

AN INVESTIGATION INTO THE PHONOLOGICAL AND MORPHOLOGICAL
INTEGRATION OF GERMAN LOANWORDS INTO OSHIWAMBO

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Abstract

Oshiwambo, a Bantu language spoken in Northern Namibia and Southern Angola, like other languages in contact, has adapted foreign words from other languages to meet the needs of its daily life vocabularies and activities. This thesis is based on the hypothesis that words borrowed from other languages, especially European languages, into Oshiwambo, are phonologically and morphologically modified to fit the Oshiwambo speech system. The data were collected from school textbooks, daily conversations and personal vocabularies of the researcher. The study investigated how Oshiwambo borrowed words from German, yet the two languages differ widely in terms of phonemic inventories and phonotactics. Borrowing of words from German to Oshiwambo required phonological and morphological processes to enable the transfer of characteristics of one language into the other. The study identified and described the phonological and morphological changes which the loanwords from German go through to fit into the Oshiwambo speech system. The study further established the phonological rules that account for these changes.

The study adopted the Natural Generative Phonology theory which was propagated by Hopper (1976) and the general word formation theory as the theoretical framework. The loanwords were transcribed for phonological and morphological analysis. It was evident that there were lots of vowel and consonant changes in the process of borrowing. It was also evident that Oshiwambo borrowed nouns, adjectives and verbs from German. Any word (noun) that had been borrowed from German was assigned a class based on semantics, phonology or morphology. The study contributes to the linguistic study in Oshiwambo in particular and Bantu languages in general. The knowledge acquired could be utilized by the institutions of higher learning too. It is recommended that more research like the current study should be conducted for the rest of the remaining European languages as source languages from which Oshiwambo has borrowed words, as a way to trace the origin of loanwords.

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List of Acronyms and Abbreviations

adj. - adjective

Afr. – Afrikaans

C - Consonant

CC - Consonant and Consonant sequence

Cl. - noun class

CV - Consonant and Vowel sequence

Eng. - English

MBESC - Ministry of Basic Education, Sport and Culture of the Republic of Namibia

Pl. - Plural

Sing. - Singular

V - Vowel

v. - Verb

Vd - Voiced consonant

Vless - Voiceless consonant

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Dedication

This thesis is dedicated to my late paternal grandfather, Max Tsheetheni Uushona, who was one of the early teachers and preachers in Uukwaluudhi district and at Tsandi congregation. It was through him that the enlightenment of education reached me.

The dedication also goes to my parents, siblings and nieces: Nandjambi and Nangula; and nephews: Elungi and Tshikongo, for all the consistent support and encouragement they offered me during my study.

Declarations

I, Johannes Uushona, declare hereby that this study is a true reflection of my own work and is a true reflection of my research, and that this work, or part thereof has not been submitted for a degree in any other institution.

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Signature

Date: April 2019

CHAPTER 1

INTRODUCTION

1.1 Background

Namibia is a multilingual community with 15 recognised languages taught in schools (MBESC, 2003). There are three language families in Namibia, namely Indo-European languages, Khoesan languages and Bantu languages (Maho, 1998). Matras (2009) states that most societies in today's world are multilingual due to the language contact which occurs when speakers of different languages interact, and their languages influence each other and borrowing of words occurs as well.

Many Europeans came to the territory known today as Namibia during the 19th century of which the most were traders, hunters, missionaries and explorers. They were Portuguese, Dutch and German amongst others. These Europeans interacted with indigenous people and exchanged goods such as ammunition, alcohol and clothes with the indigenous people and in return they got cattle, metals, ivory and skins (Mbumba, 1988).

After the War of National Resistance (1904-1908), there was a shortage of labour in the Police Zone (the Central and Southern areas of Namibia, separated from the native territories by a red line which was secure for Whites) as Namas and Hereros were nearly exterminated (Silvester, 1998).

The German colonial administration had to source migrant labour from either abroad (South Africa) or from northern Namibia. The source was mainly Ovambo communities. They were required to work on farms, mines and railway construction (Mbumba, 1988). This contact created opportunity for the Aawambo labourers to borrow words from the language of their employers, the Germans.

The other factor that led to the contact between Germans and Aawambo was the German Rhenish Missionary Society activities which were established in Oukwanyama in 1891 (Hayes, 1998).

It is linguistically argued that “a Bantu language adapts loanwords to suit its pre-existing phonology especially when two languages involved in the borrowing process belong to two different language families” (Kennedy, 2017. p. 21). Oshiwambo is a Bantu language while German is an Indo-European language. Therefore, this study investigated the phonological and morphological integration of German loanwords into Oshiwambo.

1.2 Statement of the problem

Loanwords and borrowing has been an important area of research in various languages of the world. Loanwords and borrowing have been the main theme in the studies such as Steinbergs, (1985), Hafez (1996), Kayigema (2010), Tarai (2012), Evans (2014), Matiki (2016) and Kennedy (2017). These studies focus on morphological and phonological adaptation and receptivity between various languages, including Arabic, Portuguese and English, and Odia in India, Egyptian Arabic and English in Egypt, Kinyarwanda and English and French in Rwanda, Lubukusu and English in Kenya, Chichewa and English in Malawi, Bemba and English in north-eastern Zambia, Oshikwanyama and Afrikaans, English and German in Namibia. These languages came into contact either through trade, colonisation or missionary activities.

A study conducted in Namibia by Steinbergs in 1985, explored the phenomenon of loanword phonology as illustrated by data from Oshikwanyama only. Steinbergs (1985) explored English, Afrikaans and German as principal languages of borrowing in Oshikwanyama. However, Steinbergs (1985) did not explore the morphological

aspects of loanwords. Steinbergs' (1985) investigation was so broad that it covered three donor languages, namely English, Afrikaans and German, making it difficult to generalise all findings to the German language. Lastly, the study included only eight (8) German words in its sample. Therefore, this study aimed to investigate the phonological and morphological integration of German loanwords into Oshiwambo only, with a corpus of 76 loanwords which were investigated for quality results and generalisation to German only. Phonology and morphology are so entwined that they cannot be separated and therefore they should be studied together.

1.3 Research questions

The aim of this study was to investigate the morphological and phonological integration of Oshiwambo loanwords from German. The hypothesis of this study was that loanwords from the German language are accommodated into Oshiwambo through various phonological and morphological processes. Therefore, the study specifically sought answers to the following questions.

- i) What phonological changes occur during borrowing words from German into Oshiwambo?
- ii) What morphological changes occur during borrowing words from German into Oshiwambo?
- iii) What are the criteria for allocating German words to Oshiwambo nominal classes?

1.4 Significance of the study

The study may contribute to the influence that German has on Oshiwambo language because German is still a contact language in Namibia. The research may also pave

the way for further research in local languages, especially for students at tertiary institutions. It may also contribute to the description of the Oshiwambo lexicon. Moreover, the findings of the research may also serve as a source of learning for students at institutions of higher learning. It is important to investigate both phonological and morphological aspects of a language at the same time because the two are deeply entwined.

1.5 Limitations of the study

A researcher is not a German speaker. Therefore, for phonological purposes, oral clarification from a German speaker was needed.

1.6 Delimitations of the study

Oshiwambo has borrowed words from several other languages such as Afrikaans, English, Finnish, Otjiherero and other indigenous African languages. However, this study strictly investigated loanwords from German into Oshiwambo, limiting itself to a corpus of 76 words for investigation.

1.7 Organisation of the study

This chapter has provided the background to this thesis, its significance, research questions as well as its limitations and delimitations. The rest of the study is organised as follows: Chapter 2 reviews what other relevant studies reveal as far as borrowing and loanwords in various Bantu languages is concerned. It sought for phonological and morphological strategies that these Bantu languages employ in the nativisation of loanwords from other languages. This review also identifies the criteria which these Bantu languages employ in allocating loanwords to their nominal classes. A thorough understanding of these strategies and criteria is important to the researcher in investigating the phonological and morphological integration of German loanwords

into Oshiwambo. The review further aims to explore the relevant theory or theories on which the main study is grounded.

Chapter 3 gives an outline of research design, target population, sample and sampling techniques, research instruments, data collection procedures and data analysis techniques used in this study.

Chapter 4 gives an overview of phonological and morphological structures of the two languages under study. This discussion is necessary to give insights into the following chapter which is the major discussion of the entire study. Understanding the phonological and morphological aspects of both languages helps both the researcher and readers to understand the borrowing and integration processes of loanwords between the two languages. Every word that enters the Oshiwambo language through borrowing is subjected to the phonological and morphological constraints that are to be discussed in this chapter. Only those phonological and morphological processes that are directly or indirectly involved in the integration of German loanwords into Oshiwambo are discussed in this chapter.

Chapter 5 is devoted to analysing, discussing and presenting the research findings of this study. This study investigates the phonological and morphological integration of German loanwords into Oshiwambo.

Lastly is chapter 6, which gives the summary, conclusion and recommendations of the study and suggestions for further research.

CHAPTER 2

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Introduction

This chapter reviews relevant literature in the area of borrowing and loanwords in various Bantu languages. The review specifically seeks for phonological and morphological strategies that these Bantu languages employ in the nativisation of loanwords from other languages. The review also identifies the criteria which the Bantu languages employ in allocating loanwords to their nominal classes. It is necessary for the researcher to have a thorough understanding of these strategies and criteria in investigating the phonological and morphological integration of German loanwords in Oshiwambo. The review further aims to explore the relevant theories which inform and guide the researcher in the analysis and presentation of data.

2.2 Background of borrowing and loanwords

Borrowing and loanwords have been important areas of research in various languages of the world. Amongst the previous studies such as Whiteley (1963), Steinbergs (1985), Hafez (1996), Owino (2003), Hoffer (2005), Hsieh & Hsu (2006), Kayigema (2010), Karuru (2013), Evans (2014) and Mayuko (2014), the main theme has been loanwords and borrowing, with a focus on morphological and phonological adaptation and receptivity between various languages, including Japanese Mania and Taiwan's Mandarin, Kamba, Dholuo, Lubukusu, Gikuyu, English and Kiswahili in Kenya, Egyptian Arabic and English in Egypt, Kinyarwanda and English, and French in Rwanda, Oshikwanyama and Afrikaans, as well as English and German in Namibia.

The term *borrowing* has been used in different fields, therefore it has different meanings. In linguistics, Campbell (1998) defines borrowing as “a process when one

language takes words from another language and makes them part of its own vocabulary and such words are referred to as loanwords” (p. 57). Moreover, Thomason and Kaufman (1988) 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 these incorporated features” (p. 37). Similarly, Hoffer (2005, p. 45) defines borrowing as “the process of importing linguistic items from one linguistic system into another, a process that occurs any time two cultures are in contact”. The present study, therefore, considers borrowing as a strategy or process of importing words from German into Oshiwambo to satisfy lexical needs. The current study notes that Oshiwambo speakers lacked words for the new items and ideas that came with Germans and as such, it had to borrow words from German because there was a need to communicate.

