



The Role of ICT and the Mother Tongue in Education

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Abstract

This paper discusses native languages, their importance and the relevance of Information Communication Technology (ICT) in learning them and in education as a whole. It explores the significance of the mother tongue on the results of globalization and second language learning. Special attention is on NatiV, an Android Application that teaches early learners how to read (thus providing the foundation of actual language learning) a language native to Zimbabwe, chiShona. The interface provided to language education through NatiV is described, noting that it indeed realizes the declarations made in the Universal declaration of Linguistic Rights. The projections surfacing from the conclusions lean towards diversifying m-learning (mobile learning) to other languages and lexicography in general.

1. Introduction

The mother tongue is the greatest asset people bring to task of foreign language learning and provides a Language Acquisition System [1] which enables one to learn a new language based on their current understanding of literacy that the mother tongue offers them. Globalization has caused population mobility, which in turn has caused linguistic, cultural, racial and religious diversity within schools [2]. This language contact consequence has somehow caused a threat to the host society's language and identity. For instance, "foreign" students were at one time not allowed to speak in their mother tongue, which forced them to renounce that language in order for them to be accepted in their new society. Owing to the colonial language policies which were subsequently inherited by the post-independence government and the diglossic nature of the Zimbabwean society, English commands the most prestigious position ahead of local languages that are mother tongues to more than 90% of the population. The language of instruction at schools is also English, and using vernacular is not considered standard practice. Nonetheless, the world has begun to realize the importance of bilingual children's mother tongue in education.

The threat to mother tongue learning and official usage stimulated this research. The research aims at motivating for, and implementing the adoption of current technological developments towards the learning of native languages for their onward use in the education process. Our contribution to mother tongue usage is not a way of reinventing the wheel but it is to buttress what the Universal Declaration on Linguistic Rights (hereinafter The Declaration) declared. Article 9 of the Declaration states that, 'All language communities have the right to codify, standardize, preserve, develop and promote their linguistic system, without induced or forced interference'. Native Voice (henceforth NatiV), the software programme for chiShona as a mother tongue learning tool that we are currently working on aims therefore to support and respect this right. Plans are also underway to extend the project to other indigenous languages. The NatiV efforts are also supported through article 29(1) of the declaration which declares that, 'Everyone is entitled to receive an education in the language specific to the territory where s/he resides'. Developing an application that promotes mother tongue usage and learning in Zimbabwe is therefore overdue, owing to the Constitution of Zimbabwe Amendment (Number 20) Act of 2013 which has recognized 16 languages as official languages. Since status language planning has already been implemented, logically the recognized languages would require corpus planning that will, among other goals, standardize, create dictionaries, grammar books, harmonize and modernize lexemes. Such, body of literature may look cumbersome, but not so much with an e-learning software that helps learners to store more resources, convert text to speech and help children to learn while they play. All these languages would sooner or later need a supporting Education Act that would warrant their use as instructional languages in the education system, albeit to certain limited levels. NatiV is therefore preparing for such needs. Considering the anticipated costs of implementing an education policy that caters for all the languages recognized in the constitution, it can however be made easier through a cheaper and locally designed technological platform.

The interpretation of the above article is that both ICT hardware and software (like NatiV) should be developed in the indigenous languages for their learning, use in learning and gainfully harnessing the technological advancements and benefits that can accrue therefrom.



2. Globalization

Globalization has resulted in a society that is made up of linguistic, cultural, racial and religious diversity in schools. This is because people drift from continent to continent, and there are more interracial marriages resulting in increased intermingling of cultures. The sharing of world views, products, ideas and other aspects of culture has increased nowadays due to the fast internet speeds and other facilitating technological advancements in general. Some societies see this as a problem to be solved, whereas some see this as a platform to enjoy the linguistic, cultural and intellectual resources they bring from their homes [2].

The linguistic diversity that comes with globalization presents an economic challenge to some societies – there can be too many languages to support. This could end up with minority languages being neglected for official use and standardization as is the case with local minority languages. Linguistic diversity also threatens a majority of all existing languages. If we define a language to be the property of a certain culture, where culture is dynamic, it inherently means that language also changes. However, change and extinction are different. Globalization can be regarded as an agent for language shift towards the more international second language, and leaving the indigenous language to weaken and lose its detail or depth, and then eventually die. The consequences of language contact through colonialism coupled with globalization perpetuate what Philipson calls linguistic imperialism. As a result, indigenous languages, in spite of being native to big populations, are in competition for survival and therefore in need of compatibility with the current technological developments in order to stay afloat.

