

Re-engineering Mother-Tongue Education in Africa in the ICT Era: Issues and Challenges

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Abstract

The UNESCO (1953) Report has amply demonstrated the primacy of mother-tongue as the most effective and affective medium of instruction in the education process. However, the gains of mother-tongue education, especially in Africa, are fast receding into the mist of these contemporary times of ICT and globalization when virtually all discourses ranging from the pedestal to the most elevated are conducted in the so-called 'globalised' languages. In this paper, the possibility of re-tooling mother-tongue education in Nigeria in a manner that would reposition the indigenous languages for appropriating the various opportunities offered by the new information and communication technologies is explored. In this regard, the paper addresses the issues raised at the 'African Languages and Internet Workshop held at Bamako (Mali) in May 2002 and makes a case for the adoption of a realistic language policy, which is well disposed to implementing the UNESCO (2003) recommendations regarding mother-tongue education. In this way, the education system would be strategically repositioned for the task of playing a complementary role of implementing the strategy set up by the ACALAN framework for the use and valorization of indigenous languages and cultures of Africa in the new information society.

Keywords: mother-tongue education, African languages, ICT, re-engineering, ACALAN, Internet.

1. Introduction

In 1953, the United Nations Education Scientific and Cultural Organisation (UNESCO) published the experts report on the *The Use of Vernacular Languages in Education*, which made strong educational arguments in favour of mother tongue (or first language) instruction that enables school children to use their local languages in learning. Since the publication of this report, a good number of international frameworks have been provided to institutionalize mother tongue education in the world. According to Agbedo (2007), the UNESCO position on the choice of language of instruction in education derives essentially from the United Nations' Universal Declaration of Human Rights, proclaimed in 1948, which lays down the basic principle against discrimination on the grounds of language in *Article 2*: 'Everyone is entitled to all rights and freedoms set forth in this Declaration without discrimination of any kind, such as...language.' The rights of persons belonging to minorities are further established by the 1966 International Covenant on Civil and Political Rights and the 1992 Declaration on the Rights of Persons Belonging to National or Ethnic, Religious and Linguistic Minorities. Whereas *Article 27* of the International Religious Covenant refers more generally to the rights of persons belonging to minorities to use their own language... in community with the other members of their group, the Declaration is of explicit relevance to the language issue in the field of education as it formulates in *Article 4* that 'persons belonging to minorities should have adequate opportunities to learn their mother tongue or to have instruction in their mother tongue and that measures should be taken in order to encourage knowledge of the language and culture of the minorities.' The educational rights of indigenous peoples, as Agbedo (2007) further observes, are addressed by the 1989 ILO Convention 169 concerning Indigenous and Tribal Peoples in Independent Countries, whose *Article 28* requires that children belonging to the peoples concerned shall, wherever practicable, be taught to read and write in their own indigenous language or in the language most commonly used by the group to which they belong and that adequate measures shall be taken to ensure that these people have the opportunity to attain fluency in the national language or one of the official languages of the country. The 1990 International Convention on the Protection of the Rights of All Migrant Workers and Members of their Families stipulates that States of employment shall pursue a policy aimed at facilitating the integration of children of migrant workers in the local school system, particularly in respect of teaching them the local language, and the teaching of their mother tongue and culture.

The 1989 Convention on the Rights of the Child emphasizes that language has to be considered as an educational value. *Article 29* provides that the education of the child shall be directed to the development of respect for the child's cultural identity, language and values. Also, the 1960 Convention Against Discrimination in Education lays down the educational rights of people belonging to minorities. The 1976 Recommendation on the Development of Adult Education reinforces the role of mother tongue as it explicitly recommends mother tongue instruction and thus adopting even a broader perspective on language learning. Adult education, as it stated in *Article 22*, should enable them to ...educate themselves and their children in their mother tongues. The role of the mother tongue in education was also referred to in the 1978 Declaration on the Race and Racial Prejudice that recommends in *Article 9* that steps should be taken to make it possible for the children of population groups of foreign origin to be taught their mother tongue. The 1995 Declaration and Integrated Framework of Action on Education for Peace, Human Rights and Democracy, in its *Article 29* advocates respect

for the educational rights of person belonging to minorities as well as indigenous peoples in order to foster understanding between communities and nations. The Universal Declaration on Cultural Diversity, adopted in 2001 equally touches upon the importance of language for promoting cultural identity. Article 6 of the Action plan for the implementation of the Declaration define the role that languages should play in the field of education including respect for the mother tongue, linguistic diversity at all levels of education and the promotion of multilingualism from an early age.