In this study, borrowing is associated with words. A loanword is a word borrowed from another language, which is usually called the donor or source language. The speaker of the borrowing language, also called the recipient or beneficiary language, partly or totally integrates a foreign word in his or her own language system (Kayigema, 2010). However, according to Robins (as cited in Kabuta, 1996), loanwords will be understood as “those words which were not in the vocabulary at one period and are in it at a subsequent one, without having been made up from the existing lexical stock of the language or invented as entirely new creations” (pp. 39-40).

Steinbergs (1985) argues that not all words are completely assimilated in a recipient language. There are those loanwords that are hardly changed; yet other words may be so strongly modified that their shape is not distinguishable from that of a native word.

On the contrary, the former may look and sound foreign to the native speakers of the recipient language. Similarly, Hafez (1996) argues that there are some Egyptian Arabic speakers who use the deeply assimilated words without noticing that they are foreign words and in such cases, they do not care to find the indigenous alternative to them even when they are available.

The current study considered loanwords as those words that the Oshiwambo language has borrowed from German and are so much integrated and modified that speakers use them without noticing their foreign origin. This study aimed at identifying such words, as well as the phonological and morphological changes they have undergone during the integration process.

While several studies such as Chimhundu (2002), Zivenge (2009) and Evans (2014) investigated borrowing and loanwords in other African languages, Steinbergs (1985) is the only one who studied borrowing and loanwords in Oshiwambo. However, Steinbergs' (1985) investigation is so broad in that it covers three donor languages, namely German, English and Afrikaans. Therefore, this makes it difficult to generalise all findings to German. In addition, Steinbergs' (1985) investigation does not explore the morphological aspects of loanwords. Lastly, the study by Steinbergs (1985) included only eight (8) German words in its sample. The uniqueness of the present study lies in the fact that it focuses on the phonological and morphological integration of German words in Oshiwambo. This study argues that there are German loanwords that are so assimilated and deeply integrated such that Oshiwambo speakers frequently use them without noticing their foreign origin, and this is due to the integration which has taken place at phonological and morphological levels. However, there are also

some other loanwords in Oshiwambo that appear to be foreign and this is due to the differences in the arrangements of phonemes and phonological rules between the recipient and donor languages.

2.3 Reasons for borrowing

This review notes two reasons for lexical borrowing. Matras (2009) states that gaps in the lexical inventory of the recipient language, and the prestige enjoyed by the donor language are the two main reasons for borrowing. The ‘gap’ hypothesis assumes that bilingual or semi-bilingual speakers notice that one language is in possession of expressive means that do not exist in the other, while the prestige hypothesis assumes that speakers imitate elements of the speech of a socially more powerful and dominant community to gain approval and social status. Dixon (1980) reports that when European culture was introduced into Australia, names had to be found for new items such as animals, artefacts and activities. Possible ways of achieving that were either borrowing a form from English by extending the meaning of a word already existing in the language or by coining a new compound from existing roots.

Shariq (2013) shares the same view by maintaining that there are new innovations in every field, including a lot of travelling and migration; however, the linguistic system does not have all the necessary terms to explain these new innovations in every area. It is therefore necessary that languages borrow from one another to fill any existing gap in their lexis.

In the same vein, Karuru (2013) argues that borrowing occurs out of necessity or need, where a language does not have a word that is ready for something. The researcher believes that Oshiwambo had to borrow words from German because of need too. The Germans brought new items which did not exist in the Oshiwambo culture before the

arrival of the Germans. Such items include tools, foodstuffs, clothes, ammunition and vehicles. The researcher also believes that the tenets of the gap hypothesis played a role in the borrowing of words from German to Oshiwambo because there was a need to name these German items/objects and ideas that the Germans brought along.

2.4 A difference between phonology and morphology

Aronoff and Fudeman (2011) define and differentiate the two terms, *phonology* and *morphology*. Phonology refers to the branch of linguistics that deals with the patterning of sounds - the mental system that governs such patterning of sounds, while morphology refers to the mental system involved in word formation or to the branch of linguistics that deals with words, their internal structure, and how they are formed.

Mangrio (2016) argues that in linguistics, as a field, morphology should be referred to as 'linguistic' morphology since it (morphology) is used in other fields as well. Mangrio (2016), therefore, defines morphology as the study of words and their internal structures mainly through the analysis of morphemes, affixation, reduplication and various sorts of compounding.

Abdul (2002) asserts that no two languages share the same phonological systems. Mahlangu (2007) shares the same view by arguing that each language is governed by its own phonological rules in adopting and pronouncing new imported lexical items (p. 8).

Phonology and morphology are so entwined that they should be studied together. Since loanwords come in a recipient language with their original sounds and forms, they undergo some phonological changes and as a result morphological changes too for them to conform to the phonology and morphology of the recipient language.

2.5 Loanword adaptation strategies

Kennedy (2017) argues that in a situation where a Bantu language adapts loanwords in its phonology, especially from an Indo-European language, the Bantu language employs way to “rephonologise new words borrowed into its vocabularies” (p. 21). In addition, Kennedy (2017) notes that when two languages in the borrowing process come from different language families, their phonological inventories differ as well. Therefore, the recipient language is required to employ certain strategies to make loanwords fit and conform to the native speech system. Kennedy (2017) refers to these strategies as “repair strategies” (p. 21).

Similarly, Zivenge (2009) emphasizes that the borrowing of words from one language to another language requires the assimilation processes to enable the transfer of characteristics of one language into the other. “These are phonological and morphological processes that account for phonological and morphological changes from the source language into the recipient language” (Zivenge, 2009, p.186).

2.5.1 Phonological adaptation strategies

Since there are no two languages sharing the same phonological systems Abdul (2002), the phonological inventories of the source language and those of the recipient language are bound to be different. Therefore, in the borrowing process certain phonological rules that account for how recipient language speakers adapt loanwords from the source language without necessary breaching their language rules are followed.

Scholars such as Whiteley (1963), Steinbergs (1985), Zivenge (2009), Apenteng and Amfo (2014), and Evans (2014), have observed that there are several phonological

adaptation strategies that words undergo during the borrowing process. These strategies include sound alteration (substitution, addition, and deletion), insertion, cluster simplification and syllabic omission, depending on the differences in phonological patterns between the recipient language and the source language.

Some of these strategies are employed in handling vowels while others are used in handling consonants. The next sub-section discusses these phonological strategies at vowel and consonant levels.

2.5.1.1 Vowel nativisation

This sub-section investigates how speakers of a recipient language use phonological rules to handle the vowels of a source language to suit the phonological system of the recipient language. According to Crystal (1991), a vowel is one of the two general categories used for the classification of speech sounds, the other being the consonant.

In addition, Crystal (1991) elaborates that:

Phonetically, they [vowels] are sounds articulated without a complete closure in the mouth or a degree of narrowing which would produce audible friction; the air escapes evenly over the centre of the tongue (pp.376-377).

The following are phonological strategies employed in handling vowels of source language to suit the vowel system of recipient language.

a) Sound substitution

According to Iboil (as cited in Zivenge, 2009), sound substitution refers to “the replacement of one linguistic item by another at a particular place in structure” (p. 233). In this case, a vowel in a source language, especially that does not exist in a recipient language, is replaced with a vowel of a recipient language to suit its vowel

system. For example, Whiteley (1963), notes that all the English central vowels are realised in Kamba (Bantu language in Kenya) as **a**. ‘major’ [meidʒ] **me:ya**

‘warrant’ [wɹɹnt] **walandi**

‘nurse’[nɜ:s] **na:si** (Whiteley,1963, p. 155)

Similarly, Apenteng and Amfo (2014) reveal that there are vowels that have been treated through substitution in Akan (the most prominent indigenous language in Ghana), and they are; the short neutral half-open unrounded vowel /ʌ/, the schwa /ə/ and the back open rounded vowel /ɒ/. So, Akan words borrowed from English with such unfamiliar sounds are replaced with more familiar Akan vowels. The /ʌ/ is replaced with either /ə/ or /ʌ/, in different contexts when it occurs in Akan loanwords borrowed from English as shown below:

Words/gloss	English	Akan
rubber	/rʌbɹ/	/rʌbʌ/ (Apenteng & Amfo, 2014, p. 224)

Another English vowel that is simplified in Akan loanwords from English is the back open rounded vowel /ɒ/, which is replaced with the back half-open rounded vowel /ɔ/ sound because the /ɒ/ is not found in Akan. The following are supporting examples:

Gloss	English	Akan
qualify	/kwɒlɪfaɪ/	/kwɔlifai/ (Apenteng & Amfo, 2014, p. 226)

Zivenge (2009) notes that vowel substitution is also common in the nativisation of English loanwords into Tonga due to vowel system differences between the two languages. Tonga is a language that is spoken by a group of Bantu people called the Tonga who are found in Zimbabwe, Mozambique and Zambia. English has twenty-five vowels, including monophthongs, diphthongs and triphthongs, while Tonga has only five simple ones (Zivenge 2009, p.247). The examples below demonstrate such processes.

English /au/ to Tonga [o] /paund/ > [pondo] 'pound'
 /I: / to [i] /stri:t / > [sitiliti] 'street' (Zivenge, 2009, p. 249)

From the illustrations above, it is concluded that “the English vowels are nativised by equating them to the five pure Tonga vowels, and the underlying principle is that those vowels that share similar feature values can substitute each other” (Zivenge, 2009, p. 262).

About loanwords in Ciluba (one of the four national languages of Congo (formerly Zaire), the other three being Kiswahili, Lingala and Kikongo), Kabuta (1996) stresses that quite often, when a word ends in /e/, it will freely alternate with /a/:

French fete > feta 'celebration/party' (Kabuta, 1996, p. 44)

Another scholar, investigating the adoption of loanwords in isiNdebele (one of the nine indigenous official African languages of South Africa), Mahlangu (2007) observes that English vowels, whether single, diphthongs or triphthongs, are substituted by the isiNdebele vowels as demonstrated in the following examples:

English **isiNdebele**

- i) /o/ [ɒ] cotton [kɒtn] > /o/ ikotini [ik'ot'ini]
- ii) /oo/ [u:] doom [du:m] > /u/ idumu [iɖumu]
- iii) /a/ [eɪ] game [geɪm] > /eyi/ igejimu [igejimu] (Mahlangu, 2007, p. 17-18)

From this demonstration, vowels which share common features substitute each other as in example i) where [ɒ] and /o/ are back vowels; and ii) where [u:] and /u/ are back high vowels. In example iii), glide epenthesis has been applied where [eɪ] in English has become /eyi/ in isiNdembele.

Similarly, Mheta and Zivenge (2009) maintain that English monophthongs that do not exist in Shona (one of the eight officially recognised languages of Zimbabwe), are replaced by Shona equivalents, as presented below:

English form	Shona form	Substitute(s)
/b ^ə su:n/	/basuni/	[a] and [u]
/k ^ə ntrɪ/	/kandiri/	[a] and [i] (Mheta & Zivenge, 2009, p. 159)

Kennedy (2007), investigating the phonology, morphology, syntax, semantics and some aspects of sociolinguistics of English-derived loanwords in Bemba, states that English vowels are substituted with Bemba vowels as demonstrated in the examples which follow:

- i) The English front high vowels /i/ and /I/ are both realised as the only Bemba front high vowel /i/

Examples:

English	Bemba
----------------	--------------

lift	[lɪft]	[lifuti]
referee	[ref ^ə 'ri]	[liifali] (Kennedy, 2007, p. 89).

