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Sustaining Nigerian Languages through Use¹

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1.0 Introduction

The goal of the paper is summarized in the title – “Sustenance of Nigerian Languages through (their) Use” in all facets of life in this age of explosion in technology and information dissemination. We are actually concerned with investing power to these languages, that they may be used in the home, in the society, in the school, in government, in politics, in science and technology, information and communications. While it is true that the introduction of ICT in indigenous communities can cause some clashes between traditions and the language of technology, it is also true that it can bear very positive fruits. For instance, it can necessitate and promote the development and use of new tools. Such tools can be used to promote, preserve, and strengthen both indigenous languages and cultures to which they are applied. The key terms in this paper are: Sustainable development and Nigerian Languages. We shall explore each of them very briefly, as background for the discussion in the paper.

Sustainable Development has been defined from several perspectives. Of particular interest to us is its definition from the Sustainable Development Commission 2011, which defines it as: ‘...development that meets the needs of the present, without compromising the ability of future generations to meet their own needs.’

There is a need for sustainability in every sphere of our national life, involving how to manage the present in a way that it can remain for the future. There is need to use what we have for the present adequately and leave some for use tomorrow. We therefore need to find a formula to preserve the Nigerian system, and work out strategies for the survival of different aspects of Nigerian life, especially the Nigerian languages, as we build capacity and provide strategy for language sufficiency.

¹ Parts of this paper were first presented at the Symposium in honour of Professor Ozo-Mekuri Ndimele at the University of Port Harcourt on the 14th March, 2014.

With regard to the Nigerian languages, Sustainable Development would be concerned with their use in contemporary Nigerian society, their empowerment to meet modern needs of the arts, science and technology and their transmission to the next generation of speakers. An area of concern in the use of Nigerian languages in a sustainable way is regarding their use in Information and Communications Technologies (ICT). Information and Communications Technologies is a generic term used to express the convergence of information technology, broadcasting and communications. Multiple convergence between these areas in content have led to changes in other areas, especially in the knowledge management and human resources development. One pertinent example is the internet and global network of computers. ICT has impacted business conduct, facilitated learning and knowledge sharing, generated global information flows, empowered citizens and communities. It has also redefined governance, created wealth and economic growth and provided generally a global information society.

However, a pertinent question to ask is, how can Nigerian languages fit into this picture? Language is the human system of communication used by a community or country. It is an extremely important aspect of a community as well as an important index of identity. It is used for all communicative functions that a community requires, and it serves as a repository of a people's culture, history, exploits, etc.

Nigeria's official language is English. But in addition to this, and perhaps the need to break off imperialistic ties, it has chosen three official regional languages - Hausa, spoken by about 20 million people in the North, Yoruba, spoken by about 19 million in the west, and Igbo, spoken by about 17 million people in a part of the south east. These three languages are regarded as 'major' languages. In addition to these three, there are about 400 other 'languages', (some with very small numbers), referred to as 'minor' languages (Crozier/Blench 1992, Grimes 2001). Egbokhare/Oyetade/Urua/Amfani (2001), reduced this very large number of languages to 113 language clusters, using mutual intelligibility criterion, in a preliminary report aimed at simplifying the current complex linguistic picture. Some of these languages have some degree of official status in their locality and are used as lingua franca, e.g. Efik, Ibibio, Edo, Fulani, etc. Within this network of indigenous languages, the Nigerian Pidgin English is a national lingua franca.

'Minority' languages in the Nigerian context are languages that are spoken by the minority ethnic groups, which are by implication not 'major', where the 'major' Nigerian languages are Hausa, Yoruba and Igbo as mentioned earlier. Unfortunately, with all the efforts that have been put into the development of Nigerian languages, not even the 'major' languages have gone beyond the 'developing' stage. We apply these classificatory labels to the indigenous languages spoken in Nigeria with a view to determining their statuses along a developmental scale. Nigeria has more than one-quarter of the languages spoken in Africa, and three of the four language phyla in Africa meet in Nigeria, namely: the Niger-Congo, Nilo-Saharan and Afro-Asiatic phyla.

From the point of view of endangerment, languages have been grouped into four groups: moribund/threatened languages, retreating languages, developing languages and Pidgin (Connell 1994).

Moribund/threatened languages are languages that are not being used and as such are not transmitted to the younger generation. Such languages are highly threatened. Retreating languages are languages that are dying in a particular area, but still flourishing in another area. Such languages are found at inter-country boundaries. Developing languages are languages that have fairly developed orthographies and are in the course of setting a literary tradition, meta-language. Pidgin is a trade language and it is a product of languages in contact.

