

Language Endangerment and Language Maintenance: Can Endangered Indigenous Languages of Kenya Be Electronically Preserved?

Eric W. Wamalwa

Department of Kiswahili
Stella Maris Mtwara University College, Tanzania

Stephen B. J. Oluoch

Department of Arts and Humanities
Kisii University, Kenya

Abstract

United Nations Cultural and Scientific Organization (UNESCO) contend that languages are the centre piece of the cultural diversity of the world yet they are also a vulnerable part of the world's cultural heritage. According to UNESCO there are about 6,000 languages spoken in the world. Unfortunately, currently there are only eight languages of wider communication in the whole world. In spite of the importance of language as a component of cultural diversity, over 417 languages all over the world are endangered. In Kenya, over eight languages are endangered among them: Terik, El Molo, Ogiek, Omotik, Bong'om, Sogoo, Suba and Yaaku. Some of these languages have already been classified as being extinct by UNESCO. This paper addresses the need to preserve and maintain endangered indigenous languages. The paper has highlighted the current state of language endangerment in Kenya. The following observations are made: most African languages have not been phonemically coded. Given the length of time that is taken for a language to be phonemically coded, many languages whose vitality is critically endangered need an urgent means for their preservation. The paper recommends for an electronic method to be considered for preservation of the endangered languages.

Key words: Cultural Diversity, Language Endangerment, Language Preservation, Electronic preservation, Indigenous Languages

Introduction

Cultural diversity is essential to human heritage (UNESCO, 2003). Among other components of this cultural diversity is language. Language, apart from being a medium of communication, also embodies the unique cultural wisdom of a people. The loss of any language is therefore a loss of humanity. It has been claimed that the 7 billion inhabitants of the world speak only 3 per cent of the world's 6,000 languages. More than half of the world's population speaks English, Russian, Mandarin, Hindu and Spanish. More precisely, about 97 per cent of the world's population speaks about 4 per cent of the world's languages; and conversely, about 96 per cent of the world's languages are spoken by about 3 per cent of the world's people (Bernard, 1996). Most of the world's language heterogeneity, then, is under the stewardship of a very small number of people.

Further, UNESCO decries the state that even languages with thousands of speakers are no longer being acquired by children; at least 50 per cent of the estimated world's 6,000 plus languages are losing speakers. It is estimated that about 90 per cent of the languages may be replaced by dominant languages by the end of the twenty-first century. The threat posed by the "big five" is real and great especially to the third world countries whose vast majority of languages are a minority. A Majority of the third world languages have not been described linguistically. The threat posed by English is underlined by its importance on the world stage in the 21st century. Whaley (2003), claims that we are in the midst of a massive demographic transformation on our planet- a shift from cultural and linguistic diversity toward linguistic and cultural homogeneity. He contends that many people of the world will embrace homogeneity instead of diversity.

Though many scholars would agree that English as a lingua franca is a necessity in the 21st century largely due to the electronic age and mass media, few would consider its negative impacts on the world's other 6,000 plus lingos. It has been projected that every two weeks or so, the last elderly man or woman with full command of a particular language dies. At that rate, as many as 2500 native languages will have become extinct by the year 2100 (Moore, 2006).

The scenario painted above indicates clear and quick measures need to be taken in order to maintain the linguistic diversity of the world and thereby, preserve global cultural diversity. Of the world's 6,000 languages, one third of them (2,000) are on the African continent—a significant number of which are endangered. Notably, Kenya, with its linguistic diversity complete with several endangered languages, becomes a fertile ground for language preservation studies. To that end, this paper provides a brief outline of the language situation in Kenya, highlighting some of the endangered languages in the county and the place and role of electronic preservation of such endangered languages.

The first part of paper is the introduction. In the second section we discuss the concept of language endangerment and the importance of cultural and linguistic diversity. The third section presents a brief outline of the language situation in Kenya and highlights some of the endangered languages in the county. In the fourth section, we dedicate our discussion on the place and role of electronic preservation of these endangered languages. Section five of the paper presents the conclusion

Language Endangerment

According to UNESCO (2003), a language is endangered when it is on the path towards extinction. A language is in danger when its speakers cease to use it, use it in an increasingly reduced number of communicative domains, and cease to pass it on from one generation to the next. That is, there are no new speakers, either adults or children. This is to say that an endangered language is one that is at a risk of falling out of use. If a language loses all its native speakers, it becomes a dead language. Krauss (2007) says that a language is endangered if there is no transmission of it to young generation. Krauss projects that if children won't speak in a language in 100 years, then such a language is endangered.