- ii) Likewise, the English back high vowels /ɪ/ and /u/ are realised as /u/ (the back high vowel) in Bemba.

Examples:

English		Bemba
ruler	[ru:l ^ə]	[luula]
sugar	[ʃ ^ʊ g ^ə]	[shuuka] (Kennedy, 2007, p. 90).

- iii) The two front mid-vowels in English /e/ and /ɜ:/ are both realised by the only front mid-vowel in Bemba as /e/.

Examples:

English		Bemba
search	[s ^{ɜ:} tʃ]	[seeca]
tent	[tent]	[iteenti] (Kennedy, 2007, p. 90).

- iv) Similarly, the two back mid-vowels in English /ɔ:/ and /ʊ/ are both realised as /o/ in Bemba.

Examples:

English		Bemba
form	[f ^{ɔ:} m]	[foomu]
plot	[pl ^ʊ t]	[puloti] (Kennedy, 2007, p. 91)

- v) The following English low vowels /ʌ/, /ɑ/, and the central mid-vowel /ə/ are realised by the only low vowel in Bemba /a/.

Examples:

English	Bemba	
bar [b ^{ɑː}]	[baa]	
bus [b ^ʌ s]	[baashi]	
alpha [alf ^ə]	[aalufa]	(Kennedy, 2007, p. 91)

From the examples above, it is concluded that the English vowels are substituted with Bemba vowels that share similar features. That is why the English vowels in example (i) /i/ and /I/ are front high vowels in English and therefore they are replaced with the only front high vowel /i/ in Bemba. Similarly, the two back mid-vowels in English /ɔ/ and /ɒ/ are both realised as /o/, which is the only back-mid vowel in Bemba.

b) Vowel insertion/epenthesis

Evans (2014) defines vowel insertion as “a linguistic process where a vowel is added to a borrowed word” (p.50). Moreover, Batibo (1996) defines vowel insertion or vowel epenthesis as “a linguistic process that involves the insertion of a vowel between two consonants or after a final position” (p. 34), while John (as cited in Zivenge 2009, p. 212) defines vowel epenthesis as “the insertion of a vowel into the word segment”.

Chimhundu (2002) notes that English consonant sequences may be expected to be broken up in accordance with Shona syllable structure, which is typically CV or open type by vowel insertion as appearing in the examples below:

'cream' /krim/ > /kirimu/ (Chimhundu, 2002, p. 127)

Likewise, Zivenge (2009) states that "the Tonga language does not recognise consonant clusters but rather complex consonants or consonants that are co-articulated (articulated as a unitary segment) in a CC sequence" (p. 212). English words have cluster consonants while Tonga ones have complex consonants. When English words are borrowed into the Tonga phonological environment, vowel epenthesis is done to bring about phonologically acceptable words. This is done by inserting vowels in the middle of a word (mid-word epenthesis) or at the end of a word (paragogic vowel epenthesis). The following examples demonstrate such phenomenon:

English

Tonga

'caps' /kæps/ [kepesi] (Zivenge, 2009, p. 218)

Similarly, Kabuta (1996) has also observed vowel epenthesis as a phonological process in handling consonant clusters of loanwords in Ciluba. If the borrowed noun begins with a cluster with [b] or [k], [u] and [a] respectively are appended, resulting in an open syllable as demonstrated below:

French classe > kalaasa 'classroom'

bloc > buloko 'prison' (Kabuta, 1996, p.

43)

In another study, Mahlangu (2007) observes that in some cases English loanwords with some consonant clusters such as /sc/, /sq/, /sl/, /sp/, sch and st generally insert a vowel as in the following instances:

English

isiNdebele

scanner

isikena (Mahlangu, 2007, p. 83)

So, these cluster phonemes are syllabified by vowel insertion in isiNdebele. In the same vein, Chimhundu (2002) and Mheta and Zivenge (2009) assert that vowel epenthesis is applied in Shona loanwords either to open closed syllables or to break consonant clusters. The vowel is either inserted into the middle of words or at the end of words:

English form	Shona form
/disk/	/disiki/
/trʌmpʔt/	/tirambeti/ (Mheta & Zivenge, 2009, p. 161)

This means that the closed syllable is converted into an open syllable structure.

In another study, Kennedy (2007) observed that all five vowels in Bemba occur as epenthetic vowels, which means that they can be inserted in a loanword. This insertion can be prothesis (insertion of an initial segment), anaptyxis (insertion of a vowel between two consonants) and paragodic (insertion of a vowel at the end of a word), as demonstrated in the following examples:

i) Prothesis

English	Bemba
company	akaampani
book	ibuuku (Kennedy, 2007, p. 93)

ii) Anaptyxis

English	Bemba
brake	buleki
captain	kapiteni (Kennedy, 2007, p. 93)

iii) Paragodic

English	Bemba
ball	boola
cup	kaapu (Kennedy, 2007, p. 94).

For every category of vowel insertion there is a reason. Kennedy (2007) states that many words in Bemba begin with a vowel. So, prothesis is needed. Anaptyxis is applied to break up consonant clusters, while paragodic epenthesis is applied because all words in Bemba end with a vowel (Kennedy, 2007, p. 94).

It is evident that in Bantu phonology, vowel insertion/epenthesis is applied to either open close syllables or to break consonant clusters that result in CV-type syllables. Epenthesis further increases the number of syllables because adding a vowel results in a new syllable. As proven by examples above, English monosyllabic words such as *ball*, *brake* and *book* have become polysyllabic in Bemba.

c) Vowel harmony rule

Generally, vowel harmony is the resemblance of vowels in different syllables in a word. Batibo (1996) describes vowel harmony as “a process where the inserted vowel adopts the phonetic features of the vowel from the preceding syllable” (p. 34). Batibo (1996) observes vowel harmony in the nativisation of English loanwords in Tswana and Swahili. Tswana is the national language of Botswana, one of the official languages of South Africa and a national language in Namibia, while Swahili is the main official language of Tanzania, the national language of Kenya, and functions as a lingua franca in Uganda, Burundi, Zaire and the Congo Islands.

In Tswana, the vowel harmony rule is applied either from left to right or from right to left as in the examples below:

Left to right case

‘week’ *beke*

‘note’ *nouto*

Right to left

‘glass’ *galase*

‘screw’ *sekurufu* (Batibo, 1996, p. 36)

Similarly, Batibo (1996) notes vowel harmony in English loanwords in Swahili as in the examples that follow:

‘driver’ *dereva*

‘German’ *mjeremani* (Batibo, 1996, p. 38)

In another paper, Zivenge (2009) concludes that vowel epenthesis is done in conjunction with harmony between a vowel and a preceding consonant. Vowels [a], [e,] and [i] are inserted when preceded by a coronal consonant (alveolar, dental and alveo-palatal sounds), while vowels [u] and [o] follow a labial sound. This case follows what Batibo (1996, p. 34) refers to as the onset assimilation rule that stipulates that “if the onset consonant is a labial or bilabial, the inserted vowel will be [u] or [U] and if the onset consonant is a non-labial (dental, alveolar, palatal or velar), the inserted vowel will be [i] or [I]”.

As observed in other Bantu languages previously discussed, vowel insertion through vowel harmony can also be applied to German loanwords in Oshiwambo. Vowel harmony is a common rule in the Oshiwambo speech system. Fivaz (1986) explains that in some cases in Oshiwambo where a two-syllable sequence occurs, one vowel is replaced by an identical, or similar vowel to the vowel in the other syllable.

d) Mirror vowel epenthesis

Something like vowel harmony is what Kennedy (2007) terms as mirror vowel epenthesis. There are certain rules in Bemba governing vowel epenthesis in breaking English consonant clusters. Three of such rule are:

i) Mirror vowel epenthesis (s)

“This rule states that in Bemba between any consonant and *s*, the same vowel which precedes the cluster is inserted between the consonant and *s*” (Kennedy, 2007, p. 96)

Examples:

English

Bemba

eggs

iekeshi

box

imbokoshi (Kennedy, 2007, p. 97)

ii) Mirror Vowel Epenthesis (gl, gr, kl and kr)

This rule states that “in Bemba the same vowel that follows the reflex of the English consonant cluster *gl*, *gr*, *kl* and *kr* is also inserted between the cluster (except for tone and length)” (Kennedy, 2007, p. 97).

Examples:

English

Bemba

Cluster

club [kl^hb]

akalaaba

kl

grade [greId]

keleeti

gr (Kennedy, 2007, p.

97).

iii) u- Epenthesis (pl or bl)

“This rule states that in Bemba between *p* or *b* and *l* normally *u* is inserted if the cluster is followed by *e* or *a*” (Kennedy, 2007, p. 98).

Examples:

English

Bemba

brake [breIk]

buleeke (Kennedy, 2007, p. 98).

From the examples above, one can see that there is a resemblance of vowels in some loanwords, such as in rule i) and ii) which is just vowel harmony. Rule iii) above is also noticed amongst loanwords in Oshiwambo such as English *plastic*, *opulasitika*; therefore, these rules can be applied in studying and analysing German loanwords in Oshiwambo.

e) Glide epenthesis

Zivenge (2009) asserts that a syllable nuclear is said to be complex when instead of having pure vowels only it is found to have either diphthongs or triphthongs. A complex peak is not permissible in Tonga. Therefore, such peaks are handled by a process called glide epenthesis. Crystal (as cited in Zivenge, 2009, p.193), defines epenthesis as the intrusion or insertion of an extra sound, medially in a word, while glides are semi-vowels [w] and [j].

Glide epenthesis is demonstrated as follows:

English

Tonga

‘sound’ /saund/

[sawundi] (Zivenge, 2009, p.195)

Zivenge (2009) concludes that the labio-velar glide [w] has been inserted to break up diphthong [au], accompanied by the epenthesis of the vowel [i] at the end since Tonga does not allow coda consonants at the end of the syllable. Epenthesis of the labio-velar approximant [w] has been necessitated by the phonological observation that the

two sounds [u] and [w] share similar distinctive features, which are [+ sonorant] and [+ round].

Epenthesis of the palatal approximant [j] has also been observed in breaking diphthongs and triphthongs in Tonga by Zivenge (2009). The alveo-palatal approximant [j] is epenthesised when there is a V element that has the same feature conTableurations with the glide [j] and share the similar feature matrices with glide [j], should either precede or follow the glide [j] in the CV sequence. This is demonstrated in the following phonetic environments:

[oi], [ei], [ai], [I:], [ui], [ia], [ie], [io] and [iu] as occurring in the following words.

English

Tonga

‘boil’ /b^oɪl/

[bojila] (Zivenge, 2009, p. 204)

It is observed that glide epenthesis does not only break diphthongs but also affects the number of syllables from English to Tonga.

