, they cannot answer how, where and when questions in language learning such as *Hausa Byki Deluxe*, *Talk Now* CD-ROM Course for Igbo, *Instant Immersion Yoruba* and *Anki Software* for Yoruba. For instance, how, where and when to use an honorific pronoun in the Yoruba language. Developing software for the Yoruba language in such context should require that such information be fed into the software. Hence, developing softwares that will help students learn a language like Yoruba implies having expert linguists proficient in Yoruba provide a detailed description of the language. It would not be an easy thing to do but it clearly is a great challenge. The social interactive features can be found in other CALL media such as synchronous computer-mediated communication (CMC) known as chat (Darhower 2002). CALL softwares and applications for Nigerian languages should be able to specify who uses the language, to whom, and when and in what specific form.

The teaching methodology of most CALL devices such as *Talk Now* CD-ROM Course for Igbo are not dynamic but rigid and programmed, when compared to a teacher's methodology. There are however some interactive software such as is *Mi Vida Loca*, developed by the BBC for learners of Spanish. The benefit here on one hand is that the computer is patient and willing to take on longer hours of consistent drills than a human teacher, who is bound to respond to certain natural limitations such as fatigue, and adjust if a method is becoming boring and less result oriented. On the other hand, recent software also include serious games which do much more than just drills, and students are just as impatient as teachers and will never inflict long hours of drills to the computer. The computer is not 100% consistent and is subject to overworking. There is every possibility for technological hitches such as crashing, freezing or incompatibility of software with the windows of the system. A typical example of software with specification is *Eyespeak*: Windows 7/Vista/XP/2000, 256MB RAM or more, 800MHz or better processor, 400MB hard drive space. By implication, any computer short of this specification will not be compatible with the software.

7.0 Mitigating factors to CALL in Nigeria

The smooth existence of CALL in Nigeria, despite the interesting prospects in the country has been slowed down by some mitigating factors. These factors cut across the social, cultural, political, educational and economic inadequacies thriving in the country. It is not out of place to say that education and learning of any kind will not be successful if the factors below are not addressed. These factors include:

1. Poor Security: Nigeria today is fast moving from a country of tranquility to a country of chaos. The security of people and infrastructure is greatly threatened. In fact with the recent terrorist/militant activities going on in the country, schools and business centers have become the target of terrorists' especially in northern Nigeria where Boko Haram is operating. The computer customers and the computer markets are threatened. Educational institutions are being attacked, bombed and students abducted in the northern part of Nigeria. A lot of network masts have been destroyed as a result of insecurity. Armed robbery has made some Nigerians to lose their computers which will not be easy for them to recover due to the economic situation of the country. Linguists who are interested in gathering data from the Nigerian languages in regions of Nigeria such as the northern region would be unable to carry out their work as a result of the security situation of the region. This has great residual effects on the thriving possibility of CALL in Nigeria.

In order to overcome this impediment to CALL, the government should provide adequate security measures to ensure the safety of lives and properties. This would enhance the sustenance of existing infrastructures and attract more technology-driven infrastructures.

2. Unavailability of good Internet Facilities: Internet facilities in Nigeria were and to a large extent still remain a property of the rich and privileged. Internet facilities are found in only selected establishments in the country. The internet plays an important role in technological language learning. On the internet today, we find features such as language learning and online reading labs; language testing; listening practice sites, Listening, listening sites, Listening comprehension resources, streaming multimedia and text scripts, Text-to-speech and speech-to-text sites, Language study links, Phonics-based reading programs. In fact there are site online that provide lesson plans, evaluation rubrics, reading practice and collaborative writing ideas. _With access to the internet or the computer comes new knowledge, information and literacy, or literacies' (Raji-Oyelade, 2012, p. 3). The GSM networks in the country have stepped into this problem of internet facilities to provide alleviation by providing modems, yet not every Nigerian or establishment can afford a modems and the routine recharge fee. When one affords a modem, the unsteady network always hinders its smooth usage. In fact not all parts of Nigeria can boast of having access to the services of a GSM network. The cost of maintaining internet facilities in schools is high and prohibitive, which leads to an increase in school fees.

