

AN INVESTIGATION OF LINGUISTIC CROSS- POLLINATION BETWEEN ENGLISH

AND SILOZI AMONG SILOZI SPEAKERS AT TERTIARY INSTITUTIONS IN

WINDHOEK

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## ABSTRACT

This study critically investigated linguistic cross-pollination, or linguistic inter-influence, that took place when two mutually unintelligible languages (Silozi and English) came into contact for an extended period of time. The study specifically analysed how such contact affected both English and Silozi at the level of phonology, morphology and lexicon, as they were used interchangeably by Silozi speakers at tertiary institutions (IUM, NUST, and UNAM) in Windhoek. The study used the mixed methods approach, where quantitative data was collected to investigate contact induced changes at the aforesaid levels of language, and qualitative data was collected to explore social factors that promoted bilingualism among Silozi speakers at tertiary institutions in Windhoek. The qualitative data captured in the interviews were presented under emerging themes and verbatim quotes, and quantitative data collected was transcribed and then cross-referenced with the reviewed literature to determine any linguistic effects due to linguistic inter-influence. The study employed the Optimality Theory (OT) to investigate universal principles, phonological acquisition and linguistic typology to determine linguistic crosspollination as a result of interaction between conflicting constraints. The OT is a theory that could be used to investigate selected sequences to explain and predict cross-linguistic tendencies in phonotactic constraints. The study found that when Silozi speakers pronounced the two dental sounds (/ð/ and /θ/), the two sounds were substituted by the alveolar sounds (/s/ or /z/), and that, when pronounced by Silozi speakers, the four alveolar sounds (**d**, **t**, **z**, and **s**) moved one place to become dentalised. Consonants in Silozi alternate, and allowed no consonant clusters and all words end in vowels. The study recommends for future studies to be pursued to determine linguistic cross-pollination resulting from other English consonants, and also investigate constraints on vowel clusters and diphthongs.

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## **DEDICATION**

I dedicate this accomplishment to all who in one way or the other promote learning. I still saw it inevitable to dedicate this work to my late maternal grandparents, Mr Ben Ntelamo Tubaluane and Ms Anna Mabuku Muyoba–Ntelamo. This work is still dedicated to all my born and unborn children.

## DECLARATION

I, Morgan Simataa Silume, declare that this thesis is my own unaided work. Any assistance that I have received has been duly acknowledged in the thesis.

It is submitted in partial fulfilment of the requirements for the degree of Master of Arts in English Studies at the University of Namibia. It has not been submitted before for any degree or examination at this or any other institution of higher learning.

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## **CHAPTER 1**

### **1.1 INTRODUCTION**

One of the most significant outcomes of bilingualism is language contact in which one language is enriched by another language and vice-versa (Thomason, 1990). This researcher developed an interest to pursue how languages in contact could mutually enrich each other; therefore, the present research investigated linguistic cross-pollination between English and Silozi among Silozi speakers at tertiary institutions (IUM, NUST and UNAM) in Windhoek. The main focus of the present study was to investigate how such contact affected both English and Silozi at three levels of language, namely phonology, morphology, and lexicon. The study assessed the factors that led to linguistic cross-pollination among Silozi speakers who were employed by tertiary institutions and resided in the geographical area of Windhoek. This chapter presents the background information, identifies the specific area of investigation and the questions to be answered. It also outlines the scope and significance of the inquiry. Finally, the methods that were used for data collection and transcription are explained.

### **1.2 Background to the study**

Namibia, like most other multicultural and multilingual societies, offers a favourable environment for the breeding of interesting linguistic features that have the potential to attract the curiosity of sociolinguistic researchers. This country, to use the words of Sankoff (2001), is rich in its socio-cultural and linguistic background, and this could demonstrate a harmonious co-existence of many languages. Similarly, the Zambezi region of Namibia boasts a rich linguistic diversity where languages, such as Barakwena, Mbukushu, Mbalangwe, Yeyi, Sifwe,

Subia, Silozi and Totela, have co-existed for a long time. Five of these languages (Mbalangwe, Sifwe, Subia, Silozi and Totela) share the maximum degree of linguistic features at spoken level, and understandability, or mutual intelligibility, is high. Sankoff (2001) argues that mutual intelligibility means that two speakers can understand each other. Furthermore, the other three (Mbukushu, Yeyi and Barakwena) share the minimum degree of linguistic features at spoken level with the other five. However, despite the high level of understandability, these languages are recognised as separate languages.

### **1.2.1 The language Silozi**

Sitwala (2010) explains that the present-day language called Silozi evolved from the linguistic contact between two languages, that is, the Kololo of the Makololo and the Aluyi of the Aluyana. Sitwala (2010) narrates that it is believed that the Luyi migrated southward from Katanda, in what is now called The Democratic Republic of Congo, in the 17<sup>th</sup> and 18<sup>th</sup> centuries and, settled in Northern Rhodesia, the present-day Zambia.

While settled in the floodplain of Zambia, a clan of Sebitwane, running from the Mfecane, invaded their land and were severely defeated. This clan that came with Sebitwane, as Sitwala (2010) elaborates, was called the Makololo. Mainga (1965) clarifies that Sebitwane started ruling the land and the Aluyi were now under his leadership. Sitwala (2010) further explains that the Makololo and the Aluyi intermingled and many intermarried, and, as a result, their languages also were mixed up. One could, therefore, employ the narration laid out by Sitwala (2010) to argue that the present-day language Silozi is the linguistic outcome of the contact between the Kololo of the Makololo and the Aluyi of the Aluyana.

### **1.2.2 Silozi in the Zambezi Region**

Sitwala (2010) argues that the Makololo changed the whole face of the Barotse kingdom; changing the language of the Barotse kingdom as well as their culture and tradition. Later on, at the end of the seventeenth century, the Aluyi revolted against Sebitwane and conquered him, and, after this defeat, Sebitwane decided to cross the Zambezi River into the Caprivi Strip in Namibia (Mainga 1965).

### **1.2.3 The supremacy of Silozi in the Zambezi, schools and radio**

As regards the hegemony of Silozi in the schools of the Zambezi Region of Namibia, Sitwala (2010) begins by observing that formal education in Caprivi (Zambezi today) does not have a long history. Nambala (2003) adds that records show that in 1928, there was only one bush school, started by the Seventh Day Adventist Church (SDA), with an average attendance of only 40 respondents. Their headquarters were at Victoria Falls. From Katima Mulilo, where this school was situated, respondents would proceed to Rusangu in Northern Rhodesia (presentday Zambia) for their Lower Middle class and then proceed to Solusi Training School in Southern Rhodesia (present-day Zimbabwe).

Legere (2001) observes that the Seventh Day Adventists withdrew from this project in 1943. It was then taken over by the Roman Catholic Church in 1945. This group moved across the river from Sichili in Northern Rhodesia (Western Zambia) into the Caprivi but their headquarters were still at Victoria Falls. Maclaren (1958) then explains that the materials and teachers used in the schools, which had now multiplied to forty, were all imported from Zambia and Zimbabwe. Thus, Silozi found its way to hegemony in the Caprivi schools. With the curriculum and learning materials, came teachers as well. A classic example, as Mainga (1965) shares more

light, is that of the former Prime Minister of Zambia in President Kenneth Kaunda's government, the late Nalumino Mundia, who was a teacher in the Zambezi Region of Namibia.

As regards the South African role in promoting Silozi in the Zambezi, Sitwala (2010) asserts that the schools were then taken over by the South African regime in 1965. Again, instead of using the local languages as medium of instruction, and at the same time not willing to invest heavily in material development, South Africa imported materials and teachers into Caprivi, especially Sotho-speaking teachers, to teach and to administer education in Caprivi. This also strengthened the hegemony of Silozi in Caprivi (since we learnt earlier that Silozi is derived from the Sotho of the Makololo), as Sotho and Silozi have much in common. Stwala (2010) stresses that with the recognised status of Silozi as a language that could be written, read and be understood by the people of Caprivi, Silozi assumed the status of being the medium of instruction in schools in the Caprivi as well as a school subject.

The point that has to be noted here is that the arrival of missionaries who came through Zambia in the early 17<sup>th</sup> century saw Silozi added to the linguistic diversity of the Zambezi region. Sitwala (2010) explains that the missionaries established mission schools where they taught the young people of Caprivi how to read and write. In these schools, as Sitwala (2010) explains, the language of interaction was Silozi which came with the missionaries from Zambia.

As regards the role that was played by radio broadcast in supporting Silozi, Sitwala (2010) relates that originally the radio station for Caprivi, broadcast from South Africa through to South West Africa (present-day Namibia). It was known as the South West Africa Broadcasting Cooperation (SWABC) and employed Silozi as the "language of broadcasting" in the Caprivi. After independence, the Silozi language, together with English, remained as the medium of communication at many domains in the Caprivi region.

Today, as Sitwala (2010) clarifies, Silozi is broadcast in Namibia, in Zambia and DRC/Congo, as well as from South Africa. The Zambian Bureau of Information publishes the monthly newspaper (Liseli) in Silozi. Nambala (2003) observes that the ethnology notes that it is used on radio and in newspapers, and that it is “recognised for education and administration purposes” in Zambia. In Namibia, it is a language spoken as a lingua franca by the majority of the native residents of Caprivi, and it is also used in education and administration (Sitwala, 2010).

Today, Silozi is a language that serves as the Zambezi region’s lingua franca, and according to Sitwala (2010), it is spoken by around 700,000 people as their first language, and most of these people live or originated in what is now Western Zambia and the Zambezi region of northeastern Namibia (the former Kingdom of Barotseland). Together with English, Silozi is preferred for use in formal settings, such as schools, courts, churches and even at gatherings where issues of regional magnitude are debated or discussed. Sitwala (2010) states that when South Africa took control of South West Africa (Namibia today), Afrikaans was introduced. In the Zambezi region, English, Afrikaans and Silozi were used in all official activities while the rest of Namibia used Afrikaans, and a local “Bantustan” language, as their official languages.

Sitwala (2010) observes that respondents from Caprivi pursued their middle and upper primary in Zambia and Zimbabwe. It is, therefore, the researcher’s take that since English was also used in schools in Zambia and Zimbabwe, the use of English also assumed its ascendancy in the Zambezi Region. The fertile ground for linguistic contact between English and Silozi was therefore laid down. This study sought to investigate linguistic cross-pollination among Silozi speakers at tertiary institutions in Windhoek. It should, therefore, be mentioned here that investigating linguistic cross-pollination between English and Silozi among university staff



members in Windhoek tacitly entailed tracing linguistic outcomes that began in the missionary schools way back then up to the contact that still exists today as the two languages are now being used by university staff members in Windhoek.

In independent Namibia, the Silozi language has not lost its “Lingua Franca” status in the Zambezi region and, together with English, it is still the region’s common language. The two languages (English and Silozi) are taught at schools and also used in many of the official domains in the region. It is this researcher’s take that English and Silozi are the languages of administration, languages of religion, medium of communication at regional gatherings, and even the medium through which residents of the Zambezi Region conduct their day-to-day business in general.

Sankoff (2001) argues that when speakers regularly use two (or more) languages in their daily interactions, there can be a number of different outcomes affecting the structure of those languages; they are usually called language contact phenomena. These phenomena, as Sankoff (2001) further opines, come in many different forms, but they all have to do with either (i) how the element of two language varieties are used together in some way; or (ii) how the structure of one variety affects the structure of another.

Therefore, the dominant use of English and Silozi in the different domains could create a fertile ground for linguistic cross-interaction which could lead to either “one-way” or “mutual” linguistic influence. It is still this researcher’s take that the linguistic cross-pollination, or linguistic inter-influence, that could result from the contact between Silozi and English among staff members at tertiary institutions in Windhoek, offers an excellent opportunity for a research endeavour.

### 1.3 Statement of the problem

The main purpose of the study in its whole was to investigate linguistic cross-pollination or linguistic inter-influence that took place when two mutually unintelligible languages (Silozi and English in this case) come into contact for an extended period of time. The main focus of the study was to analyse how such contact affected both English and Silozi at the three levels of language, namely phonology, morphology and lexicon, as the languages were used interchangeably by Silozi speakers at the afore-mentioned tertiary institutions in Windhoek.

Thomas and Kaufman (1998) envision two alternative directions in which language contact could go, resulting in two linguistic processes: *borrowing* and *substratum interference*. They reserve the term *borrowing* to refer only to “the incorporation of foreign elements into the speaker’s native language” (p. 21). When the influence goes the other way, and native language structures influence the second language, they speak of *substratum interference*. This study was based on the very phenomenon of language contact. It included in its investigation of linguistic cross-pollination, the causes of bilingualism among the targeted Silozi speakers at tertiary institutions in the geographical area of Windhoek.

Just like Appel and Muysken (2005), the researcher in this study observed that bilinguals appear to be of two kinds: partial and complete. Different scholars looked at the different effects of the language contact phenomenon and arrived at the following as effects of language contact: borrowing (Appel & Muysken, 2005), code-switching and code-mixing (Myers-Scotton, 2006). Prior studies of Silozi in their linguistic investigation did not incorporate studies of

linguistic cross-pollination as a consequence of language contact between Silozi and English, or contact between Silozi and any other language in either the Zambezi Region or Namibia.

Studies involved research that looked at the linguistic situation in Zambia by Marten and Kula (2007), the morphology of the substantive in Silozi by Gowlett (1964), and the language maintenance in the Malozi community of the Caprivi by Sitwala (2010).

The generalisations that have been made after studying inter-group interaction involving languages are mainly from the US: “An Acoustical Basis for Universal Constraints on Sound Sequences” (Haruko, 1982), India: “Influence of Magahi Language on Urdu spoken in Gaya” (Tasneem, 2012) and Japan: “English loanwords in Japanese” (Miura, 1979). There appears to be very scanty documentation with regards to linguistic cross-pollination, or inter-influence, between English and any of the languages in Namibia. Therefore, by empirically investigating the linguistic cross-pollination between Silozi and English among Silozi speakers at tertiary institutions in Windhoek, this study hoped to fill this research gap.

#### **1.4 The research objectives**

In order to understand the phenomenon of linguistic cross-pollination, or linguistic interinfluence, between Silozi and English among Silozi speakers at tertiary institutions in Windhoek, the following research objectives were formulated:

- 1.4.1 Investigate contact-induced changes at the three levels of language (phonology, morphology, and lexicon)
- 1.4.2 Assess the changes that might have taken place as a result of language contact;
- 1.4.3 Explore the factors that promote bilingualism among Silozi speakers;

### **1.5 Significance of the study**

This study of linguistic cross-pollination will contribute knowledge to the field of mutual influence or cross-pollination. It would contribute to the knowledge as regards the majority/minority languages in contact.

It was also hoped that this study would add to the rapidly increasing literature on language contact and would make possible comparisons with other linguistic studies for an explanation of the process of lexical innovation, particularly of borrowing, which has played such an important role in the shaping of the modern Silozi language.

This study is, furthermore, significant in that it examined the linguistic cross-pollination processes, namely phonological and morphological processes, by which English had influenced the lexical expansions of the Silozi language. It also investigated how Silozi had influenced the way in which English was used among Silozi speakers at tertiary institutions in Windhoek.

### **1.6 Limitations of the study**

One important limitation of this study had to do with the scope of the data. Data were limited and taken from the chosen tertiary institutions in the Windhoek district only; consequently, any results drawn from interpreting the data of this study remain applicable to this area only. The investigation was also limited to just the three levels of language (phonology, morphology and lexicon). The recording and interview activities were only directed to staff members of universities (UNAM main campus, UNAM Khomasdal campus, the UNAM School of

Medicine, IUM and NUST), and this tacitly eliminated the participation of students and other Silozi speakers at other sectors in the geographic area of Windhoek.

### **1.7 Layout of chapters**

Chapter One introduced the study and presented the background to this study. This chapter presented the statement of the problem, the research objectives, significance of the study, as well as the limitations of the study.

Chapter Two presents the literature reviewed for the study and the theoretical framework. Chapter Three presents the research methodology in terms of the approach and design that were followed. It clarified the research population, the sample and sampling procedure, the research instruments, the data analysis techniques, as well as the research ethics that the researcher observed. Chapter Four presents the data gathered and Chapter Five presents a discussion, recommendations and conclusions.

### **1.8 Conclusion**

This chapter presented the introduction and the background to the study. The chapter also argued the statement of the problem, research objectives, significance of the study, limitations of the study, and concluded with the layout of all chapters. The next chapter presents the literature review and the theoretical framework that underscores this study.

## **CHAPTER TWO**

### **LITERATURE REVIEW AND THEORETICAL FRAMEWORK**

#### **2.1 Introduction**

Languages that have been co-existing in a single speech community for an extended time are likely to influence one another in one way or the other. Minority languages are often under threat from the majority or dominant languages of a host society. This may be caused by factors such as economic and political pressures. However, the co-existence could create a fertile ground for cross-linguistic interaction that could lead to linguistic cross-pollination between languages in contact.

This chapter presents cross-linguistic tendencies as a consequence to language contact that were described by scholars in the literature reviewed for this study. The chapter still presents the universal constraints through which languages are classified. This chapter also presents the theoretical framework from which this study drew impetus when investigating linguistic crosspollination between Silozi and English among Silozi speakers at tertiary institutions in Windhoek.

#### **2.2 Theoretical framework**

Despite the purely descriptive stance assumed in data analysis, this study was also informed by the linguistic framework known as Optimality Theory (hereafter, OT), as advocated by Prince and Smolensky (1993) as a viable theory with a focus on investigating universal principles, phonological acquisition and linguistic typology. Barlow and Gierut (1999) define

OT as a linguistic model proposing that the observed forms of language arise from the interaction between conflicting constraints. Prince and Smolensky (1993) assert that in OT, the traditional view is that constraints are part of universal grammar, that is, they are provided by the language faculty and need not be learned. Barlow and Gierut (1999) advocate that OT could be used to investigate sound sequences in an attempt to explain and predict cross-linguistic tendencies in phonotactic constraints. These universal constraints, as Kager (1999) elaborates, are categorised into the following types: general constraints on sound sequences, constraints on initial and final consonants, constraints on obstruent clusters, constraints on clusters of a consonant and a liquid, constraints on clusters of a consonant and a glide, constraints on sequences of a consonant and a vowel, and constraints on vowel clusters and diphthongs.

Prince and Smolensky (1993) argue that the OT has three basic components which are universal: GEN takes an input, and generates the list of possible outputs, or candidates; CON provides the criteria, in the form of strictly ordered violable constraints, used to decide between candidates; and EVAL chooses the optimal candidate based on the constraints, and this candidate is the output. On the violability of constraints, McCarthy (2007) explains that in OT, constraints are strictly ranked and violable. McCarthy (2007) clarifies here that strict ranking means that a candidate violating a high-ranking constraint cannot redeem itself by satisfying lower-ranking constraints. Violability means that the optimal candidate does not need to satisfy all constraints.

Furthermore, McCarthy (2007) explains that the EVAL can be viewed as choosing the subset of candidates that best satisfy the top-ranked constraint, then, of this subset, selecting the subset that best satisfy the second-ranked constraint, and so on. Kager (1999) describes Eval as that

candidate “i” is optimal if and only if, for any constraint that prefers another candidate “j” to “i”, there is a higher-ranked constraint that prefers “i” to “j”.