Glide epenthesis is also observed in Ciluba loanwords. Kabuta (1996) states that glide /w/ is inserted after /v/ and /f/ because /va/ and /fa/ are not permitted as shown below:

French cravat > kalavwanda ‘tie’

Kiswahili tofali > ditavwadi ‘brick’ (Kabuta, 1996, p. 44)

Similarly, Chimhundu (2002) and Mheta and Zivenge (2009) assert that diphthongs in loanwords in Shona are broken down by glide insertion as demonstrated in the following examples:

‘style’/stail/ > /tʰitajera/ (Mheta & Zivenge, 2009, p. 162)

It can be concluded that glide epenthesis is applied in loanwords to break diphthongs and triphthongs, and this may be applied to German loanwords in Oshiwambo as well.

f) Extra-syllabic vowel truncation

As discussed earlier, vowels in loanwords are handled either by substitution or glide epenthesis, while they are inserted in handling consonant clusters. However, vowels are also deleted, especially when one of the two vowels in a diphthong, usually a satellite, is truncated or cut off so that the other vowel remains the sole nucleus of the syllable (Batibo, 1996).

In Tswana

Examples: a loanword for ‘train’ is *terena* (instead of *treina*) so the *i* in *ei* has been removed

a loanword for ‘stove’ is *setofo* (instead of *setoufo*) so the *u* in *ou* has been removed (Batibo, 1996, p. 37)

In Swahili

Examples: a loanword for ‘tape’ is *tepu* (instead of *teipu*)

‘stove’ is *stovu* (instead of *stouvu*) so vowels *i* and *u* have been respectively cut off from *ei* and *ou*, while *o* and *e* have remained as the sole nucleus of the syllables (Batibo, 1996, p. 39).

2.5.1.2 Consonant nativisation

This sub-section investigates how speakers of a recipient language use phonological rules to handle consonants of a source language to suit the phonological system of the recipient language. According to Crystal (1991), a consonant is one of the two categories used for the classification of speech sounds, the other being the vowel. Phonetically, consonants are sounds made by a closure or narrowing in the vocal tract so that the airflow is either completely blocked, or so restricted that audible friction is produced (Crystal, 1991, p.74). The following are the phonological rules that account for handling consonants in loanwords in some Bantu languages.

a) Consonant deletion/omission

Evans (2014, p. 48) describes sound deletion as “a linguistic process in which a consonant in a word is eliminated from its position, where the deleted sounds are especially those that do not occur in Lubukusu Consonant Inventory”. A study carried out by Evans (2014) investigated how Lubukusu (a dialect of the Luhya language in Kenya in Bungoma District) borrows words from English and yet the two differ widely in terms of phonemic inventories.

With consonant deletion, a consonant is eliminated from its position in a loanword (especially those that do not occur in the Lubukusu consonant inventory, of which /h/ is one).

For example (h), English	Gloss	Lubukusu	Gloss
/hautel/	hotel	/eoteli/	eoteli (Evans, 2014, p. 48)

So, /h/ has been deleted because it does not exist in the Lubukusu inventory.

Similarly, Batibo (1996) observes the deletion of consonants in English loanwords in Tswana and Swahili respectively as in the example below:

Tswana	English	Deleted consonant	
posa	‘post’	/t/	(Batibo, 1996, p. 37)
Swahili	English		
batiza	‘baptise’	/p/	(Batibo, 1996, p. 39)

Batibo (1996) therefore stresses that “deletion was applied to avoid undesirable consonant clusters or too long words if other methods were used” (Batibo, 1996, p. 37).

In the same way, Apenteng and Amfo (2014) argue that a consonant cluster is not a preferred sequence in Akan, therefore such forms are avoided. Therefore, some English words with such clusters loaned into Akan are adjusted by deletion, to make loanwords conform to the most common open syllable (CV) in the target language. For Example:

Word	English	Akan
last show	/la:st Joʊ/	/laa soo/
factory	/fæktri/	/faatiri/ (Apenteng & Amfo, 2014, p. 227)

Consequently, /st/ and /k/ have been respectively omitted. One can conclude that it is not only a single consonant that can be deleted or omitted, but consonant clusters too can be deleted.

It is evident that some Bantu languages employ consonant deletion; therefore it can be suggested that Oshiwambo, being a Bantu language, might use such a process or strategy in the adaptation of German loanwords as well.

b) Sound substitution

Sound substitution has been discussed in section 2.5.1.1 a) as the replacement of one linguistic item by another at a particular place in structure. Whiteley (1963) notes that as far as phonological assimilation is concerned, English loanwords in Kamba undergo consonant realisations and vowel realisations.

For example, English consonants /p/, / b/, / f/ and /v/ are realised as /v/.

Examples:

English ‘top’ Kamba > /tovu/

English ‘rubber’ Kamba > /la:va/ (Whiteley, 1963, p. 149)

Likewise, Evans (2014) states that consonant substitution is another linguistic process in which a consonant is replaced by a completely different consonant. For example, the voiceless bilabial stop /p/ in an English word borrowed by Lubukusu changes to a voiced bilabial fricative /β/

English	Gloss	Lubukusu	Gloss
/zip/	zip	/esiβu/	esibu (Evans, 2014, p. 49)

Steinbergs (1985) observes a similar situation and therefore argues that:

Since borrowing and source languages most often do not have the same inventory of sounds, one obvious way in which loanwords are modified is by sound substitutions. That is, for any source language sound which the borrowing language lacks, the phonetically closest sound is substituted. (p. 91)

Analysing English loanwords in Tonga, Zivenge (2009) notes that substitution is done to replace English consonants that do not exist in Tonga. Some of these sounds are /θ/, /θ/, /r/, /n⁰/ and /ns/, and substitution is demonstrated in the following example:

English	substitution process	Tonga
‘theory’	/ ⁰ tʰrI/ ----->	/sijoli/ (Zivenge, 2009, p. 238)

From this illustration, the underlying principle that accounts for English consonant substitution is the choice of equivalent consonants in Tonga, such that only those sounds that share similar distinctive features can substitute each other. In this

example, the two sounds /θ/ and /s/ are both fricatives; the former is dental while the latter is alveolar.

Substitution is also applied in handling sounds that exist in both the English and the Tonga inventories. Zivenge (2009) clarifies that the sound /s/ is such an example. However, English uses /s/ as both a simple and a cluster consonant, whilst Tonga restricts it to the simple consonant. So, using /s/ in a cluster in Tonga is not allowed, and a Tonga equivalent /tʃ/ is sought, as illustrated below:

English	Tonga
‘stool’ /stu:l/	[tʃitulo] (Zivenge, 2009, p. 244)

Similarly, Mahlangu (2007) states that although there are English phonemes that do not change in isiNdebele, there are other phonemes that phonologically change. Amongst those that change are; /b/, /k/, /g/, /p/, /dʒ/, /s/, /t/ and /q/ as demonstrated in the examples below:

English	isiNdebele
chalk	itjhogo
telegram	ithelegramu (Mahlangu, 2007, p. 80)

The changes are a result of isiNdebele phonemes being either ejective or aspirated. Another scholar, Chimhundu (2002), discussed substitution patterns of phonemes in loanwords in Shona. Chimhundu (2002) notes that “Shona speakers may be expected to replace English phonemes that do not occur in Shona with those Shona phonemes that are nearest to them perceptually or in articulation” (p. 126) as shown below:

English lateral /l/ > Shona roll /r/
‘loaf’ > /rofu/

‘light’ > /raiti/ (Chmhundu, 2002, p. 126)

c) Reproduction

In this context, reproduction refers to the adoption of a phoneme or phonemes in a language where such phonemes did not exist before. Chimhundu (2002, p. 126) explains that there are instances “where Shona speakers fail to identify strange phonemes with any of their own, and may be expected to reproduce the original sound in the loans” as in the following example: English /θ/ > /θ/

‘theory’ /θɪəri/ > /θijori/ (Chimhundu, 2002, p. 126)

From this explanation, one learns that some languages can increase their phonemes by adopting phonemes which originally were not part of their inventory.

It is evident that sound/consonant substitution is accountable for handling consonants that occur in a source language but do not exist in a recipient language. However, it should be noted that sometimes a recipient language is forced to adopt or reproduce a sound that does not originally exist in its inventory as the case of /θ/ in Shona.

d) Syllabic omission

With this process, a syllable in a word to be borrowed from a source language to a recipient language is left out. This is done for several reasons. Batibo (1996) explains that “in a situation where undesirable clusters would result or where a word would be too long if other methods were used, a consonant or a source word part would be omitted” (p. 37). One reason for this is to simplify pronunciation, especially when the original form would be hard to pronounce to fit the recipient language system. Kayigema (2010) demonstrates how syllabic omission happens during the adaptation of English words into Kinyarwanda (a Bantu language spoken in Rwanda and beyond its borders).

Examples:

Kinyarwanda	French	English	
isinya	<u>signature</u>	signature	
umu-fana	<u>fanatique</u>	fanatic	(Kayigema, 2010, p.100)

As demonstrated above, the last syllables *ture* and *tic* have been omitted. It is important to note that since syllabic omission occurs in other Bantu languages, it might occur in the integration of loanwords from German into Oshiwambo too.

e) Consonant cluster tolerance

It is noted that typically Bantu languages do not allow consonant clusters, hence vowel insertion is employed. However, some Bantu languages in some cases tolerate consonant clusters. This is supported by Batibo (1996) in Tswana and Swahili, and Mahlangu (2007) in isiNdebele respectively.

For example:

English (**settler**) ----- Swahili [**setla**] (Batibo, 1996, p. 38)

English (**sister**) ----- Tswana [**sistara**] (Batibo, 1996, p. 37)

English (**chlorophyll**) ----- isiNdebele [**itlorofili**] (Mahlangu, 2007, p. 85)

Batibo (1996) maintains that the level of consonant cluster tolerance would depend on the speaker's degree of bilingualism. Literate speakers tend to tolerate consonant clusters more often than the illiterate ones because of exposure to source languages.

Batibo (1996, p. 39) further claims that “such clusters are associated with the speech of educated elites and is a result of the influence of the source language.” Explaining why Swahili has become unique in tolerating consonant cluster Batibo (1996) states that “Swahili has a long association with foreign languages such as Arabic, which tolerates consonant clusters” (p. 39).

In another study, Mutua (2013), investigating the strategies used by the recipient system, Kikamba, to handle phonologically different words from English, noted that although consonant clusters are not allowed in Kikamba, some loanwords retain consonant clusters after nativisation.

Examples: English

Kikamba

Christ

Klistu

sacrament

saklamendi (Mutua, 2013, p.103).

From these examples, one can assume that consonant tolerance might have been caused by the frequent and regular use of these words in the church and religion fields, especially by missionaries who were not native speakers of Kikamba.

