Reclaiming and Re-visioning Indigenous Voices: The Case of the Language of Instruction in Science Education in Zimbabwean Primary Schools

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Abstract

The purpose of this study was to explore the effect of teaching science to rural primary school students using a second language (English) in Zimbabwe. The study also investigated the opinions and attitudes of primary school teachers toward teaching science using an indigenous language (chiShona). Qualitative data was collected using twenty classroom observations and interviews with ten purposely selected primary school teachers. Data were analysed using a thematic analysis. The findings revealed institutional and attitudinal barriers to using chiShona as a language of instruction in science teaching and learning. The results also showed that some teachers frustrate and silence students' voices by preferring to use the English-only discourse in their teaching. Others applied code-switching [switching from English to chiShona] to create a hybrid of the English and chiShona languages as a medium of instruction. When it came to using an indigenous language chiShona as the only medium of instruction in teaching and learning, lack of learning materials, education language policies, attitudes of teachers and administrators were found to be barriers to the proposition. Changes in language policy, production of indigenous learning resources and transformation of teacher education curriculum were some of the recommended solutions required to promote indigenous languages as media of instruction for science education and schooling in general.

1. Introduction

The choice of languages for education in Africa is determined largely by the colonial experiences of each country. Most African countries were colonised from the middle of the 19th century. Through cultural hegemony, each colonial power imposed and enforced its own language [in the form of linguistic hegemony] on the African states. According to Wiley, "linguistic hegemony is achieved when dominant groups create a consensus by convincing others to accept their language norms and usage as standard or paradigmatic" (p.113) [1]. Hegemony is ensured when they can convince those who fail to meet those standards to view their failure as being

the result of the inadequacy of their own language. In Africa, linguistic hegemony was enforced according to the colonial powers' ambitions, while imperial educational and colonial policies often determined the level of dominance, entrenchment and maintenance of the colonial language and, the extent to which indigenous languages were tolerated and promoted in the educational system.

Despite the advent of decolonization in the 1960s, African education systems continue to mirror education paradigms that were inherited from former colonial governments. Colonial education was hegemonic and disruptive to African cultural practices, local languages, indigenous epistemologies and ways of knowing. Students in African schools experience challenges in learning because of the dissonance between the school curriculum and the cultural experiences they bring from their homes and communities into the classroom. The curriculum does not adequately reflect African cultural experiences. What schools teach, and how teachers disseminate and transmit knowledge ignores the symbolic conventions and representations of the students' cultural experiences. These symbolic conventions and representations include knowledge constructs, mode of transmission and communication in the form of the language of instruction. The language of instruction in schools should be revisited and re-visioned in a transformative way to assist students' comprehend school knowledge and fully participate in their learning.

2. Language and the Colonial Legacy

Currently in African schools, there is an established way of talking about knowledge that encourages young learners to express their ideas and to question evidence in investigations of curriculum knowledge through established conventional modes and medium of communication [2]. These conventional modes and ways of communicating are conducted in a foreign and colonial language. Consequently, schools isolate students from the collaborative and participatory learning that are the foundation of African indigenous cultures and indigenous education systems. Re-visioning and transforming the African classroom requires African educators to seriously reconsider the use and purpose, as well as the effect of foreign languages as

languages of instruction in their schools. From a critical postcolonial approach, cultural and social-specific contexts are vital in defining the nature of language-in-education and its role in development in Africa. Arguably, the languages of instruction play a critical role in the advancement of knowledge, skills, and cognitive development.

The education system in postcolonial Zimbabwe is a colonial legacy of the British system. Despite political decolonisation, traditional teaching practices, particularly the use of English language as a medium of instruction in the science curriculum and other subjects, continue to dominate classrooms [3]. Anchimbe analytically observes that

The whole of Africa, south of the Sahara that had been subject to colonisation was rocked at the close of it by the extant and critical question of language choice for the new nation states. Whereas foreign or, as the case was, forcefully imposed languages were gaining grounds through the colonial education system...operating throughout Africa, the advent of independence was viewed by many as the doorway to complete oblivion of the colonial past (p.94) [4].