From all indications, the communiqués of international conferences and summits held in recent years under the auspices of the United Nations, notably the Beijing Declaration and Platform for Action, adopted in 1995 at the Fourth World Conference on Women, the Delhi Declaration and Framework for Action, adopted in 1993 at the Education for All Summit, the 1996 Amman Affirmation and the final communiqué of the Mid-Decade Meeting of the International Consultative Forum on Education for All, the 1997 Hamburg Declaration on Adult Learning, the Vienna Declaration and Programme of Action adopted by the World Conference on Human Rights, the International Conference on Education (ICE) have all lent support for mother tongue education. Against the background of the groundswell support for mother tongue education, the UNESCO (2003) position paper on 'Education in a Multilingual World' produced a set of guidelines (summarized under three basic principles), which represent the Organization's current approach to language in education in the 21 century, and which should serve to state the position of the international community in its various member states.

In essence, mother tongue education and multilingualism are increasingly accepted around the world and speaking one's own language is more and more a right. Given the expediency of bridging the proverbial 'digital divide' and eliminating low indicators for connectivity and access to internet in Africa, which constitute obstacles to the use of African languages in ICT, Nigeria and indeed all African nations are confronted with the inescapable option of re-engineering the mother tongue education such that would enhance ICT access in African languages. What steps to be taken to adequately address the issues and challenges in this regard form the thrust of analysis in the sections that follow presently.

2. African Languages and ICT

In contemporary times, it has become traditional in the discourse on global expansion of the 'information society' to talk about the infamous 'digital divide' that is, the uneven distribution of computers and internet in favor of certain regions and groups. Quite apart from assumptions regarding the value of internet connections, Africa, as Osborn (2006: 86) observes, "...is considered to be on the disfavored side of the divide. Various statistics like low numbers of telephone connections, lack of electrification and high illiteracy, he further notes, have long characterized the continent, and now are joined, unsurprisingly, by low indicators for connectivity and access to internet and computers. Most times, the major focus of such dialectics is on such technical issues as connectivity and access and hardly reckons with the linguistic dimensions of the 'divide' such as choice of language and literacy. Again, the primacy of computer and internet as potential tools not only for enhancing current literacy efforts, but also for opening new possibilities for literacy instruction in typical multilingual contexts, which of course is the general character of African speech communities, has not been accorded adequate recognition. These two factors, which constitute fundamental and institutional obstacles to the use of African languages in ICT especially on the levels of policy, attitudes, and sometimes orthographic issues, are akin to those encountered in promoting African language literacy generally.

In view of the prevailing situation, it becomes less difficult to explain the poor status of African languages in the ICT. Although the relative level of use of African languages in computing and on the internet is hard to quantify, it is clear that African languages are not yet widely used in the content of computing applications or on the internet. This is deducible, for instance, from the lack of software localized even for major African languages and the infrequency and character of such web content as one does find in African languages. Equally germane to this point is the fact that computers and the internet, like formal educational systems a century earlier, have been introduced and disseminated as more or less monolingual media using one or another European language. This, continues Osborn, is a reflection of both the dominance of the languages inherited from colonization in ICT and the use of these languages by those people in Africa most likely to use the technology. He draws on the state of African language use in web content, e-mail, and other aspects of computing including in non-internet applications and in localization of software to elucidate the situation.

In terms of web content, the results of a number of case studies (Miller Esselar Associates, 2001; Diki-Kidiri & Edema, 2003) tend to suggest that many African languages are represented in the web but predominantly not as media of communication, not even such languages as Swahili and Hausa, which are regarded as the most widely spoken languages in the African continent. This is contrary to what obtains in Europe whereby the minority languages with relatively few L1 speakers are ranked higher than the most widely spoken languages of Africa. For instance, a simple survey of websites by language done in 2000 by Vilaweb, the website of a Barcelona newspaper, showed many more pages for languages such as Basque and Slovenian (Pastore 2000) than for any language in Africa surveyed three years later. A follow-up to the Vilaweb survey (Mas, 2003), which ranked the top 48 languages on the web found Afrikaans forty-second after the above mentioned

languages, and Swahili last following, among others, such minority languages with quite insignificant L1 as Frisian and Faeroese. In spite of the fact that e-mail has long been a significant use of internet in Africa, their uses as media of communication have been limited essentially to the big two languages – Swahili and Hausa. Currently, there are at least two web-based e-mail services that provide for composition in several African languages – Africast.com and Mailafrica.net. This is in addition to a number of e-mail distribution lists in which much or most of the traffic is in either Swahili or Hausa.