On the causes of language endangerment, UNESCO (2003) posits that it may be the result of external forces such as military, economic, religious, cultural or educational subjugation, or it may be caused by internal forces, such as a community's negative attitude towards its own language. Internal pressures often have their source in external ones, and both halt the intergenerational transmission of linguistic and cultural traditions. Further, they explain that many indigenous people, associating their disadvantaged social position with their culture come to believe that their languages are not worth retaining. Such people abandon their languages and culture with the hope of overcoming discrimination, to secure a livelihood, and enhance social mobility, or to assimilate to the global marketplace (UNESCO 2003; Batibo, 2005). On the world stage, it is estimated that 3,000 of the existing 6,000 languages will perish in the coming century; another 2,400 will come to near extinction leaving only 600 languages in the safe category (Grenoble and Whaley 1998).

Batibo (2005) rightly points out that a limited number of speakers or the seemingly moribund state of the language is not a prerequisite, but rather a favorable condition for language endangerment. Further, a criterion upon which a certain language's level of endangerment is measured is suggested by Batibo (2005). Languages described as highly endangered are those which are currently deemed to be most vulnerable on the basis of the following indicators:

- The number of speakers currently using the language. A language with speakers fewer than 5000 is deemed highly endangered.
- The degree of bilingualism dominant in the language. Usually, any minority language whose speakers are highly bilingual in a dominant language is classified as endangered and its speakers are likely to shift to the dominant language.
- Socio-economic disadvantage of the minority language is a factor that endangers the concerned language.
- The prevalence of negative attitudes towards the minority language. Here, the speakers see no value in their language thus shifting to the dominant language which the speakers are positively inclined.

- Non-transmission of the minority language to the younger generation. This usually happens when parents no longer teach their children the minority language.
- The presences of a situation where by the elderly people that are beyond child bearing age speak the minority language. This means that there would be no offspring being born so as to be taught the minority language.

It is important to note that these factors do not operate independent of each other. Rather, they function one with the other, at least two or more factors may together, account for the endangerment of a particular language. The exception however is, as in the case of genocide, where a whole ethnic group could be wiped out and so their language.

Why Cultural and Linguistic Diversity?

There is unanimous agreement among linguists that one of the most important features that distinguish human beings from other animals is the faculty of speech which they (humans) possess. Crystal (2000) cited by Obiero (2010) presents five arguments as to why we should care when a language dies. He says that, like biological species, a multiplicity of languages amounts to diversity; that languages are an expression of identity; and languages are in themselves repositories of history. They form an integral part of the sum of human knowledge and that, as a slice of that knowledge; they are interesting subjects in their own right. Language is a vital and critical channel through which relationships are commenced and sustained through communication. A brief discussion of the arguments raised by Crystal (2000) is therefore important.

The importance of the languages of the world is mirrored through the functions performed by the languages to the native speakers and by extension to speakers who use them as either second or third languages. Batibo (2005), while discussing the state of language endangerment in Africa, reminds us of the cardinal functions of our African languages that we all should safeguard jealously. Our perspective in the foregoing discussion is thus clearly different from that of authors such as Halliday (1970) who views language function from within the structure of language. We concur with Mathiot and Garvin (1975) that the functional aspects of a language are considered at least as important as, if not more important than its structural aspects. This is because it is through its functional aspects that language is related to the rest of culture. These functions are here below highlighted.

Cultural transmission

The ability of language to facilitate the transmission of culture has rightly made it to be likened to a vehicle through which cultural experiences are accumulated, stored and passed on from one generation to another. In African societies, cultural experiences have been accumulated over time in a number of ways including the following:

- By the long interaction between the members of the society and their milieu. This has resulted in a unique knowledge of the environment, including flora and fauna which has led to the accumulation of skills and equipments to interact it. Similarly, each African society in general and Kenyan diverse linguistic communities in particular have developed such unique indigenous knowledge system.
- The interaction amongst members of the society themselves has given rise to the formation and development of customs within the concerned society. As a result, each community has its own special set of traditional beliefs and practices which may involve, but is not limited to complex kinship relations, stratified social structures, avoidance conditions and taboos, modes of politeness, age and gender-roles relations.
- Interaction between members of a society with their supernatural world has resulted in the adoption of beliefs in supernatural religious powers (i.e. the worship of a special deity) and a defined ancestry as a people's way of life.