Banishing the colonial past in education to oblivion has not been fully achieved. The Zimbabwe government, like other African governments, seems to be guarded about changing the medium of instruction to an indigenous language. The purpose of this paper is to discuss the effect of using a foreign language on indigenous students who are not familiar with the English language used in their classrooms. Language is not only a medium of communication, but it is also a vehicle for transmitting and receiving cultural knowledge. Students who are taught in their indigenous language are likely to be active in class and are also likely to easily make sense of what they learn. According to ADEA/UNESCO study, without high levels of mother tongue proficiency, it is not possible to achieve successfully one's educational goals, leading to the argument that language is not everything in education, but without language, everything is nothing in education [5]. The most effective educational models are those that build additional languages into models that foster the continued development of children's mother tongues and mother tongue literacy [6].

3. Language Policy in Zimbabwe

Zimbabwe is a multilingual country with a population of about 12.5 million. Its main national languages are chiShona (spoken by about 82% of the population), isiNdebele (spoken by about 14%), and English (spoken by about 1%). English dominates other languages and is both a national and official language, while chiShona and isiNdebele are only national languages. About 3% of the population

speaks a number of minority indigenous languages such as chiKalanga, chiChangana, chiChewa, chiVenda, chiTonga and chiNambya.

The dominance and hegemony of English is revealed in the *Education Act* [7], as amended in 1990, which states that:

1. The three main languages of Zimbabwe, namely Shona, Ndebele and English, shall be taught in all primary schools from the first grade as follows:

- a). Shona and English in all areas where the mother-tongue of the majority of the residents is Shona or
- b). Ndebele and English in all areas where the mother tongue of the majority of the residents is Ndebele.

2. Prior to the fourth grade, either of the languages referred to in paragraph (a) or (b) of sub-section (1) may be used as the medium of instruction, depending upon which language is more commonly spoken and better understood by the pupils.

3. From the fourth grade, English shall be the medium of instruction provided that Shona or Ndebele shall be taught as subjects on an equal time allocation as the English language.

4. In areas where minority languages exist, the Minister may authorise the teaching of such languages in primary schools in addition to those specified in sub-section (1), (2) and (3).

The *Education Act* promotes English as the language of instruction throughout the education system. Although the three major languages seem to enjoy some semblance of recognition under the Act, English continues to be highly endorsed. Indigenous languages appear to have the same status with English prior to Grade 4, however, from the fourth grade, indigenous languages fade into oblivion and English becomes the compulsory medium of instruction. Even prior to fourth grade, teachers and parents in most schools prefer the subtractive or submersion model that primarily makes English the medium of instruction from the outset, from the first grade. The reason often cited is to ensure students' proficiency in English - a language of power and economic wellbeing. The favourable attitude of the population towards English due to the power, influence, and legitimacy associated with the language arguably works to the disadvantage of the indigenous languages.

Indisputably, indigenous languages are extremely important and critical to cognitive development. However, the Government of Zimbabwe's official policy on language-in-education supports the early-exit transitional model, which has the effect of marginalizing and minimizing the value of indigenous languages. The early-exit transitional

model involves a single target language at the end of the school. The target language that will be used as a medium of instruction is the official or foreign language. In Zimbabwe, the learners receive their school instruction in indigenous languages (as per the Education Act) in the first three years when they begin schooling and then gradually move to the use of English in the fourth year. This transitional model was adopted from the colonial era. African languages are not being viewed as a necessary choice for the postcolonial era school instruction.

Supporters of indigenous languages in education argue that the official language policy is characterised by colonial continuities, rather than transformation, providing limited support for the development of indigenous languages at all levels of the education system [8]. Most observers who have looked at the issue of language policy in Africa agree that there is a big gap between intended policy and outcome [1]. The problem of language in education, the language policy and the actual implementation of such policy requires a strong political will. The retention of the dominant role of English language in all educational and economic domains is likely to impact negatively on the development of indigenous languages in Zimbabwe.