Prince and Smolensky (1993) further explain that OT supposes that there are no languagespecific restrictions on the input. This is called *richness of the base*. For example, as Prince and Smolensky (1993) explain, a language without complex clusters will differently deal with an input such as /flask/. Some will epenthesise (e.g. [falasak], or [falasaka]) and some will delete (e.g. [fas], [fak], [las], [lak]). McCarthy (2007) describes epenthesis as the insertion of a sound or letter within a word, e.g. the *b* in *thimble*. Kager (1999) explains that epenthesis help resolve unsyllabifiable consonants as candidates (inputs) with epenthesis are among those supplied by GEN, and because EVAL favors less-marked over more faithful and differently-unfaithful. Kager (1999) explains that markedness constraints impose the requirements of the structural well-formedness of the output. In the same vain, McCarthy (2007) observes that markedness constraints enforce well-formedness of the output itself, prohibiting structures that are difficult to produce or comprehend, such as consonant clusters or phrases without overt heads.

On the other hand, faithfulness constraints, as McCarthy (2007) elaborates, require that the observed surface form (the output) match the underlying or lexical form (input) in some particular way; that is, these constraints require identity between input and output. In the same vein, Kager (1999) clarifies that faithful constraints enforce similarity between input and output, for example requiring all input consonants to appear in the output, or all morphosyntactic features in the input to be overtly realized in the output.



Furthermore, McCarthy (2007) clarifies that each of the constraints (faithfulness and markedness) plays a crucial role in the theory. Faithfulness constraints prevent every input from being realized as some unmarked form, and they are inherently conservative, requiring the output of the grammar to resemble its input. On the other hand, markedness constraints, as McCarthy (2007) further explains, motivate changes from the underlying form, and are often in tension with faithfulness constraints as they favor some linguistic structures over others. On the conflict between constraints, Kager (1999) further explains that they can conflict, so the constraints ranking – which differs from language to language – determines the outcome. One language, as indicated earlier on, might eliminate consonant clusters, despite the resulting faithfulness violations; another might retain all input consonants, violating the markedness constraint.

The OT fits the present study as it investigates linguistic cross-pollination between two contact languages (English and Silozi) with dissimilar constraints. The languages under investigation had different constraints in the sense that one (English) allowed consonant clusters (CC) and the other one (Silozi) eliminates them (consonant clusters) by vowel insertion. Specific inputs from either languages are analysed, and instances of linguistic cross-pollination are indicated by those cases of epenthesis as the sounds or letters are inserted within a word, or a phone, to fit the phonotactic system of either language. In other words, cases of linguistic crosspollination are still traceable from consequences of conflicting constraints where consonant clusters might be eliminated, or added, resulting in faithfulness violations, or where consonants might be retained resulting in markedness violations.

### **2.3 Language contact**

Thomason (1999) observes that when speakers regularly use two (or more) languages in their daily interactions, there can be a number of different outcomes affecting the structure of those languages; this is termed language-contact phenomena. In the same vein, Appel and Muysken (2005) define contact as a term used in sociolinguistics to refer to a situation of geographical continuity or close social proximity (and thus of mutual influence) between languages or dialects. Appel and Muysken (2005) argue that the result of contact situations can be seen linguistically in the growth of loan words, patterns of phonological and grammatical change, mixed forms of language (such as creoles and pidgins) and a general increase in bilingualism of various kinds.

In a restricted sense, languages are said to be “in contact” when they are used alternately by the same people, that is, bilinguals. In like manner, Thomason (2007, p. 42) defines contact-induced change when "a particular linguistic change is caused at least in part by language (or dialect) contact if it would have been less likely to occur outside a particular contact situation". Thomason (2007) believes that the definition of language contact projects three basic elements: two or more languages, the users of these languages and a socio-cultural setting in which contact takes place.

The basic linguistic nature of the language families in contact is also an equally important factor which describes the contact-induced, linguistic outcomes. According to the observation of Atreya, Singh and Kumar (2014), language is so fluid that one cannot keep it in an air-tight container. As human beings socialise, they learn language and in diverse cultural situations. They come into contact with many languages that modify their way of speech.

Atreya et al. (2014) report that Magahi and Urdu that were spoken in the Gaya district of Bihar, India, had been spoken over a long period and, due to contact, it emerged that both languages had influenced each other significantly during the course of time. Atreya et al. (2014) further argue that it is very common in multilingual countries that people use sounds and words of other languages as part of their own language and even in some intense contact situation, they found that the syntactic pattern was also transferred from the source language to the recipient language. The main focus of investigation in the present research was on the linguistic crosspollination, or linguistic inter-influence, that had taken place as a result of contact between Silozi and English among Silozi speakers at selected tertiary institutions in Windhoek, Namibia. It specifically focused on the linguistic cross-pollination that took place at the phonology, morphology, and lexicon levels.

Furthermore, the researcher in the present study saw it fit to add Benjamin's (2005) observation that cultural contact can occur either directly through the personal contact of the speakers of these languages or indirectly through media or literature. Benjamin (2005) also states that the common outcome of direct and indirect cultural contact is the diffusion of cultural items across linguistic boundaries. Benjamin (2005) stresses that one clear manifestation of this cultural diffusion is the emergence of new lexical items in a recipient language.

These new lexical items are imitations of forms or patterns in the donor language, and they can be manifested as phonetic or semantic adaptations. Benjamin's (2005) aforesaid argument underscores the current study that investigated linguistic cross-pollination as a result of language contact between Silozi and English among Silozi speakers in Windhoek. This study focused on the linguistic cross-pollination, or inter-influence, that took place directly through

the personal contact of the speakers of these languages, as opposed to linguistic influence that is likely to take place indirectly through the media or literature.

In explaining how language contact comes about, Atreya et al. (2014) stress that this phenomenon is apparent in many different forms, but all have to do with either how the elements of two language varieties are used together in some way or how the structure of one variety affects the structure of another. In the same vein, Weinreich (1953, p. 1) clarifies that language contact is when “two or more languages are used alternately by the same persons”. The present study investigated linguistic cross-pollination between English and Silozi, as the two languages were used by the same speakers who were based in Windhoek and hailed originally from the Zambezi region.

Weinreich (1953) further elaborates on the phenomenon of language contact phenomenon by asserting that the practice of alternately using two languages will be called “bilingualism” and the person involved, “bilingual”. Those instances of deviation from the norms of either language, which occur in the speech of bilinguals as a result of their familiarity with more than one language, that is, as a result of language contact, were referred to as interference phenomena. It is these phenomena of speech, and their impact on the norm of either language exposed to contact, which invite the interest of the linguist (1953).

In clarifying that interference is enshrined in the citation above, Weinreich (1953) states that the term “interference” implies the rearrangement of patterns that result from the introduction of foreign elements into the more highly structured levels of language, such as the bulk of the phonemic systems, a large part of the morphology and syntax and some areas of the vocabulary. The researcher in the present study concurs with Weinreich (1953) who introduces the term

interference to signify the phenomenon that takes place when one language system is fundamentally changed as a result of foreign input.

When it comes to the direction of language contact, Thomason and Kaufman (1988) advocate that there are two alternative directions in which language contact can go, resulting in two distinct linguistic processes: borrowing and substratum interference. Thomason and Kaufman (1988) reserve the term “borrowing” to refer only to the adoption of foreign elements into the speakers' native language. When the influence goes the other way, and native language structures influence the second language, they speak of substratum interference.

On the types of cross-linguistic influence, Benjamin (2005) observes that Van Coetsem's (1988) framework distinguishes between two types of cross-linguistic influence or what he calls “transfer types”, namely, borrowing and imposition. The latter is largely equivalent to terms like “interference via shift”, “transfer”, “indirect diffusion”, and “substratum influence” that appear in the literature. Therefore, the study at hand included into its investigation of linguistic cross-pollination those items referred to as interference by Weinreich (1953) and Thomason and Kaufman (1988) in the definitions above perceived by hearers when the Silozi speakers conversed in English.

Weinreich (1953) analysed language at the three levels of language, that is, phonology, morphology and syntax. Weinreich (1953) stresses that “great or small, the differences between the languages in contact must be exhaustively stated for every domain-phonetic grammatical and lexical, as a prerequisite to an analysis of language contact” (1953, p. 2).

In like manner, the present study analysed the language outcomes that occurred as a result of contact between English and Silozi at the language levels of phonology, morphology and lexicon. The analysis included paying attention to those cases of deviation from the norms of either language, which occurred in the conversations of bilinguals (targeted Silozi speakers) as a result of contact between Silozi and English.

The researcher concurs with the arguments of Weinreich (1953) that a full account of interference in a language contact situation is possible if the extra linguistic factors are also considered. Weinreich (1953) asserts that among the non-structural factors, some are inherent in the bilingual person's relation to the languages he brings into contact. Weinreich (1953, p.

1) provides examples:

- i. Verbal expression in general and the ability to keep languages apart;
- ii. Relative proficiency in each language;
- iii. Specialisation in the use of each language by topics and interlocutors;
- iv. Manner of learning each language;
- v. Attitudes toward each language, whether idiosyncratic or stereotyped;
- vi. Size of bilingual group and its socio-cultural homogeneity or differentiation;  
breakdown into subgroups using one or the other language as mother tongue;  
demographic facts; social and political relations between those sub-groups;
- vii. Prevalence of bilingual individuals with given characteristics of speech behaviour in several subgroups;
- viii. Stereotyped attitudes toward each language, indigenous or immigrant status of the languages concerned;
- ix. Attitudes toward the culture of each language community;

- x. Attitudes toward bilingualism as such; xi. Tolerance or intolerance with regard to mixing languages and to incorrect speech in each language;
- xii. Relation between the bilingual group and each of the two language communities of which it is a marginal segment.

## **2.4 Language contact and bilingualism**

In providing details regarding bilingualism as a consequence of languages that are in contact, Thomason (1999) asserts that it is the term for the alternative use of two or more languages, and the speaker's mother tongue or first language is one of the two languages. Thomason (1999) further stresses that bilingualism is used as a cover term for multilingualism too - speaking more than two languages. Makihara and Schieffelin (2007) argue that being bilingual does not imply complete mastery of two languages. They assert that speakers are bilingual when they have acquired or learned to speak or understand -as a minimum- some phrases that show internal structural relations in a second language.

Myers-Scotton (2006, p. 44) defines bilingualism as “the ability to use two or more languages sufficiently to carry on a limited casual conversation”. Thomason's (1999) definition of bilingualism suits this study well, for it analysed the outcome of the alternative use of two languages, one of which (Silozi) was used mostly as mother tongue by the targeted speakers residing in Windhoek.

It is important to note that Thomason (1999) acknowledges that the definition of “language contact” is far from being flawless and further argues that this simplest definition has some flaws in one other obvious way: speakers of two (or more) languages need not be in the same

place for language contact to occur. Thomason (1999) cites as an example the languages of sacred texts and other writings connected with major world religions. Thomason (1999) cites Christianity as being responsible for the spread of Latin (and, to a lesser extent, New Testament Greek) to many countries; Pa-li, the sacred language of Buddhism, spread with the religion to Thailand, Burma and other Southeast-Asian countries.

In his attempts to stress the role of religious texts in spreading language, Thomason (1999) points out that the Qur'an, the sacred text of Islam, is written in Classical Arabic, but many of the world's Muslims do not speak any form of Arabic. Nevertheless, Thomason (1999) further argues that Classical Arabic is in contact with other languages in many parts of the world through the religion, as is attested by the sizable number of Arabic loanwords in various languages; among them Persian, Turkish and Malay - that are spoken primarily by Muslims.

Furthermore, Thomason (1999) argues that contact without full bilingualism is not only confined to religious languages. Thomason (1999) asserts that the most striking example in the modern world is the pervasiveness of English outside the traditionally English-speaking nations. Thomason (1999) cites millions of non-English speakers who have come into contact with English through radio, television, Hollywood films and popular music (on CDs and cassettes, as well as on the radio and television), and writings of all kinds.

Extending his notion of contactless bilingualism, Thomason (1999) observes that some English could be learned through these media, though the knowledge is likely to remain passive unless the listeners have opportunities to practise their speaking or writing skills. However, the researcher in the present study was spurred by scholars such as Atreya et al. (2014), who



advocate that language contact most often involves face-to-face interactions among groups of speakers of whom at least some speak more than one language (in a particular geographical locality).

Appel and Muysken (2005) argue that when speakers of different languages interact closely, it is natural for their languages to influence one another. Sankoff (2001), in the same vein, asserts that cultural contact can occur directly through the personal contact of the speakers of these languages. Thomason (2007) advises that indirect contact can be viewed as delayed effect contact, where remarkable structural disturbance can rarely be found in the recipient language and the influence is limited to lexical borrowings. The direct contact or transfer, as Thomason (2007) further argues, is where the outcome of the contact is immediately manifested, often with modifications in the construction of the target language.

The present study took a broader perspective to language contact studies where linguistic inter-influence directly took place at different language levels of the target languages in contact. It investigated linguistic cross-pollination as a consequence of direct linguistic contact between Silozi and English as the languages used by speakers at tertiary institutions in a bilingual, or multilingual, speech community of Windhoek. Benjamin (2005) argues that, when considering the degree of hierarchy of borrowings, it could be said that some linguistic items are more flexible for change than others. Benjamin (2005) stresses that the distinction between closed and open classes has been made based on the degree of changes in the linguistic categories. Benjamin (2005) opines that while lexicon is considered as an open class, the morphology and syntax are included in the closed class, as it is affected only in the situation of direct and intense contact.

Poplack and Sankoff (1984) opine that bilingualism is the result of contact between speakers speaking different languages, especially L1s (first languages). Poplack and Sankoff (1984) further explain that if bilingualism is looked at as a group phenomenon, it often results under two main sets of conditions: Close proximity: relates to the ordinary conditions of life in ethnic groups that regularly put speakers in close proximity to speakers of another language.

Poplack and Sankoff (1984) further argue that if learning the other group's language is not a reciprocal matter, then the group of less power and prestige makes the effort to learn the other group's language; Displacement: promotes the need or desire to learn another language, which presupposes living in a bilingual nation, living in a multi-ethnic area, occupation and marrying outside one's group. Displacement can mean either physical movement or a change in a psychological outlook.

Poplack and Sankoff (1984, p. 9) identify the conditions of close proximity with other groups that promote bilingualism:

- Living in a bilingual nation, especially as a minority group member.
- Living in border areas between ethnic groups or nations.
- Living in a multi-ethnic urban area.
- Engaging in an occupation that involves many contacts with out-group members.
- Marrying outside one's ethnic group.
- Having a parent or grandparent outside one's ethnic group.

## **2.5 Forms of influence of one language over another**

In explaining why speakers of a given mother tongue are attracted to another language, this study adopted Myers-Scotton's (2006) argument that speakers fall under the influence of another language because there is something more "attractive" about the language; the attraction largely being associated with the higher prestige of the speakers of that language or its wider use in the community where both languages are spoken. Myers-Scotton's (2006) reason for the influence of one language on another fits the present research where largely English was used by most people at tertiary institutions in Windhoek, compared to Silozi that was used only by speakers that hail from the Zambezi region of Namibia.

Myers-Scotton's (2006) reason for influence suits this study, as she stresses that the attraction of speakers in a bilingual or multilingual speech community could be associated with the higher prestige of the speakers of that language. The prestige with which English was held at tertiary institutions in Windhoek, if not the whole of Windhoek, cannot be over emphasised. It could be classified as the medium of communication in most Windhoek professional circles, the language of politics and even the medium of interaction among speakers who speak different mother tongues at most work places, such as schools and institutions of higher learning.

## **2.6 Language contact outcomes**

In providing specificity to the outcomes of languages in contact, Poplack and Sankoff (1984) argue that along with numerous lexical borrowings, there usually ensue phonological changes in the recipient language, and that the two corridors of "phonological and lexical" levels

constitute major gateways to all of the other aspects of contact-influenced change. It is also appropriate to consider here the observation by Benjamin (2005) that the common outcome of direct and indirect cultural contact is the diffusion of cultural items across linguistic boundaries. Benjamin (2005) stresses that one clear manifestation of this cultural diffusion is the emergence of new lexical items in the recipient language. New lexical items, Benjamin (2005) further explains, are imitations of forms or patterns in the donor language and they can be manifested as phonetic or semantic adaptations.

Nurse (1985) reports that modifications through language contacts implies the transfer of linguistic material in terms of: combinations of sound, meaning, and syntactic relations. Nurse (2005) stresses that languages in contact influence one another through the direct mechanism of borrowing and the interaction provides loanwords. This study investigated how English and Silozi influenced one another. The process involved assessing the new lexical items that might have resulted from the linguistic contact between the two languages in contact in the urban “speech community” of Windhoek.

In defining speech community, Thomason (1988) asserts that the term speech community describes a group of human beings identified in terms of geographical and social spaces and the set of sociolinguistic practices which make them different from other groups. Thomason (1988) stresses that the “space” in this definition needs not always be physical or geographical. It can be social, in the case of indirect contact through media or sacred texts.

## 2.7 Socio-historical factors

Weinreich (1953) argues that besides linguistic, typological reasons for language change in contact situations, the extra-linguistic factors (socio-cultural and psychological) are not to be dismissed. This study coupled Weinreich's (1953) argument above with Thomason and Kaufman's (1998) observation that ultimately, social factors are highly involved in language change in both genetically transmitted languages and mixed languages. It is also important to consider the observation by Bakker (2010), who asserts that in favourable, socio-cultural situations, language contact may lead to multi-directional outcomes which include the "mutual exchange" of linguistic items, although these exchanges are likely to be limited to a particular geographic region or at certain linguistic level.

Trudgill, Chambers and Schilling-Estes (2001) observe that two major social processes have given rise to contact situations of interest to linguists: conquest and immigration. The imposition of a language of wider communication has occurred both as a result of conquest per se, and in the establishment of standard languages via institutions like universal elementary education, where local populations have been transformed into linguistic minorities in a broader political unit. The observation by Bakker (2010) stresses the significance of the inclusion of socio-historical factors in the studies pursued in linguistic contact. The present study, therefore, also included in its investigation the factors that promoted bilingualism among Silozi speakers at tertiary institutions in the speech community of Windhoek.

Benjamin (2005) agrees with Bakker's (2010) observation by arguing that many scholars in the field of contact linguistics emphasise that the study of loan-words is concerned only with phonetically adapted lexical items to the exclusion of semantically adapted items, which,

according to them, should simply be seen as new lexical items in the language resulting from “influence” by items from another language. Benjamin (2005) terms this approach the “Narrow Approach” to lexical importation.

Thomason (2001) proposes that under the right social and linguistic conditions, tremendous alterations including structural changes will take place. Thomason (2001) asserts that in phonology, loss or attrition of entire phonetic and/or phonological categories in native words and of all kinds of morphophonemic rules, in syntax, sweeping changes in such features as word order, relative clauses, negation, coordination, subordination, comparison, and quantification and in morphology, typologically disruptive changes such as the replacement of flexional by agglutinative morphology or vice-versa, the addition or loss of morphological categories that do not match in source and borrowing languages and the wholesale loss or addition of agreement patterns (Thomason, 2001).

Furthermore, Benjamin (2005) discusses the role the community plays in language contact phenomena as far as inter-linguistic influence is concerned. Benjamin (2005) stresses that the nature and makeup of the community allow one to test hypotheses about the extra-linguistic factors often claimed to be relevant to contact-induced change. Benjamin (2005) opines that these extra-linguistic factors include intensity, length of contact, status of the languages in the community (minority or majority) and demographic features. Benjamin (2005) further stresses that other characteristics relevant to the contact situation include density of contact on the local level, individual bilingual ability and the relative tendency to borrow or code-switch.