This is a demonstration that African societies have from time immemorial developed rich cultures that were not only embedded but also transmitted through language. Language is therefore a critical means without which passage of a people's experiences from generation to generation is not possible. This transmission can either be vertical or horizontal. Batibo (2005) shows that the transmission of this cultural knowledge in most African societies is done through various forms of oral folklore like narration of stories, fables, proverbs, idioms, sayings, riddles, songs etc.

Identity

Language is very crucial in marking both individual and group identity. By use of language, we can distinguish one ethnic community from another. Within the same speech community, language plays a vital role in marking self identity through individual idiolects that differentiate one speaker from another. The role of language as a marker of identity is very important in moments of crisis. For instance, in Kenya, during times of crisis such as the 1992, 1997, 2002 tribal clashes and the 2007-8 post election violence, language was effectively used to identify in-groups "colleagues" and out-groups "enemies". In the Kenyan case for instance, a victim who was not able to respond fluently in the language of the interviewer was perceived to belong to the enemy's side and thus attracted punishment.

On the positive note however, language has effectively been used as a national and regional identity marker. The wide spread use of Kiswahili in the East African countries and the Great Lakes region is a case in point. That Kiswahili is the lingua franca of this region is no dispute. Therefore language is an important tool in mapping out the geographical identity of its speaker. Moreover, language is used to identify one's place within the group, mark and differentiate the speakers age sets, occupations of interlocutors and religion.

Socialization

Man is a social being. Man therefore has the natural urge to satisfy the need for socialization. Language is the tool that naturally facilitates this process. Unlike in many western cultures where socialization is not so pronounced, in most African societies, it would be deemed impolite for one to come across others and fail to acknowledge their presence through a greeting. Children are thus socialized into the community by use of language. Societal order is also maintained through the application of language. Likewise, languages foster solidarity and cohesion amongst the in-group members. They also foster social relations between participants, serve to perpetuate social stratifications and are an important tool for thought and intelligence development (Batibo, 2005).

The preservation of linguistic diversity is thus a preservation of all these very critical functions. UNESCO (2003) captures the importance of preserving endangered languages by declaring that the extinction of a language results in the irrecoverable loss of unique cultural, historical and ecological knowledge. Further, they posit that each language is a unique expression of the human experience of the world. Thus, the knowledge of any single language may be the key to answering fundamental questions of the future. This means that every time a language dies, we have less evidence for understanding patterns in the structure and function of human language, human prehistory and the maintenance of the world's diverse ecosystems.

Linguists have also argued for the preservation of languages not just for cultural diversity but also for science and linguistic study's sake. For instance, Austin and Simpson (2007) have argued for preservation by saying that the loss of linguistic diversity represents a massive social and cultural loss not only to the speakers of the particular language but to humanity and science in general.

To a linguist, the loss of linguistic diversity is a loss to scholarship and science. While one of the major goals of linguistics is to define universal grammar, that is, to determine what is constant and invariant in the grammars of all natural languages, attainment of that goal is severely hampered and even rendered impossible in the absence of linguistic diversity (Austin and Simpson, *ibid*). To this end, Hale (1998) quoted in Austin and Simpson (2007:6) says:

“Without linguistic diversity, it would be impossible for us—*linguists* to perform the central task of linguistic science i.e. the task of developing a realistic theory of human linguistic competence, realistic in the sense that it properly reflects not only the limits on the manner in which grammatical structure is determined by the properties of lexical items, for example, but also the impressive diversity of surface form in the observable structures of natural language.” (Emphasis added)

Other scholars have argued that though cultural diversity was to suffer loss due to language endangerment, but for scientific posterity alone, languages should be protected. This proposition is premised on the ground that what we now know about linguistic analysis is but the tip of the iceberg and that the study of many languages would provide answers to current puzzles in linguistic research. UNESCO (2003) maintains that a language that can no longer be maintained, perpetuated or revitalized still merits the most complete documentation possible.

Such documentation serves various purposes: 1) it enriches the intellectual capital, 2) it represents a cultural perspective that may be new to our current knowledge and 3) the process of documentation often helps the language resource person to reactivate the cultural and linguistic knowledge.

