ORTHOGRAPHY HARMONISATION OF TEKELA LANGUAGES

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Abstract

This paper aims to explore procedures to be taken to harmonise languages' orthography without destroying or threatening the identity of the languages involved, that is, Siphuthi and siSwati. It also determines the principle to follow for the invention of the new graphemes of the harmonised orthographies.Inter-governmentalism theory andZipf's Principle of Least Effort framed this paper. The findings of this paper reveal that it is possible to harmonise the orthography of mutually intelligible languages; therefore, it is possible to harmonise the orthography of Tekela languages. The results also suggesttwo steps in unification of orthography harmonisation. The first procedure is the evaluation of the linguistic features such as phonological and morphological features. The last step is the consideration of the economy of speech soundto avoid the imbalance or dominance in orthographic invention.

Key words:Tekela languagesorthography harmonisation, Zipf's Principle of Least Effort

1. Introduction

Lesotho is the South Africa's landlocked country. Its nation is known as Basotho. Gill (1993) cited by Matsoso (2017) views Basotho as people founded by Moshoeshoe I during the nineteenth century. According to Gill (1993) and Moloi (2015), Basotho are known to speak Sesotho (Sothern Sotho) as their language; however, Moloi (2015) asserts that this statement does not give a true picture about what is really prevailing in Lesotho. There are other languages other than Sesotho which are spoken in this country, being: IsiZulu, IsiXhosa and Siphuthi. These three languages are considered to be minority or indigenous languages while Sesotho is considered to be the language of the majority population.

The speakers of the above-mentioned minority languages are composed of the 'remnants' of people who escaped from Chaka's Mfecane two centuries back Moloi (2015). Others came to Lesotho for various reasons including political, social and economic reasons. Moloi (ibid:262) adds that in the north of Lesotho, there are people who speak IsiNdebele as well as other dialects of Sesotho (Sekholokoe and Setlokoa) whereas in the south, there are large communities which speak Xhosa and Phuthi, 'sometimes exclusively'. Donnelly (2009) states that the current Siphuthi speaking areas in Lesotho are: Quthing (Sinxondo, Mpapa and Mount Moorosi) and in some parts of Qacha's Nek.According to Donnelly (2009), it is stated in the Ethnologue that there are 43 000 speakers of Siphuthi even though the source for this statistics is not clear. However, in accordance to Damane (1948) and Donnelly (2007), Shah (2019) concurs that starting from the late 1940s, Siphuthi speakers have been estimated to 20 000. Therefore, the study adopted Shah's estimation since her study is more recent and her secondary resources are explicit unlike Ethnologue's.

Both Donnelly(2009) and Shah (2019) assert that Siphuthi is classified under Tekela languages within the Nguni cluster of the South-Eastern Bantu languages. At the same time, Siphuthi is also taken as a hybridised language because of its considerable number of shared features with Sesotho. Donnelly (2009) further stipulates that until approximately 1992, Siphuthi was considered to be a dialect of Sesotho. He argues that, synchronically, this is apeculiar statement, but diachronically in part accurate. Let us consider this classificationin figure 1 below:
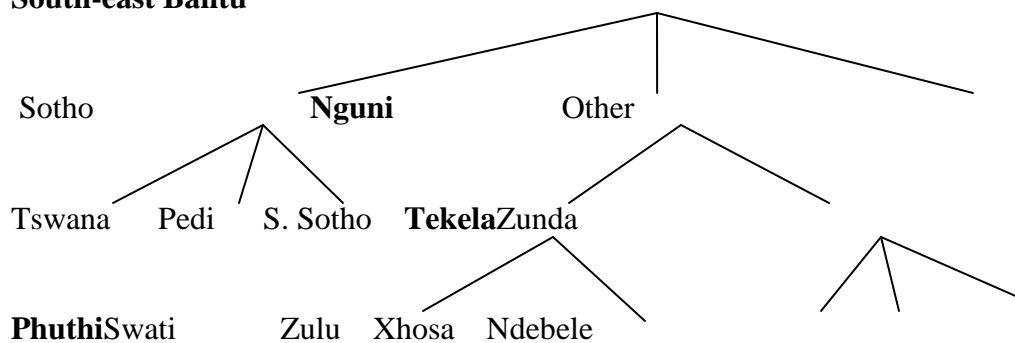
South-east Bantu

Fig. 1 Nguni Classification (Donnelley, 2009)

Besides these two Tekela languages, Donnelly (2009) states that there are other Tekela languagessuch as Lala, Bhaca, Northern Ndebele and Southern Ndebele. Historically, Donnelly

(2009) asserts that Phuthi and Swati are closely related. Based on his examination on Phuthi's phonology and morphology, Donnelly (ibid) adds that historically, this language is obviously Nguni; however, due to its contact with Sesotho, it has now become deeply hybrid with Sesotho.