The above observation by Benjamin (2005) reflects the phenomenon under investigation. The current study included in its investigation of linguistic cross-pollination participants who had

tertiary qualifications, stayed in Windhoek for a long time and were, therefore, conversant in both Silozi and English. Their bilingual ability and relative tendency to borrow or codeswitch made them relevant participants to the present study which investigated linguistic interinfluence between English and Silozi among Silozi speakers in Windhoek.

Sankoff (2001, p. 2) argues that “From the beginning of modern sociolinguistics, due attention has been paid to the study of speech communities characterised by language contact”. Sankoff (2001) explains that, far from conceiving of language contact as an individual enterprise, these authors recognised that language contact is always the historical product of social forces.

Sankoff’s (2001) observation here marries well with Benjamin’s (2005) assertion that the theoretical framework of contact linguistics became more vibrant with the works of Weinreich (1953).

Sankoff (2001) further stresses that the socially and historically oriented body of work contributed by sociolinguists owes a strong theoretical base to contact linguistics. In short, the sociolinguistic perspectives on language contact situations give emphasis to the investigation of the types of socio-historical situations that have given rise to different linguistic outcomes. Also, Clyne (1987) stresses that when working within the structural paradigm, studying language contact from both a linguistic and a socio-cultural perspective is important. It is such observations that compelled Benjamin (2005) to attest that some dialectologists, like and Siegel (1987), agree that the outcome of language and dialect contact will depend on both the linguistic relationship between the varieties and the social conditions underlying the contact.

It is important here to refer also to an observation that Winford (2003) makes. Winford (2003) states that Weinreich’s (1953) distinction between borrowing and interference as the two basic

types of cross-linguistic influence was further expanded and refined by Thomason and Kaufman (1988), with reference to a wide variety of contact situations. According to Thomason and Kaufman (1988), linguistic outcomes of language contact are influenced mainly by the history of social relations among populations, including economic, political and demographic factors. Language contact within a socio-historical perspective that considers the historical forces that led to language contact is the central theme of the work of Thomason and Kaufman (1988) on language contact.

Thomason and Kaufman (1988, pp. 14-15) argue that "Linguistic constraints on linguistic interference are based ultimately on the premise that the structure of a language determines what can happen to it as a result of outside influence". It is in this respect that the researcher in the present study saw it appropriate to mention that this study equally included socio-historical factors in trying to determine what led to linguistic contact within the area under investigation.

Furthermore, Benjamin (2005) stresses that the approach that also engages non-linguistic factors is designated the "Broad Approach". Benjamin (2005) explains that it is the main thrust of the sociolinguists who probe into different linguistic outcomes of language contact situations. For sociolinguists, as Benjamin (2005) further explains, the analysis of even a simple loan word should not be separated from non-lexical factors, such as societal and cultural influence and intervention. Social circumstances are equally reiterated by Gillian (2009) who opines that, when probing the diverse social circumstances of language contact separately according to the various domains of linguistic structure, it is clear that these circumstances have a differential effect.



Bakker (2010), as cited earlier on, asserts that in favourable, socio-cultural situations, language contact may lead to multi-directional outcomes which include the mutual exchange of linguistic items, although these exchanges are likely to be limited to a particular geographic region or at certain linguistic level. Bakker's (2010) assertion gave impetus to the current research as it also included in its investigation those factors that promoted bilingualism among the targeted Silozi speakers at tertiary institutions based in the geographical region of Windhoek.

In extending Bakker's (2010) observation above, Benjamin (2005) negatively criticises the stance of traditional studies on linguistic contact. Benjamin (2005) argues that the studies on the linguistic processes in the phenomenon of language contact are limited in the evaluation of loan words or word borrowing at the initial stages of the development of contact linguistics. These traditional studies, as Benjamin (2005) explains, focused mainly on explaining the linguistic items that were loaned, and rarely on the way in which the loan items came about. Benjamin (2005) asserts that the traditional investigations often failed to explain why the mixing and borrowing occurred, which is an equally important enquiry to be explained in sociohistorical context.

This study, therefore, included in its literature review the process of linguistic integration that borrowed linguistic items from the donor language (DL) to the recipient language (RL). Bakker's (2010) assertion above underscores the current study in terms of focusing on a given geographical speech community.

## **2.8 Borrowing of vocabulary**

Borrowing is a term that prompted multiple definitions from numerous scholars. Thomason and Kaufman (1988, p. 37) define borrowing as "the incorporation of foreign features into a

group's native language by speakers of that language: the native language is maintained but is changed by the addition of the incorporated features". This appears to coincide broadly with Van Coetsem's (1988) definition in terms of RL agentivity: If the recipient language speaker is the agent, as in the case of an English speaker using French words while speaking English, the transfer of material (and this naturally includes structure) from the source language to the recipient language is *borrowing (recipient language agentivity)*.

In other words, Van Coetsem (1988, p. 3) distinguishes between the "source language" and the "recipient language", and regards the factor of agency as primary. Van Coetsem's (1988 term "phonological borrowing" is parallel to "borrowing" in Thomason and Kaufman (1988), as they restrict this process to "recipient language agentivity" (p. 10). Native speakers of the recipient language import into their language something from another source language. The obverse of this analogous to Thomason and Kaufman's (1988) notion of substratum interference, is called "imposition" (p.11), which occurs when foreign language speakers *impose* the phonological habits of their own first language phonological habits on their own use of the second language. It is important to include Van Coetsem's (1988) note that "in our usage the term imposition does not carry negative connotations; it simply denotes an agent other than the recipient language speaker" (p. 11).

Scholars such as Winford (2003), Van Coetsem (1988), Thomason and Kaufman (1988) classify contact-induced changes in languages into two broad categories. They argue that there are contact-induced changes that take place due to "borrowing" and those that take place due to "interference". It is important here to include Winford's (2003) argument that other terms used for "interference" include "substratum influence" and "transfer". Winford (2003) bemoans the fact that labels like these, unfortunately, have been used to refer both to the outcomes of

language contact and to the “mechanisms” or processes that lead to such results. Winford (2003) asserts that this imprecision in the use of key terms poses serious problems for the understanding of what is actually involved in the two types of cross-linguistic influence.

In the same vein, Van Coetsem (1988) distinguishes between the mechanisms of borrowing under RL agentivity and imposition under SL agentivity, with their shared but differently implemented processes of imitation and adaptation. This approach, as Winford (2003) clarifies, recognises that the same agents may employ both kinds of agentivity, and hence different psycholinguistic processes, in the same contact situation.

Furthermore, Van Coetsem (1988) makes a broad distinction between “borrowing” and what he calls “imposition”, and defines them in terms of two transfer types, which he labels recipient language (RL) agentivity and source language (SL) agentivity. Van Coetsem (1988) stresses that transfer in this context is used in a neutral sense, to refer to any kind of cross-linguistic influence, not just L1 influence in SLA. The present study involved in its investigation of linguistic cross-pollination, or cross-linguistic influence, any kind of contact-induced changes between English and Silozi, as the two languages were used interchangeably by Silozi speakers in Windhoek.

Haugen (1953) suggests that every lexical borrowing involves two such processes:

“importation” and “substitution”. He explains that importation is typically partial, since it is not necessary to take over a word with all its sounds, forms and meanings intact. Instead, speakers tend to substitute some of the habits of their own language for those in the source language. On the other hand, Van Coetsem (1988) suggests a distinction between “imitation”

(roughly corresponding to Haugen’s (1953) “importation”) and “adaptation” (corresponding to “substitution”). Van Coetsem (1988) elaborates that the latter involves the use of L1 habits in modifying features imported from an SL.

The researcher in the present study followed Van Coetsem’s (1988) terminology, which appears more transparent and applicable. The present study involved in its investigation of linguistic cross-pollination cases of modification that Silozi speakers “showed” as they continued to use English and Silozi in the speech community of Windhoek. Winford (2003) argues that the twin mechanisms explain much about the types of lexical contact phenomena that have been classified as borrowings. Winford (2003) draws a simple classification to offer examples of the lexical contact phenomenon.

<b>A. Lexical borrowings</b>	French <i>rendezvous</i> in English
1. Loan words	
a) “Pure” loanwords	
b) Loan blends	Pennsylvania German. <i>bassig</i> (E. boss + G. –ig)
2. Loan shifts (loan meanings)	
a) Semantic extensions Loan translations	Americans Portuguese <i>frio</i> “cold infection” (on model of Eng. cold)
b) Loan translations	Germ. <i>Wolkenkratzer</i> (cf. Eng. <i>skyscraper</i> )
<b>B. Creations</b>	
1. Purely native creations	Pima “wrinkled buttocks” for “elephant”
2. Hybrid creations	Yaqui <i>líos-nóoka</i> (Lit. “god-speak”) “pray”
3. Creations using only	Japanese <i>wan-man-ka</i> “bus with no conductor” foreign morphemes. English <i>one + man + car</i> .

Table 1. A simplified classification of lexical borrowings: Adapted from: Winford (2003)

Winford (2003) argues that the lexical phenomena shown above are not exact imitations, but rather the products of various creative processes applied to SL forms or patterns. He further explains that some of them, for instance, “loanwords” and “loan blends”, illustrate the processes of importation and adaptation that are associated with prototypical lexical borrowing under RL agentivity. In this transfer type, as Winford (2003) shows, imitation comes first, and then adaptation alters the imported item so that it conforms fully to RL phonology, morphology and syntax. In other words, lexical borrowing typically adds new lexical items to the RL without affecting its structure. Most of the categories of lexical borrowing shown above conform to this pattern. Winford’s (2003) analysis of the process of borrowing reflects, to an extent, the present study that involved in its investigation of linguistic cross-pollination between English and Silozi in Windhoek, all the contact-induced changes and the process through which lexical items were adopted and adapted in the RL.

However, as Winford (2003) continues to throw light on the linguistic cross-pollination phenomenon, other lexical contact phenomena, such as loan translations appear to involve the transfer of structural patterns from the SL to the RL. Heath (1984, p. 367) refers to this as “pattern transfer” and distinguishes it from borrowing. The question then is whether phenomena like calquing are true borrowings, in the sense in which Van Coetsem (1988) uses the term. In other words, is imitation of a foreign structural pattern similar in kind to imitation of a foreign lexical item? What kinds of structure can be imitated (or borrowed) under RL agentivity? There seems to be consensus that patterns of the type involved in calquing, as well as derivational morphology, can be imitated in this way. This kind of borrowing is primarily lexical in nature, though it involves the transfer of structural patterns.

## **2.9 The issue of structural borrowing**

It has been a matter of debate whether and under what conditions, languages borrow structural features. Winford (2003) argues that these questions are vital to the understanding of contact-induced structural change, as well as to the classification of its products. It is important here to consider Thomason and Kaufman's (1988) argument that there is a scale of borrowing, with slight lexical borrowing at one extreme and extensive grammatical replacement at the other, with varying degrees of structural borrowing in between. Thomason and Kaufman's (1988) argument clearly implies that structure can be borrowed in its own right, and in significant degrees. In fact, as Winford (2003) stresses, it is debatable whether instances of so-called structural borrowing are not the result of direct importation or imitation of the kind associated here with lexical borrowing.

Furthermore, Winford (2003) opines that certain structural innovations in an RL appear to be mediated by lexical borrowing and are, therefore, not clear cases of pure structural borrowing. Winford (2003) further elaborates that, in other cases where direct borrowing of structural elements occur, as it seems to in some situations, it typically involves free morphemes such as prepositions and conjunctions. Winford (2003) further stresses that bound morphemes appear to be borrowed only in cases where they substitute RL morphemes that are semantically and structurally congruent with them. Moreover, such borrowing requires a high degree of bilingualism among individual speakers.

## **2.10 Cases of structural borrowing**

Scholars, such as Wilford (2003) and Kurath (1956), argue that there is ample evidence that heavy lexical borrowing can introduce new structural features into a language. A well-known

example is the extensive borrowing of the French lexicon into Middle English in the fourteenth to fifteenth centuries. The introduction of French loans with initial [v ð z] led to the phonemicising of OE allophonic variants, such as [f] and [v], [θ] and [ð] and [s] and [z]. The respective pairs of fricatives were originally allophones, voiced in intervocalic position, but voiceless elsewhere, for example, [wi:f] “woman” vs. [wi:vas] “women”. The introduction of French words like *veal*, and *zeal*, led to the development of contrasts, for example, between *feel* and *veal*, *seal* and *zeal*, leading to a phonemic opposition between the voiced and voiceless fricatives. Similarly, lexical borrowing led to the phonemicising of /č/ vs /j/ and [š] vs [ž]. On the whole, however, phonological changes were few, confined to the pairs above, and no new sounds were introduced into English.

Moreover, the tendency toward the phonemicisation of certain allophonic pairs may have existed even before French influence intervened. For example, Kurath (1956) argues that the loss of geminate consonants in words like [pyfan] (< pyffan) may have created a contrast between intervocalic [f] and the [v] in words like [dri:van] “drive”. Also, internal developments such as the loss or reduction of endings and lexical borrowing from Old Norse may have contributed to these changes.

Furthermore, Winford (2003) asserts that lexical borrowing from French also had some influence on English morphology, particularly on derivational processes. It introduced several derivational affixes, such as the prefixes in *dis-connect*, *de-flee*, *en-rich*, *em-bolden*, etc. Similarly, items like *cert-ify*, *charit-able*, *declar-acioun*, *statu-ette*, etc., yielded various suffixes, some of which became relatively productive as early as the Middle English period itself. For instance, as Wilford (2003) elaborates, the adjective-forming suffix *-able* was soon employed with native stems to yield words like *speakable*, *knowable*, etc. In general, however,

relatively few of the many French affixes that had been imported became productive, and the vast majority of French loans underwent adaptation to English morphological processes.

Winford (2003) advises here that the important point is that both the phonological and morphological innovations were introduced indirectly through lexical borrowing. Middle English speakers clearly did not isolate morphemes *like-able* in the relevant French words and import them independently of the stems to which they were attached.

In the same vein, Thomason and Kaufman (1988) discuss the situation in Kormakiti Arabic, where lexical borrowing was the source of various structural innovations. Thomason and Kaufman (1988) stress that, while such innovations are clearly borrowings, they were not directly imported in either of these cases. In fact, as they elaborate further, there seems to be much support for the traditional view that direct structural borrowing is subject to very strong constraints, as has long been argued by linguists such as Meillet (1921), Sapir (1921), and others.

As noted above, Winford (2003) extends that direct borrowing of structural elements can occur only when the languages involved are typologically very similar, allowing for the substitution of an RL morpheme by a close counterpart in the SL. Then leave, for the moment, the direct borrowing of function words, especially conjunctions and prepositions, which appear to occur quite frequently. For example, many indigenous languages in the Americas have borrowed conjunctions like *pero* “but” and “*como*” as, “like” from Spanish. This kind of borrowing is more akin to lexical than structural borrowing, and, like the former, it tends to have little or no impact on the structure of the RL.



The present study involved in its investigation of linguistic cross-pollination between English and Silozi the possibility of lexical and structural borrowing between the two languages under investigation. In providing some background to the practice of borrowing between languages in contact, the researcher saw it fit to adopt Hoffer's (2002) argument that perhaps the most frequently encountered product of cultural contact is the set of loanwords that follow from intercultural communication.

In stressing the history of borrowing, Atreya et al. (2014) argues much about the contemporary borrowing of English words into other languages, but this phenomenon is not new, nor is it very large by historical standards. They observe that the large-scale importation of words from Latin, French and other languages into English in the 16th and 17th centuries was more significant. In defining borrowing, Hoffer (2002) argues that borrowing is the process of importing linguistic items from one linguistic system into another, a process that occurs at any time that two cultures are in contact over an extended period of time.

In the same light, the researcher saw it appropriate to consider Appel and Muysken's (2005) observation on lexical borrowing, namely that it is hard to believe that there is any language which has not borrowed words from another. Appel and Muysken's (2005) define lexical borrowing as a linguistic phenomenon identified in most languages, a process of transferring linguistic signs. Appel and Muysken's (2005) stress that lexical borrowing refers to those specific cases where a structural unit of a language is inserted to name a linguistic reality which does not exist in the recipient language. Appel and Muysken's (2005) observation is reiterated by Gillian (2009) who asserts that lexicon is clearly the most readily borrowable element, and in due course, borrowing lexicon can lead to structural changes at all linguistic levels.

In explaining the process of borrowing, Appel and Muysken's (2005) assert that modifications through language contact experiences the transfer of linguistic material in terms of combinations of sound, meaning and syntactic relations. Benjamin (2005) elaborates on the process of borrowing by suggesting that every lexical borrowing involves two such processes: importation and substitution. Benjamin (2005) explains that "importation" is typically partial, since it isn't necessary to take over a word with all its sounds, forms and meanings intact. He asserts that instead, borrowing language speakers tend to substitute some of the habits of their own language for those in the source language.

Van Coetsem (1988) suggests instead a distinction between imitation (roughly corresponding to Benjamin's (2005) importation) and adaptation (corresponding to substitution). He then explains that adaptation involves the use of L1 habits in modifying features imported from an SL. Furthermore, Appel and Muysken (2005) argue that languages in contact influence each other through the direct mechanism of borrowing, the interaction providing loanwords.

Appel and Muysken (2005) further stress that language systems contain a number of independent elements (the lexicon, the phonological component); therefore, when a language borrows a word, it does not necessary mean that it borrows the sound of it as well. Appel and Muysken (2005) furthermore opine that there is no doubt that the loanword is phonologically adopted, but it could be adopted according to the system of the recipient language. The present study included phonological transformation in its investigation of how languages in contact (English and Silozi) influenced each other, and which determined how loanwords were adopted into either language, hence the term "linguistic cross-pollination".

## **2.11 Motivations for borrowing**

It has been suggested that there are two major motivations to borrow a word for which the recipient language already has a word. The two motivating factors suggested by Mougeon and Beniak (1991) are:

### **2.11.1 Core borrowings**

Core borrowings occur in the speech of bilinguals who regularly use both of their languages. In their study, Mougeon and Beniak (1991) found that those French speakers who roughly used English and French equally saw more borrowings than other groups. The present study targeted a group of people with tertiary qualifications that have been residing in Windhoek for a number of years, who, therefore, could be assumed to be speakers who would make equal use of English and Silozi, a prerequisite to core borrowing.

The role of borrowing by those who know both languages equally is further supported by Hoffer (2002) who argues that people who know another language well can use the items from that language at will. The researcher, in the present study, included as his sources of data the University of Namibia academics who were well conversant in both contact languages under investigation. The target group constituted resourceful participants in this study as they used items from both languages at will.

The bilinguals (conversant in both languages in contact) role in borrowing is further cited by Hoffer (2002) who stresses that contact with a prestige language, whether there are numbers of speakers in contact or not, often results in borrowing by the educated classes, which in turn

may or may not diffuse the loanwords through the general vocabulary. Hoffer (2002) cites, as an example, the Latin phrases that are still used in scholarly publications in the West, centuries after Latin is no longer anyone's native language.

Furthermore, Winford (2003) elaborates the conventional wisdom that there are two primary mechanisms by which one language can directly influence another - borrowing and imposition. Winford (2003) argues that these two major mechanisms and their associated types of agentivity are universal across contact situations, and most contact phenomena can be subsumed under one or the other. As it has been shown, the definitive characteristic of borrowing is that it leads to little, if any, modification of the RL structure. Imported items are integrated phonologically, morphologically and syntactically, via the process of adaptation.