Many Nigerian languages are endangered. This may be as a result of their not being used in different domains. Austin and Julia (2011) outlines four major causes of language endangerment: natural disaster, war and genocide, political repression, cultural /political/economic repression. Out of these, two of them: political regression and cultural marginalization are the most common of these causes.

Political repression frequently happens when Nations working to promote a single national culture limit the opportunities for using 'minority' languages in the public sphere, schools and the media. Sometimes, they even prohibit their use altogether. Cultural, political, economic marginalization happen when political and economic power are closely tied to a particular language and culture so that there is strong incentive for individuals to abandon their language(s) in favour of other languages.

2.0 Theoretical Considerations: Graded Intergenerational Disruption Scale

In response to the growing crises of endangered languages, linguists have developed different techniques to identify, analyze and preserve human languages. A seminal framework is that developed by Fishman (1991), the Graded Intergenerational Disruption Scale (GIDS), which examines a language with regard to the following eight levels:

- a. its use in education, work, mass media, government at the nationwide level;
- b. its use in local and regional mass media/governmental services;
- c. its use for local and regional work by both insiders and outsiders;
- d. its use for literacy, transmitted through education;
- e. its use orally by all generations and its effective use in written form throughout a given community;
- e. its use orally by all generations and whether it is being learned by children as their first language;
- f. its use among child bearing generation, with no transmission to the children;
- g. whether its remaining speakers are members of the grandparent generation, etc.

GIDS developed other alternative frameworks for assessing the status and vitality of languages in danger, developed as extensions of the primary levels. Some of these include Brenzinger et al 2003, which produced an initial frame for UNESCO; Lewis and Simmons 2009, which developed the Expanded Graded Intergenerational Disruption Scale; Lewis 2009, which developed the Ethnologue Vitality Categories; the UNESCO Framework 2009, etc. These frameworks built on Fishman's 1991 GIDS.

GIDS focuses on the intergenerational transmission of language for maintenance. It is assumed that children should learn from their parents so that they can in turn pass it on to their own children in a kind of sustainable relay transmission. Although intergenerational transmission is an individual decision of parents, society and institutions can influence their individual parental linguistic choices and define domain of use. These domains, defined by participants, location and topic over time become a societal norm, which become very obvious when they are eroded in form of 'language shifts'. Such shifts begin with the loss of language use and then end up with loss of the language users themselves.

GIDS, therefore, provides a framework for assessing the status and vitality of languages focusing mainly on the level of disruption. Such a technique is useful and is recommended for the Nigerian situation. It should form part of the strategic toolkit for dealing with the fragmented linguistic situation in Nigeria. It can help in language preservation, revitalization and development, and it should, therefore, be applied systematically to deal with these issues in a way that will sustain the languages.

Nigerian languages can be sustained through use in different areas like: in the home, in education, in ICT. The primary strategy for sustaining our languages is their use in the home. Parents should speak them to their children. For many reasons, many parents do not speak their languages to their children. We, therefore, need more advocacy to get parents to see this need. Handing over a language to the next generation is the surest way to prevent language endangerment

One of the best strategies of developing a language is its use in education. As the languages are used, they are developed in the course of usage in different areas. Our education system can contribute to this development, not only in teaching the languages, but also in using them. For instance, where the local component is an African/Nigerian language, all efforts should be made to teach, examine in that language.

There are valuable knowledge and skills around computing and communication devices, software that operate them, applications that run on them, systems that are built with them, etc. It is important to deploy such knowledge to create productive systems in specific linguistic areas. We need to consciously and strategically apply linguistic knowledge for use in different domains with the aim of solving practical societal problems. That way the languages can be sustained in vibrant use and development. These languages need to be empowered.

3.0 Empowering Nigerian Languages²

For Nigerian languages to be used for different purposes in the relevant domains, they need to be consciously and adequately empowered to be so used. The empowerment of these languages should involve several stages. Given the fact that these languages are at different stages of development, they have to be addressed differently, depending on the status and function of the language in the Polity. However, such empowerment should be done in a sustainable way,

so that these precious languages can be useful today and preserved for the future. So far, we have attempted to empower the Nigerian languages, but in a haphazard way. What we need is to develop a strategy for the survey of the these languages to find out their sociolinguistic facts, document and describe them, codify them and develop tools for working on them.