1.1 Historical Background of Harmonisation

According to Babane & Chanke (2015), some researchers use the term *language harmonisation* interchangeably with the concept *language unification*. Deprez& du Plessis(2000) cited by Babane & Chauke (2015) state that the notion of language harmonisation was not suggested for the first time with regard to South African languages. The reason being, it has also been a problematic issue in countries like Yugoslavia. In this country, the following languageswere harmonised against Germanisationand Magyarisation: *Serbs*, *Groats* and *Slovenes*. Babane & Chanke (ibid) aver that it was through the language unification that standard language which was officially known as *Serbo-Groats* or the *Central South Slavic language*(CSSL) was born.

Due to harmonisation that took place in Yugoslavia, Babane & Chanke (2015) further purport that two different spellings emerged, which are*Latin* and *Cyrillic*. Deprez & du Plessis (2000) cited by Babane & Chauke (2015), stipulate that many speakers of those languages accepted the harmonised Serbo-Groat languages; nonetheless, political intolerance amongst the speakers of those languages forced the unified languages to split into four different languages: *Bosnian*, *Groat*, *Montenegrin* and *Serbo*. Babane & Chauke (2015) further indicate that the language harmonisation did not end in the west, but it also worked with English. Alidou and Tenga (2006) stipulate that Professor Prah, the director of Centre for Advanced Studies of African Societies (CASAS) stated in his interview that European languages such as English and German have been standardised using the same strategies as harmonisation. He further exemplifies that the speakers of different dialects of English speak differently, but write quite similar using the Standard English. Even though there is some slight different orthography in words such as *favour/favor*, *behaviour/ behavior*, this difference does not impact negatively on the speakers.

Harmonised languages must have orthography that needs to be planned. Orthography planning has a number of kinds. Banda (2008) quotes Chanda (2003) who classifies four kinds of orthography planning, namely: *orthography development* (provision of a writing system for the

Published by:
http:ijesir.org

(IJESIR) International Journal of Science and Innovative Research
ISSN: 2724-3338
Vol. 01 Issue 01, November 2020

Paper id: 010005IJESIR

unwritten language); *orthography reform* (modification of the existing writing system); *orthography standardisation* (special case of orthography reform) and *orthography harmonisation* (convergence of languages where graphemes and spelling rules are given to have new or unique graphemes).

Coming to the unification of South African languages, Webb & Sure (2000); Babane & Chanke (2015) aver that there was a proposal that the Nguni and Sotho languages should be harmonised internally. Babane & Chanke (ibid) go further by stating that a politician Jacob Nhlapo was the first person to propose the debate on the language harmonisation or unification in 1944. The proposal was re-visited by Neville Alexander and CT Msimane. Babane & Chanke (ibid) cite Mesthrie (2002) who professes that Alexander proposed that a new standardised Sotho language need to be developed including Northern Sotho, Southern Sotho and Tswana. A new Standard Nguni should alsobe unified based on Zulu, Xhosa, Ndebele and Swati. In this proposal, Siphuthi is not included, which signifies a gap since its exclusion fails that ethnic group.

1.2 Motivation behind Harmonisation of Tekela Languages

The burning issue that has evoked many researchers' minds with regard to the Lesotho language policy and language-in-education policy is practical negligence of the endangered languages spoken by some individual citizens in some parts of Lesotho; and discrimination or injustice or ill-treatment of those ethnic groups in education system. Matlosa (2009), Matsoso (2017) and Moloi (2015) aver that in Constitution of Lesotho (2009), it is stated that the official languages of Lesotho shall be English and Sesotho. Matsoso (2017) further indicates that officialising these languages has cost minority languages' official recognition and identity. Bryant (2009) quoted by Moloi (2015) concurs that the norm pertaining the language policy is that, the government prepares the language policy document for the country to follow without involving the language users. This means that the Lesotho's language policy originates from the top, leaving the nation (grass-roots) the passive recipients of the policy, hence devaluation of the minority languages in Lesotho.