In this regards, the internet service providers in Nigeria should upgrade their services to meet the needs of the people. The government can ensure that standard services are provided for Nigerians by establishing special technology-driven monitoring and control units for technology driven services and reinforce the duties of establishments such as the Nigerian communication commission to cover internet services. This would also check the prohibitive cost of installing and maintain internet facilities in Nigerian schools and thence reduce the high tuition for schools that provide internet services.

3. The standard of Living or Poverty Level of the Citizens: The above identified problem generally is resultant from the poverty level of the citizenry. If the economic status of the citizenry is boosted, individuals can afford PCs for their families, and the software that will be used for offline Language Learning. Home internet services will be among the key projects of the families and individuals. It must be hypothesized here that, to a large extent, it is due to this factor that many schools in Nigeria have not implemented CALL or ordinary computer education, so that the tuition fees will not be prohibitive to the poor Nigerians who would like to school or send their children to school. The standard of living of Nigerians would be checked if the government creates and sustains job, pay the salaries of works as at when due. The government can also diversify the economy to give agriculture a stake so that the people will not only look up to white-collar jobs, but seek a means of livelihood via farming and other entrepreneurial activities.

4. Lack of CALL Awareness/Technical know-how: Apart from the points mentioned above, it is a truism that many Nigerians do not know that one can actually learn a language on the computer and become proficient in the language. Those who imagine such an activity may not be aware of language learning software such as *Hausa Byki Deluxe*, *Talk Now* CD-ROM Course for Igbo, *Instant Immersion Yoruba* and *Anki* Software for Yoruba and language learning applications such as *dotCasda* and *Talkasoft* applications for Hausa and *isabi* for Igbo and Yoruba.

The knowledge of computer operation is another mitigating circumstance in Nigeria. The level of computer literacy in Nigeria is low. Even among the elite, not all have a good knowledge of the computer ranging from maintenance, navigation and operation. More critical is the operation of internet enabled phones. This trend is found more among the adults who do not have time to read manuals of phones, and even to explore the facilities and services their phones have to offer. Only a reasonable number of elites know that they can carry a mini-dictionary in their phone and are willing to consult it in times of confusion. This is detrimental to the development of CALL. The absence of this know-how implies lack of a dual inter-connective activity of digital literacy and information literacy. This problem can be checked by creating CALL awareness in Linguistics and Education conferences. Also, CALL sensitization programs can be organized on the radio and television stations in the country since both media have a wide coverage in the country. Computer training programs in the country should be extended to the semi-urban and rural areas of the country so as to increase the number of computer literates in the country.

5. Societal Restriction(s): The —you are this and cannot do that! syndrome in the Nigerian society have greatly hampered the development of CALL. Some people do know that they can actually use their phones to learn a language via interaction, but due to their societal statuses, it is difficult for such persons to engage in CALL activities. They try to discourage their children or close relatives from interacting on the computer. Imagine a scenario where a Revered lecturer or an Emeritus Professor is chatting on 2go or —pinging! with his/her blackberry: —He is the most irresponsible person I have ever seen! many of us will conclude. The sensitization programs solution proffered in the previous paragraph would also be used to inform the people that computer assisted learning and computer mediated communication cannot reduce someone's status but can expose people to current trends and developments triggered by technology by making communication and learning easy and convenient.

6. Fear for Misplaced priorities: In Nigeria, the general attitude towards electronic gadgets is poor and discouraging: the older generation who are more predominantly technophobic usually discourage the young generations who are predominantly technophiles by tagging interactions on/with the computer (i.e. mobile phone or PCs) as irresponsible. There is always a fear that if children are exposed to electronic gadgets like computer or mobile phones, the children may be taken away from their focus in life. Generally, things like computers are seen as distraction from learning or distraction from moving towards (a) specific goal(s) in life. Here too, imagine a student who is always pinging or chatting on any of the interactive machines such as 2go, Badoo, Facebook, Twitter, or paying attention to a language spoken from the computer etc. the conclusion might be that —s/he has lost direction in Life, or he/she is unserious, or his/her life is doomed. Ignorant questions such as „what does the computer or the Whiteman who made the computer know about our local languages?“

This impediment can be checked by defining the purpose of engagement on the social network. By this, the parents need to enlighten their children on other beneficial use of the internet and social network other than aimless chatting. The parents can even help the children share their time for study and leisure so that the children would have a balanced life. The parents can also be enlightened on the importance of CALL or controlled interaction with/on the computer to the development of their children in avenues such as Parent Teachers Association (PTA) in Nigerian schools.