Contact outcomes that fall under this scenario include cases of lexical borrowing, “classic” code-switching, and most bilingual mixed languages.

The present study involved in its investigation of linguistic cross-pollination between Silozi and English whether or not imported linguistic items modified the RL structure, and the study also sought to investigate the category into which the contact outcomes of the two languages in contact fell. The researcher felt here obliged to revisit closely the actual processes associated with the two major mechanisms. As we saw earlier, Van Coetsem (1988, pp. 8–12) argues that there are two major processes, imitation (Haugen’s “importation”) and adaptation (Haugen’s “substitution”). As van Coetsem (1988, p. 7) explains, imitation produces a deviation from the RL, yielding a borrowing that is often only an approximation to the SL item.

Adaptation, on the other hand, “is an adjustment to the native RL which does not modify that language” (1988, p. 9). Here, Winford (2003) explains that both processes are at work in both

of the transfer types, but in borrowing, imitation comes into play before adaptation, while the reverse obtains in impositions. Adaptation, on the other hand, as Coetsem (1988, p. 12) explains, can produce quite similar results in both borrowing and imposition. Van Coetsem advises that the consideration of English-derived words are adapted by Hindi speakers in both RL and SL “agentivity”.

Hock (1991) discusses how English stops and fricatives are substituted by perceived equivalents in Hindi when borrowed into the latter. For instance, English aspirated stops (/p, t, k/) are replaced by Hindi unaspirated stops ([p, t, k]), while English fricatives (/f, T/) are replaced by Hindi aspirated stops [p, t]. When speakers of Hindi speak English, they adapt English sounds in precisely the same way; this is a well-known feature of Indian English.

The similarity in outcomes, as Wilford (2003) elaborates, may explain the tendency to confuse the two major mechanisms and their associated types of agentivity. In both cases, the agents of change are adapting materials from an external language to fit the structure of their dominant language. In borrowing, as Wilford (2003) further elaborates, they preserve this structure, particularly the more stable domains of grammar, such as phonology, morphology, and most, if not all, aspects of morpho-syntax. In imposition, they transfer varying degrees of their L1 structure to an external recipient language. In many cases, the results of these distinct mechanisms do not, by themselves, indicate which mechanism was involved, in the absence of sound sociohistorical evidence.

Miura (1979) identifies two means of sound replacements the sounds which exist in English but not in Japanese receive: One is to substitute the English sound with a corresponding one in

Japanese, and the other is to substitute with a sound which is not found in Japanese but is still relatively easy to pronounce for the native speaker. Miura (1979) further clarifies that some examples of substitution with different sounds are the English [th] and [dh] with [s] and [z] in Japanese, or [ng] in English with [ngu] in Japanese.

**theory** > *seorri* **all weather** > *ooru uezza*

**song** > *songu*

## 2.12 Morphological integration

Miura (1979) opines that morphological integration is the process through which loanwords are assimilated into the target language, making them morphologically indistinguishable from native RL. In much the same way as loanwords may be integrated into the phonological patterns of EA along a continuum from fully integrated on one extreme, to non-integrated on the other, loanwords may be integrated morphologically as well into the RL.

According to Smeaton (1973), a loanword undergoes modification of morphological structure to achieve harmony with the established predominant pattern and root system, thus usually leading to internal pluralisation, that is, broken plural and similar derivations. Atreya et al. (2014) argue that it is universal that borrowed words are almost always adapted to the recipient language in morphology. Atreya et al. (2014) stress that 100 percent of words of any language (both borrowed and indigenous ones) are treated the same as morpho-syntax. That is, both receive the same inflections and they follow the same requirements for word order. Thus when a Spanish speaker uses an English borrowed word, such as “weekend”, it receives a Spanish

determiner and it is, therefore, “el weekend” (realised as a singular with masculine gender, the default gender for Spanish).

Another example, as Atreya et al. (2014) explains, shows how a borrowed word, Norwegian *matpakke* “lunch bag” is integrated into a Turkish frame when used in a sentence by Turkish immigrants to Norway who are fluent in both languages. They borrow the entire expression as a loan translation in which the verb with a Norwegian meaning has been realised in Turkish. The present study investigated the linguistic cross-pollination between English and Silozi spoken in the geographical area of Windhoek, and it included in the investigation what happened to language features that could be subjected to the process of borrowing.

In the same light, Hoffer (2002) further stresses that the borrowed forms are integrated into the syntax and inflection system of the native language. He elaborates that the borrowed form could be used with native prefixes and suffixes as in the original French “garage” becoming “ungaraged” Hoffer (2002) further points out that foreign affixes which occur in enough borrowed items become productive affixes in the language, as in Latin-French suffix “-able” in “agreeable,” and “drinkable.” The researcher opines that Hoffer’s (2002) observation was important to the present study.

Hoffer (2002) observes that “intimate borrowing” is the situation in which two or more languages are used in a single geographical area by a single political community. Hoffer (2002) stresses that usually intimate borrowing involves a dominant or upper and a lower language, and the borrowing is primarily from the upper to the lower, and it often includes speech forms which are not new objects or practices. The observation Hoffer (2002) by defines the relationship between English and Silozi, where English is the dominant or upper and Silozi the

dominated or lower language. The researcher wished to focus on the kind of linguistic crossinfluence that had taken place between the two languages.

Smeaton (1973), in his study on English vowel integration in Egyptian Arabic, asserts that in much the same way as SL consonants are altered in loanwords to suit the consonants available in EA, vowels in loanwords are limited to those of EA, namely /i/, /e/, /a/, /à/, /o/, /u/ and /ii/, /ee/, /aa/, /ââ/, /oo/, and /uu/. Smeaton (1973) argues that to suit the sound patterns of EA, vowels in loanwords may undergo two main types of alteration: substitution and/or lengthening. Smeaton (1973) explains that vowel substitution may be due to their absence from EA, a preference for one vowel over another, or for vowel harmony in a word- Vowels that are not found in EA are substituted by others when they occur in loanwords.

Smeaton (1973) further explains that vowels are also altered to avoid variation and create harmony within a word, thus simplifying its pronunciation, through duplication of the same vowel in adjacent syllables. An example of this is the pronunciation of “aluminium” as /ʔalamonjom/, where the first vowel is duplicated in the second syllable and the other one in the last syllable, thus creating the pattern Ca-Ca-CoC-CoC. Similarly, as Smeaton (1973) further explains, the loanword based on “chiffonier” is pronounced /ʃofoniira/, also duplicating the first vowel, thus producing the pattern Co-Co-CVVCV. This study involved two languages of which one, Silozi, disallowed consonant clusters while English allowed the cluster of consonants either at the “word initial” or “word final” positions.

The English example could be seen in words such as strike, and text. Miura (1979) pursued a study on the assimilation of English loanwords into Japanese. Miura (1979) concludes that since the phonetic system of a Japanese syllable is described either as V or CV, consonants are



not used in succession, but a consonant is usually followed by a vowel. Miura (1979, p. 64) explains “For this reason, it is difficult to reproduce in Japanese a group of consonants as it exists at the beginning of the word 'strike' or at the end of the word 'text'”. Miura (1979) argues that each of the consonants in the words given above must be succeeded by a vowel. Miura provides an example indicating the transformation from English to Japanese:

**strike** > *sutoraiku* **text** > *tekisuto*

Miura’s (1979) example indicated above shows that the English language allows consonant clusters both in word initial, as in “strike”, and in word final, as in “text”, positions. However, the example demonstrates that Japanese does not allow consonant clusters in either positions. The study at hand investigated linguistic cross-pollination, an endeavour that included Silozi, a language that, just like Japanese, does not allow consonant clusters with English that allows consonant clusters.

### **2.13 Magnetism of the dominant culture of the donor language**

The motivating power of the dominant culture of a given language is embedded in Mougeon and Edouard’s (1991) argument that the magnetism of the dominant culture of the donor language seems to motivate speakers to borrow core elements.

Mougeon and Edouard (1991) assert that it does not even seem to matter if the donor language is widely spoken in the community in question. The researcher sees it fit to also include here the argument Atreya et al. (2014) make in their interpretation of linguistic hegemony. Atreya et al. (2014) assert that it is obvious that a language's influence widens as its speakers grow in

power. Atreya et al. (2014) cite as an example Chinese, Greek, Latin, French, Spanish, Arabic, Persian, Sanskrit, Russian, German and English as languages which have each seen periods of widespread importance, and have had varying degrees of influence on the native languages spoken in the areas over which they have held sway.

In extending the argument of Atreya et al. (2014), referred to above, the researcher concurs with the observation by Benjamin (2005) that the direction of contact is determined by factors of social prestige. He further explains that of the two languages, one will be of higher standing than the other. This, as he explains further, is termed the “superstrate” language. On the other hand, Benjamin (2005) argues, the other is then the “substrate” language. Benjamin (2005) notes that in a few cases where both languages are approximately equal in social status, one can speak of “adstrate” languages.

Benjamin (2005) continues that normally the superstrate language influences the substrate language. A substrate language may exert an influence, but this is usually low level and not of any immediate relevance to the structure of the superstrate language, though substrate influence may be the source of changes in cases of delayed effect contact. The present study included in its investigation of linguistic cross-pollination the English language, which acquired widespread importance and has had varying degrees of influence in the geographic region of Windhoek.

## **2.14 Phonological integration**

Thomason (1999) explains phonological borrowing as the process of making borrowed words fit the sound system of the recipient language. This can include Benjamin’s (2005) argument

that, with the adoption of lexical items by the recipient language, several phonological alterations are also likely to occur with the influence of the phonological system of the recipient language. Such phonological alteration, as Benjamin (2005) further argues, would not be limited to the foreign origin vocabulary; in due course, it may filter down to the phonological system of the native language.

In extension to Benjamin's argument above, the present study further considered Gillan's (2001) assertions that: Phonological change is also almost universally characteristic of adult L2 speakers, but for social reasons, the "substratum potential" such speakers have is usually very limited. When they do, they may have a very strong influence in bringing about phonological changes that can have far-reaching influences in morphology and syntax as well. So the introduction of foreign lexical material carries not only phonological baggage, but often may carry morphological and syntactic baggage as well (p. 642-643).

Thomason (1999) advises the consideration of phonotactic, which refers to the combination of the sounds that are permissible in the recipient language. The researcher concurs with Atreya et al.'s (2014) observation that many languages have a CVCV system. This means that consonants alternate, but they allow no consonant clusters, and the word must end in a vowel. Similarly, the Silozi language in the present study has a CVCV system demonstrating that the consonants alternate, but it allows no consonant clusters and all the words end in a vowel, or even vowels. Atreya et al. (2014) further argue that the phonotactic of English, for example, allow many words to end in consonants and that there are many consonant clusters. Atreya et al. (2014) advise the consideration of a word, such as *streets*, that both begins and ends with consonant clusters. Consequently, when other languages borrow English words, they may break up consonant clusters or make other changes.

In the same vein, Thomason (1999) stresses that borrowed words are almost always adapted to the recipient language in morphology, receive the same inflections and follow the same requirements for word order. It was the interest of the researcher in the present study to include in the investigation what happened to the words that Silozi and English borrowed from each other, as the languages were used alongside or even interchangeably in the geographical area of Windhoek that was studied. In a similar way, Atreya et al. (2014) cite an example of the Hindi languages that borrowed from English. Atreya et al. (2014) argue that when Hindi languages borrow English words, consonant clusters are broken up by many non-English speakers or Hindi speakers. For example, a word like /film/ becomes /filim/ because Hindi language has a CVCV construction.

Appel and Muysken (2005) explain that not all languages of the world (by any means) have the same phonemic inventory of distinctive sounds. Appel and Muysken (2005) stress that when different languages borrow words from other languages, they attempt to make them sound native. When Chinese borrows a word, Chinese speakers want to make it “as Chinese” as possible (Appel & Muysken, 2005). For instance, as cited earlier on, Miura (1979) identifies two means of sound replacements the sounds which exist in English but not in Japanese, receive: one is to substitute the English sound with a corresponding one in Japanese, and the other is to substitute with a sound which is not found in Japanese but is still relatively easy to pronounce for the native speaker. Miura (1979) further clarifies that some examples of substitution with different sounds are the English [th] and [d] with [s] and [z] in Japanese, or [ng] in English with [ngu] in Japanese.

The means of replacing sounds that exist in English but do not exist in the target language, fascinated the researcher in the study at hand. In particular, the substitution with different

sounds of the English sound [th] to compensate for its absence in Silozi excited much interest. It was in the interest of this researcher to examine the linguistic cross-pollination that took place when sounds that existed in English but not in Silozi were used by the Silozi speakers as they spoke English in the geographical area of Windhoek. Nurse (1985) asserts that a minority of the world's languages appear to have a series of dental (as opposed to alveolar) obstruents. Nurse (1985) argues Proto-Bantu does not have such a series, nor do most East African Bantu languages.

By contrast, as Nurse (1985) explains, three Bantu languages in northeastern Kenya (the northern Swahili dialects, Pokomo, Elwana) have acquired such a series, which thus merits explanation. There are three mechanisms involved: (a) the borrowing of loan sounds along with loan vocabulary, (b) a simple phonological shift whereby inherited alveolars moved one place to become dental, and (c) a more complicated shift whereby inherited (pre) palatals bypassed an intervening alveolar series to become dental.

Nurse (1985) stresses that the two dental /th/ sounds of English are frequently made in error by non-native English speakers, and they are important sounds to master because they are frequently used in English. Nurse (1985) explains that these sounds are differentiated into the voiced /ð/ and voiceless /θ/. Nurse (1985) further says that the /ð/ is the IPA symbol used to express the voiced /th/ sound as in the, that, there, those, etc., while /θ/ is the IPA symbol used to express the unvoiced /th/ sound as in think, thank, theft, thick, etc. These dental sounds are actually defined as being epico-dental sounds, as the tip of the tongue (lower articulator) articulates with the teeth (Nurse, 1985).

### 2.14.1 The voiced dental fricative

In this case, as Nurse (1985) explains, the articulation implies a very soft contact between the articulators, as in the, this, that and thy.

ð



Figure adapted from Nurse (1985)

Possible positioning:

- Word initial as in *though, there, they*
- Word medial as in *within, leather, father*
- Word final as in *with, soothe, seethe*

If one feels the throat, one should be able to detect the vibrations of a voiced consonant. A speaker can also feel the tongue tip acting against his/her upper front teeth. The fact that air is forced between the tongue and the upper teeth means that it is a fricative consonant.

Voicing: **Voiced**

Place of articulation: **Dental**

Manner of articulation: **Fricative**

Position of the soft palate: **Oral**

### 2.14.2 The voiceless dental fricative

In this case still, as Nurse (1985) explains, the articulation implies a very soft contact between the articulators, as in *think, thank, thigh* and *thought*.

θ



Figure adapted from Nurse (1985)

Possible positioning:

- Word initial as in thin, thirst, think
- Word medial as in ether, lethal, author
- Word final as in heath, path, cloth

The speaker cannot feel any vibration of the throat indicating that it is a voiceless sound. One can feel air being forced between the tip of the tongue and the upper front teeth. Nurse (1985) stresses that any sound articulated at the teeth is a dental sound, whereas any sound that is created by creating friction by forcing air through a narrow channel is known as a fricative.

Voicing: **Voiceless**

Place of articulation: **Dental**

Manner of articulation: **Fricative**

Position of the soft palate: **Oral**

The mistakes made by non-native speakers of English, as far as the aforementioned dental

English sounds are concerned, could be summarised as follows:

Voiceless th: /s/, /t/, /f/, /b/ substitutions or eliminated completely;

Voiced th: /z/, /d/, /f/ substitutions or eliminated completely.

The researcher in the present study included in his investigation of linguistic cross-pollination between Silozi and English among Silozi speakers residing in Windhoek, cases of linguistic

cross-pollination that results from the use of the two English dental sounds referred to hereinabove.

Furthermore, Nurse (1985), as cited earlier on, asserts that a minority of the world's languages appear to have a series of dental (as opposed to alveolar) obstruents. Nurse (1985) argues ProtoBantu does not have such (alveolar) series, nor do most East African Bantu languages. Included in his explanation of how three Bantu languages (the northern Swahili dialects, Pokomo, Elwana) in northeastern Kenya acquired such series, Nurse (1985) opines that a simple phonological shift saw inherited alveolars move one place to become dental. The present study included in its investigation of linguistic cross-pollination, the linguistic outcome that followed the use of the alveolar sounds in English as Silozi speakers in Windhoek spoke English.

### **2.14.3 The alveolars**

Six alveolar sounds are identified in English: /d, t, z, s, n, l/ as in take, day, see, zoo, never and later (the last one is lateral). Of the group, /t, s/ are voiceless and the rest, /d, z, n, l/ are voiced. As for the place of articulation, the tip of the tongue (the blade of the tongue for some speakers) articulates with the alveolar ridge, therefore, these consonants are actually described as being epico-alveolar or laminal depending on the part of the tongue which participates in the articulation.

Nurse (1985) hypothesises that forms of alveolar dentalisation took place under historical conditions of contact with neighboring three Bantu languages in northeastern Kenya (the



northern Swahili dialects, Pokomo, Elwana). Nurse (1985) recognises that the three Bantu languages in the area under scrutiny have a full series of dental stops or obstruents.

Dentalisation entails alveolar consonants pushed forward to become dental, and as Nurse (1985) stresses, (pre)palatals could even bypass an intervening alveolar series to become dental, a process little reported in the literature.

The current study that investigated linguistic cross-pollination between English and Silozi included an analysis of the linguistic outcome that results from the use of alveolar consonants (/s/ and /z/) together with the dental sounds (/ð/ and /θ/) of English, as explained above, and also analysed the linguistic cross-pollination cases that result when Silozi speakers encounter English words with the alveolar consonants /t/, /s/, /z/ and /d/.

In the study of two Bantu languages (Pokomo and Elwana), as Nurse (1985) found out, “dentality” in all four seems to have come about under the same formative influence, namely, interaction with certain neighboring Cushitic languages. This study included the cases of linguistic cross-pollination as the Silozi speakers used these sounds (/t/, /d/, /s/, and /z/) as they speak English amongst themselves and even amongst other residents from different linguistic backgrounds in the geographical area of Windhoek. It analysed the place of articulation that were behind the articulation of the alveolar sounds /t/, /s/, /z/ and /d/ as the Silozi speakers spoke English.

#### 2.14.4 The articulation of the targeted English alveolar sounds

**t**



Figure adapted from Nurse (1985)

As in tin, tear, top, tank.

Possible positioning:

- word initial as in town, take, talk
- word medial as in fatal, steak, butter
- word final as in but, fit, boat,

The speaker can clearly feel their tongue touch the alveolar ridge and the distinct explosion of air that marks it as being plosive.

Voicing: **Voiceless**

Place of articulation: **Alveolar**

Manner of articulation: **Plosive**

Position of the soft palate: **Oral**

**d**

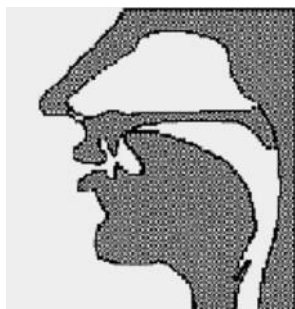


Figure adapted from Nurse (1985)

As in dog, dip, day, deer

Possible positioning:

- word initial as in dog, dear, dish
- word medial as in middle, admit, badly
- word final as in third, mad, old

The speaker can feel that the throat vibrates as they say the letter, so it is voiced. The speaker should be able to feel the tongue the alveolar ridge, making it an alveolar sound. And, one could feel a small explosion of air on the hand if they were to hold it in front of their mouth, which demonstrates that it is a plosive sound.