The learners from Grade 1 to 3 should be taught in their mother tongue (Matsoso, 2017 cites the Ministry of Education and Training, 2009). Matlosa (2009) and Moloi (2015) add that from

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http:ijesir.org

(IJESIR) International Journal of Science and Innovative Research
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Grade 4 upwards, Sesotho, which practically is perceived as the mother tongue for entire Basotho or Lesotho's nation, shall only be taught as a subject, and English as a medium of instruction. Mashiyi (2011) cites Bamgbose (2004) who categorises Lesotho as one of the countries that were under the colonial rule, and supports the use of African languages for teaching especially in early primary school education. However, in practice, the Lesotho's language-in-education policy shadows other African or minority languages, in particular, Nguni languages (IsiZulu, IsiNdebele, IsiXhoza and Siphuthi) as specified by Matsoso (2017).

Having been living in Quthing district for several years, the afore-said language-in-education policy at the lower level has been problematic to non-Sesotho speaking learners. If asked, some of them state that whenever they were at school, they felt out of place since they were never exposed to neither Sesotho nor English before, but the only language tool they had was their mother tongue (either Siphuthi or isiXhosa) that it why they dodged the classes. In relation to the injustice, the challenges are also noted by Moloi (2015) that rendered the indigenous Basotho; those problems include drop-outs and injustice in courts of law to feel inferior.

Additionally, there is a contradiction caused by the language-in-education declaration itself, and the national policies or principles that underpin the Lesotho language-in-education policy which emphasise on the promotion of mother tongue instruction; equity and inclusive education. For instance, UNESCO, UN Heads of Governments (Sustainable Development Goal 4) and the Lesotho's Education Act of 2010 which specifies the implementation of the country's education system being non-discriminatory in availing education and related opportunities to all.

It seems like the government through its education system as it is the governing body in control is likely to adhere to these policies, principles and goals; that is, the policies and the goals are parallel to reality. Whatever declaration or goal or policy unfolds seems to operate in a vacuum; all these are not real. Lesotho's language-in-education policy neglects the learners' rights to inclusive education. Furthermore, both language policy and the reality of language-in-education policy do not account for one of the main function of language, which is the expression of identity. According to Crystal (1997), language signals who we are and where we belong; it also gives the most natural symbol of public and private identity.

Baphuthi, whose language is the main concern in this paper, have made several attempts trying to be recognised as stated by Moloi (2015), but in vain. Therefore, in this paper, I have decided to take different path from my predecessors who have made an outcry on Lesotho's language-in-education policy and language policy itself. Now that Siphuthi has no official position in this country even in South Africa where it is spoken Gcina, Sterkspruit, Matatiele and Mount Fletcher (Donnelly, 2009), why can't it be harmonised with siSwati since the two languages are linguistically similar, and are from the same family? The reason being, Siphuthi is not yet standardised, so harmonisation can be done even if the language is not yet standardised as supported by Banda (2008) that orthography harmonisation can apply to languages which have no writing system. The researcher is aware that Lesotho College of Education has introduced IsiXhosa in its curriculum as stated by Moloi (2015), and Xhosa learners are benefiting already hence the exclusion of the language in this notion of harmonisation. Therefore, this paper focused on the orthography harmonisation of Tekela languages.

The researcher addressed this phenomenon from the inter-disciplinary point of view as the problem of the Lesotho language and language-in-education policies requires an understanding of various disciplines to solve the complex problems posed by these policies. Toomey, Markusson, Adams and Brockett (2015) define inter-disciplinary perspective as the one that analyses, synthesises and harmonises or integrates links between disciplines into conjoined and coherent whole. Therefore, the aim is to bring together both the *legal positivism* and *naturalism*. According to Toomey *et al*. (2015) and Demiray (2015), in legal positivism, the positive laws are commanded and implemented by the formal elites and influential that form authorities or political superiors or sovereign. People are obliged and obligated to follow the rules, that is, they adhere without question. For instance, people are forced to stick to the language policy and language-in-education policy in spite of its deficiency to some of the citizens in this country.