7. Unavailability of CALL software and computer programs: Nigeria is still a developing nation. Apart from the socio-economic and political aspects, the aspect of technology is also included. As a result of poor internet services in the country, softwares for CALL for Nigerian languages are not easily accessible. Internal development of CALL softwares has not received the attention of programmers due to envisaged less patronage. An exploration of the internet reveals that even the three major languages in Nigeria have relatively few CALL softwares and applications such as *Hausa Byki Deluxe*, *Talk Now* CD-ROM Course for Igbo, *Instant Immersion Yoruba* and *Anki Yoruba*, *Anki Hausa* and *Anki Igbo*, *Learn Igbo Starter 2.0*; and language learning applications such as *dotCasda* and *Talkasoft* applications for Hausa and *isabi* Igbo and *isabi* Yoruba.

The development of such softwares for Nigerian languages must not be left for computer scientists alone. Computer programmers must go into alliance with Linguists who specialize in different Nigerian languages in developing of CALL software. One of the roles of the language experts will be to ensure that the variety of the Nigerian language in question is the standard one, to ensure that the tasks perceived as authentic and to plan tasks that are centered on meaning (Ellis 2003; Lai and Li 2011).

At present, the state of linguistic description for the different Nigerian languages is such that the three major languages Hausa, Yoruba and Hausa are highly described. However, the minority languages in Nigeria have not ascertained the status of the major languages in terms of description. The Tiv language is the fourth largest language in Nigeria, but according to Blench (2011: 2) phonological description exist for the Tiv language but the material on Tiv is not really up to modern standards. This implies that if CALL is to be developed for the Tiv language and the minority languages in Nigeria, then intensive description must be made of the languages in the aspects of morphology, syntax, phonology and semantics up to modern standards.

As a way of controlling this problem, more interactive softwares should be developed for the Nigerian languages. There are relatively few softwares for the Yoruba language that allows interaction such as Instant Immersion Yoruba. However, the Language learning software for the Igbo language such as *Talk Now! CD-ROM Course for Igbo* and *Foreign Service Method Igbo Basic Course* are not interactive but more of a drill and practice development as an MP3 audio file. With this, it is proposed here that the development of interactive software would be more oriented towards optimal learning results.

8. The unavailability of online pedagogical materials on Nigerian languages: CALL is not limited to the use of software, but extends to the use of World Wide Web to accesses literatures on languages. However, only the three major languages in Nigeria have a fairly appreciable amount of pedagogical materials on the internet. Accessing written pedagogical materials on the minority languages in Nigeria would be problematic. To solve this problem, pedagogical materials such as primers and elementary grammar books, novels, short stories and oral literatures on the local languages in Nigeria must be made available on the internet for learners who wish to access such materials. This paper therefore proposes that more pedagogical materials on the languages in Nigeria should be made available on the internet.

9. The speakers' attitude: In Nigeria, the youths are more computer-oriented and more driven towards electronic gadgets. However, the Nigerian youths find foreign languages like English more exotic and classic than their native languages. The understanding of Nigerian languages is not a proud asset; therefore they only use it when in limited domains such as at home if the use of the local language is encouraged by their parents. Even in such situation(s), the Nigerian language(s) is/are adulterated with words from the English language. With this therefore, softwares that would be developed for language learning would receive highly limited patronage from few computer literate Nigerians. With this in mind, software developers would not want to go into a less profitable venture as developing soft ware for the learning Nigerian languages. However, funding agencies can motivate these software developments by making provision for accessible funds for Nigerian languages software development. Also, if there is a positive attitude from the speakers of the languages in Nigeria, the software developers would be encouraged to produce the softwares because native would market their languages to foreigners who would want to learn the Nigerian languages. When the attitude of the speakers becomes positive, they would see CALL softwares as a form of preserving the resources and patterns of their languages.