Language Endangerment in Kenya

Kenya is both a multilingual and multiracial country. A number of studies estimate the number of languages spoken in Kenya to be between 30 and 60 (Obiero, 2008). However, for a brief review of the sociolinguistic situation in the country, Webb and Kembo-Sure (2000) and Ogechi (2003) present a widely accepted position. Kenya has 42 languages (referred to as codes by Ogechi 2003). This figure is however lower than the number of languages proposed by the Constitution of Kenya Review Commission-CKRC (2000) as cited in Ogechi (2003), which puts it at 70. The languages of Kenya are grouped into three main linguistic groups, namely the Nilotic languages, Bantu languages and Cushitic languages. Statistically the Bantu languages comprise 65%, Nilotic languages 32% while the rest are Cushitic (Obiero, 2008). Kenya's co-official language is English, which is also the language of instruction from primary level to university with the exception of subjects like French, Kiswahili and German which require instruction to be undertaken in those particular languages.

Kiswahili is the national language and co-official language alongside English. This is however a recent development that is a result of the declaration of the new constitution which was promulgated in August 2010. With this scenario, it is evident that the rest of the Kenyan languages are largely used for intra-ethnic communication in homes and rural areas. Ogechi (2003) observes that languages in Kenya are not equal in status. There are majority languages and minority languages¹. It should be noted here that the school system in Kenya puts the indigenous in a disadvantaged position compared to Kiswahili and English. Apart from Kiswahili and English which are learned, taught and examined nationally at both primary and secondary levels, all indigenous languages cease being taught at class three².

The importance attached to Kiswahili and English has made the two languages to be regarded as languages of prestige in that they carry a certain potential for economic benefit (Mugambi 2002, cited in Obiero 2008). Mugambi adds however that, Kenyan people also place great value on their ethnic languages because they carry the people's culture and oral history. However, as a result of increased social mobility, urbanization, interethnic marriages, and formal education, among other factors, the minority ethnic languages face a great threat of endangerment. Given that functionally and in terms of prestige, English and Swahili surpass the local languages by far; the two languages have expanded considerably in the recent past, to the disadvantage of the indigenous languages. We acknowledge however that endangered languages of Kenya are to be assessed based on their peculiar linguistic ecologies within which they are found. This is because the indigenous languages are themselves never the same in vitality; relatively smaller ones have experienced greater pressure, sometimes from a neighboring other, in addition to English and Swahili (Obiero, 2008).

Likewise, in many urban areas of Kenya, as earlier mentioned, there is a new group of people who can neither speak nor understand their first languages. This has been compounded by two main factors. First is the school policy that allows for Kiswahili to be taught from class one to class three in urban areas. This has put pressure on many parents to introduce their children to the language that is used to introduce them to the academic world. A shift from this has however been noted in the recent past in many urban families, where many parents are now introducing their children to English as the first language rather than Kiswahili. This is mainly due to the attitude held that English is a symbol of an educated and enlightened person. There is a feeling among many Kenyans, though faulty in our perspective, that ability to speak English is in itself acquisition of knowledge. Moreover, there has been an increase in the number of middle income earners who take their children to academies that primarily use English as the language of instruction right from early childhood education.

¹ Ogechi (2003) distinguishes between majority and minority languages according to Webb & Kembo-Sure (2002: 41-42), where, besides understanding the concepts quantitatively, the functional value and the prestige of a language are also to be considered.

² The official language policy in school allows for indigenous languages to be taught from class one up to class three. But this is only in areas where there is linguistic homogeneity. In urban areas, Kiswahili is used instead of the indigenous languages since most children in this areas use Kiswahili as their first language.

All these have served to diminish the place and role of first languages majority among urban dwellers. With regard to endangered languages, Batibo (2005) observes that Kenya risks losing the following languages which are already rated as being highly endangered: Boni, Dahalo, Burji, Daasanach, Digo, Konkani, Malakote (Ilwana), Nubi, Sagalla, Sanye, Suba, Chifundi and Vumba. The last two are dialects of the Swahili language. Among the factors leading to their attrition is bilingualism in the dominant language, assimilation into the larger languages surrounding the endangered one and reduced populations of the elderly and lack of, or few speakers among the younger generation. Sommer (1992) accounts how each of these languages experienced shift and their situations as of then. He opines that none of these Kenyan languages may resist extinction.