Contrary to the positivism, naturalism is a 'doctrine which holds that national identity ought to be accorded political recognition that nations have rights... and that the members of the nation ought to band together in defence of those rights' (Honderich, 2005:639). He also asserts that natural law is about a set of truths, morality and justice, together with the rules that need to be followed in order to lead a good life. Therefore, bringing together the above-mentioned perspectives, and drawing from interdisciplinary perspective can thus be appropriate in the

analysis of decision making in language planning since this perspective is applied where the topic is felt to have been neglected or misrepresented (Toomey, *et al*., 2015). This paper therefore, reflects on the following research questions:

1. Is it possible to maintain a language through harmonisation, if so, what processes should be taken to harmonise endangered languages?

2. How is the orthography harmonised?

2.Literature Review on Related Studies

Several studies have been conducted based on the concept of orthography harmonisation such as the one carried out by Mtenje (2003) that deals with the issues to consider when developing orthographies, and harmonising orthographies of typological related languages. Mtenje (2003) demonstrates that it is important to first study and consider the major linguistic features and their functions concerned.Even though Mtenje has exhaustively discussed both phonological and morphological factors to be considered in orthography harmonisation. The study does not also articulate the steps to be taken in the inventory of new graphemes or all the sounds that have phonemic status in the cluster. In addition, the principle(s) to follow for the inventory of the graphemes is/ are not given.

Realising the gaps of Mtenje's study, Simango (2003) also conducted thestudy. He addressed the issue of the steps taken in inventory of new graphemes or all the sounds that have phonemic status in the cluster. It is in this paper where Simango (2003) emphasises that many attempts aiming at unifying orthographies of mutually intelligible languages have been taken up-to-date. He states that alarming calls over the previous years for the orthographic reforms reflect the growing realisation by the scholars and language practitioners in this region. They have realised that minority people of this region and languages will be better served if the orthographies are harmonised in such a manner that the written form emulates the similarities that exist between the varieties of each language cluster. However, in his study, he concentrated mainly on the orthography reforms than orthography harmonisation. Furthermore, he has not provided us with the principle to govern the invention of new or unique graphemes to each phonemic sound.

Following Simango's study which lacks classification of orthography planning of which might be of great help to the following researchers who have interest in this concept to narrow their scope, Banda (2008) conducted the study.Prah (1998) cited by Banda (2008:40) indicates that 'the western inventions of African languages and the accompanying proliferation of orthography have had a negative impact on Africa's quest for socio-economic development'. He discussed challenges created by the existence of missionaries and colonial inspired orthographies, and how those can be resolved through cross-border orthographies. Still, he did not say anything about the principle to follow when inventing the new graphemes of the harmonised languages.Many scholars have written on the notion of orthographyharmonisation, but I approached the issue differently. Even though this reviewed literature predominantly looked at the orthography harmonisation which serves as the base for this paper, these scholars have not acknowledged or included neither Siphuthi in language harmonisation nor the principle to follow when harmonising the orthography.

3. Theoretical Framework

Looking at the related literature given above, the prior research seems to have not explicitly stated theories they have used in their work except for Woldegiogis (2013) whom in conceptualising harmonisation of higher educationused the *Regional Integration Theories* drawn from economics (Macro-economic Theory) through its concepts, *integration* and *convergence*. To address the possibility of harmonising the languages, I adopted the theory used by Woldegiogis (2013), that is, the Regional Integration Theories. However, I opted for one of the grand theories he has used which is the *Inter-governmentalism* instead of Neo-fuctionalism as the latter has a feature of top-down of which this paper does not support. The researcher has also espoused*Zipf's Principle of Least Effort*which addresses the issue on the invention of new graphemes.