4. Literature Review

Language plays a pivotal role in the production and transmission of knowledge. The language that teachers use in schools determines the extent to which students will participate in contributing their knowledge to the learning situation [9]. In most African classrooms formal learning is conducted in a foreign hegemonic language. School officials participate in the subjugation of indigenous languages to the dominant, to the point where just the dominant language remains as the preferred language of instruction. Foreign languages have continued to dominate the education systems as the languages of instruction in contemporary Africa. Students who cannot or who fail to master a foreign language are excluded from their right to learn, especially in their first language or mother tongue.

The prevailing continued use of dominant foreign languages and the Eurocentric school curriculum perpetuate neo-colonial or postcolonial oppression. With postcolonial oppression, the notion of “white” linguistic supremacy that was established during the colonial period is likely to prevail [10]. The language that is used in the classroom should serve as the praxis of liberation [11]. Ultimately, in African schools and classrooms, indigenous languages, which are rooted in indigenous cultures and have a liberating effect, should be the languages of instruction. Indigenous languages liberate students and their teachers [who are also indigenous] from foreign languages that have continued to disrupt

continuities in students’ experiences, thus muting and frustrating their voices. Indigenous students’ failure to identify with the curriculum knowledge, the language of instruction and the structured experiences of formal schooling can generate tremendous anxiety in those facing questions about who they are, who they should be, and how they want others to see them [12].

The absence of empowering pedagogies and indigenous perspectives in formal schooling, especially the marginalization of indigenous languages as modes of instruction is a threat to educational performance and success, cultural identities and self-perceptions of African students [9]. Anchimbe laments that,

The dilemma of African languages in the wake of globalisation and the continuous empowerment of other languages qua languages of industrialisation, technology and international currency, is one that has occupied one of the most obscure positions in the national agenda of many African states. With less and even lesser attention paid to the functional empowerment of these indigenous languages, since a greater attention is paid to developing and promoting bilingualism, or an imposed second official language or a national cross-cultural language, the fear of their extinction is becoming higher (p.94) [4].

While foreign languages have exposed African students and indigenous elites to the outside world, indigenous languages are crucial in restoring indigenous students’ inward beauty, identity and pride. True emancipation lies in Africans returning to indigenous knowledge and languages while meticulously synthesizing the knowledge with Western knowledge.

In debates on language and education, language is usually defined as a shared set of verbal codes, such as English, isiNdebele, chiShona, French, and Swahili, but it can also be defined as a generic, communicative phenomenon, especially in sending and receiving information [13]. Teachers and students use spoken and written language to communicate with each other, to present tasks, engage in learning processes, present academic content, assess learning, and build classroom interactions [14]. In Zimbabwe, schools are seen as the repository of “standard” English, which is assumed to be the proper medium of communication and instruction. However, for the majority of learners and their teachers, English is a second language, which many of them struggle to use. Consequently, the voices of the indigenous students who are English-language learners are often marginalised and silenced. Courtney Cazden and colleagues documented how language practices by speakers of English as a second language were interpreted as

deficits rather than resources [15] for educational participation and performance. The deficit paradigm leads to a subtractive model whose objective is to move the learners out of the home language and into the second language as a medium of learning as early as possible [6].

In sub-Saharan Africa, foreign languages, such as English, French and Portuguese are viewed as scientific languages, while indigenous languages are perceived as shallow and inadequate [3]. Teachers view foreign languages as enriching and enhancing to learning experiences, while indigenous children's stories, parental narratives and experiences are characterised as ill formed and their language as a deficit. This view reflects the current practice in most African countries in which a foreign language continues as the primary and ultimate medium of instruction. The argument for maintaining the current language policy in education is that if the policy worked well under the colonial system and succeeded in developing the leadership needed and in training the manpower required for Africa, it should work in the postcolonial era [6]. However, this colonial practice that marginalised indigenous languages in education should not be the vision for contemporary Africa. According to Kathleen Heugh, several scholars have provided typologies of language education policies and models in African settings, which move away from mother-tongue education towards international language of wider communication/second language models and demonstrate that most are ineffective, inefficient and counterproductive [13].