Ten years later after Sommer's account, the Kenyan situation has gotten worse. The *Atlas of the World's Languages in Danger* (2010) has listed six (6) Kenyan languages among its list of languages that are already extinct. These include the El Molo, Kore, Lorkoti, Sogoo (also called Okiek), Yaaku and Kinare. The *Atlas of the World's Languages in Danger* (2010) speculates that some of these languages had their last native speakers between the years 1990 and 1992. Moreover, a number of other languages are categorized as severely endangered, critically endangered, definitely endangered and vulnerable. The current language endangerment situation in Kenya is summed up in the table below based on their level of vitality.

Figure 1: Levels of vitality for endangered languages of Kenya

Name of language	Alternate name	Vitality	Number of speakers	Year	Location
Omotik	Laamoot	Critically endangered	50	1992	Rift Valley
Elmolo		Extinct	-	1992	Rift Valley
Bong'om		Definitely endangered	1000	2007	Somali/Kenyan boarder
Boni	Aweera, Waata	Definitely endangered	3000	1990	North Eastern
Burji		Vulnerable	7000	1994	North Eastern
Dahalo		Severely endangered	400	1992	Mouth of Tana River
Kinare		Extinct	-	1992	Makuyu region
Kore		Extinct	-	1992	Coastal region
Lorkoti		Extinct	-	1992	Eastern (Embu)
Ongamo	Ngasa/Nadza	Critically Endangered	200	1992	Kenya/Tanzania boarder-Kilimanjaro
Sogoo		Extinct	-	1992	-
Suba		Vulnerable	100000	1992	Kenya/Tanzania
Yaaku		Extinct	-	1990	-

Adapted from: Moseley, C. (2010)

The state presented in the table above clearly points out the reality of state of endangerment in Kenya. It is real and biting. Granted that loss of a language is loss of diversity, the current trend has to be averted by all adherents of human and linguistic diversity regardless of their professional inclinations. In view of this, concerted efforts should be directed towards the preservation of endangered languages, especially the minority languages that are day by day losing out on the number of speakers due to competing factors surrounding them.

Preservation of endangered Languages

In order to reverse this tide of language loss, rescue measures mounted by linguists, individual communities and organizations have focused their efforts on activities that are now known as language revitalization. The interventions envisaged in revitalization however focus only on languages that that have been classified as endangered. The reality in Africa is that many minority languages are threatened with extinction due to language contact. In the Kenyan context, this challenge is posed by the role that English and Kiswahili play in the daily lives of the citizenry.

On the continental front, apart from focusing on revitalization programs only, there has been increased impetus by linguists in the recent past about how to safeguard indigenous languages particularly the endangered languages, as valuable resources for Africa and national heritage in the individual African countries (Batibo, 2009). One suggested solution to this problem is to have an active and protracted program of language documentation throughout Africa (Kube 2006). This suggestion is based on the fact that most indigenous African languages have not been sufficiently described or codified. Therefore, a systematic description and codification of the indigenous languages would empower these languages for public use, preserve them for future generation as well as give them more utilitarian value (Batibo, 2009).

Other scholars have proposed that literacy is vital to ensuring prevention of language decay. Grenoble and Whaley (1998) cited in Derhemi (2002) present an overview of the main scholarly positions on the relationship between endangered languages and literacy. The dominant view argues that literacy is essential to nationalism and to language survival in the modern world. According to Derhemi (2002), the authors of this overview maintain that literacy has a strong effect at the macro-level, the larger and external context of linguistic endangerment, but that its effect on language vitality is primarily a result of micro-variables, which are specific characteristics of each community with an endangered language.

Communities which have a written tradition are certainly in a stronger position to revitalize a language, which may need reconstruction of lost or degraded material. On this basis, a workshop was held in Bamako, Mali in 2006, where it was observed that linguists ought to play a more active role not only in describing and promoting all indigenous languages in their respective African countries, but also in sensitizing their governments to devise more supportive policies, particularly with the intervention of the AU-sponsored African Academy of languages (ACALAN)³. This workshop offered important suggestions. Some of the recommendations and resolutions were made that are relevant to our present discussion, here below cited, (Kube 2006:10):

- To establish a database listing languages and research domains which need urgent attention and intervention in order to concentrate and optimize research efforts.
- Concentrate linguistic research on standardization and harmonization of orthographies and alphabets, terminology development and preparation of tools for using African languages in Information and Communication Technology (ICT).