Inter-governmentalism

Inter-governmentalism theory isa political theory which was developed by Andrew Moravcsik (1993).Woldegiogis (2013) states that Inter-governmentalism theory is one of the grand theories that seeks to explain the broader transformation of regional integration (European integration). It was proposed in reaction to the Neo-functionalism emphasising the significance of national

Published by:

http:ijesir.org

(IJESIR) International Journal of Science and Innovative Research
ISSN: 2724-3338
Vol. 01 Issue 01, November 2020

Paper id: 010005IJESIR

governments in the process of regional integrations. In this paper, the researcher employed four assumptions of this theory as a base to her arguments, being:

1. The assumption of inter-governmentalists is that after years of European integration, the current role of the nation-state is stillthere, and is able to profile further the process of supra-national integration(Woldegiogis, 2013).

2.The achievement of integration depends uponthe ability of nation-states to adjust and respond to the co-operative agreements that define integration (Woldegiogis, 2013).

3. One stream of inter-governmentalism views regional integration as aresponse to shift in the balance of power (Hooghe & Marks, 2019).

4. Inter-governmentalists argue that regional integration andpolicy harmonization is a bottom-up process unlike the top-down assumptions of neo-functionalism.

This theory is applicable to this paper in that, even after some couple of years after convergence or harmonisation of the two languages' orthography, it will still serve the same purpose, and even continue to shape the process of which by then, we will be talking about orthography reforms of the Tekela languages. The readiness for the nation and the states to adapt to the change positively may enable the parties involved to create co-operative agreements that develop into further integration. Therefore, in this case, ifon the one hand both Phuthi and Swati people are ready to unify the orthography of their languages, and on the other hand the government is also ready to officialise the new graphemes of the harmonised languages, then it means moving to another phase that leads to the integration agreement. Inter-governmental theory seeks to balance power, in this regard, the power between the dominant languages (Sesotho and English) and marginalised language (Siphuthi); meaning, if ever Siphuthi's orthography is harmonised, Baphuthi learners might be fully included, and not discriminated.

Zipf's Principle of Least Effort

 Zipf's Principle of Least Effort was proposed by the Harvard linguist, George Kingsley Zipf 1949. Coulmas (1992) quotes Zipf (1949:6) who gives his striving goal as presenting credible evidence that 'every individual's entire behaviour is governed by the Principle of Least Effort'.Coulmas (1992) asserts that this principle supports the economy of language which draws from the notion of economy. According to Coulmas (1992), this principle is described as being

effective in the process of adaptation evolution. The importance of adaptation is to develop appropriate instruments for the objects at hand as well as using existing instruments for pursuing the objectives at hand for which they are suitable.The process of adaptation evolution is illustrated and interpreted in figure 2:
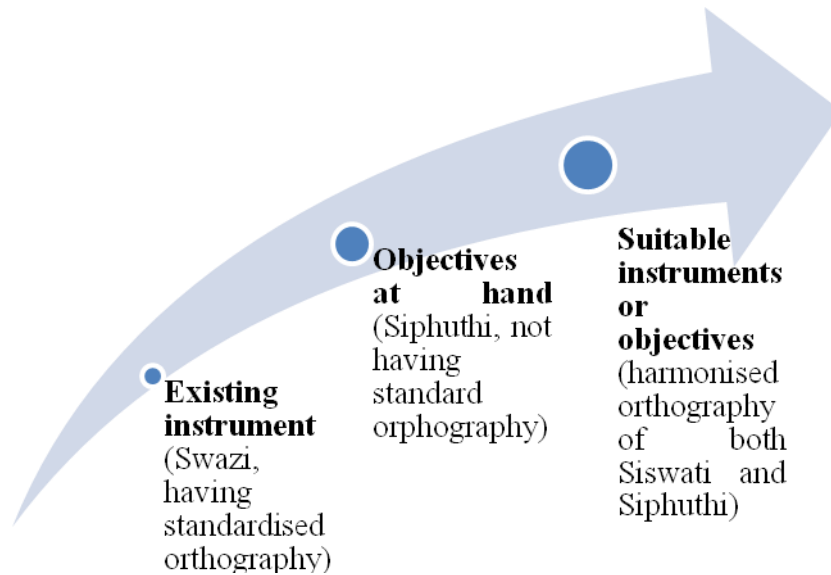