3.1 Language Surveys

Language surveys measure people's ability to speak and understand another language, study their attitudes about different languages, evaluate the differences and similarities in speech communities that speak related languages, assessing the vitality of languages that may be endangered. Basic surveys need to be done to initiate descriptions of the languages. Survey results are used for many purposes, especially in making decisions regarding language policies, language classifications, educational programmes, language development work, testing the vitality of the languages, etc. They may be conducted by individuals (like the Language Survey of India by George Abraham Grierson), the survey and language teaching in East Africa by the Ford Foundation and several surveys across the world by SIL International.

We should put in place a structure to do a systematic survey of the Nigerian languages. We need to establish what languages are spoken where, when, etc., and record the basic sociolinguistics of the speech communities. Such a survey will also capture the geo-political details and dynamics, as well as provide a clearer picture of the vitality of the languages spoken in the 774 LGAs in Nigeria. A framework like the GIDS is useful framework to adopt in this kind of enterprise.

3.2 Documentation and Description

Following from the survey, we can then strategise further to document and describe them. Linguists have always done some form of documentation, as a way of recording linguistic data. Traditionally, from elicitation of data from different aspects of a language, and subsequent analyses, grammars, dictionaries, etc. emerge. These constitute some form of documentation. But in the light of current developments in a new area of Linguistics has emerged, whose aims are slightly different from the traditional aims of language description. Himmelmann (1998) has tried to differentiate between description

² See also Udoh 2014 in which parts of this subsection have been presented.

and documentation. The aims of description are different. A record of the language with emphasis on abstract elements, constructions, underlying rules, etc. form the focus of the elicitation, and these precede the analysis. On the other hand, the aims of documentation are basically to record the linguistic behaviour as exhibited in discourse.

What has emerged out of this is Documentary Linguistics, and it conforms with the times in terms of practice, tools and products. It deals with the record and representation of natural discourse. Since discourse is primary in Documentary Linguistics, then both description and analysis are secondary products of the record of natural discourse which form the documentary corpus. Descriptive and explanatory materials like grammars, dictionaries, etc. annotate the documentary corpus. Documentary Linguistics curates texts, such that they can be stored, accessed and shared electronically using very special tools. There is a current technological revolution going on in information technology. Nigerian cultural heritage must be preserved, shared and passed on. Nigerian languages have to be part of this revolution. We need databases and structures for capacity building in different areas of our civilization.

What are the implications of globalization for the preservation of these languages in the light of the current international fight against language death? How can Nigerian languages participate effectively in globalization and yet preserve her unique but diverse languages? Since globalization involves basically some interaction, it follows, therefore, that the interaction can be monopolized by some groups involved in the interaction, thus colonizing the activities. On the other hand, the different activities can be shared by the participating members. This sharing implies the empowerment and acquisition of the correct tools of participation. We have two options of either being colonized or sharing. Which of these two options do we want? We must, therefore, develop our languages and put in place a structure for this development, so that Nigerian languages can participate in the global linguistic activities.

3.3 Codification of the Languages

Codification refers to the standardization and development of a norm or a model for a language. Given the Nigerian case, with the languages at different stages of development, we need a strategy to do this in a systematic way. Some languages may need to begin from the documentation stage, some from the orthography, while others may need to begin from the expansion and

codification stage. The strategy should deal with not just corpus planning but also status planning.

Nigerian languages should have spelling systems. This is the first step of development after the preliminary phonological description. With such an orthography, a literary tradition and other forms of empowerment can follow. Currently, there are on-going meta-language projects in the major languages and a few minor languages like Ibibio, and the vocabulary is gradually being developed to accommodate new technology, science, etc.

3.4 Developing tools of participation in globalization

The Nigerian linguistic scene is rather complicated. These languages, as we have said, require different kinds of attention. With the current technological revolution going on, we need to develop tools for work on different aspects of these languages. We need tools, both software and hardware, for surveys, fieldwork, documentation, archiving, etc. Many of such tools require interdisciplinary expertise. Many institutions are doing this, like: the Max Planck (www.eva.mpg.de/linguistics.html), Summer Institute of Linguistics (www.sil.org), Electronic Meta-structure for Endangered Language Data (www.emeld.org/tools/ontology.cfm), etc. We could do the same.