As is demonstrated by the above recommendations, efforts towards the preservation of endangered languages remain focused on the old forms of language description and documentation. We note however, that with the large number of languages threatened with extinction in Africa, a good number of them will have ceased to exist before they are described. As a result, important data that would be necessary for description and documentation will have been lost even before it is acquired. This is due to the acknowledged fact that language documentation is a long time process. Then, there is the challenge of lack of enough qualified personnel and the resources required to undertake the exercise. Apart from these, there abounds a phonemic problem too. Many languages, owing to the fact they are not codified, may have sounds that have no matching symbols in the International Phonetic Alphabet.

In the same breath, only few African languages have managed to be used in ICT. These include: Kiswahili, Xhosa, IsiZulu, Afrikaans, Sesotho, Amharic Arabic, Setswana and Yoruba. This is indeed a negligible fraction from almost 2,000 languages resident on the African continent. ICTs have not been available in all local languages, due to majority of them having not been linguistically described, and the perception that they are economically not viable (Osborn, 2010). Since the situation in Kenya with regard to the number of languages that have been codified is similar to many other parts of the continent, methods of preservation that majorly rely on coded data places majority of these languages in certain danger of decimation. Alternative methods therefore, have to be employed together with the ones that have already been used in the past. One of the ways to ensure the maintenance of these languages is to increase their use either through education, as media of instruction, language literacy and use in broadcast.

³ African Academy of Languages (ACALAN) was created in 2003 by the African Union (AU). Its main role is to promote regional and sub-regional cooperation in the development of the African languages for public use in their respective countries.

Granted that most of them have not been coded, their use in education is untenable. Much as we acknowledge the effort of private radio stations to use a number of indigenous languages in their radio broadcasts, we need to point out that none of the languages categorized as endangered in the Kenyan case are among those used. In fact, as though to demonstrate the danger that belies minority languages, only one university-Maseno University in Kenya offers courses in indigenous languages. The courses are offered for *Ekegusii, Dholuo and Gikuyu* languages. The three mentioned languages are among the big five languages of Kenya. The remedy for minority endangered languages therefore lies in other forms of preservation such as electronic preservation which would aid retrieval and access to stored data. Preservation of these languages may require digital archiving.

It is accepted that the principal role of archiving is to store records, potentially indefinitely, and make them available to those entitled to access them (Francis et al, 1998). A number of electronic data preservation formats such as Portable Document Format (PDF), eXtensible Markup Language (XML) among other formats require a language that has been codified. For endangered languages which have not been codified, formats that ensure their preservation in audio form would suffice. Different communities approach the archiving of databases in very different ways. This ranges from computer science, where archiving usually includes simple backup operations and moving parts of the database into more remote memory, but without a long-term approach, to scientific research databases, where preservation is a necessity, but the focus lies on access, normalization and value-adding, and to archival science, where long-established techniques and methods as well as the need to maintain authenticity of data meet the technological challenge of databases in order to preserve them for an indefinite period of time.

Given that the languages which are the subject of our discussion suffer many disadvantages that render them difficult to preserve, preservation in their audio formats could be given priority. Versatile digital formats like MPEG 1 and MPEG 2 commonly known as MP3 is a digital audio encoding format that has been used for consumer audio storage, and digital audio compression for the transfer and playback of music on digital audio players. That this has worked for music which is basically audio, can linguistic data on endangered languages be stored using this formats or any other electronic format? Is this method viable? Are there better electronic methods that can serve this purpose? Answers provided to these questions not only by linguists but other interested parties especially in information technology will enhance debate on this subject not only in Kenya, but in Africa as a whole and thereby, as is our envisaged opinion, help in the preservation and maintenance of our endangered linguistic diversity.

Conclusion

The discussion in this article has shown that languages are an important instrument through which cultural diversity is stored. Their preservation therefore, ensures the maintenance of cultural diversity. It has been established that many endangered African languages are faced with lack of phonemic codification and therefore have no orthographies. As a result, very few languages stand a chance to be used in formal literacy and Information Communication Technology. In Kenya, a number of languages have been classified as extinct. To speed up the process of revitalization and preservation of the endangered languages, an alternative means has been proposed.

The paper has proposed the use of electronic means in the preservation of the endangered language. However, for the realization of this proposal, a lot needs to be done so as to have necessary data that will guarantee the availability of information necessary for sustainable development in the digital environment and at the same time help preserve and maintain cultural diversity through the preservation of our indigenous languages.

Acknowledgement

The authors wish to acknowledge the contributions of Prof. Simala, Dr. Tibategeza and Mr. Moses Malande whose thoughts and views helped give birth to this article in its current form.