Voicing: **voiced**

Place of articulation: **Alveolar**

Manner of articulation: **Plosive**

Position of the soft palate: **Oral**



Figure adapted from Nurse (1985)

**Z**

As in zoo, zip, zeal, zone

Possible positioning

- word initial as in zest, zinc, zulu
- word medial as in easy, bosom, lazy
- word final as in has, was, does

This sound is very clearly a voiced sound. It is the voiced equivalent of /s/. A speaker can feel air being forced through the tongue and the alveolar ridge, meaning that it is a fricative being articulated at the alveolar.

Voicing: **Voiced**

Place of articulation: **Alveolar**

Manner of articulation: **Fricative**

Position of the soft palate: **Oral**



Figure adapted from Nurse (1985)

**S**

As in song, sip, soap, seat

Possible positioning:

- word initial as in seal, cease, sit
- word medial as in essay, escape, pencil
- word final as in pass, goose, famous

This sound is totally voiceless. One should be able to feel the air being forced between the tongue and the alveolar ridge. The fact that there is friction means that it is a fricative, being articulated in the alveolar region.

Voicing: **Voiceless**

Place of articulation: **Alveolar**

Manner of articulation: **Fricative**

Position of the soft palate: **Oral**

## **2.15 Universal phonotactic constraints**

Various hypotheses have been offered regarding the factors which determine the phonetic shape of human language. For example, Liljencrants and Lindblom (1972) hypothesise that the configuration of vowel systems was largely determined by the perceptual principle that members of a given system should be maximally different from one another. By using this principle of maximal perceptual contrast, Wright (1980) proposes a possible account for a cross-linguistic tendency that nasal vowels never outnumber oral vowels in a given language. Ohala and Riordan (1979) suggest that the aerodynamic requirements on voicing and the compliance of surface tissue of the oral cavity would explain why back-articulated voiced stops are missing in the voiced stop series in many languages.

Haruko (1982, p. 1-2) explains and predicts cross-linguistic tendencies in phonotactic constraints and comes up with the following universal tendencies:

Consonant clusters and vowel clusters in general are disfavored. Initial consonants are preferred to final consonants. Obstruent clusters in the same manner of articulation are rare. Obstruent + liquid clusters are preferred to nasal + liquid clusters. Among obstruent + [l] clusters, dental stop + [l] clusters are rare. Obstruent + [r] clusters, however, are not restricted in any particular way. Among consonant + glide clusters, labial + [w] and dental/alveolar/palatal + [j] are disfavored.

Similarly, labialisation and palatalisation as secondary articulations are disfavored on labial consonants and dental/alveolar/palatal consonants, respectively. Combinations of a labial or velar consonant and a rounded vowel and of a dental/alveolar/palatal or velar consonant and a front vowel are relatively rare. Among vowel clusters, combinations of a low vowel and a high vowel are preferred to other vowel combinations. Moreover, sound change affects some specific sound sequences. Labiovelars or velar + [w] sequences often change to labials, and palatalized labials or labial + [j] sequences often change to dentals/alveolars/palatals.

Nurse (1985) argues that, minority of the world's languages appear to have a series of dental (as opposed to alveolar) obstruents. Proto-Bantu does not have such a series, nor do most East African Bantu languages. Nurse (1985) further explains that, by contrast, three Bantu languages in northeastern Kenya (the northern Swahili dialects, Pokomo, Elwana) have acquired such a series, which thus merits explanation.

There are three mechanisms involved: (a) the borrowing of loan sounds along with loan vocabulary, (b) a simple phonological shift where inherited alveolars moved one place to become dental, and (c) a more complicated shift where inherited (pre) palatals bypassed an intervening alveolar series to become dental. Again, Nurse (1985) asserts that it is hypothesized that these forms of dentalisation took place under historical conditions of contact with neighboring Cushitic communities.

## **2.16 Mutual and non-mutual Influence**

Some scholars argue on both sides as far as the direction the linguistic influence between languages goes. For instance, Atreya et al. (2014) argue that change, as a result of contact, is

often one-sided. Chinese, for instance, has had a profound effect on the development of Japanese, but the Chinese language remains relatively free of Japanese influence, other than some modern terms that were re-borrowed after having been coined in Japan, based on Chinese precepts and using Chinese characters. Atreya et al. (2014), furthermore, cite as an example a situation in India where Hindi and other native languages have been influenced by English up to the extent that loan words from English are part of day-to-day vocabulary.

On the other hand, though, Atreya et al. (2014) also argue that in some cases, language contact may lead to mutual exchange, although this exchange may be confined to a particular geographic region. For example, in Switzerland, the local French has been influenced by German, and vice-versa. In Scotland, the Scottish language has been heavily influenced by English, and many Scottish terms have been adopted into the regional English dialect. The indelible mark left by the long association the English language had with the French language is equally worth noting, for English even has a few phrases, adapted from French, in which the adjective follows the noun: court-martial, attorney-general and Lake Superior.

Additionally, Bakker (2010) observes that change as a result of contact may be often unidirectional. In favourable socio-cultural situations, language contact may lead to multidirectional outcomes which can include the mutual exchange of linguistic items, although these exchanges are likely to be limited to a particular geographical region or at certain linguistic levels. The present study included in its investigation the linguistic crosspollination, or linguistic inter-influence, between the languages Silozi and English, as used alongside each other in the geographic region, or urban centre, of Windhoek, Namibia by academics.

Thomason (199) argues that people could retain features of the substratum as they learn the new language, and even pass these features on to their children, leading to the development of a new variety. He explains the meaning of substratum by using the language shift scenario, and asserts that when language shift occurs, the language that is replaced (known as the substratum) can leave a profound impression on the replacing language (known as the superstratum). Thomason (1999) cites as an example the distinct pronunciation of the dialect of English spoken in Ireland that comes partially from the influence of the substratum of Irish.

## **2.17 Conclusion**

This chapter presented the literature review and the theoretical framework that underscore this study. Chapter Four presents the data gathered for the study at hand.



## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter presents the research methodology used to conduct this study. The chapter focuses on the research approach, research design and data collection procedures and instruments used in collecting data for the research. Limitations of the research and research ethics are also discussed in this chapter.

#### **3.2 Research approach**

The aim of this study was to investigate linguistic cross-pollination between English and Silozi among Silozi speakers residing in Windhoek. In order to understand the phenomenon of linguistic cross-pollination or linguistic inter-influence between Silozi and English among Silozi speakers, quantitative data was obtained to investigate contact-induced changes at the three levels of language (phonology, morphology, and lexicon). Furthermore, quantitative data were required in order to assess the kind of changes that might have taken place as a result of language contact between the two languages under investigation.

Since this study also assessed the role of social factors in social-contact phenomena, qualitative data were collected to explore the factors that promoted bilingualism among Silozi speakers.

Patton (2002) argues that one is allowed to use methodological appropriateness as the primary criterion for judging methodological quality, recognising that different methods are appropriate for different situations. The mixed-methods approach was appropriate for this study, for it required both qualitative and quantitative data in order to understand the phenomenon of linguistic cross-pollination between Silozi and English. Creswell (2003) defines a mixed methods approach as one in which the researcher tends to base knowledge claims on pragmatic grounds (for example, consequence-oriented, problem-centered, and pluralistic). Creswell (2003) argues that a mixed methods approach employs strategies of inquiry that involve collecting data either simultaneously or sequentially to understand research problems. Tashakkori and Teddlie (1998) define mixed-method studies as studies that are products of the pragmatist paradigm that combine the qualitative and quantitative approaches in different phases of the research process.

In the current study both qualitative and quantitative data were gathered simultaneously to enable the researcher to investigate contact-induced changes at the language levels of phonology, morphology, and lexicon. The data that were gathered were eventually analysed by transcribing the recorded read words, phrases and sentences to investigate phonological interinfluence between Silozi and English.

De Vos et al. (2009) further explain that most of the mixed-method studies use triangulation as a way of combining the quantitative and qualitative approaches. Creswell (2003) observes that the concept of triangulation is based on the assumption that any bias inherent in a particular data source, investigator and method would be neutralised when used in conjunction with other data sources, investigators and methods. The current study analysed quantitative data (for

contact-induced changes at three levels of language and assessed the specific changes that have been taking place) gathered through qualitative means (recorded interview).

The quantitative data were then triangulated with the qualitative data. These were then categorised in emerging themes, to enhance the researcher's understanding of the linguistic cross-pollination between English and Silozi. Padgett (1998, p. 97) identifies four different types of triangulation:

- Data triangulation denotes the use of more than one data source (interviews, archival materials, observational data, etc.).
- Investigator or observer triangulation is the use of more than one observer in a single study to achieve intersubjective agreement.
- Theory triangulation means the use of multiple theories or perspectives to interpret a single set of data.
- Methodological triangulation denotes the use of multiple methods to study a single topic, for example combining quantitative and qualitative methods in a single study.

The current study followed data triangulation in collecting data through interviews and other sources such as Silozi/English dictionary, as well as methodological triangulation, which was the combination of quantitative and qualitative methods in a single study. Thus, as Padgett (1998) stresses, the concept of triangulation is sometimes used to designate a conscious combination of quantitative and qualitative methodology.

### 3.3 Research design

De Vos et al. (2009) assert that research designs will differ depending on the purpose of the study, the nature of the research questions, and the skills and resources available to the researcher. Creswell (2007) identifies the following five strategies of inquiry or traditions that could be used to design (qualitative) research: *biography*, *phenomenology*, *grounded theory*, *ethnography* and *case study*. However, as De Vos et al. (2009) explain further, as each of the possible designs has its own perspective and procedures, the research process will also reflect the procedures of the chosen design.

The researcher in the study at hand sought for an in-depth understanding of the linguistic crosspollination phenomenon between Silozi and English among Windhoek residents. Therefore, the method was chosen for the current study since it entails the collection of very extensive data in order to produce an in-depth understanding of the entity being studied (Borg & Gall, 1989). Creswell (2007) asserts that a case study investigates a given phenomenon within a real life context using multiple sources in order to produce a case description and case-based themes, for it probes deeply and analyses intensively.

In the context of the current study, the researcher wished to investigate linguistic crosspollination between Silozi and English. In order to gather both quantitative and qualitative data in this situation, the researcher required exposure to the reading and discussion sessions in which these two languages (Silozi and English) were the medium through which the discussions were taking place in real time, as well as investigate perceptions of the participants regarding linguistic cross-pollination.

Creswell (2007) argues that a case study can be regarded as an exploration of an in-depth analysis of a bounded system (bounded by time and/or place), or a single or multiple case, over a period of time. De Vos et al. (2009) stress that the case being studied may refer to a process, activity, event, programme or individual or multiple individuals. In the present study of investigating linguistic cross-pollination, the case being studied were *cases* of linguistic crosspollination or linguistic inter-influence between English and Silozi were investigated.

Creswell (2007) states that the product of a case study research is an in-depth description of a *case* or *cases*. Creswell (2007) further stresses that the researcher situates the case under investigation within its larger context, but the focus remains on either the case or an issue that is illustrated by the case. This implies, as Babbie (2001) explains, that case study researchers, in contrast to grounded theorists, seek to enter the field with a knowledge of the relevant literature before conducting the field research. In the current study of investigating *cases* of linguistic cross-pollination, literature in relation to the research objectives had been reviewed and, therefore, the direction for fieldwork research had been provided.

Mark (1996, p. 219) refers to three types of case study, all with different purposes:

- *The intrinsic case study* is solely focused on the aim of gaining a better understanding of the individual case. The purpose is not to understand a broad social issue, but merely to describe the case being studied. The present study included in its investigation of linguistic cross-pollination between Silozi and English a detailed description of the language contact phenomenon.
- *The instrumental case study* is used to elaborate on a theory or to gain a better understanding of a social issue. The case study merely serves the purpose of facilitating

the researcher's gaining of knowledge about the social issue. In the study at hand, a case study was employed to merely aid the investigation of *cases* of linguistic crosspollination between Silozi and English among Silozi speakers in Windhoek.

- *The collective case study* furthers the understanding of the researcher about a social issue or population being studied. The interest in the individual case is secondary to the researcher's interest in a group of cases. Cases are chosen so that comparisons can be made between cases and concepts and so that theories can be extended and validated. Though the current study paid attention to a single *case* of linguistic crosspollination, it also extended to specific *cases* of linguistic inter-influence between the two languages in question.

### **3.4 Population of the study**

De Vos et al. (2009, p. 209) draw a distinction between the terms “universe” and “population”. “Universe” refers to all potential subjects who possess the attributes in which the researcher is interested. The universe of this study, therefore, was all the speakers of Silozi residing in the geographical area of Windhoek. On the other hand, population is a term that sets boundaries on the study unit (De Vos et al., 2009). De Vos et al. (2009) clarify that population refers to individuals in the universe who possess specific characteristics. Seaberg (1988) defines population as the total set from which the individuals or units of the study are chosen. Bless and Higson-Smith (2000) see population as the set of elements that the research focuses upon and to which the obtained results should be generalised.

The current study was conducted at the three universities, based in Windhoek, namely the University of Namibia (that is UNAM Main campus, UNAM Khomasdal campus and the School of Medicine), Namibia University of Science and Technology (NUST) and the International University of Management (IUM). The population of this study comprised all the Silozi and English academic staff members employed and stationed at the centres of the institutions mentioned above.

### **3.5 Sample and sampling procedures**

A sample comprises elements of the population considered for actual inclusion in the study, or it could be viewed as a subset of measurements drawn from a population in which the researcher is interested (Da Vos et al., 2009). Da Vos et al. (2009) further argue that the sample is studied in an effort to understand the population from which it was drawn. The sample of participants for this study comprised a representation of the characteristics of the population from which they were drawn, but the data drawn from the participants were a representation of the languages that were under investigation.

Since this study intended to generalise cases of linguistic cross-pollination from the sample to the English and Silozi languages spoken by the entire population from which the sample was drawn, the sample, therefore, had approximately the same linguistic competence of English and Silozi as the population relevant to the research objectives. The significance of bilingualism in this study made it important to select academic staff members whose competency in both English and Silozi could not be doubted. In this study, where language was at the centre of

investigation, the right group composition of the academic staff, therefore, generated freeflowing discussions that contained useful data. A determination of the total number of all Silozi speakers employed at each of the targeted institutions was made with the assistance of one of the Silozi and English speaker at the each research site. The simple random technique was then employed to select a sample of between 6 to 10 participants who took part in reading and discussion sessions.

The researcher considered the “container-select” procedure for it was convenient in this regard, since it could be carried out within the shortest time possible and, therefore, the participants’ obligations with their employer could not be compromised. The name of each individual staff member was written on a separate slip of paper, all slips placed in a container and the container was then shaken. Slips were selected from the container until the desired number of participants at each centre was reached. In cases where the number of potential participants was less than six, all of them were selected to take part in the research.

Morgan (1997) considers the amount that each participant contributes to the group a major factor in decisions about the group size. De Vos et al. (2009) argue that groups this size (6-10) allow everyone to participate, while still eliciting a range of responses. Morgan and Krueger (1998) mention that deciding on the right number of participants means striking a balance between having enough people to generate a discussion, but not having so many people that some feel crowded out. In the present study that investigated a case of linguistic crosspollination, the researcher ensured that each member had time to talk to the researcher through a one-to-one discussion.



### 3.6 Research instruments

Consistent with the qualitative research methodology, the strategy for gathering both quantitative and qualitative data were the reading sessions and one-to-one discussions. De Vos et al. (2009, p. 314) define a focus group interview as a “purposive discussion of a specific topic or related topics taking place between eight and ten individuals.” In the current study that investigated cases of linguistic cross-pollination, the reading sessions and one-to-one discussions/interview were used to trigger responses from the targeted sample.

The reading sessions helped the researcher investigate cases of linguistic cross-pollination, such as consonant simplification (for example, fronting), final consonant deletion, dentalisation of the alveolar sounds (/t/, /d/, /s/, /z/), consonant cluster reduction, and “alveolisation” of the two dental (/ð/ and (/θ/)) sounds of English, morphological transformation and lexical borrowing. Carefully selected words, and phrases were read aloud by individual participants and the reading was tape-recorded for later analysis. The English sounds that did not appear in Silozi and a case, or cases, of linguistic cross-pollination when Silozi speakers used the two dental English sounds (/ð/ and (/θ/)) and the four alveolar sounds (/t/, /d/, /s/, /z/), were important for the current research to remain aligned with research objective 1.3.1.

The data obtained through the reading sessions were specifically used to provide responses to cases of linguistic cross-pollination when the aforesaid sounds of English appear at the three positions of carefully selected words, and such positions were word initial, word medial and word final. Both the one-to-one discussions and the reading sessions helped the researcher meet the requirements of the research objectives 1.3.1 and 1.3.2. On the other hand, the one-to-one interview helped the researcher with the investigation of social factors that lead to bilingualism

in multicultural societies. The focus group interview helped the researcher meet the requirements of research objective 1.3.3 that sought to determine social factors that led to bilingualism among Silozi speakers.

### **3.7 Procedure**

The researcher ensured that the purpose of the current study was well defined and permission was also obtained from the institutions concerned, as well as the University of Namibia to conduct the study. The timeline for the data collection session was communicated to participants well in advance. Creswell (2007) advises that the strategies associated with a mixed methods approach are those that involve collecting and analysing both forms of data in a single study. Creswell (2007) further recognises that all methods have limitations, therefore, researchers often feel that biases inherent in any single method could neutralise or cancel the biases of other methods. Triangulating data sources is a means for seeking convergence across qualitative and quantitative methods that were born to eliminate these biases (Creswell, 2007).

The present study used reading sessions and one-to-one interviews, also referred to as one-to-one discussions, to collect both quantitative and qualitative data to enhance the researcher's understanding of the linguistic cross-pollination phenomenon under investigation.

Creswell (2007, p. 17) asserts that there are procedures for mixed-methods strategies of inquiry, namely:

- *Sequential* procedures, in which the researcher seeks to elaborate, expand or compare the findings of one method with another. This may involve beginning with a qualitative method for exploratory purposes and following up with a quantitative method with a

large sample so that the researcher can generalise results to a population. Alternatively, the study may begin with a quantitative method in which theories or concepts are tested, to be followed by a qualitative method involving detailed exploration with a few cases or individuals.

- *Concurrent* procedures, in which the researcher converges quantitative and qualitative data in order to provide a comprehensive analysis of the research problem. In this design, the investigator collects both forms of data at the same time during the study and then integrates the information in the interpretation of the overall results. Also, in this design, the researcher nests one form of data within another, larger data collection procedure in order to analyse different questions or levels of units in an organisation.
- *Transformative* procedures, in which the researcher uses a theoretical lens as an overarching perspective within a design that contains both quantitative and qualitative data. This lens provides a framework for topics of interest, methods for collecting data, and outcomes or changes anticipated by the study. Within this lens could be a data collection method that involves a sequential or a concurrent approach.