While some proponents of early learning and use of European languages in African schools see it as vital in reducing the language and cultural deficit that disadvantages non-speakers of English or French as a first language, not all researchers on language-in-education agree on the deficit-model. Researchers who focus on the use of African languages in education argue that when indigenous languages are used for school instruction, they act as a resource for learning, cognition and conceptual development [14]. Indigenous languages maintain a link between home and school experiences. Ample evidence exist that shows that the use of a language familiar to children as the natural medium of instruction in African schools improves teaching and learning, while the continued use of foreign languages creates a situation that might also lead to linguistic 'under-nourishment' i.e. impoverished knowledge of both English and mother-tongues. Heugh who studies language education models in Africa concluded that indigenous languages contribute positively towards improved provision of education for children [13]. A longitudinal study conducted by Bamgbose that compared the use of the home language, Yoruba, and English as languages of instruction in Nigeria concluded that children who were taught in Yoruba

performed significantly better than those who had been taught in English, although those who were taught in English had a specialist teacher of English [16]. In Ghana, Wilmot studied classes in which the medium of instruction was changed from English to the children's mother tongue, and found that children knew much more and learned much better when taught in a language familiar to them than in a foreign language [17]. In Zimbabwe, Shizha found that the use of English as a medium of instruction in primary schools was the main factor that silenced students in science classes [18], while in Niger, Chekaraou who made a comprehensive study of the use of Hausa in primary schools observed that teaching in these schools through a home language fostered active teacher-student interactions which enabled students to develop their critical thinking skills which were transferable to all learning experiences even when the first language ceased to be the language of instruction in upper grades [19].

Language is the central feature of culture and socialisation or learning. It is in language that culture is transmitted, interpreted and configured. Language is also a register of culture and useful in voicing our thoughts and intentions. With regard to silenced voices, the muted voices, which happen to be the everyday indigenous language of the child, must be integrated into any understanding of contemporary politics of culture, identity, and education which leads to the promotion of educational equity and social justice. Studies of culture, language and cognition show that through repeated and patterned experience in the world, children who use their indigenous language develop schema through which they filter future experiences [12]. New learning is strongest when children are able to communicate in a familiar language to make connections to prior knowledge since language has important outcomes for the ways children are or are not able to extend the funds of knowledge they bring to classrooms.

For most African children, school knowledge and the language of instruction are disconnected from the children's home experiences and from interactions with teachers. Classroom observation studies in several countries in Africa (Burkina Faso, Mali, Niger, South Africa, Togo, Tanzania, Ethiopia, Ghana, and Botswana) revealed that the use of unfamiliar languages forces teachers to use traditional and teacher-centered teaching methods which undermine teachers' effort to teach and students' effort to learn [6]. Closing the communication gap between the teacher and students is a crucial and rewarding undertaking for both teachers and students if they can use the collective language to share learning experiences that employ forms of communication that create situations whereby meaning can be derived and learning becomes a lived-experience.

5. Research Rationale

The main purpose of this paper is to address teaching and learning issues faced by primary school teachers and students that use a second language in science education. Very few observational studies have been conducted in Zimbabwean classrooms in order to show the impacts on students' learning when teaching is conducted in English as a medium of instruction. There is not enough data available on teacher' attitudes towards using the English language and indigenous languages as languages of instruction in science education in primary schools in Zimbabwe and the cognitive effect of the medium of instruction on students who are not familiar with the language in use. By focusing on teaching practices and teachers' views and attitudes, the study hopes to fill this gap.

6. Methodology

Qualitative data was collected using classroom observations and interviews with ten purposely selected rural primary school teachers. Twenty classroom observations were conducted and video recorded, while ten semi-structured interviews were audio-recorded. The observations focused on classroom communication and interactions between the teachers and their students and amongst students themselves. The twelve questions that were designed for the interviews focused on the teachers' experiences in teaching science using English as a medium of instruction as well as their attitude towards using an indigenous language, chiShona, as a medium of instruction in teaching science. Data were analysed using thematic analysis.