Apart from these techniques, linguists/linguists organisations have also developed software tools that are used specifically for the preservation of endangered languages. Some of these software tools include: ELAN and FLEx. ELAN is derived from EUDICO Linguistic Annotator. It is a language documentation tool that allows its user(s) to create, edit, visualise and search annotations for video and audio data. It was developed at Max Planck Institute for Psycholinguistics in 2001. Even though it was specifically designed for the preservation and analysis of language data and gestures, it can also be used by everybody who works with media corpora. ELAN can be downloaded/installed from <http://tla.mpi.nl/tools/tla-tools/elan/>. A “print screen” to show the ELAN annotation environment is presented in Figure 1:

FLEx (FieldWorks Language Explorer) is another language documentation tool, developed by SIL-International in 2012. It is a data management and analysis tool for linguists and lexicographers, which facilitates the recording and analysis of linguistic and anthropological data. An important aspect of this tool is its ability to provide its users multiple ways to view and edit data. FLEx

can be used to do many things. It can be used to record lexical information for the development of a dictionary; rapidly enter words using the semantic domain; record vernacular texts and view a concordance of words within recorded texts; create an interlinear analysis of texts; make a morphological analysis of the recorded data; create a grammar sketch; and record anthropological field notes. It can be downloaded from <http://fieldworks.sil.org/flex/>. An anatomy of FLEEx screen is presented in Figure 2:

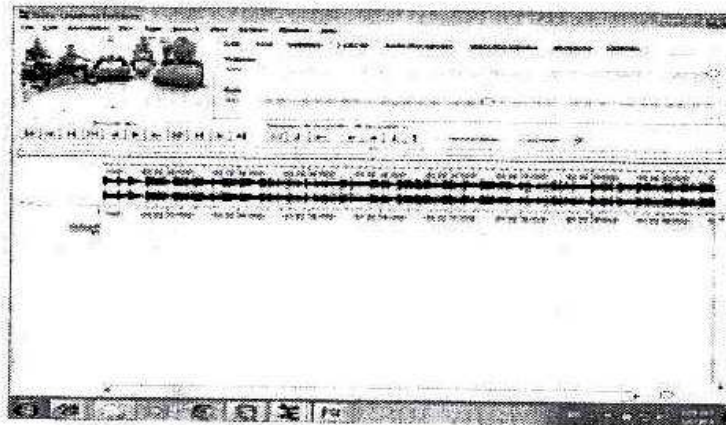


Figure 1: A “print screen” to show the ELAN annotation environment

4.0 Recommendations

We recommend the following:

a. **Use of a sociolinguistic framework like the GIDS to define domains and language shifts in Nigerian languages.**

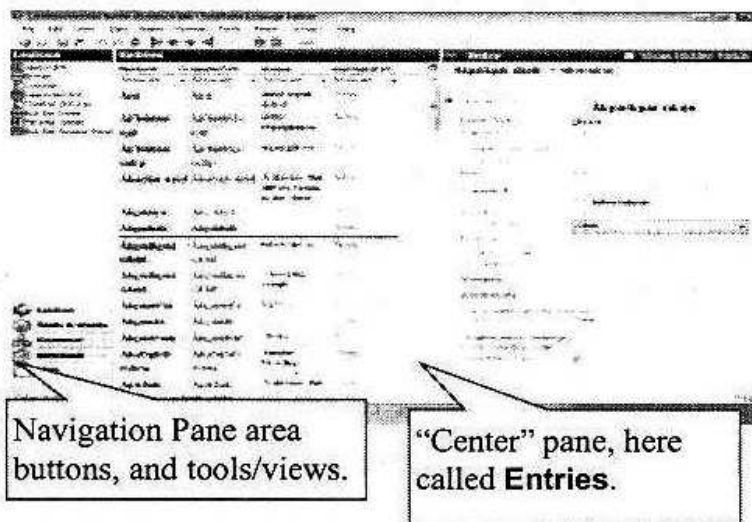
There is a need to assess the status of the Nigerian languages. Such an assessment using a framework like GIDS will show a clear picture of the level of endangerment of the different languages. This should provide a structure for the nature of development and/or revitalization strategies to adopt to stem the tide of endangerment.

b. **Interdisciplinary collaborations**

Interdisciplinary collaborations involving different disciplines will address different aspects language use, with regard to practice and tool development and use. Speech Synthesis, the artificial production of human speech is a good example of an area of collaboration that has yielded very good fruits so far. Computer generated simulation of human speech as computer technology is used to ‘construct’ human speech from electronic circuits to replace pre-recorded

human speech. Speech Synthesis projects should involve a team of linguists, phoneticians, computer scientists and mathematicians working together to develop large portions of artificial speech in a particular language. This area of interdisciplinarity has made quite some giant strides in the recent past in can be very productive in the:

- i. assistance in language teaching and learning for its repetitive capacity provides a good aid to language learning exercises, reading exercises, presentations, etc;
- ii. assistance in the simulation of responses in different virtual environments for the handicap, grassroots mobilization, recreation of an extinct language revitalization projects;
- iii. telephone answering service and automated attendant systems and voice response.