The concurrent procedure, in which the researcher converges quantitative and qualitative data in order to provide a comprehensive analysis of the research problem, suited the current study. In the study at hand, one-to-one discussions were employed to collect discursive data that were tape recorded for analysis purposes. Smit et al. (1995) mention that a tape recorder allows a much fuller record than notes taken during the interview; these can later be transcribed for close analysis. De Vos et al. (2009, p. 300) advises that focus groups “are used in multi-method studies that combine two or more means of gathering data in which no one primary method determines the use of the others”.

In the current study, interviews and discussions were useful as multiple viewpoints or responses were needed to obtain adequate quantitative and qualitative data. Marshall and Rossman (2011) advise that each participant may make comments, ask questions of other participants or respond to comments by others.

The researcher in the current study introduced a pre-determined topic that the participants narrated as the researcher offered trigger points that gave the freedom of response to the participant. The topic was discussed exclusively in English. The researcher provided guidance to the discussion with limited interference, while the participants discussed the topics that the facilitator raised. The researcher here placed high value on capturing the language used by the participants. The focused one-to-one discussions, as juxtaposed with the reading activities, allowed the researcher to collect quantitative data that informed research objectives 1.3.1 and 1.3.2.

Furthermore, the one-to-one discussions between the researcher/facilitator and the participant helped the researcher to harvest qualitative data that informed research objective 1.3.3. They helped the researcher obtain multiple viewpoints in a shorter period of time than what would have happened in a focus group discussion. The participants were requested to share their viewpoints, feelings and experiences as regards the factors that lead to bilingualism and linguistic cross-pollination in multicultural societies.

The researcher, here, as De Vos et al. (2009, p. 300) advises, used these one-to-one interviews, or discussions, as a “fundamental way of listening to people and learning from them, and of creating lines of communication”. Open-ended questions were utilised to allow the participants to answer freely, thus enhancing the validity of the findings.

### **3.8 Data analysis**

Creswell (2007) advises that in order to generate findings that transform raw data into new knowledge, a researcher must engage in active and demanding analytic processes throughout all phases of the research. In the current study that investigated linguistic cross-pollination between English and Silozi among Silozi speakers in Windhoek, the two sets of data (qualitative and quantitative) were analysed differently. After cleaning the raw data, qualitative data were organised into manageable units, chunks and categories. The researcher, as Bogdan and Biklen, (1992) advises, compared, synthesised, sought patterns, and discovered what was important, what was to be learned and what was to be told to others. The researcher generated different categories in relation to research objective 1.3.3 and the accompanying literature reviewed.

Furthermore, the qualitative data captured in the interviews were presented under emerging themes and verbatim quotes, and this was done by content analysis of the data, noting certain words and phrases. After collecting the quantitative data, on the other hand, the first step involved the phonetic transcription of the one-to-one discussions and individual read ups.

The researcher then cross-referenced the data collected with the literature reviewed for research objective 1.3.2 to determine whether or not there were any linguistic effects that have taken place as a result of linguistic inter-influence. In attempting to respond to research objective 1.3.1, the researcher applied the theoretical framework to determine consistency with the research topic. This included establishing to what extent the recorded data were imbedded with

cases of linguistic cross-pollination consistent with the OT, a viable theory with a focus on investigating universal principles, phonological acquisition and linguistic typology.

### **3.9 Research ethics**

Bogdan and Biklen (1992) assert that ethics in research are principles of right and wrong that a particular group (such as researchers) accepts. These principles, according to Marshall and Rossman (2011), compel researchers to respect the rights, dignity, privacy and sensitivity of participants. Bogdan and Biklen (1992) state that important matters relating to research ethics include informed consent, the right to privacy and protection of participants from harm, be it physical or psychological or social. The researcher also adhered to the ethical code of the University of Namibia, thus applied and received ethical clearance from the university to conduct this study for academic purposes.

#### **3.9.1 Informed consent**

In the present study, the researcher informed potential participants in writing that participation was voluntary and that they could withdraw their participation at any time. The researcher informed the participants that choosing not to participate carried no adverse consequences for them. The nature of the study, its objectives, possible advantages, risks, dangers and obligations to participants were discussed with participants. The participants were informed about how the interviews would be conducted. The researcher also appealed to participants to exercise mutual respect during and after the interviews.

The participants were informed that their discussions would be tape-recorded and that they would always have the right to request to listen to the recordings after the interviews. Caution was taken to ensure that informing participants was not done in a manner that would intimidate them and thus compromise research findings. The researcher refrained from asking insensitive questions and any forms of ridicule and stereotyping.

### **3.9.2 The right to privacy**

The participants were informed in writing that their right to remain anonymous would be respected, and pseudonyms were used in the research report. Participants were assured that no disclosure of any confidential information that had any damaging effect to their person would be done.

To protect the participants dignity and identity, this researcher ensured that all research material collected were in safe keeping even after the study had been completed. Such material would be shredded and destroyed three years after the publication of this thesis.

### **3.9.3 Protection from harm**

Participants were assured that they were protected from any harm, be it physical, psychological or social. They were also informed to expect to be treated with respect, not to be imposed upon or embarrassed in any way. Questions were not insulting or unnecessarily intrusive. They were advised to make an indication when the research procedure was threatening to embarrass them

or causing some discomfort. Data collection strategies for this study on linguistic crosspollination were used in the context of the research ethics considerations discussed above.

### **3.9.4 Conclusion**

Chapter Three presented the research methodology used to conduct this study. The Chapter focused on the research approach, research design, data collection procedures and the instruments used for data collection and analysis. Data collection limitations and research ethics were also discussed in this chapter. Chapter Four presents and discusses the data gathered for the study.



## CHAPTER FOUR

### RESULTS AND DISCUSSIONS

#### 4.1 Introduction

This chapter presents and discusses the data collected. The chapter focuses on the data that were gathered through reading sessions of the pre-determined words and phrases, the one-to-one discussions and the ones that were harvested through write ups the participants were required to do in reaction to items in a given questionnaire.

The reading sessions were meant to determine linguistic cross-pollination through phonological integration, the write ups the participants undertook were meant to investigate cases of linguistic cross-pollination through morphological integration, and lastly the determination of the social factors that lead to multilingualism was made through one-to-one discussions between the researcher and the participants.

The first part of this presentation of the findings is the demographical information of the participants who took part in this study. The second part presents and discusses the cases of linguistic cross-pollination between Silozi and English at the phonological level of the languages in question. The third part of the presentation focuses on presenting and discussing cases of linguistic cross-pollination at the morphological level of the two languages under investigation. And the last part of presentation of data to this Chapter, focuses on presentation

and discussion of the cases of linguistic inter-influence as far as lexicon integration, or cases of shared vocabulary, between the two languages in contact, was concerned.

#### **4.2 The demographics of participants in the study**

The demographical information of the participants in this study paid particular attention to the names of institutions, gender of participants, experience and the professional qualifications of them all. The presentation of the demographics (names of institutions, experience and professional qualifications) in this study correlates the argument by Weinreich (1953) that besides linguistic, typological reasons for language change in contact situations, the extralinguistic factors (socio-cultural and psychological) are not to be dismissed. It is the researcher's take that tertiary institutions are societal organisations where language contact, and possible linguistic cross-pollination, could take place as different languages are used to facilitate the purposes of such institutions.

The demographics are meant to indicate that ultimately, social factors are highly involved in language change in both genetically transmitted languages and mixed languages. The qualifications of the participants was meant to indicate that the participants were quite conversant in both languages that were under investigation. This consideration was made necessary by the observation by Atreya et al. (2014) that language contact most often involves face-to-face interactions among groups of speakers of whom at least some speak more than one language (in a particular geographical locality). In the situation at hand, it had to be demonstrated that participants to this research endeavour were also conversant in English, as evidenced by their academic qualifications.

Thomason (2001) proposes that under the right social and linguistic conditions tremendous alterations including structural changes will take place. The demographics demonstrate that two languages (with Silozi being the staff members' native language and English an official language) were in contact through what Atreya et al. (2014) term "face-to-face interactions" as they were spoken by staff members at the tertiary institutions in Windhoek. Education as part of social factors marries well with the observation by Bakker (2010) that in favourable, socio-cultural situations, language contact may lead to multidirectional outcomes which include the 'mutual exchange' of linguistic items, although these exchanges are likely to be limited to a particular geographic region or at certain linguistic level.

#### **4.2.1 The period of association with the institution**

The association of the participants with the institutions ranged from three to more than fifteen years. Five (38.5%) of the respondents did not score to indicate the number of years they have been serving their institution. A total of six (46.2%) participants have been with their Windhoek institution for a period of between 6 and 10 years; and one (7.7%) of the participants have been with their institution for a period of between 3 and 5 years, while the other one (7.7%) have been with their institution for more than 15 years.

#### **4.2.2 Professional qualifications**

The majority (8 in total, 61%) of the participants indicated that they were post graduate degree holders followed by 1 (7.7%) of the total participants had attained under graduate

qualifications and another 1 (7.7%) of the participants were diploma holders. A total number of 3 three participants did not indicate their academic qualifications. Refer to table below:

**Table 4.2 The professional qualifications of participants**

	<b>Frequency</b>	<b>Percentages</b>
No scores	3	23.0%
Diplomas	1	7.7%
Undergraduates	1	7.7%
Post graduates	8	61%

#### **4.3 The sequence of data presentation**

The researcher in this study set out to investigate the phenomenon of linguistic crosspollination, or linguistic inter-influence, between Silozi and English among Silozi speakers residing in Windhoek. The presentation and discussion of the data followed the sequence in which the research objectives were indicated. In other words, the objectives that were formulated formed the leading guide in the manner in which the presentation of the data and discussion was approached.

The presentation begins with the first research objective (1.3.1) that sought to investigate contact-induced changes at the three levels of language. It specifically begins with the influence the phenomenon of language contact had at the level of phonology, and then that is followed by its influence on morphology and then its influence on lexicon. The presentation then moves to the second objective (1.3.2) which sought to assess the changes that might have taken place

as a result of language contact. The presentation then concludes with the third research objective (1.3.2) that sought to explore the factors that promote bilingualism among Silozi speakers.

It should be stressed that the analysis of the language contact phenomenon in this study went up to the level of syllables (vowels), and consonants. This correlates the advice by Weinreich's (1953) observation that "great or small, the differences between the languages in contact must be exhaustively stated for every domain-phonetic grammatical and lexical, as a prerequisite to an analysis of language contact" (1953, p. 2). Again, this research was informed by the OT in its investigation of linguistic cross-pollination between languages that had dissimilar constraints, therefore going down to the level of vowels and phones was important to accommodate cases of epenthesis. The inclusion of vowels and phones in the analysis of linguistic cross-pollination correlates McCarthy's (2007) observation that epenthesis is the insertion of a sound or letter within a word, and also positively correlates Kager's (1999) explanation that epenthesis help resolve unsyllabifiable consonants as candidates (inputs) with epenthesis are among those supplied by GEN, and because EVAL favors less-marked over more faithful and differently-unfaithful.

#### **4.3.1 Phonological integration**

The researcher wished, as indicated earlier on, to also investigate the effect the language contact phenomenon had at the phonology level of language. Such a desire accorded the researcher with an opportunity to either approve or disapprove Barlow and Gierut's (1999) observation that the Optimality Theory could be used to investigate some selected sound sequences in an

attempt to explain and predict cross-linguistic tendencies in phonotactic constraints. The participants were requested to read out loudly the words and phrases where targeted sounds were inserted in the order word initial, word medial and word final. The researcher here wished to determine linguistic cross-pollination that resulted from the use of the chosen English sounds.

These sounds entailed the two dental fricative sounds (that is, the voiced /ð/ and the voiceless /θ/), and the six alveolar sounds /d, t, z, s, n, l/ as they are identified in English. The researcher wished, in particular, to determine the linguistic outcome that resulted when Silozi speakers encountered words with the selected alveolar consonants and the two dental fricative sounds.

#### 4.3.2 The voiceless dental fricative at three word position

The table below indicates the participants' pronunciation of the chosen English words as they were read out loudly. The questionnaire were named in the order of R1 through to R14, the last participant. The words were transcribed by the researcher as he listened to the record, and relied on his intuition as the speaker of the languages under investigation.

*Table 4.3 Voiceless dental fricative*

<b>Word initial</b>	Participant	<b>Word medial</b>	Participant	<b>Word final</b>	Participant
thorn	/so:n/	bathtub	/bastab/	cloth	/kulos/
thaw	/sau/	athlete	/aslet/	wreath	/resi/
thin	/sin/	toothache	/tusek/	youth	/usi/
thing	/siŋ/	bathrobe	/basrob/	booth	/bus/
think	/sink/	toothbrush	/tusplash/	math	/mas/

thread	/sred/	panther	/pansa/	broth	/buros/
thunder	/sanda/	python	/paizon/	tooth	/tusi/
thoughtful	/sotful/	toothpaste	/tuspesit/	north	/no:s/
thousand	/souzend/	marathon	/marason/	fifth	/fifis/

The table above indicates the participants' pronunciation of English words that had the voiceless dental English sound in the word initial, word medial and word final positions. The sounds resulted from the contact between English and Silozi, as the Silozi speakers read these words in a reading activity.

In his attempt to prove his case, the researcher only considered the sounds that indicated a diversion from the IPA pronunciation system. The voiceless dental fricative is a sound that does not form part of the Silozi phonotactic system, and the data in the table above, therefore, indicate the linguistic outcome as speakers of Silozi encounter such sounds as they speak English. The discussion of data on the voiceless dental fricative indicated above was done concurrently with the discussion of the data presented on the voiced dental fricative.

#### **4.3.3 The voiced dental fricative at three word positions**

The test on the two English dental sounds that do not appear in Silozi continued with the researcher listening to the participants' pronunciation of the chosen English words as they read out loudly. The words were transcribed by the researcher as he listened to the record, and relied on his intuition as the speaker of the languages under investigation.

Table 4.4 Voiced dental fricative

<b>Initial</b>	Participant	<b>Medial</b>	Participant	<b>Final</b>	Participant
that	/zat/	feather	/feza/	breathe	/brüz/
than	/zan/	weather	/weza/	lathe	/leiz/
the	/ze/	together	/tugeza/	seethe	/si:z/
they	/zey/	either	/eiza/	scathe	/skeiz/
their	/ze/	another	/anoza/	soothe	/su:z/
them	/zem/	father	/faza/	bathe	/beiz/
these	/ziz/	mother	/maza/	clothe	/kloz/
later than	/zan/	clothing	/klozing/	worthy	/weizi/

The table above indicates the participants' pronunciation of English words that had the voiced dental fricative English sound in the word initial, word medial and word final positions. Again, the sounds resulted from the contact between English and Silozi, as the Silozi speakers read these words loudly in a reading activity.

Once again, in his attempt to prove his case, the researcher only considered the sounds that indicated a diversion from the IPA pronunciation system. The voiced dental fricative is a sound that does not form part of the Silozi phonotactic system, and the data in the table above, therefore, indicate the linguistic outcome as speakers of Silozi encounter such sounds in their usage of the English language.



#### 4.3.4 Linguistic outcome of the absentee dental sounds

It could be deduced from the presentation above that the pronunciation of sounds with the two dental sounds was substituted by other English sounds. The voiceless dental fricative in the words presented in table 1, were substituted by the voiceless alveolar fricative /s/. The voiceless alveolar fricative, is the sound that is created when there is minimal contact between the tongue and alveolar ridge, and the speaker feels the air being forced between the two articulators. This alveolation represents a diversion from the normal pronunciation of this English sound.

Again, in accordance with the OT proponents, the diversion represents a distinction between the input and the output. It then demonstrates concomitance with the OT's markedness constraint, which then correlates McCarthy's (2007) observation that markedness constraints enforce well-formedness of the output itself, prohibiting structures that are difficult to produce or comprehend, such as consonant clusters. In the case at hand, the consequence is the replacement of a sound, or consonant, which does not exist in Silozi with the one /s/ that is near and easy to pronounce.

The diversion demonstrates changes from the underlying form and, as McCarthy (2007) explains, it is in tension with "faithfulness constraints" as it indicates favoritism of some linguistic structures over others. The differences in the results (input versus output) indicate a distinction between the English and Silozi OT constraints. It therefore correlates Barlow and Gierut's (1999) observation that OT, as a linguistic model, proposes that the observed differences in the forms of language arise from the interaction between conflicting constraints.

Nurse (1985) clarifies that, in the production of the voiceless dental fricative, which is (th or

/θ/), the articulation implies a very soft contact between the tongue and the front upper teeth. Nurse (1985) stresses that the speaker should be able to feel the air being forced between the tip of the tongue and the upper front teeth. The replacement of the voiceless dental fricative, that is the (th or /θ/), appears to be the situation in all regards where the sound appears, that is word initial, word medial and word final. This indicates possible linguistic cross-pollination where Silozi has had an influence on the English language at the phonology level of language among Silozi speakers. The pronunciation of words such as “thorn, thin, think, thanks, etc. in table 1 were pronounced as if they were spelt “sorn”, “sink”, and “sanks”.

Furthermore, the presentation still indicates a diversion from the usual norm when the English words with the voiced alveolar fricative, which is (th or /ð/), were articulated by the speakers of Silozi. The voiced dental fricative in the words presented in table 2, were substituted by the voiced alveolar fricative /z/. This sound, as Nurse (1985) explains, is very clearly voiced, and it is created when there is minimal contact between the tongue and the alveolar ridge, and the speaker feels the air being forced between the two articulators.

The shift from contact between the tip of the tongue and the upper teeth to that of the alveolar ridge and the tongue in words such as they, their, them, weather, father, mother, etc., in table 2, represents an influence Silozi has had on English among Silozi speakers. The pronunciation of the words such as “they” and “them” were pronounced as if they were spelt “zey” and “zem” respectively.

The replacement of the English sounds that do not appear in Silozi by different sounds correlates with Miura’s (1979) identification of two means of replacements of sounds that exist in English but did not exist in Japanese. Miura (1979) points out that one way of replacing

absentee sounds was by substituting the English sound with a corresponding one in Japanese, and the other was to substitute with a sound which was not found in Japanese but still relatively easy to pronounce for the native speaker.

The case similar to the one Miura (1979) explains is the substitution of the two dental sounds in English (/ð/ and /θ/), with [s] and [z], in the Silozi language, as in this, that, think and thanks. The sounds that exist in English were compensated for their absence in Silozi. This was a demonstration of linguistic cross-pollination that took place when Silozi speakers at tertiary institutions in the geographical area of Windhoek spoke English. The Silozi/English situation here still resonates well with the observation by Nurse (1985) that a minority of the world's languages appear to have a series of dental (as opposed to alveolar) obstruents. The Silozi/English situation in Southern Africa also reflects Nurse's (1985) argument that ProtoBantu does not have such a series (of dental obstruents), nor do most East African Bantu languages.

Furthermore, the mispronunciation of the English sounds (/ð/ and /θ/) by Silozi speakers in Windhoek marries well with Nurse's (1985) observation. Nurse (1985) argues that the two dental /th/ sounds of English are frequently made in error by non-native English speakers. It is the researcher's take that since their use is quite frequent in English, and, therefore, to use the words of Nurse (1985), their noticeable use by the Silozi speakers when they speak English emanates from the fact that they are frequently used in the English language.