8.0 THE CONSEQUENCES OF CALL FOR NIGERIAN LANGUAGES

The issue of the consequences of CALL for Nigerian language(s) is important for examination following the opinion of scholars of second language acquisition such as Perret (1995) who submits that providing students with facilities and opportunities of language use can develop their language skills through exposure to the second language. For this to be executed there has to be a good knowledge of the attendant positive and negative consequence of CALL for Nigerian languages.

8.1 Positive Consequences of CALL for Nigerian Languages

1. Classroom independence: CALL for Nigerian languages is of immense benefit to language teachers and learners in Nigeria in the sense that both the teacher and the students

do not have to rely heavily on their class schedules. The less proficient learners can study and interact with the language softwares to gain proficiency before they can proceed to interacting with the language teachers online. For motivated students who are autonomous and already possess efficient learning strategies it very possible for a teacher to hold a conference lecture/tutorial with his or her student on *Facebook* or any social network when they are in different locations. Such students can ask questions during their times of private study via by chatting with the language teacher instead of waiting for the next meeting with the teacher in the class. If the question requires recording, mobile phone applications such as *whatsapp* have provisions for voice recording. The teacher may only be needed for explanations of complicated or technical areas thereby saving energy and time. Generally, well packaged softwares or internet resources on Nigerian languages can produce optimal results of learning Nigerian languages without visiting a class room.

2. Experiential Learning: As Lee (2000) observes, CALL can offer the students experiential learning opportunities especially in areas that require practice such as pronunciation. This will provide more room for Nigerian languages learners to have a near first hand feel of the language under study thereby gaining a knowledge or skill of the language via being involved with activities and interactions on the computer. The computer in this case would stand instead of the native speakers of the language with whom the language learner would have interacted. However, since the natives are not available, the software or/and the internet becomes the native community of the language in which the learner interacts with the language. CALL for Nigerian languages would therefore be a globalization of Nigerian speech communities.

3. Increased performance: CALL for Nigerian languages has the capability to boost the performance of students in language class(es). The efforts made by computers serve as a contributing force to enhancing improved expression of thoughts and ideas. A typical instance imported is the research carried out by Lu, M.T., Wu, C.Y., Martin, E. & Shah, R. (2009) in grammar classrooms, where English as a second or foreign language (EFL) learners were divided into two groups: the first group was exposed to class room learning without assistance from a computer but a teacher, while the second group was exposed CALL without a teacher both in a grammar test. The group exposed to CALL performed better because the resourceful exposure they had. A truthful general statement to be made about CALL is that it moves with an increased performance of the learner. CALL is organized in flexible stages such that when a learner encounters a difficult aspect of the language learning, such a learner may move on to different activities and later return to the difficult task. Organizing a language software with rigid stages can halt the study progress of a learner learning a language with the language software, and even deny the learner the opportunity of knowing other aspects of the language just because s/he could not go beyond an encountered difficult stage in the study.

4. Updated global information/ Exploration of unlimited information sources: In the world that we live today, quick information dissemination is the trend: information fly above and across roofs and beds through internet and interactive connectivity. While the learner picks up socio-economic and political information around the globe, he/she consciously or unconsciously picks up linguistic information. Knowledge is enriched via sharing of individual and general understandings, views and perspectives through interactive medium, potent to bring about self and/or national development.

Linguistic, non-linguistic and extra-linguistic information are also available with CALL facilities such as the internet. In other words, other relevant and language-related things can also be learned by a learner using CALL resources. A Nigerian language learner without the assistance of CALL will only be limited to the information provided by the teacher which may be idiosyncratic and /or prejudiced as opposed to conventionalism. Hence, CALL makes provision for a wide range of online Language related resources (Stone & Wilson-Duffy, 2009).