This is also evident among Oshiwambo speakers, having two possible forms of one loanword borrowed from English; one form for the literate and the other one for the illiterate. For example:

English	bilingual/literate	monolingual/illiterate
school	oskola	osikola
petrol	opetlola	opetolola

This would suggest that consonant cluster tolerance might be applied to German loanwords in Oshiwambo especially among the educated and bilingual speakers who speak Afrikaans, German or English in which consonant clusters are permissible.

f) Devoicing

Another phonological adaptation strategy observed in handling consonants in loanwords in Bantu languages is a feature changing rule in which voiced phonemes in the source language are substituted with the voiceless ones. This strategy is known as devoicing. Kennedy (2007) notes that the following English voiced phonemes /d/, /g/, /z/, /v/, /b/, /dʒ/, and /ð/ in English-derived loanwords are substituted with voiceless counterparts in Bemba /t/, /k/, /s/, /f/, /p/ and /c/ as demonstrated in the following examples:

English	Bemba	voiced > voiceless
<i>damage</i>	<i>/taameci/</i>	/d/ → /t/
garage	<i>/kaalaci/</i>	/g/ → /k/
valve	<i>/falufu/</i>	/v/ → /f/ (Kennedy, 2007, p. 88)

It is observed that the voicing feature plays the major role in this process. However, place of articulation too contributes to this process. In the Bemba phonemic inventory, the English voiced plosives /b/, /d/, /g/), the voiced fricatives /v/, /z/), the dental fricatives /θ/, /ð/ and the voiced affricatives /dʒ/ are non-existent. Therefore, they are substituted with their Bemba voiceless counterparts.

Similarly, Mutua (2013) notes that in the process of nativisation, some voiced segments that do not exist in the Kikamba sound system, are devoiced.

Example: English

Kikamba

card /ka:d/

kaati /kaati/ (Mutua, 2013,

p.100)

It is evident that a recipient language that lacks voiced sounds that are present in a source language, can substitute the voiced phonemes with their voiceless counterparts during the process of borrowing. It can be expected that Oshiwambo, being a Bantu language, might employ devoicing as a phonological process in integrating German words into its speech system, the way other Bantu languages do.

2.5.2 Morphological adaptation strategies

This section deals with the morphological rules that account for the adaptation of loanwords to fit the morphological system of a recipient language. Kayigema (2010) argues that:

In all language contact situations, words of foreign origin are allocated to the borrowing language system. These words need to be adapted morphologically to fit the noun system of a recipient language. Most loanwords take the form of the words of the language which has hosted them but with alterations of the original form. (p. 67)

Scholars such as Zivenge (2009), Kayigema (2010), and Karuru (2013) maintain that the morphological adaptation of loanwords from other language families in Bantu languages is operated through prefixation, suffixation, substitution, deletion,

derivation and reduplication. The following are the morphological processes that account for the modification of the structure of loanwords in some Bantu languages.

a) Prefixation

According to Karuru (2013), prefixation is a morphological process that involves the addition of a morpheme at the initial position of a stem or root. Karuru (2013) further notes that words borrowed from English to the Gi-Gichugu dialect exhibit prefixation. This is in line with what Maho (1998) observes in Bantu languages, where nouns are classified according to nominal classes and each class is distinguished by a class prefix which precedes the nominal root. In Gi-Gichugu, the plural morpheme is marked in prefixes only, and it is the prefix that indicates the class to which a noun belongs (Karuru, 2013).

To demonstrate how prefixation occurs in Gi-Gichugu, a plural prefix {ma-} is affixed:

Noun	Singular	Plural	Gloss
/afis/	/ ^ə βisi/	/ma- ^ə βisi/	office/offices
/sku:l/	/su-kuru/	/ma-sukuru/	school/schools (Karuru, 2013, p. 4)

Furthermore, Karuru (2013) notes that some other English words are adjusted to become diminutive nouns that would fit in Gi-Gichugu noun classes 12/13, where a noun is changed from its non-diminutive to a diminutive form by adding [ga-] which is realized as [ka-] for the singular form and [to-] for the plural form. Examples of such words are illustrated below:

Ordinary size	Singular diminutive	Plural diminutive	Gloss
/ɸ+mba ^{ɔ̄} i/	/ka-mba ^{ɔ̄} i/	/to-mba ^{ɔ̄} i /	bus/buses
/ɸ+sikati/	/ga-sikati/	/to-sikati/	skirt/skirts (Karuru, 2013, p. 6)

In another study, Zivenge (2009), states that both Tonga and English are prefixal and suffixal languages. Tonga has monosyllabic prefixes. For both Tonga and English, insertion of suffixes is mostly done after the base word while prefixes are inserted before the base word, as demonstrated below:

English		Tonga
soldier	/seuld ^{3ɔ̄} /	/musod ^{3a} / (Zivenge, 2009, p. 264)

The insertion of [mu-] prefix onto the English word ‘soldier’ is done because Tonga has monosyllabic prefixes. The morpheme [mu-] places the word [musod^{3a}] ‘soldier’ in noun class 1.

Similarly, Kayigema (2010) argues that a loanword in Kinyarwanda adds an augment and an affix to the stem of a word, as illustrated bellow:

Kinyarwanda	French	English
<i>a-ba</i> -voka	avocats	lawyers
<i>u-ru</i> -papuro	papier	paper (Kayigema, 2010, p. 99)

From these examples, one can see that in Kinyarwanda some nouns have an augment (pre-prefix), a prefix and a stem, as in *a-ba-fransa*. This case is like Oshiwambo noun structure, for some noun classes where the three noun constituents (augment, prefix and stem) are found. For example, in class 7, a word *oshikombe* (Eng. broom), *o-* is an augment, *-shi-* is a prefix while *-kombe* is a stem.

Zivenge (2009) argues that there are a set of rules governing the insertion of prefixes adopted in the process of lexical adaptation of English loanwords in Tonga as assigned to the noun class system. For each noun class, a prefix for that specific class is inserted to a loanword (noun) as demonstrated below:

English	Tonga	Class	Prefix	Word
'police'	/p ^h liis/ polisa	1	[mu-]	/mupolisa/
'matches'	/m ^h t ^h isa/ -t ^h isa	4	[mi-]	/mit ^h isa / (Zivenge, 2009, p. 268)

From these examples it is evident that prefixes in Tonga act as class markers. Zivenge (2009) maintains that each noun class prefix has its meaning when inserted to a noun and assigns a loanword to specific class. This is the case with Oshiwambo as well; however, it should be noted that some Oshiwambo noun classes have the same prefix and the difference can only be identified semantically. For instance, class 1 singular and class 3 singular take (*omu-*), as in *omuntu* 'a person' and *omuti* 'a tree' (Fivaz, 1986, p. 32).

b) Derivation

Crystal (1991) defines derivation as “a term used in Morphology to refer to one of the two main categories or processes of word formation (derivational morphology), the other being inflection. Basically, the result of derivation is a new word” (p. 99). Kayigema (2010) discusses seven types of derivational suffixes which help in the formation of verbs in Kinyarwanda, which are also applicable to integrated verbal loanwords. The structure of a verb in Kinyarwanda is:

Nominal prefix (infinitive) + Verbal root + Extensions + final vowel

Example: **gu-/ku-** + **fotor** + **extension** + **a**

The seven derivational suffixes are as follow:

- 1) **-ir-/-er-** indicating application (gufotor**era**)
- 2) **-an-** indicating reciprocity (gufotor**ana**)
- 3) **-ish-/-esh-** indicating causative (gufoto**resha**)
- 4) **-ik-/-ek-** indicating ability (gufotore**ka**)
- 5) **-u-** indicating passive voice (gufotor**wa**)
- 6) **-ur-** indicating reversive action
- 7) **-agur-** indicating repetitive action (Kayigema, 2010, p.102)

Verbal extensions are also common in Oshiwambo and perform the same functions as in Kinyarwanda. In Oshiwambo, these extensions occur immediately after the verb root and before the final verb suffix. For example, **-el-** is an applied extension as in *okulandela* ‘to buy for’. The verbal extensions are not applied to inherited verbs only but to the borrowed verbs as well. So, derivation is also one of the word formation processes which Oshiwambo uses and it can be employed in adapting loanwords as well. Tirronen (1977),

Hasheela, Amakali and Namuandi (1990) observe various verbal extensions in Oshiwambo as well.

Fivaz (1986) discusses these different verb extensions and their suffixes in Oshiwambo.

- 1) Reciprocal extension **-athan-** for example, okumona (to see) okumon**athana** (to see each other)
- 2) Applied extension **-el-** for example, okulonga (to work) okulong**ela** (to work for)
- 3) Passive extensions **-(i)w-** for example, okulya (to eat) okuli**wa** (to be eaten)
-(e)w- for example okupa (to give) okup**ewa** (to be given)
-w- for example okutungwa (to build) okutung**wa** (to be built)
- 4) Neuter extensions **-ek-** for example okupata (to lock) okupate**ka** (to be well locked)
-ik- for example okuuva (to understand) okuuv**ika** (to be clearly understood)
- 5) Causative extension **-ith-** for example gu (fall) gw**itha** (to make fall)
- 6) Reversive extension **-ulul/-olol/-unun/-onon-**

Examples: *manga* (tie) okumang**ulula** (to untie)

konga (search) okukong**olola** (to search again)

tomona (say it) okutom**onona** (to say again) (Fivaz, 1986,

p. 90-97).

Mbenzi (2008) argues that amongst various methods of noun formation in Oshiwambo is employing verb extensions. For example, from verbs *okulongela* (to work for) and *okukongathana* (to look for one another), nouns *elongelo* and *ekongathano* have been formed respectively (Mbenzi, 2008, p. 27). So, derivation may be used in forming

Oshiwambo nouns from German verbs or in changing German verbs into different Oshiwambo verb extensions.

c) **Suffixation**

While prefixation places affixes before a root or stem, suffixation refers to an affix added, following a root or stem. Karuru (2013) further observes suffixation as one of the morphological processes common in Gi-Gichugu for the derivational formation of new lexical items. When English words or nouns are borrowed into Gi-Gichugu, a vowel is inserted at the word final. Examples of such words are given as follows:

Gloss	English	Gi-Gichugu
bus	/bʌs/	/mba ^{ɔ̄} -i/ (Karuru, 2013, p. 7)

In this case, suffixation has been applied to open the syllable because closed syllables are not permitted in a typical Bantu language system. So, suffixation can be applicable in this study because Oshiwambo, being a Bantu language, does not allow closed syllables from German.

In another study, Apenteng and Amfo (2014) argue that morphologically, English stems that are borrowed in Akan are subjected to the inflectional rules of Akan. Akan speakers exhibit three forms in making noun plurals of English loanwords namely: the *-nom* suffix, the *-fo*^ɔ suffix, and lastly the *a*-prefix, as illustrated below:

/refiree-**nom**/ “referees”

/a-tikya-**fo**^ɔ/ “teachers” (Apenteng & Amfo, 2014, p. 231)

Apart from the plural form markers, Apenteng and Amfo (2014) further note that the **-ni** suffix is attached to English loanwords to mark singular number as in /tela-ni/ for English “a tailor” (Apenteng & Amfo, 2014, p. 228).

d) Reduplication

“Reduplication is a term in morphology for a process of repetition whereby the form of a prefix/suffix reflects certain phonological characteristics of the root” (Crystal, 1991, p. 293). Kayigema (2010) states that the stem or part of the loanword is repeated in the same way Kinyarwanda adjectival or nominal stems are repeated.