Furthermore, the pronunciation of the two dental sounds (/ð/ and /θ/) that Nurse (1985) argues are frequently made in error by non-native speakers, represents, in the current study, linguistic cross-pollination, that is, the influence the Silozi language has on the English language. When

these sounds are uttered by Silozi speakers as they speak English, they do not correlate Nurse's (1985) observation that these dental sounds are defined as being epicodental sounds, as the tip of the tongue articulates with the teeth. They are substituted, or compensated for, with /z/ and /s/. For these two sounds /z/ and /s/, a speaker can feel air being forced through the tongue and the alveolar ridge.

#### **4.3.5 The linguistic outcome of the alveolar sounds**

The present study also included in its investigation of linguistic cross-pollination, the linguistic outcome that followed the use of the alveolar sounds in English as Silozi speakers in Windhoek spoke English. The exercise gave the researcher an opportunity to either approve or disapprove the observation by Nurse (1985) that the borrowed vocabulary could be accompanied by a simple phonological shift whereby inherited alveolars moved one place to become dental. The researcher here specifically wished to also determine the linguistic outcome that resulted when Silozi speakers encountered words with the selected alveolar consonants /d, t, z, s/ as they are identified in English.

The participants were requested to read out loudly the words and phrases where targeted sounds were inserted in the order word initial, word medial and word final. The researcher then used his intuition as the speaker of the Silozi language to make a determination as to whether or not the targeted sounds were „dentalised“, or moved one place to become dental. The tables below indicate a list of words that were read loudly by the participants to determine linguistic crosspollination at the language level of phonology.

Table 4.5 Voiced alveolar plosive /d/: phrases and sentences

Phrases	Transcription (Silozi)	Sentences
ballroom dance	/ɖansi/	They loved to ballroom dance.
birthday cake	/besɖei/	She turns 18 on her birthday next Friday.
wedding gift	/wedŋ/	The wedding ceremony was beautiful.
comfy bed	/bed/	My bed has really soft sheets.

Table 4.6 Voiceless alveolar plosive /t/: phrases and sentences

Phrases	Transcription (Silozi)	Sentences
dining table	/tɛblu/	They had dinner at the table.
crunchy taco	/tɛiko/	He wants three tacos.
round button	/bʌtɔn/	I sewed my button onto the shirt.
fishing boat	/bɔt/	They went out on the boat for a day of fishing.

Table 4.7 Voiced alveolar fricative /z/: phrases and sentences

Phrases	Sentences
wild zebra	We saw a zebra in the jungle.
zigzag sidewalk	The paths zigzag down the hill.
snow blizzard	The blizzard lasted for three days.
worker bees	The worker bees make honeycombs.

Table 4.8 Voiceless alveolar fricative /s/: phrases and sentences

Phrases	Sentences
table salt	Dinners need salt at the table.
hair dresser	She chose to be a hair dresser.
school recess	School premises are empty during recess.
town princess	The town princess is everyone's darling.

It was easy for the researcher to deduce from the reading of the words that were selected with targeted alveolar sounds that as the Silozi speakers spoke English, the alveolar sounds moved one place to become dentalised. It implied, therefore, that when the targeted alveolar sounds were articulated the tip of the tongue touched the upper teeth.

The dentalisation of alveolar sounds by Silozi speakers resonates well with Nurse's (1985) conclusion on the study of the three Bantu languages in north eastern Kenya where contact between the Swahili dialects, Pokomo, and Elwana indicated a full series of dental stops or obstruents.

Furthermore, the dentalisation of the selected alveolar sounds by the Silozi speakers when they spoke, or read English, to use the words of Nurse (1985), entails that alveolar consonants pushed forward to become dental. It was discovered here that dentality came about with all the four English alveolar consonants /t/, /s/, /z/ and /d/, as in dance, table, zebra, and salt.

In the articulation of the alveolar /t/ sound, the researcher could tell that when the Silozi speakers articulated the sound /t/, the tip of the tongue touched the teeth. This was the case in all word positions, that is, word initial as in town, take, and talk, in word medial as in fatal, steak, and butter, and in word final as in but, fit and boat. The tongue touched the upper teeth and the distinct explosion of air still marked it as being plosive.

Nurse (1985) clarifies that the /t/ sound was a voiceless alveolar plosive and the native speakers of English could feel their tongues touch the alveolar ridge and the distinct explosion of air marked it as being plosive. The dentalisation of the English alveolar consonant /t/ by Silozi speakers, therefore, represents linguistic cross pollination as the articulation of the targeted sounds took place between different articulators from those of the native speakers, as described by Nurse.

Still, in the articulation of the alveolar /d/ sound, the researcher could tell that when the Silozi speakers articulated the sound /d/, the tip of the tongue touched the teeth. Again, this was the case in all word positions, that is, word initial as in dance, word medial as in birthday, wedding, and word final as in bed. The tip of the tongue touched the upper teeth and the distinct explosion of air, though, still marked it as being plosive.

The dentalisation of the alveolar /d/ sound by Silozi speakers represents linguistic crosspollination as the articulators shifted from that of the native speakers as described by Nurse. Nurse (1985) clarifies that the consonant /d/ sound was a voiced alveolar plosive and the native speaker of English could be able to feel the tongue touching the alveolar ridge, making it an alveolar sound.

Furthermore, in the articulation of the alveolar /z/ sound, the researcher could easily tell that when the Silozi speakers articulated the sound /z/, the air could be felt forced through the tongue and the teeth, meaning that it became a fricative being articulated at the teeth. This was the situation at all word positions, that is word initial as in zebra, word medial as in blizzard, and word final as in bees. The sound, however, remained clearly a voiced sound.

Again, the dentalisation of the alveolar /z/ sound by Silozi speakers represents linguistic cross pollination as the articulators shifted from that of the native speakers as described by Nurse. Nurse (1985) clarifies that the consonant /z/ sound was a voiced alveolar fricative and the native speaker of English could be able to feel air being forced through the tongue and the alveolar ridge, meaning that it is a fricative being articulated at the alveolar.

On the other hand, in the articulation of the alveolar /s/ sound, the researcher could easily tell that when the Silozi speakers articulated the sound /s/, the air could also be felt forced through the tongue and the teeth. Just like its voiced equivalent /z/, it became a fricative being articulated at the teeth. This was the situation at all word positions, that is word initial as in salt, word medial as in dresser, and word final as in princess. The sound, however, remained clearly a voiceless sound, as the speaker could not feel the throat vibrate, so it is voiceless.

Again, the dentalisation of the alveolar /s/ sound by Silozi speakers represents linguistic cross pollination as the articulators shifted from that of the native speakers as described by Nurse. Nurse (1985) clarifies that the consonant /s/ sound was a voiceless alveolar fricative, and the native speaker of English could be able to feel air being forced through the tongue and the alveolar ridge, meaning that it is a fricative being articulated at the alveolar.

#### **4.4 Morphological integration**

The researcher also determined, through this study of investigating linguistic crosspollination between English and Silozi, to investigate how loanwords were assimilated into the recipient language (RL). Miura (1979) clarifies that morphological integration is the process through which loanwords are assimilated into the target language, making them morphologically indistinguishable from native RL.

The researcher was spurred by the observation made by Atreya et al. (2014) that it is very common in multilingual countries that people use sounds and words of other languages as part of their own language and even in some intense contact situation, they found that the syntactic pattern was also transferred from the source language to the recipient language. The current



study investigated cross linguistic pollination at the three levels of language one of which was morphology. The researcher, therefore, investigated how the English loanwords were assimilated into the Silozi language, making them morphologically indistinguishable from Silozi. Smeaton (1973) argues that a loanword undergoes modification of morphological structure to achieve harmony with the established predominant pattern and root system, thus usually leading to internal pluralisation, that is, broken plural and similar derivations.

To determine morphological transformation of loanwords, the researcher used selected words from the English language and the participants were, therefore, requested to provide the Silozi version of similar words. The researcher's analysis of the data obtained to trace how borrowed words were integrated into the Silozi word class system, was based on the orthography of the English words. Though phonologies of the words did not play a bigger role here, transcribing of words was done nonetheless consonants, and not phones, played a crucial role in tracing morphological integration of English-Silozi words.

The table below indicates the responses of the participants in reaction to how Silozi speakers handled loanwords. The endeavour helped the researcher to determine what happened if loanwords were not part of the phonotactic system of the recipient language. In cases where different versions per word were provided by the participants, both versions are presented in the table and the discussions held concurrently.

*Table 4.9 Morphological integration of loanwords*

<b>English</b>	<b>Transcription</b>	<b>Silozi</b>	<b>English</b>	<b>Transcription</b>	<b>Silozi</b>
Ball	/bɔ:l/	mbola	Office	/'ɒfis/	ofesi
Bank	/bɒŋk/	panka	Paper	/'peɪpə/	pepa

Book	/bʊk/	buka	phone	/fəʊn/	foona
Bottle	/bɒt(ə)l/	botela	Pillow	/'pɪləʊ/	pilo
Box	/bɒks/	bokisi	post	/pəʊst/	posita
Bucket	/'bʌkɪt/	baketi	Pot	/pɒt/	pooto
Cabbage	/'kʌbɪdʒ/	kabici	Pump	/pʌmp/	pompi
Clinic	/'klɪnɪk/	kiliniki	Rice	/rʌɪs/	laisi
Dress	/drɛs/	diresi	paint	/peɪnt/	penda
fly	/flʌɪ/	fulai	shilling	/'ʃɪlɪŋ/	sheleñi
Glass	/glɑ:s/	gilazi	Station	/'steɪʃ(ə)n/	siteshini
Jacket	/'dʒʌkɪt/	jekete	Sugar	/'ʃʊgə/	shuuka
Key	/ki:/	kiiyi	Suitcase	/'su:tkeɪs/	sutukesi
Lamp	/lamp/	laambi	Torch	/tɔ:tʃ/	taaci
mosquito-net	/mɒ'ski:təʊ/	masikito	Wireless	/'waɪələs/	wayilesi
Motor	/'məʊtə/	moota	Wire	/waɪə/	waaya

The table demonstrates that the loanwords were integrated morphologically into the Silozi language; and they now formed part of the Silozi vocabulary, as they were used by Silozi speakers as they communicated in Silozi. It can be deduced that the borrowed words were adapted to the recipient language in morphology, and in certain instances, phonology, which directly had an impact on orthography. The adaptation of borrowed words by the recipient language resonates well with Appel and Muysken's (2005) observation that when different languages borrow words from other languages, they attempt to make them sound native.

Furthermore, table 4.9 above indicates that when Silozi speakers borrow the English words they break up consonant clusters synonymous with many English words and then insert vowels.

This scenario can be deduced from the words such as “torch - taaci, ball – mbola, bottle – botela, cabbage – kabici, bucket – baketi, fly – fulai, pillow – pilo, post – posita and glass – gilazi”. The case of epenthesis is still noted with the word “ball” where a bilabial nasal /m/ was inserted word initially to change both the phonology and orthography of the word “ball” /bɔ:l/ to “mbola” /mbola/.

The analysis provided above indicates that the Silozi language has a CVCV construction, for example “posita” (post) and “pilo” (pillow), as opposed to the English language that has CVC construction, as in “pot” and “glass”. This scenario resonates well with Atreya’s (2014) observation that many languages have a CVCV system. According to Atreya, the CVCV system means that consonants alternate, but they allow no consonant clusters and all the words end in a vowel or even vowels.

The breaking down of consonant clusters by the Silozi speakers still marries well with the results of the study on the assimilation of loanwords into Japanese that was undertaken by Miura. Miura (1979) concluded that since the phonetic system of a Japanese syllable is described either as V or CV, consonants are not used in succession, but a consonant is usually followed by a vowel. The alternation between vowel and consonants still indicates OT constraints conflict, which then positively correlates Kager’s (1999) explanation that constraints can conflict, as they differ from language to language and that determines the outcome. It further resonates with Kager’s (1999) assertion that one language, (as indicated in the analysis above) might eliminate consonant clusters, despite the resulting faithfulness violations; another might retain all input consonants, violating the markedness constraint.

In trying to explain the reasons for breaking down consonant clusters by Silozi speakers, it is the researcher's take that the phonetic system of the Silozi language syllable can be described as similar to that of Japanese. The similarity emanates from the fact that in Silozi, just like in Japanese, consonants are not used in succession, but a consonant is usually followed by a vowel. It is not easy for a Silozi speaker, therefore, to reproduce a group of consonants as it exists at the beginning of a word like “fly – fulai”, “glass – gilazi” and “station - sitieshini”.

This study of linguistic cross-pollination between Silozi and English reverberates Miura's (1979) findings in the Japanese scenario. It is difficult for Japanese speakers of English to reproduce a group of consonants as it exists at the beginning of words such as “strike – sutoraiku” and “text – tekisuto”. The alternation between consonants and vowels when Silozi speakers use English words that have been loaned into Silozi represents linguistic crosspollination. Atreya et al (2014) stresses that the phonotactics of English, allow many words to end in consonants and that there are many consonant clusters, as in “phone”, and “torch” for example.

On the other hand, as presented in table 4.9, it can be deduced that the phonotactics of Silozi does not allow words to end in consonants, and, therefore, English loan words are transformed from English to Silozi, as in “torch – taaci” and “phone – fooni”. The transformation of English words still resonates well with Thomason's (1999) observation that borrowed words are almost always adapted to the recipient language in morphology, receive the same inflections and follow the same requirements for word order.

Furthermore, table 4.9 still indicates that the English language allows consonant clusters both in word initial, as in “fly and flight”, in word medial as in “bucket and pillow” and in word

final, as in “post” and “glass”. However, each of the consonants in the words given above must be succeeded by a vowel once they are used in Silozi. For example, the English word “fly” has a consonant cluster in word initial, and once the word is used (especially when written) in Silozi, each of the consonants in word initial are succeeded by a vowel and “fly” becomes “fulai”. Similarly, the English words “bucket” and “pillow” would each of them orthographically allow a consonant cluster word medially. However, once the words are used in Silozi, each of the consonants in word medial are succeeded by a vowel and “bucket” becomes “baketi” and “pillow” becomes “pilo”.

Furthermore, the orthography of English words “glass” and “post” have a consonant cluster in word final, and once the words are loaned to Silozi, each of the consonants in word final are succeeded by a vowel and “glass” becomes “gilazi” while “post” becomes “posita” in Silozi. The examples extracted from the table still demonstrates that Silozi does not allow consonant clusters in either word initial or word final. It is equally clear from the table that the linguistic cross-pollination phenomenon is still apparent in the duplication of certain vowels as the donated or loan words go through the process of transformation. Cases of duplication of vowels to meet the requirements of the recipient language, resonates well with the observation by Smeaton (1973) that vowels are also altered to avoid variation and create harmony within a word, thus simplifying its pronunciation, through duplication of the same vowel in adjacent syllables.

An example of vowel duplication in the Silozi words provided in table 4.9 is in words such as “kiiyi” (key), “banka” (bank), “kiliniki” (clinic) and “pisinisi” (business). This indicates a situation where the first vowel is duplicated in the second syllable and the other one in the last syllable, thus creating the pattern, for instance, as in “kiliniki” Ci-Ci-Ci-Ci. It can also be

observed that vowel duplication does not only manifest itself in adjacent syllables, but it may also manifest itself as it doubles in front of a single consonant.

The following words in table 4.9 provide an example of duplication of vowels in front of consonants: “pooto” (pot), “moota” (motor), “foona” (phone – verb), “waaya” (wire) and “taaci” (torch). The duplication of more vowels in front of a single consonant receives its explanation from Smeaton (1973) who explains that vowel duplication may be due to their absence from EA (Silozi in the case at hand), and the vowels that are not found in EA are substituted by others when they occur in loanwords.

The duplication of more vowels in front of a single consonant resonates well with Smeaton’s (1973) observation that vowels in loanwords may undergo two main types of alteration: substitution and/or lengthening. Cases of lengthening are such as those explained in words such as “pooto” (pot), “moota” (motor), “foona” (phone – verb), “waaya” (wire) and “taaci” (torch). The presence of vowels such as /aa/, and /oo/ in words such as “foona” (phone), waaya (wire) and moota (motor) is meant to complement for the lengthening or duplication of the same vowel in front of a consonant.

The appearance of such vowels correlates with the study Smeaton did on English vowel integration in Egyptian Arabic. Smeaton (1973) asserts that in much the same way as SL consonants are altered in loanwords to suit the consonants available in EA, vowels in loanwords are limited to those of EA, namely /i/, /e/, /a/, /à/, /o/, /u/ and /ii/, /ee/, /aa/, /ââ/, /oo/, and /uu/.

On the other hand, cases of substitution, as a linguistic cross-pollination tendency in table 7, could be deduced from words such as “bottle and phone”. These two linguistic items are

converted to “botela” and “foona” respectively, with “a” instead of “e” in word final position. This kind of substitution happens as, to use the words of Appel and Muysken (2005), the Silozi speakers attempt to make these words borrowed from English sound as native as possible.

Table 4.9 still indicates that Silozi borrowed more words from English in relation to the words English borrowed from Silozi. This scenario was alluded to by a reasonable number of participants who felt that English has influenced a great deal of Silozi, especially when it comes to words donated into the Silozi language.

Many words have been borrowed from English into Silozi, and only a handful of words have been borrowed from Silozi into English. This is because many of the aspects we need in modern life were invented from the modern world where the medium of business is English.

The one way borrowing alluded to by participants resonates well with the analysis by Thomason and Kaufman (1998). Thomason and Kaufman (1998) argue that the most common way that languages influence each other is the exchange of words. They stress that borrowing is almost entirely one-way, from the more prestigious language to the less prestigious one.

#### **4.5 The factors of bilingualism among Silozi speakers**

The researcher in this study of investigating linguistic cross-pollination between English and Silozi, also assessed the role of social factors to this social-contact phenomenon. The consideration of social factors owes to the advice by Weinreich (1953) that besides linguistic,

typological reasons for language change in contact situations, the extra-linguistic factors (socio-cultural and psychological) are not to be dismissed.

Weinreich's (1953) argument above still correlates Thomason and Kaufman's (1998) observation that, ultimately, social factors are highly involved in language change in both genetically transmitted languages and mixed languages. The consideration of social factors in this endeavour on linguistic cross-pollination still received impetus from Bakker's (2010) assertion that in favourable, socio-cultural situations, language contact may lead to multidirectional outcomes which include the "mutual exchange" of linguistic items, although these exchanges are likely to be limited to a particular geographic region or at a certain linguistic level.

Qualitative data, therefore, were collected to explore the factors that promoted bilingualism among Silozi speakers. The researcher employed a one-to-one interview with the participants to investigate social factors that lead to bilingualism among Silozi speakers in Windhoek. This helped the researcher to meet the requirements of the research objective 1.3.3 that sought to determine social factors that led to bilingualism among Silozi speakers. This approach still helped with the triangulation of the aspects determined on linguistic cross-pollination at the language level of phonology, morphology and lexicon.

#### **4.5.1 Bilingualism in the study area**

The first question under this section sought to determine the languages in which the participants were well conversant, and this was meant to indicate the linguistic identity of the Silozi



speakers at multicultural tertiary institutions in Windhoek. This would still demonstrate, whether or not, the language situation at such institutions in Windhoek defined “languages in contact” and, therefore, provided fertile ground for linguistic cross-pollination to take place during social intercourse among residents.

All the participants indicated that they could speak more languages that were spoken in the Zambezi and even some that were spoken in neighboring countries like Botswana, Zambia and even Zimbabwe. The languages in which the participants indicated they communicated on a daily basis were English, Silozi, Sifwe, Subia, Siyeyi, Mbalangwe, Ndebele, and Mbukushu. Silozi, Subia and Ndebele were spoken in the neighbouring countries such as Zambia (Silozi and Subia), Botswana (Subia) and Zimbabwe (Ndebele).