In the area of internet computing, the use of African languages, especially on public, office, and personal computers, as Osborn (2006) observes, is still less visible. Apart from Elder (2000), which provides a glimpse of African language use on computers in a Senegalese telecenter and ANAFA (a local non-governmental organization outfit offering computer training and basic literacy in Senegalese national languages), there are apparently no surveys of such non-internet use of African languages. What appears to be a positively refreshing departure from the traditional non-utilization of African languages in ICT operations is in the area of software localization and web interfaces. Apart from the added impetus, which African languages derived from the announcement of Microsoft Corporation in 2004 concerning its increased work on localizing its software, there have been other efforts for localizing software on smaller scales for several years, as evident in the 5-year old Somali language word processor, “Hikaadiye,” available on <http://www.somitek.com/>. One open-source localization project for South African languages, Translate.org.za, has received a fair amount of attention, and several organisations based in Nigeria have begun work in recent years – Konyin (<http://www.konyin.com/>), Afará (<http://www.pin.itgo.com/afara/>), and ALTI (<http://www.alt-i.org/>). As for web-interfaces, the popular search engine Google has a programme for localized versions that already have several African language versions translated by volunteers. A “V-webmail” interface was also recently localized for Swahili (<http://webmail.variomedia.de>). Osborn believes that there may be more of this sort of localization going on than is apparent, as Shanglee (2004) claims.

It is quite obvious that contemporary times have witnessed an unprecedented upsurge in the practical engagement of ICT in African languages. For instance, African Languages Technology Initiative (ALT - I) was set up to facilitate development of the necessary resources that will enable the engagement of Information Communication Technologies (ICT) in African Languages. The overall aim is to appropriate various aspects of Human Language Technology (HTL) such as speech synthesis, speech recognition, natural language understanding, machine translation and many others for human-human and human-machine communication in African Languages for the unfolding information society. The results of these seminal efforts have served to reveal the enormity of the task of integrating Africa into the ‘global village’ of the knowledge era and further demonstrated the need for these lines of research and developments. Also, in the area of corpus linguistics, which has traditionally been dominated by the English language, substantial African-language Web corpora, as Schryver (2002: 266) observes, “...can indeed already be compiled (Web for Corpus) and accessed (Web as Corpus), and the list of potential applications grows by the day.”

Schryver (2002:267) notes further that an overview of the African-language text corpora built in the ‘traditional’ way – i.e. through scanning and optical character recognition (OCR) of hardcopy sources, transcription of recordings, and transfer of existing electronic files – can be found at ELC for ALL (Electronic Corpora for African-Language Linguistics, <http://www.up.ac.za/academic/libarts/afriLang/elcforall.htm>). The pioneers in this field are Prinsloo (1991) for Sepedi and Hurskainen (1992b) for Kiswahili. Equally worthy of note is the group of southern Sudanese refugees in Melbourne, Australia working with an office of the Victoria State Library there, on literacy in Nuer and Dinka languages. This ICT Project has resulted, through the collaboration of the Sudanese with Andrew Cunningham, Multilingual Technical Project Officer at the abovementioned library, in a set of web pages in Nuer that are intended to be a part of the literacy effort. The Oke-Ogun local/international ICT project, which is an initiative of Peter Adetunji Oyawale, offers an interesting study of growth of an idea to incorporate ICT for local development in the rural community of Ago-Are Oke-Ogun district in Ogun State Southwest Nigeria. After Mr. Oyawale’s tragic death, a collaboration between the local group, Oke-Ogun Community Development Agenda 2000 Plus (OOCD 2000+), an English volunteer in the Committee for African Welfare and Development (CAWD), Pamela McLean, and a Kenyan VSO volunteer, David Mutua, have worked to carry forth his vision. The project has been working on, among other things, a very basic information and connectivity issues on a small scale, and is looking towards further development.