Fig. 2. Process of adaptation evolution

Languages that need orthography harmonisation

African language institutions such asCentre for Advanced Studies of African Societies (CASAS)have a concern on development and recognition of African languages. CASAS work on the project of standardisation and orthographic conventions of African languages based on the degree of mutual intelligibility (Banda, 2008).Observing how marginalised other languages are, Chanke and Babane (2015) purport that most of the African languages are seen as minority languages in their countries. Consequently, for the development of those languages, it is important to harmonise them to become one language as far as orthography is concerned without interfering the ethnics' culture, customs, traditions and beliefs. This unification could be possible drawing from the theory of inter-governmentalism which supports the notion of integration to eliminate imbalance of power between the dominant language and the less dominant one. Babane and Chanke (2015) note thata languageas well as dialects of a language can beharmonised. Based on the inter-governmentalism through its principle, '... regional integration and policy

harmonization is a bottom-up process unlike the top-down assumptions of neo-functionalism', the language users have to be the first ones to be consulted, and this is where corpus-based linguistics applies because the analysis is based on the real utterances. Again, speakers of the languages involved have to be there to share their own views during the process of harmonisation to be part of an agreement on a certain writing system.

4. Discussions and analysis

Similarities and differences between Siphuthi and siSwati

Talking of the relatedness of the languages involved, Khumalo (2003) stipulate that all the Nguni languages are agglutinative languages, that is, they form words through the combination of morphemes. The Nguni languages have a Roman-based orthography which according to Khumalo (ibid) represents the spoken language; and this cluster is characterised by click sounds and share all those three click sounds including *dental click* [/] /c/, *palatal click* [!] /q/ and*lateralclick* [//] /x/. In addition to these features, Donnelly (2009) adds that Nguni languages have shared the features:

a) vocabulary

b) H-toned noun prefixes

c) breathy-voiced obstruents

d) pre-nasalised voiced stops

e) ante-penult H-tone target

f) class-specific copulative prefixes

g) 5 vowel phoneme, mostly /VCV-/ noun prefixes

h) single H syllable.

However, there are some variations here and there which are still mutually intelligible, and these differences mark the distinction between Tekela languages and Zunda languages. In support to this argument, Donnelly (2009) states that unlike Zunda, Tekela languages have *affricatedcoronalconsonants*, *independent breathy phonation* and /VCV-/ *noun prefixes in class 2* and *6*.Donnelly (ibid) further avows that the affricated coronal consonants in Siphuthi and siSwati such as /dv~dv/ and /tsh~tf/ depend on the quality of the vowel that follows the sound.

Khumalo (2003) adds that a stop sound /*d*/ is influenced by vowels, which Donnelly (2009) affirms that this feature also apply in Siphuthi. Khumalo (2003) clarifies that if the stop /*d*/ is followed by the front vowels it becomes /*dz*/, but if the stop /d/ is followed by the back vowel, then it becomes /*dv*/. Donnelly (2009) avers that both siSwati and Siphuthi have the affricates /*tsh~tf*/ which are taken as the cognates of the /*th*/ sound in Zunda languages. Khumalo stipulates that the aspirated stop sound /*th*/ in Zunda languages is influenced by the vowels. If it is followed by the front vowels, then the sound becomes /*tsh*/, but if it is followed by the back vowels, it becomes /*tf*/. The commonality between Siphuthi and siSwati is illustrated in table 1.

Table 1: Commonality between Siphuthi and SiSwati

Siphuthi	siSwati	Zunda(IsiXhosa)
Kú-**tshádz**à	kú-**tshá***n***dz**à	úku-t<u>h</u>ándà (to love)
Kú-t**fw**álàkú-**tfw**álà		úku-t<u>hw</u>álà (to carry on the head)
í-**dv**òlòlí-**dv**òlò	í-<u>d</u>òlò (knee)	

Table 1 represents similarities that exist within Tekela languages. It is worth noting that the bolded sounds represent similarities between Siphuthi and siSwati; the italicised sounds mark differences between Siphuthi and siSwati; and the underlined sounds signify the difference between both Siphuthi and siSwati (Tekela languages) and (IsiXhosa). Looking at the diacritics in three languages, they are the similar, and this similarity implicates the same pronunciation. The /*th*/ sound in the first IsiXhosa word *úku-**thá***ndà*, is followed by the vowel /*a*/. The addition of the front vowel /*a*/ to the aspirated sound /*th*/ changed the /*th*/ > /*tsh*/ in both Siphuthi and siSwati languages forming the words*kú-**tsh**ádzà* and *kú-**tsh**ándzà* respectively. The word *úku-**thándà** also has the stop sound /*d*/. Since this sound is followed by the front vowel /*a*/ which has influence over stop sound /*d*/, the sound /*d*/ changed to the sound /*dz*/ in Tekela languages. However, there is a slight difference between Siphuthi and siSwati as the latter has the inclusion of the nasal sound /*n*/.