5. Catering for Learning Needs: CALL for Nigerian languages will cater for the different learning needs of Nigerian language learners as much as the issue of individual differences arises. While some learners with high imagination can picture a described object in their brain which enhances speedy understanding, yet the opposite group requires the presence of illustrations to be able and continuous practice to get the picture of what the object looks like. Hence, CALL for Nigerian languages would cater for the —mixed-proficiency levels of learners (Mustafa, 2008) such that those students who are slow in learning can also take their time in learning the languages on their own since the computer is patient enough to take them through long hours of drills and interactions.

6. Provision of automated, Instantaneous and Individualized Performance feedback: It is not a strange situation in the Nigerian Educational system for results of tests and examination to be delayed, owing to other demands on the teacher. This is a growing trend that has to be frowned at. In Nigerian schools, there are situations where students resume for a new term before their results of the previous term are made available to them and their parents. This has enormous effects like keeping the parents from giving the right advice to their children while accessing their strength and weaknesses. With CALL for Nigerian languages however, the assessment of Nigerian language learners' performance would be immediate and it can even offer advice(s) to the students on area(s) that need to be improved. CALL can provide a base or guidance for the teacher to advise the learner, and if possible the parents as well. Feedback remarks encourage students to improve, especially instant comments like —you can do better, no try again!. —Correct! You just won yourself a game time!.

7. Promotion of Digital Literacy: The application of CALL to Nigerian languages would promote digital literacy in the country because it is _an integral aspect of modern language learning' (Murray, 2005; Warschauer, 2006). Language students would be forced to learn how to operate a computer or at least a mobile phone to be able to execute tasks given to them by their teachers in the class where CALL was used in the classroom. Also, students in schools where CALL for Nigerian languages is introduced would want to know how to access CALL materials to improve their grades in language courses. Language teachers would also be compelled to be computer literate if they must stay in the language education system with CALL strategies, otherwise, the computer literate language teachers would replace the computer illiterate teachers.

8.2 Negative consequences

1. The Socio-economic impact of CALL on Nigerian Language teachers: It must however be noted that the full introduction of CALL will not favor the socio-economic life of most Nigerian Languages teachers. This is because most teachers in the Nigerian educational system are not computer literate. Therefore, the introduction of CALL for Nigerian languages would trigger the replacement of the computer illiterate language

teachers within the Nigerian Educational system by computer literate language teachers. Consequently, most Nigerian languages teachers will lose their jobs since their functions and roles have been taken up by the computer literate teachers – by implication the computer. Naba'h, A. A, Hussain, J., Al Omari, A., and Shdeifat, S. (2009) expresses their fear of the technology overshadowing the teachers, in the sense that its —dehumanization in a task which is supposed to be a thing of human communication. This implies that the computers will take over the jobs meant for human beings, while teachers lose their jobs. This paper therefore refutes the fear of technology overshadowing teachers and submits that technology literate teachers would overshadow technology illiterate teachers in Nigeria if CALL for Nigerian languages is introduced.

This problem can however be circumvented if the government initiates computer training programs for the Nigerian languages teachers in the country. Nigerian languages teachers who are not willing to give-up their jobs can enroll into computer programs to avoid being replaced by the computer literate Nigerian languages teachers. To save subsequent cost, the Nigerian government would make computer literacy an obligatory requirement for the employment of Nigerian language teachers in the Educational sector of the country. In this regards, a prospective Nigerian language speaker would be expected to present at least a diploma certificated in computer operations from a government approved institution to get the job.

2. Increased Education Cost: The full fledging of CALL for Nigerian languages will increase the cost of acquiring education in Nigerian schools offering such education. This will rather widen the inequality gap in education experienced in Nigeria due to unequal socio-economic strength. The heads of CALL-adherent schools would claim that, the increase is an attempt to cater for the expenses incurred in procurement of computers, hard and software and maintenance. Consequently, the children of poor Nigerians will not be able to access CALL for Nigerian languages in school. Public schools in Nigeria receive the least attention when it comes to provision of Educational facilities; even when the facilities are provided, they are of low quality thereby making it less durable. Private schools on the other hand, can provide durable CALL facilities, but such schools use that avenue to inflate their tuition fee. This has to be checked to minimize the education inequality gap in Nigeria.