In spite of the few isolated instances of success in the utilization of African languages in ICT, Osborn (2006) insists that African language use in ICT appears to be marginal in Africa. Part of the reasons for this prevailing situation, according to him, is that the factors, which define the digital divide also tend to minimize the potential for African language use in ICT. If anything, connectivity is still urban-based, where official languages, through which communication on the internet is effected, are widely used. Coupled with this is the fact only the select crop of people with the requisite means and education and to who, express facility in the use of these official languages, is an exclusive preserve, can access computers and internet connections. Therefore, the digital divide, as Osborn argues, is more localized than bridged. It is being replicated on national and local levels along the lines of deeper social, economic, and linguistic divides, as identified by Keniston (2004). This perspective

recognizes four digital divides of which one is linguistic and cultural, while the other three are socioeconomic within countries, digital between North and South, and the gap between the technical elite and everyone else. Also, a roundtable on the digital divide at University of California, Los Angeles (UCLA), notes Afnan-Manns & Dorr (2003), considered a whole range of digital disparity gaps among which language issues figure prominently.

Osborn (2006) further identified and grouped other reasons why African languages are not more used in ICT generally into two categories: motivation (the will to use them) and structural factors that affect access and use (the means to do so). Regarding motivation, it is quite obvious that while those with access to computers tend to be people who are educated in and socialized to some degree to use the official languages and thus less likely to actively seek to use their first languages, those who use their first languages but not the official language tend not to be in a position to do much in this area even if they wanted to. Another motivational factor in the case of web content, continues Osborn "...has to do with the intended audience(s) to which sites are addressed," (p. 88). Using Ballantyne's (2002) 'expression' and 'application' parameters of content analysis, he avers that much web content relating to Africa, even concerning African languages, and whatever the origin, has an external audience, and so would logically tend to use languages understood internationally. In addition, much of the web content with intended local application, notes Osborn, originates from outside of Africa, where production of content in languages other than English, French or Portuguese is not an easy option. The structural factors limiting African language use ranges from problems associated with standardization of orthographies, the incidence of special characters used in many orthographies which required specialized fonts, technical inconveniences posed by the Unicode's provisions for special characters, lack of intersection between language policies and ICT policies in most African countries, general lack of knowledge about African languages and linguistics or about basic technical options to facilitate computing in multiple languages, to lack of resources to advance work in these categories, even where there is the will and know-how to implement multilingual ICT projects in Africa.

3. Retooling Mother Tongue Education for Enhanced ICT Access in African Languages

In the light of the fact that a language is spoken and used in other spheres of activity, it is worth at least providing the opportunity for it to be used in various ways with the new technologies. If this is taken as axiomatic, then such an opportunity becomes a critical concern, since African languages are themselves important vehicles for the expression and generation of knowledge. This points to the imperative of retooling mother tongue education in Africa in a manner that would enhance ICT access in African languages. According to Osborn (2006), some sources have sought to distinguish between levels or types of access. Telecommons (2000), for instance, discusses "'physical access' to ICT infrastructure and applications, and 'soft access,' defined in the African context as software and applications, which are designed to enable rural African users to utilize ICTs for their own needs and uses once the physical access has been established." The organization Bridges.org goes further to define twelve dimensions of what it calls "real access," of which "relevant content" mentions language. In effect, software and content, which constitute the two aspects of access are ones in which choice of language is important." In the context of this discussion, access beyond physical availability of hardware and connections and the rights to use these must also include some anticipation of the user profiles in terms of, among other things, language and literacy. This in turn implies attention to developing user skills, including basic literacy. Of course, it goes without saying that reliance almost exclusively on English, French, and other so-called 'globalised' languages for the transmission of information and new knowledge, as Enguehard and Mbodj (2003) argue, puts Africans and other people who are not skilled in these languages, and by extension the societies of which they are a part, at a very great disadvantage.