A number of speech synthesis projects have yielded several fruits across the world. In the University of Uyo, one of such collaborations has contributed to a good success story of interdisciplinarity, and it has produced a chain of research projects, which are still multiplying.

c. Policies and Curriculum upgrades : We need official policy documents to guide what we are doing. A well thought-out plan to guide our work on our languages in terms of the programmes, their implementation and a plan for monitoring the policies needs to be developed. Beyond this, we need to incorporate ICT components into our linguistic curriculums. Every one needs a basic understanding of ICT and how to make productive use of it. Linguistic

curriculum should include ICT components so that graduates can efficiently be able to participate in modern technical society. In essence, every linguist should be computer literate and acquire the very basic knowledge of ICT.

d. ICT Policy and Regulation : A lot is happening with regard to ICT. There is a need to develop a policy to regulate it and guide our ICT work. Such a plan should cater for the harmonization of ICT initiatives, check standards and regulate the training in this sector. Tanzania has one with the mission to:

Enhance nation-wide economic growth and social progress by encouraging beneficial ICT activities in all sectors through providing a conducive framework for investments in capacity building and in promoting multi-layered co-operation and knowledge sharing locally as well as globally (Tanzanian ICT Policy 2003).

5.0 Conclusion

We need to look inwards and strategise to empower our languages, beginning with survey, documentation, description, codification and the development of tools to facilitate the work. We need to sustain our languages through use in the home, in education, in ICT, etc. We need more knowledge and capable technical linguists to deploy, manage and maintain ICT equipment, tools, etc. We need strategic use of ICT in language issues as they relate to other businesses and the industry, with regard to telecommunications, grass root mobilisation, physically challenged persons, etc.

References

- Austin, P. and Julia S. 2011. *Cambridge handbook of endangered languages*. Cambridge: Cambridge University Press
- Brenzinger, M. Yamamoto, A. Aikawa, N. Koundioubu, D. Minasyan, A. Dwyer, A. Grinevald, C. Krauss, M. Miyaoka, O. Sakiyama, O. Smeets, R. Zepeda, O. 2003. *Language vitality and endangerment*, Paris: UNESCO Ad Hoc Expert Group Meeting on Endangered Languages, <http://www.unesco.org/culture/en/endangeredlanguages>.
- Connell, B. 1994. The Lower Cross Languages: a Pronegomena to the classification of the Cross River languages. *Journal of West African Languages*. Vol. XXIV, 1:3-46.
- Crozier, D. H. & Blench, R. M. 1992. *An Index of Nigerian Languages*. Dallas: Summer Institute of Linguistics, Inc.

- Egbokahare, F. Oyetunde, S. O. Urua, E. E. & Amfani, A. H. 2001, *Language Clusters of Nigeria*. Cape Town: CASAS.
- Fishman, J. A. 1991. *Reversing language shift*. Clevedon: Multilingual Matters Ltd.
- Gibbon, D. Ahoua, F. Gbery, E. Urua, E. Ekpenyong, M. 2004. *Wala: A Multilingual Resource Repository for West African Languages*. Proceedings of Language Resources and Evaluation Conference (LREC), Lisbon. Vol. II:579-582.
- Grimes, B. 2000. *Ethnologue: Languages of the World*. 14th Edition. Dallas: SIL International.
- Himmelman, N. 1998. Documentary and Descriptive Linguistics. *Linguistics* 36.161-195.
- Lewis, M. P. 2009. *Ethnologue: Languages of the world*. 16th Edition. Dallas: SIL International. <http://www.ethnologue.com>.
- Lewis, M. P. and Simmons, G. F. 2009. *Assessing endangerment: Expanding Fishman's GIDS*. Paper submitted to *Review Roumaine de Linguistique* for special issue on endangered languages.
- Sustainable Development Commission 2011.
- Tanzania ICT Policy, 2003.