The remedy to this problem would be for the government to give attention to the needs of public schools especially in provision of educational facilities and programs like CALL for Nigerian languages/cultures. In fact, it will not be out of place if the government even makes possession of these facilities as one of the conditions to be met before establishing a school. However, individuals and organized educational bodies like Parent Teachers Association (PTA) in schools should initiate and be encouraged to assist in implementing CALL for Nigerian languages in the schools of their wards.

3. Development and Encouragement of Meta-Linguistic Communities: There would be a development of a new linguistic speech community on the interactive mediums such as Facebook, 2go, twitter which would develop new orthographies and morpho-syntactic structures for Nigerian languages and erode the already existent orthographies and structures of the languages. The writing convention here will only be understood by the —digital natives!.

While this development is justified to technophiles, it would definitely be unwarranted by conservative scholars and educationists as well as the technophobes, in the sense that,

though computer assisted interactive language learning is economically inventive in terms of a shorthand style of writing and new lexical items developed from reduced larger syntactic constructions such as —brbl which is developed from —I will be right backl in the English language. However, this shorthand system of writing that is developed will not contribute meaningfully to the development of a Nigerian language learner who may be having problems with the orthography. For instance, the Tiv language equivalent of —I will be right backl would be —mé hídè hégénl. If the expression is reduced to —mhhl, how would a learner of the Tiv language be able to learn the spelling, pronunciation and the underlying structure of —mhhl? Hence, the Morphology and syntax of the Nigerian language in question, especially as it relates to reconciling the systematic rules of the Nigerian language with the arbitrary rules of the meta-Nigerian language developed on a social network by the digital natives would be a difficult task.

We envisage that this language that would be developed on social networks would be the —Englishizedl version of the Nigerian languages in question which would be characterized by the eradication of tone systems, shortening of phrases and clauses into lexical items, and the reduction of words into smaller lexical units. This would be a new language developing with a culture where mistakes and errors would be very difficult to identify. The remedy to this would be to encourage a conservative writing norm of Nigerian languages on the social networks where the tones and other writing conventions of the Nigerian languages are strictly adhered to during interactive learning.

9.0 Conclusion /Suggestion

In conclusion, the positive consequence of CALL for Nigerian languages outnumbers the negative consequences, and this paper makes some suggestions on how to overcome the obstacles to CALL for Nigerian languages. This is a clear indication that CALL for Nigerian languages will be a developmental venture. To kick-off, the identified mitigating circumstances and negative consequences will have to be tackled head on. As a step towards the goal this paper presents the following general suggestions:

- The initiation and development of CALL for Nigerian languages projects in Nigerian universities with a central body and forum where results arrived at in different universities can be presented analyzed and considered for further development.
- CALL for Nigerian languages is not a one-man project but should involve experts from the relevant fields of sociology, Linguistic, Psychology, Education and computer science. The apathy between Linguist, programmers of CALL and other related disciplines should be removed and collaborative efforts should be made to reduce the hitches and inadequacies experienced.
- Nigerian Language teaching cannot be entirely left to computers because they are good at only part of the language learning job: it would work perfectly with language description but cannot check and access language use yet. Until computers start accessing language use in relation to context configuration, Nigerian language teachers will always remain relevant in language teaching in Nigeria. Language instructions cannot and should not be left entirely in the hands of the computer even though it does a great deal of what a teacher can do.

Also, until computers would be able to present stimuli in way a teacher would and within and outside a simulated context, teachers will still be relevant. It must also have that ability to distinguish between errors and mistakes, a teacher will remain vital.

- Owing to the high level of computer illiteracy among Nigerian teachers, instructors or handlers of CALL for Nigerian languages classes should be given a period training on how to operate, handle and maintain the software as well as record student progress in from CALL lessons received. The behaviors of teachers have to be modeled.
- The government can assist in the development of CALL for Nigerian languages by providing schools with computer labs and connecting these labs to the internet, while the Ministry of Education also provide facilitative infrastructure, authentic CALL curricula and feasible teacher training programs.

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