7. Analysis of Findings

The qualitative data collected during classroom observations were video-recorded, while the interviews were audio-taped. The data were later transcribed, and analysed using thematic content analysis. The observations were analysed for student-teacher interactions, student-student interactions and the language used in the teaching and learning of science. Interviews with teachers were analysed for, belief, views and attitude toward the use of English and chiShona in the teaching and learning of science. Descriptive and analytic coding was used to create code labels for a coding frame that was used to categorise themes and subthemes.

7.1. English and the "silencing of voices"

A teacher who was teaching a science lesson on 'houseflies' asked the class:

What do [house] flies feed on?

One student answered in the mother tongue and said, "Ndove" (cow dung). The teacher looked surprised and retorted in a mocking voice:

Shall I have to write "ndove" on the board?

The teacher's voice, tone and question made the other students to laugh and the teacher repeated in the same tone:

Shall I have to write that on the board? A Grade 1 child should say that. If a Grade 5 child can say that, what then should a Grade 1 child say? Say it in English.

In another science class, a teacher interjected when a student began to respond in chiShona to a question that the teacher had asked about "photosynthesis" and "chlorophyll". The teacher shouted:

You should always try to answer in English. Are you going to use Shona in the examination? The examination has no Shona questions and you are not going to be asked to answer in Shona. Now go on in English.

The students in the above scenarios gave up answering the teachers' questions and sat down. They were embarrassed and humiliated by the teachers' unfriendly response to their language difficulties, and the unsympathetic laughter from their class mates. The teachers were not sensitive to the language problems the students were facing in explaining their ideas in English. In everyday classroom interactions, teachers are threatening and unfriendly to students who are not proficient in the English language forcing the students to withdraw from participating in class discussions. Instead of promoting dialogue, the English language frustrates and "kills" classroom interactions. The finding is consistent with evidence that shows that learners who use the second language show long term poorer academic performance than learners who learn in their mother tongue [14].

7.2. Classrooms as 'isolation units'

The silence and lack of support from teachers can be very isolating for some students. Students who cannot use English proficiently are likely to perceive the classroom as an "isolation unit" as they find themselves isolated from the learning situations and experiences. Usually these students are confused, frustrated, embarrassed, neglected, and ignored. Concerning 'voiceless' pupils, one teacher blamed the victims for their isolation by stating that:

Ah ... some of these children are always quiet, reserved and withdrawn. The reasons all depend on individual pupils. Some have individual problems, while others maybe, find it difficult to give out what they have. And

some pupils are dominated by others... their answers are easily dismissed by others.

The situation described above does not provide equal opportunity to all students in the classroom. As explained by some teachers, there are some students who take control of the class interactions while others are treated as if they do not exist. The unequal relationships create classrooms that are tense, uncaring and unloving. Unfortunately, some of the teachers do not help the situation. Instead of assisting students find their voices using their home language, they create an intimidating classroom climate.

7.3. Language policy and examinations

Because school science in Zimbabwe is taught in English, it denies indigenous African students the opportunity to learn science in a language that is familiar and meaningful to their experiences. Teachers coerce students to master a foreign language that could be incomprehensible and inconceivable. However, teachers blame both the *Education Act* on language policy and administrative officials who enforce the use of English in science teaching. One teacher complained:

It is our administrators who encourage us to use English as a medium of instruction when teaching science. They state that we should note that policy requires that all teaching in science should be taught in English.

Another teacher echoed the same sentiments:

According to policy, we should use English. The government policy is that all subjects, excluding Shona and Ndebele, should be taught in English. We use English as required by the Ministry of Education.

The *Education Act* raises English to an official status that is not accorded to indigenous languages. In addition, as some teachers argued, the schooling system in Zimbabwe is geared towards passing national examinations. Students have to pass them before proceeding to high school. At the end of the primary course, in Grade 7, students write science examinations in English. Thus, at every grade level students are being prepared for examinations, both in terms of content and the appropriate language to use. The Zimbabwe Languages Association has described the *Education Act* as characteristically colonial because it upholds hegemonic “standard” English at the expense of promoting indigenous languages.