For example:

French	Kinyarwanda	Gloss/English
a) <i>bleu</i>	buru-ru,	blue
b) <i>signer</i>	gu-sinya-sinya	to sign (Kayigema, 2010, p. 104)

Reduplication is common in Oshiwambo too. Mbenzi (2008) asserts that “reduplication is employed in the formation of nouns in Oshiwambo in which a stem of an existing noun is reduplicated” (p. 26). It is therefore applicable to this study. Since reduplication is used with inherited words, it is also possible to be applied to German loanwords.

2.6 Allocation of loanwords to nominal classes

Schuh (as cited in Bobuafor, 2009) explains that the term *noun class* is used in two different ways in the description of African languages; namely, it is used to refer to:

A single set of morphological concord which may show up as affixes on noun stems, affixes on modifiers, and pronominal referents to nouns and a paired set of [morphological] concords where one member of pair has a singular referent and the other member is a plural corresponding to that singular. (p. 272)

Chimhundu (2002) clarifies that nouns in Bantu languages are characterised by a system of prefixes according to which they may be divided into a number of classes. They share several noun prefix-classifiers which are well defined morphologically. However, Matiki (2016) argues that these prefixes do not only indicate the class of the noun but also encode such grammatical information as number and agreement (p. 90). Similarly, Maho (1998) argues that in Bantu languages, each nominal class is distinguished by a class prefix which precedes the nominal root; although there are nouns which are marked with a null/zero prefix (p. 70). This is observed in the Oshiwambo nominal class system “where classes 1a), 5 and 9 which do not have prefixes” (Fivaz, 1988, p. 32).

Scholars such as Demuth (2000), Ngorosho & Alcock (2004), Matras (2009), Kayigema (2010) and Matiki (2016) have investigated the strategies employed in allocating loanwords to noun classes in Bantu languages and acknowledge that languages that assign gender or class to inherited nouns also assign them to borrowed nouns.

Regarding the strategies employed in allocating loanwords to Bantu language nominal classes, semantic, morphological and phonological characteristics have been identified to have played a role. Kayigema (2010) argues that “nominal classes

dominate the morphology of Kinyarwanda. The concordial or agreement prefixes determine which class a noun belongs to” (p. 34).

Kayigema (2010) further notes that nominal classes are determined based on concord prefixes within a sentence structure. Therefore, one way of allocating loanwords in Kinyarwanda to the nominal classes is applying the morphophonological strategy in which the initial syllable of a foreign word resembling the noun class-prefix is adapted to match the shape of the recipient language. Similarly, Kabuta (1996) explains that whenever there is a formal resemblance between the first syllable (or article plus first syllable) of a foreign word and a Ciluba noun prefix, the former is adopted to match the shape of the Ciluba noun prefix (p. 44).

Similarly, the phonological strategy is also applicable in Kamba, where Whiteley (1963) asserts that regarding morphological assimilation of English loanwords in Kamba (Bantu language in Kenya), “where the initial element of the word as phonologically assimilated is similar to one of the recognised prefixes, singular or plural, then the word is allocated to the Class of which the prefix is a marker” (p. 161). Example: Class 3/4 (mu-/mi-) mule:la English umbrella.

Likewise, Mahlangu (2007, p. 103) argues that “when African languages adopt nouns from other non-African languages such as Afrikaans and English, they do so by means of prefixing the noun class prefix and phonologically adapt it to their respective phonological systems”. So, any noun borrowed from Afrikaans or English is adopted into the isiNdebele lexical system by prefixing noun class prefixes as in the following table:

Table 2.1

isiNdebele classes 1 and 2 prefixes

Class	Prefix	Source language	Example
1	um(u)-	Eng.	umvangeli ‘evangelist’
1 (a)	(u-)	Afr.	upeni ‘pennie’
2	ab(a)-	Eng.	abavangeli ‘evangelists’
2(a)	(abo-)	Afr.	abopeni ‘pennie’

Source: Mahlangu (2007, p. 103)

The table above demonstrates one of the characteristics of Bantu languages as argued by Odden (2015), that in a Bantu morphology nouns have somewhat arbitrary genders which are marked with singular versus plural class prefixes, conventionally numbered from number 1 to 22 or higher and generally paired so that nouns with singular in class 1 have a plural in class 2 and so on.

Maho (1998) similarly, argues that “it is virtually impossible to define any class with a set of sufficient and necessary criteria” (p. 70). Maho (1998) further adds that the “allocation of classes to loanwords is more often concerned with phonology than semantics” (p. 70).

Kayigema (2010) demonstrates that a morphological order of a noun in Kinyarwanda is: augment + nominal prefix + stem. Most nouns begin with an augment, although other nouns do not have any augment at all. According to Kayigema (2010), “an

augment is any element other than a concord prefix that stands before a stem, while a stem can be defined as that part of a nominal which remains after the removal of any concord prefix” (p. 68).

Kayigema (2010) further defines a concord prefix as “any prefixed element that serves to operate the system of grammatical agreement that is characteristic of every Bantu language” (p. 68). Concord prefixes are relevant to noun allocation because they serve as class markers in Oshiwambo. Therefore, any loanword (noun) from German assigned to a class which has a concord prefix would carry such prefix too.

Whiteley (1963) clarifies that in Kamba where there is no initial element which can be related to a recognised prefix, two principles operate. The word will either be allocated to a Class, generally 9/10 or 14/6 based on its zero-prefix, or it will be allocated to Class 1/2 based on its meaning, that is whether it denotes a human being.

Example: /lendi/ 9/10 English smart lady

/kavuteni/ 14/6 English captain

/mini:sta/ 1/2 English minister (Whiteley, 1963, p. 161)

Moreover, Kayigema (2010) notes that:

Some loanwords may be allocated to noun classes according to their semantic characteristics, whether they are animate or inanimate. A typical Bantu language assigns nouns denoting humans to class 1. Other nouns are assigned to different classes because of being kinship names, natural phenomena, liquids, diminutives, abstracts, trees, seasons, body parts or animals, which would depend on the nominal system of a specific language (p. 86).

Likewise, Fivaz (1986) notes these features as main significance in noun allocation to the Oshiwambo nominal class system (p. 32). Similarly, Whiteley (1963) notes that in Kamba, some words appear to be assimilated into a Class because of their meaning alone, or at least based on an element in its meaning. Thus, some words are allocated to Class 5/6 based on size, and one word is allocated to Class 11/10 based on length.

For example: *ikoti* 5/6 English ‘coat’

tai 11/10 English ‘tie’ (Whiteley, 1963, p.161).

Furthermore, Matiki (2016) agrees with other scholars on the issue of assigning loanwords to Bantu nominal classes, that “the grammatical role of nominal prefixes, phonological similarity of the initial syllable to available class prefixes, the relative semantic similarity of the noun, and the perceived semantic content of the nominal classifiers”, are factors involved in the classification of nouns into distinct classes (p. 90).

It is therefore evident that three criteria have been used in allocating loanwords to certain classes, namely 1. Their initial syllable bears phonological resemblance to their singular prefix of a particular class, or 2. They are integrated on the basis of their semantics while 3. Others are integrated based on both semantic and morphological reasons.

2.7 Theoretical framework

Research has to be informed by a theory. This research therefore adopted the theory of Natural Generative Phonology (NGP) which was propagated by Hooper (1976), which assigns the correct phonetic representations to utterances in such a way as to reflect a native speaker’s internalised grammar. Since the aim of the study was to

investigate phonological and morphological changes that German words undergo during borrowing into Oshiwambo, this theory can help in making concrete predictions about sounds of natural language and examining relationships between morphology and phonology by applying categories of rules of phonology. This theory (NGP) has also been used by Evans (2014) in investigating the phonological and morphological nativisation of Lubukshu (a dialect of Luhyia of Western Kenya) loanwords from English language.

Evans (2014) stresses that the NGP has various types of rules. One of such categories of rules are phonological rules which account for only phonetic information, including syllable boundaries of borrowed words in their environments. The rules include assimilation, strengthening and weakening. Morpheme deletion and insertion in borrowed words justify these rules. The morphological rules are determined by morphosyntactic or lexical conditioning, which consider morphological and syntactic information such as morpheme boundaries, morpheme classes and lexical categories. There are also via-rules which account for cases that cannot be explained by phonetic or syntactic terms (Evans, 2014, p. 46).

There are four reasons why this theory has been chosen in investigating the phonological and morphological integration of German loanwords into Oshiwambo.

1. The NGP theory applies the phonological rules which account for phonetic information in loanwords. Understanding the sound system of the recipient language helps the researcher in establishing the phonological processes involved in the adaptation of German loanwords into Oshiwambo.

2. This theory uses the morphonological rules which account for morphosyntactic or lexical conditioning. These rules consider morphological and syntactic information

which includes morpheme boundaries, morpheme classes and lexical categories. In this case, understanding the use of different morphemes such as noun class markers and plural/singular markers in recipient language helps the researcher identifying them in loanwords too.

3. The NGP theory applies the word formation rules which specify what morphological elements constitute a word and the nature of their arrangement within a language. Understanding the word structure in a recipient language helps the researcher to understand the morphology of loanwords too. This provides the researcher with the morphological information of words such as word constituents in the recipient language, which can help the researcher in establishing the morphological processes involved in the adaptation of German loanwords into Oshiwambo.

4. This theory applies syllabification rules which assign boundaries to the phonological strings or sequence. It is important for a researcher to understand the syllable structure of a recipient language to make specific rules governing the syllabification of loanwords. For example, Oshiwambo does not allow closed syllables, but it employs processes such as vowel insertion and consonant cluster modification to open closed syllables.

Apart from using the NGP theory, the study also adopted general word formation theory, which accounts for compounding, derivation and conversion as word formation processes in a language (Lieb, 2013). In the present study, it was important for the researcher to understand various word formation processes applied in the recipient language because the same processes can be applied to loanwords during the integration process.

Oshiwambo has been noted for using derivation, suffixation, prefixation and reduplication as word formation processes. Having a thorough understanding of word formation processes in a recipient language (Oshiwambo) helps the researcher in justifying and establishing word formation processes employed in the adaptation and integration of German loanwords into Oshiwambo.

CHAPTER 3

METHODOLOGY

3.1 Introduction

This chapter gives an outline of the research design, target population, sample and sampling techniques, research instruments, data collection procedures and data analysis techniques used in this study.

3.2 Research design

The qualitative research design has been used to do the qualitative content analysis of the phonological and morphological integration of German loanwords into Oshiwambo. According to Liamputtong and Ezzy (1999) the qualitative research design focuses on meanings and interpretation, and therefore tries to understand how and why people act in particular ways. This design has been found to be appropriate and suitable in investigating this aspect of human language behaviours because the study sought to interpret the phonological and morphological processes that German loanwords undergo during the process of borrowing into Oshiwambo.