In Zimbabwe, many people are self-employed and most of these are women. As a result, children are left with baby sitters or are sent to nursery schools where they are immediately introduced to English, limiting the environment to naturally pass on the mother tongue [9]. In the rural areas, children are left to fend for themselves, while the time that should be dedicated by the parents to socialize and teach their children about the societal values and ethics, in the mother tongue, is converted to time for more adult chores and responsibilities. The girl child is especially affected, as she is more responsible for house chores and taking care of other younger siblings [7].

3. The Significance of the Mother Tongue

Since we have claimed that most indigenous languages are also mother tongues, it becomes appropriate to characterize the interpretation of the terms. The terms mother tongue, native language and first language (L1) are used interchangeably by most scholars, particularly because they all portray a context that the language variety concerned is primary. Mother tongue makes part of the definition of native language as an arterial language that is acquired from birth, usually in a cultural setting that then ethnically identifies the individual. A more widely accepted definition for native language takes into account the geographical location where that language is spoken. The Declaration of Independence defines native language under its Preliminary Heading as the language of the community historically established in a specific space. For someone to be called a native speaker, they would have had to be born in that area and raised to speak the language spoken there. The mother tongue is acquired at a young age, naturally, through interaction of the young person with their family and members of society. It is possible for one to have more than one mother tongue. In such a case, the child would have grown in a bilingual home (for example, where one parent speaks a native language different from the other parent). Native speakers may not necessarily know the grammatical rules of the language, but are intuitively aware of these rules through their experience in speaking the language.

Besides the mother tongue being a part of a person's identity, it can be used as an advantage to learn other languages. The theory is that a mother tongue is the most important ally a foreign language can have [1]. When learning a new language (or when learning a technical (or otherwise) concept), the mother tongue is already "silently" present. The brain, via cognitive ability, tries to use what it already knows to draw patterns from and make relationships with what is being taught. The stronger the roots are to the mother tongue, the better the chances of mastering a second language. The concept of literacy is already well developed, so learning a second language is a much easier process. It may also be deplorable to realize that a weak understanding of the mother tongue drastically affects the learning of other languages or subjects. For instance, children raised in slang-speaking (street lingo) homes have a tough time mastering the grammar of either their native or second language.

Studies have shown that we learn better in our mother tongue [12]. If children are proficient in their first language they already "know" about language. Currently, monolingual instruction is being used at schools in Zimbabwe, even up to tertiary level. It is not considered standard practice to teach using the native languages. Some students, especially in marginalized areas, find it difficult to learn their mother tongue. There may not be many books to read, let alone teaching aides to help them learn how to



read. Attitude is very crucial in language choice, usage, and even preservation and the family must promote and value the first language in order to cultivate it in their children [4].

4. NatiV – The Application

NatiV is an Android application under development for e-learning infrastructure that will teach children how to read chiShona. It is aimed at improving a child's syllable-to-sound (letter-to-sound) association, up to a point when they are able to construct whole words. It implements simple, core Android application development concepts, with a User Interface (UI) and gestures that are child-friendly. A new TTS voice is being created for NatiV, in the chiShona language spoken in Zimbabwe. NatiV is also being developed with special consideration to dyslexic children. NatiV aims at supplementing teaching resources in marginalized areas.

5. Conclusion

Our research has in a way made submissions on the need to use indigenous languages within the learning process and it has introduced software that not only promotes mother tongue learning and usage but also interests of the learner through utilizing current technology. The NatiV app is designed in a way that respects many linguistic rights and inclusive education as it also caters for dyslexics. The mother tongue is essential when it comes to learning a new language, more so when learning any new concept. ICT is a technology that is now accessible to anyone through the internet and provides an efficient means of empowering education, in this case, mother tongue learning. Solutions can be made through the use of ICT to help children learn their mother tongue with little supervision. These solutions also guarantee the preservation of dying minority languages. Manipulation of ICT systems in education can also be extended to electronic dictionaries that have speech output to help learners with pronunciation and a project to digitalize monolingual dictionaries of Zimbabwean indigenous languages should be a worthwhile endeavor.

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