From the secondIsiXhosa word *úku-**thw**álà*, the /*th*/ sound is followed by the semi-vowel /*w*/. It could be inferred that if the aspirated sound /*th*/ is followed by the semi-vowel sound, the latter

influences the former and changes the aspirated sound /*th*/ > /*tf*/ sound forming the word*kú-**tf***wálà*in Tekela languages.

The last IsiXhosa word í-***dò****lò* has stop sound /*d*/. This word is followed by the back vowel sound /*o*/. When it comes to Tekela languages, this vowel changes the stop sound /*d*/ > /*dv*/ forming the word *lí-**dv***òlò*. The words given in these three languages have the same meaning.

Another difference between Tekela and Zunda languages is seen on lateral sound /*hl*/ used in both siSwati and Siphuthi(Khumalo, 2003). The Siphuthi and siSwati lateral sound /*hl*/ is regarded as a cognate sound of the pre-nasalised ejected sound /*ntl*/ in IsiXhosa. There are some slight differences in linguistic cognates. For instance, Khumalo (2003) states that siSwati use the cognate /*e*/ while Zunda languages use /*a*/; siSwati would use the cognate /*t*/ whereas Zunda languages would use cognate /*z*/. Let us now consider the examples where Siphuthi is included:

Table 2: Cognates of Tekela and Zunda languages

Siphuthi	siSwati	Zunda (IsiXhosa)
I**hl**okoi*n***hl**oko	i*n*t̲loko (head)	
Ma**t***i*ema*n***t***i*a̲manz̲i (water)		

Table 2 reflects the cognate sounds of Tekela and Zunda languages. Looking at the words which mean *head*, both Siphuthi and siSwati have the lateral sound /*hl*/. The only difference is seen on siSwati word as it has the inclusion of the nasal sound /*n*/. The cognate sound of /*hl*/ is /*ntl*/ in IsiXhosa as seen in example ***intloko***. For the word *water*, Siphuthi and siSwati use the cognate sound /*t*/ as in *ma**t**i* and *eman**t**i* correspondingly while IsiXhosa uses /*z*/ as in *amanzi*. Still on the word *water*, siSwati uses the cognate /*e*/ as in ***e***manti whereas IsiXhosa uses the cognate /*a*/ as in ***a***manzi.

Some scholarsargue against orthography harmonisation.Simango (2003) being one of the opponents;on one hand, he argues that different orthographies play a significant role in merging the colonial administration's strategy of divide and rule. He sees another barrier in relation to the speakers of the languages involved as they fear that the new graphemes of the harmonised languages will be influenced by the dominating variety or languages over the others. People also

view harmonisation as threat to their languages that they might lose identity. On the other hand, Simango (2003:36) affirms that orthography has nothing to do with the survival of the languages, that is, 'languages are independent of orthographies'. He further stipulates that the reality is that the speakers of the languages or varieties involved will still continue to speak their languages or varieties the same way they have done before application of the uniform grapheme. This unification of languages or varieties is meant for the educational purposes to have 'a uniform way of writing' (Simango, 2003:37).

Steps to be taken to Design the Common Orthography

There are certain procedures to be followed in orthography harmonisation.According to Banda (2016), the harmonisation of orthographies that he was involved included the speakers of the languages in question by then and other stakeholders capturing the sound inventories of the language or linguistic repertoire of speakers, and then determine how to represent sounds in writing. Specifically, Mtenje (2003) avers that when developing orthographies of typologically and genealogically related languages through harmonisation, one should consider the following linguistic features: phonological factors such as tone, accent, stress, consonant cluster and vowel length, sequence, predictable and redundant sound amongst others. They should also consider morphological features including root shapes, prefixes, suffixes, constraints across morpheme or word boundaries and others.For this paper, the concern is on the linguistic patterns, that is, phonemes without coinage of the supra-segmental features mentioned above. After analysing the afore-said linguistic features, Simango (2003) stipulates that the first step in invention of the unique or new graphemes is to invent all the sounds that have phonemic status in the cluster without making reference to the spelling system currently in use; second, assign new graphemes to each phonemic sound; and last, establish uniform rules for representing word divisions and combination of words and particles in the language cluster, in this case, Tekela languages.