7.4. Opposition to indigenous languages

Some teachers argued that English is a tool for international and global communication, while African indigenous languages lack scientific and

technical competency because of lack of scientific terms. Indigenous languages such as chiShona are judged to be culturally specific with no scientific or international significance. When asked about the best language for science education, one teacher replied:

I do not agree with using Shona in teaching science. English and science are found everywhere in the world, so if I teach science in Shona it will not help students who would like to work in other countries in future. Today people are migrating to different countries, and if I teach science in Shona, how will they fit in those countries they will go to work? Indigenous languages are not totally acceptable in teaching and learning. Where are the materials, such as books, written in indigenous languages? The main problem is lack of scientific terms in indigenous languages.

The globalisation of English has meant, in effect, a negation of local science, knowledge and languages. As revealed by the teachers’ attitudes, their students are being schooled for the global labour force rather than for local needs. The lack of teaching and learning materials written in indigenous languages is another obstacle to using indigenous languages as languages of instruction.

7.5. Support for indigenous languages

Teachers who support the use of indigenous languages in science education argue that a foreign language disrupts students’ cognitive abilities, home-school connections, everyday experiences and their social and cultural realities. One teacher argued:

I think it would be better for children to learn science in Shona because they think in Shona; it's their everyday language. So it's better for them to apply these things [e.g. science] in Shona. Although some of the scientific concepts can be difficult, I still think that at it would be better for their understanding.

Another teacher concurred with the above opinion:

Well, I would appreciate it very much, if steps are taken to teach science in Shona... I think for comprehension's sake and understanding, we need to do that in the mother language.

7.6. Code-switching

In their classes, some teachers promote language integration by using code-switching, moving from English to a local language and back. Code-switching was observed in the following teacher-student interaction during a science lesson on insects.

Teacher: *Let's look at those insects that fly. I think we have got a lot of them.*

Student: *Bete [cockroach]*

Teacher: *Hmm ... what do we call it in English?*

The students remained quiet without responding.

Teacher: *Cockroach ... Hatidzizive? Mapete akazara munyika? [Don't we know them? Cockroaches are many in the country]. Name another insect.*

Student: *Chipfukuto [weevil]*

Teacher: *[laughs, seems not to know the English translation]. What do we call it? Tinogona kungochinyora [Let's write it in Shona]. Do you know mbuya-mbuya? Mbuya-mbuya tinovaziva? Do you know its name in English? She is called the praying mantis.*

The teacher shows how code-switching can be used to make science more meaningful to students. The teacher helped the students to overcome the language barrier to learning by creating space and a language to cross cultural and linguistic boundaries. The teacher also provided students with a language of hope, possibility and empowerment. As a result, the classroom climate was warm and welcoming. Students did not hesitate to communicate their ideas in chiShona since they could do so in a language they were comfortable with. Although some teachers seem to hold negative attitudes toward code-switching, there is ample evidence that it is used to offer a natural and effective resource for establishing scientific meaning in classrooms where the teacher and the students communicate in the same home language.

8. Conclusions

Learners enter the school proficient in the home language and developed in home language skills and expertise. Unfortunately, the language skills are not further developed for use in the formal academic contexts. Children are expected to go through their learning in a language they do not understand, a language that frustrates them. A key determinant to educational achievement is communication skills and significant proficiency in the language of instruction. For African students to understand curriculum knowledge, concepts and requisite cognitive skills, and communicate effectively they need to, first, understand the language in which the knowledge and concepts are being presented. In Zimbabwe, English, which is the language of formal instruction in schools demotivates learners and minimises their involvement in learning activities. Teachers end up doing most of the talking while children remain silent or passive participants. Excerpts of the teacher-students interactions used in this paper show clearly that the implementation of learner-centred pedagogy

is difficult when the language of instruction is not familiar to children. In most cases interactions become alienating, teacher-centred, and subject-centred while classrooms are turned into "isolation units". Students are marginalised and silenced by lack of English proficiency, the language that is used by teachers.