References

- Austin, P. and Simpson, A. (2007). *Endangered Languages: Language Loss and Community Response*. Cambridge: Cambridge University Press.
- Batibo, H. (2005) *Language Decline and Language Death in Africa: Causes, Consequences And Challenges*. New York: Multi Lingual Matters Ltd.
- Batibo, H. (2009) "Language Documentation as a Strategy for the Empowerment of the Minority Languages of Africa" Masangu Matondo et al., (eds) *Selected Proceedings of the 38th Annual Conference on African Linguistics*. p. 193-203.
- Bernard, H. R (1992). *Preserving Language Diversity*. *Human Organization* 51(1) 82-89.
- Crystal, D. (2000) *Language Death*. Cambridge: Cambridge University Press.
- Derhemi, E. (2002). "The Endangered Arbresh Language and the Importance of Standardised Writing for its Survival: The Case of Piana degli Albanesi, Sicily" *International Journal on Multicultural Societies (IJMS)*, 4(2) 248 -269.
- Francis, R., et al. "Electronic Archiving-A 100 Year Experiment" *Proceedings of the Third Document Computing Symposium, Sydney, Australia, August 21, 1998*.
<http://210.8.122.120.vers/publications/pdf/electronic%20Archiving>. Retrieved on 24/01/2012.
- Grenoble, A. L. & Whaley, J. L. (1998). *Endangered Languages: Language Loss and Community Response*. Cambridge: Cambridge University Press.
- Halliday, M. A. K. (1970). "Language structure and language function" John Lyons (ed) *New Horizons in Linguistics*. London: Penguin Books.
- Ken Opala (March 6th 2002) "How Kenya Stands to Lose More than Ten Tribes" *The Daily Nation*. pp11.
- Krauss M. E. (2007). "Keynote-Mass Language Extinction and Documentation: The Race Against Time". In Miyaoka, Osahito; Sakiyama, Osamu; Krauss, Michael E. (eds) *The Vanishing Languages of the Pacific Rim* p. 3-24.
- Kube, S. (2006). "Joining Forces for Preserving Africa's Linguistic Diversity" [Report on the Joint UNESCO/ACALAN meeting of Experts, held in Bamako, Mali, 23-25 March 2006]. Paris: UNESCO.
- Mathiot, M., and Garvin, P.L (1975) "The Functions of Language: A Socio-cultural View". In *Anthropological Quarterly*, 48(3)148-156.
- Moore, R. E. (2006). *Disappearing, Inc.: Glimpsing the sublime in the politics of access to endangered languages*. *Language and Communication*, 26(3/4) 296-315.
- Moseley, Christopher (ed.) (2010). *Atlas of the World's Languages in Danger*. 3rd edn. Paris, UNESCO Publishing. Online version: <http://www.unesco.org/culture/en/angeredlanguages/atlas>
- Obiero, J.O. (2008) "Evaluating Language Revitalization in Kenya: The Contradictory Face and Place of the Local Community Factor" *Nordic Journal of African Studies* 17(4): 247-268 (2008).
- Obiero, J.O. (2010) "From Assessing Language Endangerment or Vitality to Creating and Evaluating Language Revitalization Programs" *Nordic Journal of African Studies* 19(4): 201-226 (2010)
- Ogechi, N.O. (2003). *On language rights in Kenya*. *Nordic Journal of African Studies* 12(3) 277-295)
- Osborn, D. (2010). *African Languages in a Digital Age: Challenges and opportunities for indigenous language computing*. Cape Town: HSCR Press.
- Sommer, G. (1992). A survey on language death in Africa. In: *Language Death: Factual and Theoretical Explorations with Special Reference to East Africa*, pp. 301-413. Mouton De Gruyter, Berlin.
- Stefanova and, Risch (----). "Searchable Long-term Preservation of Scientific Data through Semantic Web Representations" http://user.it.se/udbl/software/sard/DS_Italy_1.5.pdf. retrieved on 23-2-2012.
- UNESCO. (2003). "Language Vitality and Endangerment" Available at <http://portal.unesco.org/culture/en/ev.php-URL> accessed on 27/9/2010
- Webb, V., & Kembo-Sure. (2000). *African Voices; An Introduction to the Languages and Linguistics of Africa*. Cape Town: Oxford University Press Southern Africa.
- Whaley, L. (2003) "The future of native languages" *Futures*. 35(9) 961-973.