Application of Zipf's Principle of Least Effort in Graphemes Inventory of Tekela languages

As indication earlier that even though the reviewed studies have given the steps to harmonisation and inventory of new graphemes, they have not clearly stated the principle to follow in graphemes inventory. Therefore, this paper opted for the Principle of Least Effort. The previous

studies have confirmed that the speakers of the varieties involved in the previously proposed harmonisation fear that dominant language or variety might have much influence on the new graphemes, so this principle might demystify or rectify that belief or fear. Based on the aspects of adaptation, we have siSwati which has the standard written form, but Siphuthi has just been described and lacks the standard form. What Donnelly (2009) and others have done was just the description of the language (Siphuthi). For this reason, the researcher considers Siphuthi as an objective at hand that needs the existing instrument. In this case, the siSwati orthography is to be employed over Siphuthi sub-standard orthography to come up with suitable instrument, which in this case is 'the new Tekela graphemes or orthography'.

However, to avoid the imbalance or dominancein orthographic invention which is more exclusive, the notion of economy of speech sounds will be brought up. For the patterning of the sounds, Coulmas (2003) states that we should be more considerate in energy used in producing different phonemes, realising that one phoneme takes less energy than another. Therefore, if one phoneme has an extra articulating feature than the other, Coulmas (2003:243) exudes that 'it is intuitively clear that one with extra feature is costly to produce'. As a result, I suggest that it should be eliminated. Coulmas (2003) stipulates that the economy of writing inherits the features of economy of speech sounds, that is, production of speech sounds informs writing. Again, looking at the table 1 and 2 above, *tshadza/ tshandza; ihloko/inhloko;* and*mati/emanti,* Swazi words have the insertion of /*n*/ and /*e*/ for *emanti*, so to come up with the graphemes of the words which are closely related like this in terms of form and pronunciation, elimination of the phonemes that need a lot of energy should be considered.

Conclusion

This paper partially answered the researcher's questions as the researcher feels like verification on the point of language harmonisation as a tool to maintain a language calls for further research looking at the existing harmonised languages globally.For accuracy, the Principle of Least Effort has to be used for the inventory of Tekela languages' graphemes.

Recommendation

As suggested above to consider the economy of speech sounds, that is, the energy used to produce speech sounds; the tests are still ought to be done with regard to intensity and pitch of the phonemes before designing the uniform graphemes. Again, I am aware that since Siphuthi is the hybrid of both Tekela languages and Sesotho; for instance, it has gained a small set of new Sesotho phonemes: [ʒ, ŋ, tlʰ] (consonants); [i̧, u̧, e, o] (vowels); and [m̩. n̩, ŋ̩, ʒ̩, ɓ] (an expanded set of nuclei) (refer to the appendix A and B), their harmonisation should be handled with care (Donnelly, 2009). Last, just like Zimbabwe, which Khumalo (2003) exudes that does not have the language policy; it tried to accommodate every language inferred in the Zimbabwe Education Act of 1987.Therefore, after harmonisation, I can recommend that the Lesotho's education system absorb the harmonised language to be taught in schools where there are Siphuthi native learners in primary schools in addition to the officialised and authorised languages (Sesotho and English).

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Appendices

Siphuthi Phonemes

Appendix A

Siphuthi Breathy Consonants(Donnelly, 2009)

b̤ d̤dz̤ ~d̤v̤dʒ̤dl̤   g̤|g̤   ǃg̤   ǁg̤

v̤   (z̤)   ɣ̤   ɦ̤

        r̤, l

m̤   n̤ ɲ̤

w̤   y̤

Appendix B

Hybrid Vowel Inventory of Siphuthi (Donnelly, 2009)

SiSwati		Sesotho		Siphuthi	
——		i̧ ụ		i̧ ụ	
i u		i u		i o	
e——o		e o			
ɛɔ		ɛ ɔɛ ɔ			
aaa					