3.3 Population

A population is defined by Wiid and Diggins (2013, p.186) as “the total group of people or entities [social artefacts] from whom information is required.” The population of this study were all Oshiwambo printed materials in which German loanwords could be found. So, the study has employed document study. Bailey (1982) defines *document study* as “the analysis of any printed materials that contain information about the phenomenon one wishes to study” (p. 301). These materials differ greatly in terms of the degree of the structure and purpose for which they were originally written. One area of these documents is the printed mass media, especially

newspapers, magazines, journals and newsletters, and books for fiction and non-fiction. In this study, both fiction and non-fiction books were used. However, due to scarce literature in Oshiwambo, the researcher picked loanwords from daily conversations and personal experience and vocabularies on the recipient language.

3.4 Sample

In this study, the convenience sampling technique was used to select the sample. With the convenience sampling technique, the researcher made use of elements that he knew or that he was able to quickly get and that were easy to access. Therefore, the researcher made use of Oshiwambo printed materials from the library to collect German loanwords for study. The researcher aimed to collect 100 German loanwords from these materials. However, during the data collection process, only 76 words were collected from these materials. Bailey (1982) states that one disadvantage of document study is that “there are many areas of study for which no documents are available, because in some cases the information was simply never recorded, or it was recorded and got destroyed, or the documents remain secret” (p. 305). Oshiwambo is one of those languages where a lot of information remains unwritten. This is confirmed by Maho (1998, p. 31) who states that “the available literature on Oshiwambo languages/dialects is rather scarce.” Although this comment was made 20 years ago, the situation has not changed dramatically.

3.5 Research instruments

The researcher made use of Oshiwambo printed materials to collect loanwords. Some loanwords were picked from daily conversations. Creswell (2013, p. 45) argues that “the qualitative researcher is the key instrument in the research, who collects data himself through examining documents, observing behaviours, and interviewing

participants”. For this reason, the researcher was the key element in data collection as he brought in his knowledge on the recipient language. The researcher was also resourceful in gathering loanwords that he suspected to be of German origin from his vocabulary, which were later confirmed by the research assistants who were German mother tongue speakers or by the Collins Free Online Translator-Collins Dictionary.

3.6 Data collection procedures

Creswell (2013) argues that:

Typically, one thinks that qualitative data collection focuses on the actual types of data and the procedures for gathering them. Data collection involves gaining permissions, conducting a good quality sampling strategy, developing means for recording information both digitally and on paper, storing the data, and anticipating ethical issues that may rise. (p.145)

After the research proposal for the current study had been approved by the Post Graduate Studies Committee of the University of Namibia, the researcher started gathering loanwords from printed materials in the library and from personal collections. Any source that had been used was recorded and fully acknowledged for referencing purposes. A corpus of seventy-six (76) loanwords was collected. Some loanwords were collected from Oshiwambo printed materials in the library. Other words were collected from the researcher’s vocabulary, while others were picked from daily conversations.

The researcher is not a German speaker, neither does he have knowledge of German; the researcher thus used two German mother tongue speakers in verifying the pronunciation of words identified to be of German origin. These were German

students doing Oshiwambo for Beginners; an undergraduate module in the Faculty of Humanities and Social Sciences at the University of Namibia. The researcher came to know the two students through the Department of Language and Literature Studies in which he was serving as a Part-time Lecturer for Oshiwambo.

The two German mother tongue speakers were identified for the task of verifying the pronunciation of words which were thought to be of German origin. They were informed about all anticipated ethical issues, including the purpose and significance of the study and their role in the study.

After the research assistants had agreed to assist with the study, sessions were organised to meet the researcher. The researcher would ask the research assistants a German word for all the words suspected to be German loanwords. Such a word was given in English. The researcher would compare the German pronunciation to the Oshiwambo pronunciation for the German word. This was done to see how close the pronunciation of these words in the two languages was. Words which had close pronunciations in two languages (Oshiwambo and German) were accepted to be German loanwords. Such words were also tested for pronunciation on the Collins Free Online Translator-Collins Dictionary.

Creswell (2013) argues that one characteristic of qualitative research is that it employs multiple methods, which means that “the qualitative researcher typically gathers multiple forms of data, such as interviews, observations, and documents, rather than rely on a single data source” (p. 45). Therefore, the researcher opted for making use of the Collins Free Online Translator-Collins Dictionary to confirm the origin of any loanword suspected to have West Germanic origin. By listening to the pronunciations, the researcher was able to determine which of the three languages could be the source

language of such words. In addition, the researcher also involved other informants (who knew both German and Oshiwambo) in the listening exercise. One such person was Mrs Margaret S. Kalo-Hoefelein, who is an Oshiwambo speaker but is married to Mr Ralph A. Hoefelein, who is a German speaker.

These words were recorded in a notebook as well as in a personal computer by the researcher. For each loanword recorded and accepted to be of German origin, its German written form, and its phonetic transcription were given and recorded. Similarly, this was done to the corresponding loanword in Oshiwambo.

It was observed that certain words needed justification and verification of whether the source language was truly German or could possibly be Afrikaans. This was so because some words have identical pronunciation in the two languages. The verification was done based on three aspects, namely 1. Pronunciation, 2. Existing Oshiwambo literature and 3. History. With regard to pronunciation, a word was believed to have been borrowed from German if its pronunciation in Oshiwambo is closer to its pronunciation in German than it is in Afrikaans.

There are existing Oshiwambo literature such as Tirronen (1977) and Steinbergs (1985) listing loanwords from Germanic languages in Namibia.

By history, it depends on who introduced certain items to the Aawambo, whether it was German or Afrikaans speakers.

3.7 Data analysis

According to Creswell (2013):

Data analysis in qualitative research consists of preparing and organizing the data that is text data as in transcripts for analysis, then

reducing the data into themes through a process of coding and condensing the codes and finally representing the data in tables, or in a discussion. (p.180)

This study is descriptive research because it tries to describe the characteristics of a phenomenon (phonological and morphological integration of German loanwords into Oshiwambo). Therefore, loanwords were transcribed, and data were presented through discussion.

Loanwords were assigned to different categories. These categories were determined based on parts of speech. Therefore, each part of speech was a different category. This was deemed necessary to categorise them because each part of speech has a different morphology.

One of the three research questions of the current study was to investigate the phonological and morphological changes that German loanwords undergo during the process of borrowing into Oshiwambo. Therefore, during data collection, for each loanword that had been collected and accepted to have German origins, its German written form as well as its phonetic transcriptions was recorded. This was done to help the researcher to identify and observe the phonological and morphological changes that had taken place, and to determine the phonological and morphological strategies that were employed during the process of borrowing.

The study used the descriptive method within qualitative content analysis or textual analysis. Gray (2009) states that content analysis involves the making of inferences about data (usually text) by systematically and objectively identifying special characteristics (classes or categories) within them, which is achieved by the creation

of specific rules called criteria of selection which must be established before the data can be analysed.

Scholars such as Steinbergs (1985), Batibo (1996), Mahlangu (2007), Zivenge (2009), Kayigema (2010) and Evans (2014), assert that most Bantu languages employ common phonological and morphological strategies in the integration of loanwords, and these include sound substitution, vowel insertion, glide epenthesis, deletion, addition and affixation. This is done for a loanword to phonologically and morphologically fit in a speech system of the recipient language. Therefore, these were some of the strategies the researcher was anticipating seeing happening in the present study, where Oshiwambo is a Bantu language serving as a recipient language.

The research provided information about the phenomenon (phonological-morphological integration of loanword) and described, interpreted and explained it systematically. Gray (2009) argues that researchers need to go beyond description: they need to interpret, to understand and to explain, because that way they can gain new insights in their data.

To determine the criteria used in assigning loanwords to noun classes in the recipient language, each loanword (nouns) was assigned to an Oshiwambo nominal class where it belongs. This was what the third question of the study was looking for.

Lastly, any other words which belong to other parts of speech were systematically analysed according to the features of its part of speech, especially with regards to the word structure. Phonologically, they were treated the same way that nouns were handled.

CHAPTER 4

AN OVERVIEW OF PHONOLOGY AND MORPHOLOGY OF OSHIWAMBO AND GERMAN

4.1 Introduction

The main aim of this chapter is to give an overview of the phonological and morphological structures of the two languages under study. The two languages under study are Oshiwambo and German. The former serves as the recipient language while the latter serves as the source language of loanwords. These two languages differ widely in terms of phoneme inventories, syllable structures, phonotactics and word structure. German is a West Germanic language belonging to the Indo-European family (Crystal, 1998, p. 299), while Oshiwambo is a Bantu language spoken in northern Namibia and southern Angola (Maho, 1998, p. 29).

This chapter gives a description of the phonemes and morphemes which exist in both languages. This discussion is necessary to give insights into the following chapter which is the major discussion of the entire study. Understanding the phonological and morphological aspects of both languages helps both the researcher and readers to understand the borrowing and integration processes of loanwords between the two languages. Every word that enters the Oshiwambo language through borrowing is subjected to the phonological and morphological constraints that are discussed in this chapter. Only those phonological and morphological processes that are directly or indirectly involved in the integration of German loanwords into Oshiwambo are discussed in this chapter.

The chapter is therefore divided into two major sections. The first one focuses on the Oshiwambo phonological and morphological aspects, while the second section deals with the same aspects in German.

4.2 The Oshiwambo Phonology

There are different ethnic groups in Namibia of which Aawambo is one. Maho (1998) states that the Aawambo make up the largest ethnic group in Namibia. They speak a cluster of dialects or languages which are jointly known as Oshiwambo. These dialects are: Oshikwanyama (spoken in southern Angola as well), Oshindonga, Oshingandjera, Oshikwambi, Oshikwaluudhi, Oshimbalanhu, Oshikolonkadhi and Oshiunda (Maho, 1998, p. 28). In addition to these dialects are Oshimbadja, Oshikwankwa and Oshindombodhola, making a total of eleven dialects of Oshiwambo, which are mutually intelligible (Hamakali & Mbenzi, 2016, p.45).

Maho (1998) further notes that:

Only Oshindonga, Oshikwanyama and Oshikwambi have been codified, predominantly by missionaries. Official orthographies have been published for Oshindonga (1966, 1975) and Oshikwanyama (1966, 1980), these being the only standard varieties. Moreover, Oshindonga is used as the written standard in all the Owambo kingdoms, except the Uukwanyama. (p. 29)

It is necessary to look at what phonology is although it has been defined in chapter 2. Phonology is “a branch of linguistics which studies the sound systems of languages” (Crystal, 1991, p.261). The two general categories of speech sounds are vowels and consonants.