Teachers frequently use code-switching, shifting between the students' home language and the official medium of instruction to encourage learners to speak and participate in classroom activities. In classrooms where code-switching is used there is improved teacher-students interactions and the classroom atmosphere is more relaxed, and students interact freely with the teachers and among themselves. Where English is the only language of instruction used, students feel inhibited, frustrated, disinterested and discouraged from free or spontaneous class activities and communication. Teachers opposed to using an indigenous language as the medium of instruction are more likely to use English as the only language of instruction, while teachers who support the use of the mother tongue are more likely to use code-switching. The use of a familiar medium of instruction is central to stimulating and meaningful classroom learning.

In Zimbabwe, classroom life is significantly influenced by the current education language policy. The policy promotes a foreign language as the medium of instruction. The maintenance of English as the dominant and exclusive language of instruction creates learning difficulties for students. The policy which incidentally determines the language for assessing learners is implemented in sociolinguistic contexts in which the learners do not adequately speak or understand the foreign language. The status given to English as a tool for measuring students' achievement forces teachers to maintain a language considered to be the medium of scientific instruction. Examinations are not written in local languages; therefore, teachers are not motivated to use indigenous languages as media of instruction.

9. Recommendations

The language of teaching, in Zimbabwean schools, needs re-visioning and transformation. The language of instruction should reflect African reality and African consciousness [9] that seem to be ignored by the current education language policy. The benefits of using an indigenous language as a medium of instruction have been noted by the World Bank which concluded that first language instruction results in increased access and equity, improved learning outcomes, reduced repetition and dropout rates, socio-cultural benefits and lower overall costs [20]. Taking these benefits into account, the following recommendations are suggested as a way

to increase the use of indigenous languages as languages of instruction in Zimbabwean schools.

- Education in Zimbabwe should be conducted in indigenous languages in all cycles of the formal education system, i.e. in primary, secondary, and tertiary education. The government should abandon the early-exit transitional model and promote indigenous languages as the languages of instruction throughout the education system. This resonates strongly with Brock-Utne's suggestion that early education in African languages is a good thing, but if its education benefits are to be of lasting value, the instruction in the mother-tongue needs to continue beyond the primary level, and should be developed to the level that written texts and oral language used for learning and teaching mathematics, science, history, and geography can be understood and actively used by the learner at upper levels of schooling [14].
- The Government of Zimbabwe and development agencies should design and implement policies and strategies that will lead to change in language attitudes virulent among the African "elites" and among the "masses". Attitudes must be shifted away from overestimating the role of the foreign language (English) as a tool for learning and teaching, and towards a positive recognition of the value and significance of the indigenous languages (chiShona and isiNdebele) for progress and development in Zimbabwe.
- There should be flexibility in the use of the medium of instruction so that alternative trilingual additive systems [English, chiShona and isiNdebele] are offered in place of one medium of instruction in communities where one indigenous language is not a language of wider regional distribution.
- Access to and proficiency in a national language of wider communication or language of cross-cultural communication, in this case English, should be made through teaching of English as a second language and a subject in primary, secondary, and tertiary education. All learners need to have access to the language of high economic, educational and political status in the country (English which is a foreign language as well as an international language of wider communication) as a subject.
- Textbooks in indigenous languages should be written to promote the languages. Political will should be mobilised to provide adequate budgetary allocation to produce the books.
- Academics, scientists, writers, teachers, and members of the community should be mobilised to participate in research to compile dictionaries of indigenous scientific terms.
- New multilingual evaluation instruments should be produced to evaluate students in a language

that is appropriate and familiar to them. The exercise should involve stakeholders such as writers, academics, examiners and teachers.

- Pre-service teacher training should be reformed to take into account the new education language policy, integrate innovative teaching methods, and take the teachers' sociolinguistic profiles into account for their placement into schools.

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