The foregoing, perhaps and justifiably provokes the worry about the kind of fate, which awaits languages that do not provide any level of ICT access. Once there is greater application of ICT on the local scale, the question of how to use local language(s) becomes inescapable, as the Oke- Ogun pilot scheme tended to show. The issue of literacy in the indigenous language(s) follows logically. Given the many pedagogic advantages of mother tongue education and the institutional supports deriving from the UNESCO's basic Principles in this regard, the reinvention of language in education policies in Africa in a manner that would retool mother tongue education for the crucial role of redefining access to ICT in African languages becomes imperative. In this regard, the ACALAN framework - a pan-African ICT structure that spells out the strategy for the use and valorization of African languages and cultures in the new information society - provides an auspicious starting-point. Within the framework of the Regional Conference on "Africa and the World Summit of Information Society", the African languages and Internet workshop, organized by the Academie Africaine des Langues (Academy of African Languages) took place at the Palais des Congres, Bamako, Mali, on May 26, 2002. The document on African Academy of Languages entitled 'Special Bulletin, ACALAN', reviewed the issues related to the status, the roles and the places of the languages in the process of endogenous development of African countries and the various opportunities offered by the new information and communication technologies. The President of ACALAN, Adama Sammassekou stressed the need to set up the pan-African structure and also for experts (linguists and data processing specialists) to collaborate to ensure the presence of the African languages in the development of African countries. Regarding the incongruity for Africa to continue expressing themselves

through non African languages, the experts insisted on the need to appropriate African languages and Internet as strength for social and economic development.

The Bamako Conference ended with a number of recommendations, which impinged on the economic, technological and political aspects of Africa. On the economic sphere, it called for the creation of a HAMI (Highway of African Multilingual Information) fund intended to finance the production and maintenance of Web sites in African languages; establishment of a vocational training fund for African data processing specialists, to continuously train Linux system administrators whose tasks are to configure, support and maintain the Linux web hosting servers sites in African languages; awarding of data processing and Web sites support contracts to African data-processing companies in order to support their economic activity, promote them, stimulate their growth and ensure a greater sustainability of specialized human resources working in Africa. In the area of technology, it recommends among others, that the States of Africa work out a strategic plan in order to assume their data-processing transition and the implementation of new international UCS/JUC standard in their respective African data-processing environment; and that the LABTIC created with the support of AIF in the countries of the South become genuine platforms of confrontation, test and validation of the characters of the African languages. It equally advocates the creation of national structures and associations for applications development in national languages by the international organizations to promote an African Dot Force whose essential mission would be to ensure the convergence of the present standards in African languages (SIL, BPI, etc.) applications towards an integrating generic standard. At the political level, the Conference recommended that all the Member States of African Unity sign the charter of ACALAN and consequently commit themselves in setting up the pan-African structure of ACALAN, which eventually becomes an ideal framework to put in synergy all the initiatives in the field of languages.

In the light of the ACALAN framework, it becomes imperative for African universities to redesign their language teaching programmes in a manner that would accord priority attention to improving ICT access in African languages

4. Conclusion

The African continent, considered from the prism of the contemporary context of the global expansion of the 'information society,' has remained tethered on the disfavoured rope of the proverbial 'digital divide.' The linguistic dimension of this divide, which circumscribes ICT access in African languages questions anew the neocolonial language policies of most African States that institutionalize the language of ex-colonial masters as the official language on the one hand and relegate the indigenous languages to the ground on the other hand. The negative undertone of such policy has informed the decision of a good number of nations to revise it. The idea that integration means giving up your mother tongue is no longer sacred. "The Jacobin tradition of punishing children for using dialect languages at school has changed," says Michel Rabaud, head of the French government's inter-ministerial task force on mastering the French language. Consequently, mother tongue education and multilingualism are increasingly accepted around the world and speaking one's own language is more and more a right. International Mother Language Day, proclaimed in 1999 by UNESCO and marked on 21 February each year, is one example. Encouraging education in the mother tongue, alongside bilingual or multilingual education, is one of the principles set out by UNESCO in its 2003 position paper on 'Education in a Multilingual World'. In the light of the foregoing, any institutional framework put in place to re-jig mother tongue education in African countries is quite in order more so now that the current emphasis is on the increased use of African languages in the ICT. Herein lies the inescapable option of adopting the ACALAN pan-African structure by African nations, as an ideal framework for synergizing all the initiatives in the area of languages that would enhance ICT access in African languages.

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