The use of all the above-mentioned languages among Silozi speakers in one geographical area of Windhoek demonstrates the existence of a language contact phenomenon, where speakers used more than one language to communicate with each other. This was proof enough that the geographical area of Windhoek was the fertile ground from which linguistic cross-pollination took place.

The use of more languages at tertiary institutions in an (urban) area of Windhoek meets the argument by Thomason (1999) that when speakers regularly use two (or more) languages in their daily interactions, there can be a number of different outcomes affecting the structure of those languages; this is termed language-contact phenomena. In the same vein, the use of these languages alongside each other on a daily basis by Silozi speakers in Windhoek, resonates with Bakker’s (2010) assertion that in favourable, socio-cultural situations, language contact may lead to multidirectional outcomes which include the “mutual exchange” of linguistic items,

although these exchanges are likely to be limited to a particular geographic region or at certain linguistic level.

The participants indicated that they were comfortable with communicating in both Silozi and English, and their use of any of the languages just depended on the audience. The use of these two languages (Silozi and English) by the same people in the same area, to use the words of Appel and Muysken (2005), means that the two languages are in contact, as they are used ultimately by the same people, that is, bilinguals.

As shown earlier on, the contact between the two languages leads to linguistic cross-pollination. For example, it was demonstrated that Silozi speakers pronounced the English alveolar sounds as if they were dental sounds and the dental sounds as if they were alveolar sounds. The fact that the contact between Silozi and English led to linguistic changes still resonates well with Thomason (2007) who defines contact-induced change when “a particular linguistic change is caused at least in part by language (or dialect) contact if it would have been less likely to occur outside a particular contact situation” (p. 42).

#### **4.5.2 The acquisition or learning of the target languages**

There was one of the questions that sought to determine how the Silozi speakers learnt or acquired the languages in which they indicated they were conversant. The participants had a variety of ways in which they acquired or learnt their languages. Each of the participants had a language that they spoke as a mother tongue, while others were learnt through friends, formal

schooling (English and Silozi), neighbourhood, migration, living in border land, living in a multi-ethnic urban area (Silozi), and inter-marriage (Ndebele).

The different contexts in which the Windhoek Silozi speakers acquired or learnt the languages in which they communicated on a daily basis marry well with the identification that Poplack and Sankoff (1984) make. Poplack and Sankoff (1984) assert that the conditions of close proximity with other groups that promote bilingualism are:

- living in border areas between ethnic groups or nations;
- living in multi-ethnic urban areas;
- engaging in an occupation that involves many contacts with “out-group” members;
- marrying outside one’s ethnic group;

Furthermore, the participants also indicated the domains in which they used the languages they referred to above. Much of English was spoken at work with colleagues, students, and also with those who had a mother tongue different from those who spoke Silozi. Some English was still used at church where congregations were multilingual and all of the religious literature was written in the English language.

On the other hand, Silozi was used when the participants met those who did not share a mother tongue and Silozi would then be used as a lingua franca. The participants therefore narrated:

I use Silozi for those colleagues who come from the Zambezi, but cannot converse in Sifwe. In Windhoek here, it depends from which side of the Zambezi my friends come

from. If they are from the eastern side, I use Sisubia, and if they are from the western side, I use Silozi.

All the above-mentioned domains in which the languages were exercised provide evidence to the argument by Poplack and Sankoff (1984) that language contact that promotes the desire to learn or use another language emanates from living in a bilingual nation, living in a multiethnic area, occupation and marrying outside one's group.

#### **4.5.3 The linguistic inter-influence**

All the participants demonstrated an understanding that there was inter-influence among languages that were spoken within the same locality. It was also discovered that the participants understood that there was linguistic cross-pollination, or influence, at the different levels of English and Silozi language. There was also a general understanding that linguistic interinfluence could be heard as Silozi speakers spoke English and vice versa.

There was a general understanding that a mother tongue had an influence on how one spoke a second language. They stressed that the language that one learns first influences their performance in the second language.

If you sound a word, it is always determined by your first language. A mother tongue is the basis on which one learns a language. Immediately one opens their mouth, even here, not only in Silozi, I will be able to tell, "Are you a Damara? "Or Are you Silozi?" It is a general phenomenon among Silozi speakers because of the way we pronounce words. I think you are very aware of the word "th" or "the", which does not exist in our

mother tongue. So, what happens once we come across this word, we look for the word which is closer to that and “z” becomes very closer to that, so you hear people say “zat”. Not because they don’t know, but it is just a word that is closer to the one in their mother tongue because they do not have a “th” in Silozi.

The observation on the “zat” scenario by participants, complements or triangulates, the earlier analysis that the pronunciation of the two dental sounds (/ð/ and /θ/) are, to use the words of Nurse (1985), frequently made in error by non-native speakers. In the current study, therefore, they represent linguistic cross-pollination, that is, the influence the Silozi language has on the English language.

#### **4.5.4 English versus Silozi**

The researcher wanted to determine how the participants would describe the influence that takes place between Silozi and English, as far as inter-influence or linguistic cross-pollination was concerned. The participants raised issues of lack of words to refer to some of the items that the Silozi language, or culture, does not have or did not invent. The participants argued that they borrowed words or certain linguistic items to counter for the absence of certain words in the Silozi language.

The direct question on how they felt about the linguistic cross-pollination between Silozi and English, saw participants allude to aspects of why they felt they could not converse in Silozi without the incorporation of English. If they began a conversation in Silozi, the English lexical “creep” in, but if they began in English, it is the Silozi influenced pronunciation that sells them out.

I discovered the matrix imbedded language model where the dominant language influences the grammar of the other language, so it becomes a matrix. In our case, English has dominated Silozi either very badly or very well. This is because there are many things that we did not invent, and they came with the whites. So, because we did not have them, the only way you can do is to take that word and try to “recoil” it so that it sounds like a Silozi word. When we look at the word “book”, since we did not have a book, there were no schools, you still hear the word “book” but coiled into “buka”.

The participant’s observation on taking words from a source language correlates and triangulates the analysis on morphological integration done earlier on. The word “book” underwent transformation that saw it fit the phonotactic of the Silozi language. It correlates the observation by Smeaton (1973) that a loanword undergoes modification of morphological structure to achieve harmony with the established predominant pattern and root system.

The morphological transformation here could be described easily in the words of Appel and Muysken (2005), that the substitution of “oo” in “book” with “u” in “buka”) happens as the Silozi speakers attempt to make the words borrowed from English sound as native as possible. The “substitution” here represents linguistic cross-pollination as it shows how English has influenced the Silozi language. The participants still alluded to the aspect of borrowing words from the English language to enrich the Silozi Language. The participants went to an extent of defending the aspect of borrowing and felt it was very important for the growth of a language.

If you don’t have, the only way you can do, is to borrow from a language that has. We also have in a way maybe influenced English. We hear words such as “lechwe” from the Silozi word “lizwi”, which refers to a water buck. The white people lived in the

flood plains of the Zambezi and they didn't have them, and they had to call them "lechwe". "Mopani" tree, they didn't have it when they came from Europe and they got the word "mupani" here.

The adoption of elements into a native language resonates well with Thomason and Kaufman (1988) who advocate that there are two alternative directions in which language contact can go, resulting in two distinct linguistic processes: "borrowing" and "substratum interference". Thomason and Kaufman (1988) reserve the term "borrowing" to refer only to the adoption of foreign elements into the speakers' native language.

When the influence goes the other way, and the native language structures influence the second language, they speak of "substratum interference". In the above narration by participants, it is the native language (Silozi) that influenced the second language (English), as the English did not have the words to refer to a water buck "lechwe" from "lizwi" in Silozi and "mopani" from "mupani" in Silozi.

The substitution of the vowel "i" in "lizwi" of Silozi with "e" in "lechwe" following its transformation to English, resonates well with the argument of Haugen. Haugen (1953) argues that every lexical borrowing involves two such processes: "importation" and "substitution". He explains that importation is typically partial, since it is not necessary to take over a word with all its sounds, forms and meanings intact. Instead, speakers tend to substitute some of the habits of their own language for those in the source language.

The English here did what is consistent with what Van Coetsem (1988) calls "adaptation". Van Coetsem (1988) suggests a distinction between "imitation" (roughly corresponding to

Haugen's (1953) "importation") and "adaptation" (corresponding to "substitution"). Haugen's (1953) elaborates that the latter involves the use of L1 habits in modifying features imported from an SL. The English adapted the Silozi words "lizwi" and "mupani" by using their own habits to convert them to "lechwe" and "mopani" respectively in alignment with such habits. There were still cases of "importation" that were referred to by participants where words, especially those related to the advent of technological gadgets, were simply introduced into Silozi without subjecting them to the morphological transformation processes.

"We find items that are new to us. These words came with European civilization and we cannot have words to refer to them. These include words such as "computer, cellphone, refrigerator, radio, apple, dress, flask and switch" (Timoh, 2017).

These English words, to use the words of Haugen (1953), were simply "imported", which Van Coetsem (1988) calls "imitation", into Silozi with their sounds, forms and meaning intact. The "importation" of these words by Silozi speakers is still reflected in the argument by Winford (2003) that even the English language "imported" words such as "rendezvous" from French without subjecting them to any adaptation processes of borrowing. Adaptation, to use the words of Winford (2003), means that borrowed words are integrated phonologically, morphologically and syntactically.

Furthermore, the researcher wanted to find out why it was a general phenomenon for people from the Zambezi, especially young people, to speak English amongst themselves even if they shared a mother tongue. Issues of inferiority complex came to the fore, for participants felt that people had inferiority complex and they believed by speaking English in Windhoek, they could then raise their status.



People from the Zambezi feel inferior in relation to other tribes. They feel English was something they could cling on to raise their status. Even when they go out in the villages, they would want to show off that they have been at UNAM and now, therefore, speak good English well. In fact, it is not only young people, you will discover that even old people in their homes, they speak to their children in English.

The citation above were referred to by some participants as regards the role played by the status of a language in contact linguistics, or in this case, inter-linguistic influence. The observation by participants on the status of a language resonates well with the Benjamin's (2005) assertion that extra-linguistic factors include intensity, length of contact, status of the languages in the community (minority or majority) and demographic features. The prestige with which the English language is held cannot be underestimated and the desire for many people to be regarded as the best speakers cannot be over-emphasised.

#### **4.6 Conclusion**

This chapter presented and discussed the data of this study. It analysed linguistic crosspollination at the three levels of language, that is, phonology, morphology and lexicon. It also assessed the social factors that leads to bilingualism, as a result of language contact in a given speech community. The next chapter presents the recommendations for further studies, summaries, and the conclusions at which the study arrived as far as linguistic cross-pollination between Silozi and English was concerned.

## CHAPTER FIVE

### CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction

It is believed that when speakers regularly use two (or more) languages in their daily interactions, there can be a number of different outcomes affecting the structure of those languages; and this is termed language-contact phenomenon. The geographical continuity or close social proximity leads to mutual influence between languages or dialects. Therefore, the Optimality Theory (OT) was used to investigate universal principles, phonological acquisition and linguistic typology. The OT was also used to investigate some selected sound sequences in an attempt to explain and predict linguistic cross-pollination tendencies in phonotactic constraints between English and Silozi. These universal constraints are categorised into general constraints on sound sequences, constraints on initial and final consonants, constraints on clusters of a consonant, constraints on sequences of a consonant and a vowel, and constraints on vowel clusters and diphthongs.

This study, therefore, concludes and summarises the findings pertaining to linguistic crosspollination between English and Silozi among Silozi speakers at tertiary institutions based in the geographical and urban centre of Windhoek. The result of contact situations can be seen linguistically in the growth of loan words, patterns of phonological change, mixed forms of language and a general increase in bilingualism of various kinds. Therefore, the cases of linguistic cross-pollination were investigated at the three levels (phonology, morphology and lexicon) of the two languages (English and Silozi) under investigation. The study still assessed

the specific changes that had taken place as a result of contact between the languages of English and Silozi. It is believed that besides linguistic, typological reasons for language change in contact situations, the extra-linguistic factors (socio-cultural) are not to be dismissed. Ultimately, social factors are highly involved in language change in both genetically transmitted languages and mixed languages. Therefore, this study equally explored the factors that promoted bilingualism among Silozi speakers at tertiary institutions in the geographical and urban area of Windhoek.

## **5.2 Summary of the study findings**

In order to understand the phenomenon of linguistic cross-pollination, or linguistic interinfluence, between English and Silozi among Silozi speakers at tertiary institutions in Windhoek, three objectives were proposed (see section 1.3). The findings are presented in the subsections that follows and are organised according to the proposed research objectives, which were used as the “vehicle” through which the aims of this study could be met.

### **5.2.1 Linguistic cross-pollination at phonological level**

Different Cases of linguistic cross-pollination resulted from the use of two dental fricative sounds (that is, the voiced /ð/ and the voiceless /θ/), and the four alveolar sounds /d, t, z, s/ as they are identified in English.

### 5.2.1.1 The voiceless and the voiced dental fricatives

It was deduced that when Silozi speakers pronounced the voiced dental fricative /ð/ and the voiceless dental fricative /θ/, the two dental sounds were substituted by either the voiceless alveolar fricative /s/ or the voiced alveolar fricative /z/. In particular, the voiceless dental fricative /θ/ was substituted by the voiceless alveolar fricative /s/ in all word positions, which were word initial, word medial and word final. The sound was then created when there was minimal contact between the tongue and the alveolar ridge, and the air could be felt being forced between the two articulators.

On the other hand, the voiced dental fricative /ð/ was substituted by the voiced alveolar fricative /z/ in all word positions, which were word initial, word medial and word final. The sound was then created when there was minimal contact between the tongue and the alveolar ridge, and the air could be felt being forced between the two articulators.

The only difference between the voiced /ð/ and the voiceless /θ/ dental fricatives, as per pronunciation by the Silozi speakers, was on the voicing. In other words, the two dental sounds shared the same place of articulation (alveolar), as well as the manner of articulation (fricative), as they were articulated by Silozi speakers.

### **5.2.1.2 The four alveolar sounds**

The cases of linguistic cross-pollination, or linguistic inter-influence, were also realized when it came to the articulation of the selected alveolar sounds. When the Silozi speakers read the English words with the four selected alveolar sounds (**d**, **t**, **z**, and **s**) at the three word positions (that is initial, medial and final), the alveolar sounds moved one place to become dentalised. The dentalisation of the selected alveolar sounds here meant that when the targeted four alveolar sounds were articulated, the tip of the tongue touched the upper teeth.

It should be stressed that the selected four alveolar sounds moved to a similar place of articulation (that is, dental) and the only difference that was maintained, as articulated by the Silozi speakers, was on the voicing and the manner of articulation. The voiceless alveolar plosive /t/ and the voiceless alveolar fricative /s/ retained the same voicing (that is, voiceless) and the same manner of articulation (that is plosive /t/ and fricative /s/ respectively) when pronounced by the Silozi speakers. In the same vein, the voiced alveolar plosive /d/ and the voiced alveolar fricative /z/ also retained the similar voicing (that is, voiced) and a similar manner of articulation (that is, fricative and plosive respectively).

### **5.2.2 Linguistic cross-pollination at morphology level**

The loanwords from the English language were assimilated into the recipient language (RL), Silozi in the case at hand, through the process called morphological integration. The morphological integration process made the loanwords morphologically indistinguishable from native RL.

### **5.2.3 English and Silozi phonotactic**

The Silozi language has a CVCV construction, as opposed to the English language that has a CVC construction. The CVC means that the orthography of the English language, allows many words to end in consonants and that there are many consonant clusters. The CVCV system, on the other hand, means that consonants in the Silozi language alternate, but they allow no consonant clusters and all the words end in a vowel or even vowels. Just like Japanese, the phonetic system of a Silozi syllable fits the description of either V or CV, where consonants are not used in succession, but a consonant is usually followed by a vowel.

### **5.2.4 Fitting loanwords into the Silozi system**

When Silozi speakers borrow the English words, they break up the consonant clusters synonymous with many English words and then insert vowels. The reason why Silozi speakers break down the English consonant clusters is to make the loanwords sound as native to the Silozi language as possible. It is not easy for a Silozi speaker to reproduce a group of consonants, as they exist at the beginning of many English words, and it is easy to deduce this interference when Silozi speakers pronounce English words. In Silozi, the vowel duplication does not only manifest itself in adjacent syllables, but it may also manifest itself as it doubles in front of a single consonant.

### **5.2.5 Bilingualism of the study area**

Tertiary institutions in Windhoek are a multilingual and multicultural institutions that present socio-cultural situations where language contact could lead to multidirectional outcomes between languages in contact. The outcomes of the language contact situation include the “mutual exchange” of linguistic items between the languages that are used by similar speakers in different domains.

### **5.3. The social factors and linguistic cross-pollination**

Language contact, and then possible linguistic cross-pollination, among Silozi speakers at tertiary institutions in the district of Windhoek was brought about by social factors such as conquests by colonisers, migration, urbanisation, intermarriage, multiple ethnicity, schooling, neighbourhood, living in a multi-ethnic urban area, friendship and living in border areas. The issues that still contributed to the use of languages interchangeably were such as the level of technology, names of items that were not invented locally, and culture.

### **5.4 Domains for possible linguistic exchange**

The enhancement of linguistic cross-pollination among Silozi speakers at tertiary institutions in Windhoek owed to the fact that these speakers interchangeably used Silozi and English at places such as church, work place, friendly gatherings, and at home with family members. The factors that dictated the code that the speaker used at these domains were issues such as social distance between interlocutors, different mother tongue between interlocutors, prestige

(especially in terms of English), religious literature that is written in English, multilingual denominations, low inferiority complex, and when talking to strangers.

## **5.5 Recommendations**

In alignment with the findings presented and discussed in chapter four, and summarised in this chapter, the researcher felt it was important to make recommendations for further studies. Given the fact that this study was carried out in the geographical area of Windhoek where the exposure to many languages cannot be doubted, a recommendation is hereby made in the following respect:

- a study on linguistic cross-pollination undertaken at tertiary institutions in the Zambezi region where the variety of the Silozi spoken is undoubtedly different from the one spoken in Windhoek;
- a study on linguistic cross-pollination emanating from the contact between Silozi and English as the languages are spoken by those Silozi speakers whose academic achievement did not stretch to beyond grade 12.

The current study investigated linguistic cross-pollination in relation to two English dental sounds (that is, the voiced and the voiceless dental fricatives), and the four alveolar sounds (that is, the voiced and voiceless alveolar plosives and the voiced and voiceless alveolar fricatives).

A recommendation is hereby made that studies should be pursued in relation to:



- linguistic cross-pollination that emanates when Silozi speakers pronounce English words with a voiced bilabial plosive /**b**/ in word initial; the accompanying bilabial nasal /**m**/ for a word like “mbola” for “ball” (see table 4.9) needs thorough investigation;
- the deletion of consonant clusters other than placing vowels in front of consonants;
- linguistic cross-pollination between English and Silozi at the language level of syntax and semantics;
- and, lastly, employment of OT in the investigation of constraints on clusters of a consonant and a glide;
- mutual linguistic inter-influence, or linguistic cross-pollination, between English and Silozi in relation to the articulation of other English sounds;

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