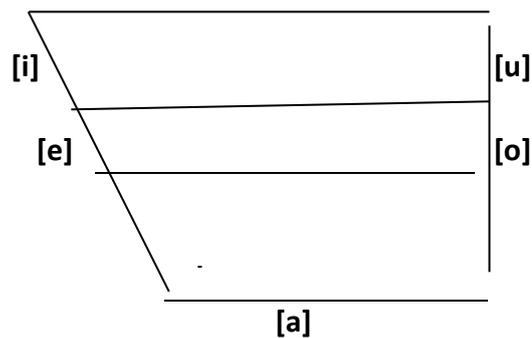
In presenting the phonology of Oshiwambo, the sound systems of the two standard varieties, Oshindonga and Oshikwanyama, are demonstrated.

4.2.1 The vowel system

Vowels are sounds that are “articulated without a complete closure in the mouth or a degree of narrowing which would produce audible friction” (Crystal, 1991, pp. 376-377).

“The Oshiwambo vowel system reflects a simple ‘height-by-frontness’ set of contrasts. There are five vowels, but these can be ten when long vowels are created by having a sequence of identical vowels” (Fivaz 1986, p. 8).

Figure 4.1 Oshiwambo Vowel Chart



Source: (Fivaz, 1986, p. 8)

The Oshiwambo vowels can be described as follows:

The vowel [i] is the front high vowel,

[u] is the back high vowel,

[e] is the front low vowel,

[o] is the back low vowel,

[a] is the front low vowel (Hasheela, Amakali & Namuandi, 1988, p. 7).

Therefore, vowels are described in terms of tongue height and tongue position.

Vowels can be observed in examples below:

[i] *ila* ‘come’

[ii] *iita* ‘war’

[a] *dhana* ‘play’

[aa] *aanona* ‘children’

[u] *pula* ‘ask’

[uu] *tuula* ‘tear’

[o] *omumati* ‘boy’

[oo] *oongmbe* ‘cows’

[e] *eta* ‘bring’

[ee] *eeno* ‘yes’ (Hasheela, Amakali & Namuandi, 1988, p. 7).

From the examples above, short and long vowels are observed. There is no difference as far as the place of articulation of the two types of vowels is concerned. The only difference is that long vowels are pronounced longer than short vowels.

4.2.2 The consonant system

Fivaz (1986) describes consonants as “those phonemes which occur as onset to phonological entities known as ‘syllables’, whose phonetic realisation involves air-flow constriction, and which may occur in a range of restricted combination clusters with each other” (p. 1). Although Oshindonga and Oshikwanyama belong to the same language (Oshiwambo), there are differences in their phonetic inventories, especially

with regard to the consonants. It is therefore important to look closely at the consonants in the two languages as presented in the charts which follow:

Table 4.1

Oshindonga Consonants

Simple consonants		Labial	Dental	Alveolar	Palatal	Velar	Glottal
Stops	Vless	p		t		k	ʔ
	Vd	(b)		(d)		(g)	
Fricatives	Vless	f	th	s	sh	x	h
	Vd	v	dh	z	(zh)	g	
Continuants		w		l	y		
Nasals		m		n	ny		
Nasal compounds							
Stops	Vless	mp		nt		nk	
	Vd	mb		nd		ng	
Fricatives		mv	ndh	nz			

Affricatives Vless		nsh	nts			
Vd				ndj		
w-Compounds	pw		tw		kw	
Stops Vless	fw	thw	sw	shw		
Vd		dhw	zw		gw	
Continuants			lw	yw	hw	
Nasals	mw		nw			
Nasal-w-compounds						
Stops						
Vless	mpw		ntw		nkw	
Vd	mbw		ndw		ngw	
Fricatives			nzw			
Affricatives Vless			ntsw			
Vd				ndjw		

Affricates			ts			
Palatal compounds						
Stops	Vless	py		ty		
	Vd			ly		
Nasals		my		ny		
Nasal-y- compounds						
Vless		mpy		nty		
	Vd	mby		ndy		

Source: Fivaz (1986, p. 3).

From the chart above, the Oshindonga simple consonant system comprises of four consonant sounds, namely stops, fricatives, continuants and nasals. These consonants can be combined to form other compound sounds. These sounds can therefore be described based on place of articulation and manner of articulation, as demonstrated in the chart above.

The next sub-section presents Oshikwanyama phonemic consonants.

Table 4.2

Oshikwanyama Phonemic Consonants

	Bi-labial	Labio-dental	Dental	Alveolar	Palate-alveolar	Palatal	Labio-velar	Velar	Glottal
Stops Vless	p			t				k	
Vd	b			d					
Nasals	m			n				ŋ	
Laterals Vd				l r					
Fricative Vless		f		s	ʃ			x ɣ	h
Vd		v							
Affricative									
Vless					tʃ				
Vd					dʒ				
Approximant									
Vd						j	w		

Source: Hasheela (2004, p.17)

It is evident in Table 4.1 and 4.2 that in both languages/dialects (Oshindonga and Oshikwanyama), simple consonants can be combined with the semi-vowels /w/ and /y/ to form new sounds. It is also evident that some Oshindonga phonemic consonants such as the dental fricatives /θ/ and /ð/, and the alveolar fricative /z/ are non-existent in Oshikwanyama. This conclusion can therefore introduce a new topic about ‘phonological free variation’, which helps one to understand the meanings of words in different dialects of Oshiwambo. Enough knowledge about phonological free variation also helps one to understand how loanwords from German are treated in different dialects of Oshiwambo.

4.2.3 Phonological free variation among Oshiwambo dialects

Mompean (2008) defines phonological free variation as “a well-known phenomenon that occurs when two or more phonemes - the free variants - may replace each other in the same position without any change in meaning” (p. 2). Edward (2012) describes free variation as “a phenomenon of phonological doublets in which one word happens to have two different phonemic forms” (p. 8). According to Mompean (2008), different factors contribute to free variation and these include sound change, assimilation, dissimilation, epenthesis, liaison and other sociocultural factors.

Maho (1998) states that the Aawambo speak a cluster of dialects or languages which are jointly known as Oshiwambo. These dialects are: Oshikwanyama (spoken in southern Angola as well), Oshindonga, Oshingandjera, Oshikwambi, Oshikwaluudhi, Oshimbalanhu, Oshikolonkadhi and Oshiunda (p. 28). It is observed and noted that most words in different dialects of Oshiwambo differ with one or more phonemes in the same phonetic environment. This is due to the fact that some phonemes may exist

in one dialect while they might be absent in the other as it appears between Oshindonga and Oshikwanyama in the following examples:

Table. 4.3

Free Variants among Oshiwambo dialects

English	Oshindonga	Oshikwanyama	Free variants
help	kwatha	kwafa	/θ/ /f/
name	edhina	edina	/ð/ /d/
day	esiku	efiku	/s/ /f/
dress/wear	zala	djala	/z/ /dʒ/
mercy	ohenda	onghenda	/h/ /ŋ /
hear	uva	uda	/v/ /d/
always	aluhe	alushe	/h/ /ʃ/
force/power	oonkondo	eenghono	/nk/ / ŋ /
death	eso	efyo	/s/ /fy/
head	omutse	omutwe	/ts/ /tw/
foot	ompadhi	omhadi	/mp/ /mh/
heavenly	oonkwagulu	eenghwaulu	/nkw/ /nghw/
calf	ontana	onhana	/nt/ /nh/
chalk	ompya	omhya	/mpy/ /mhy/

radio	oradio/oladio	oradio/oladio	/r/ /l/
water	omeya	omeva	/y/ /v/
we	tse	fye	/ts/ /fy/
eyes	omeho	omesho	/h/ /sh/
sheep	onzi	odi	/nz/ /d/
resurrection	eyumuko	enyumuko	/y/ /ny/
give	gandja	yandja	/g/ /y/
my	shandje	shange	/ndj/ /ng/
his father	he	xe	/h/ /x/
plural morpheme cl. 10 cows	<i>oongombe</i>	<i>eengombe</i>	/o:/ /e:/

Source: Hasheela (1985, pp.12-16), Ehanganano (1987)

The examples given above do not mean that phonological free variation occurs only between Oshindonga and Oshikwanyama. The two languages have been purposefully used here because they are the most standard dialects. Free variation may even occur amongst three different dialects of Oshiwambo as in the following examples:

English	Oshindonga	Oshikwanyama	Oshimbalanhu	Free variants
play	<i>dhana</i>	<i>dana</i>	<i>vana</i>	/ ^h / /d/ /v/

sheep	<i>onzi</i>	<i>odi</i>	<i>ozi</i>	/nz/ /d/ /z/
give	<i>gandja</i>	<i>yandja</i>	<i>yandja</i>	/g/ /y/

There are also some free variants that occur between more than three dialects of Oshiwambo as demonstrated in the example below:

English	Oshindonga	Oshikwanyama	Oshikwaluudhi Oshingandjera Oshikolonkadhi	Oshimbalanhu	Free variants
rain	<i>omvula</i>	<i>odula</i>	<i>ombula</i>	<i>ovula</i>	/mv//d// mb/ /v/

It can be concluded that since free variation occurs in inherited words amongst dialects, it can also occur in loanwords. Therefore, loanwords may be treated differently in different dialects because of free variants which exist amongst different dialects as observed in *osikola/ofikola* for ‘school’ in Oshindonga and Oshikwanyama respectively.

4.2.4 The syllable structure

Another phonological aspect to discuss is the syllable. Fivaz (1986) describes syllables as: Phonological elements composed of a certain sequence of phonemes, which include a consonantal onset, and a vowel nucleus. The onset may consist of one simple consonant or a consonantal cluster, while some syllable may have no consonantal onset at all, as it appears in *o-mvu-la* ‘rain’. (p. 13)

A word like *omvula* [o.mvu.la] consists of three syllables as separated by full stops. The first syllable is *o.*, a vowel only. The second syllable is *.mvu.*, consisting of consonantal cluster *mv* and a vowel *u*. The third one is *.la*, consisting of a simple consonant *l* and a vowel *a*. Each of these three syllables is open because it ends with a vowel.

Fivaz (1986), concludes that there are four syllable types:

CV (consonant and vowel)

V (vowel only)

m (m having dropped vowel)

CV? (ends in glottal stop) (Fivaz, 1986, p. 13)

Although Oshiwambo syllables typically end with a vowel, it is however observed that Oshiwambo speakers who are exposed to European languages tend to use closed syllables as observed in loanwords such as [os.ko.la] for the English word ‘school’.

Closed syllables occur in Oshiwambo to a lesser extent too, especially when the labial nasal /m/ is followed by the vowel /u/ in writing. In speech, the vowel /u/ is dropped. For example, a word *omumati* ‘boy’, in writing, is pronounced *ommati*. It has four syllables: [o.m.ma.ti] of which the second syllable *m* is closed because it does not end with a vowel like the other three.

4.2.5 Phonological processes

Fivaz (1986) argues that “not all possible sequences of Oshindonga phonemes are permitted. Therefore, certain phonological rules should apply to change the phonemic shape when unacceptable phoneme sequence results from combining certain

morphemes” (p. 15). These are rules that relate to a sequence of vowels and those that relate to consonantal sequence.

Maho (1998) argues that “all Bantu languages of Namibia employ labialization, palatalization and nasalisation of consonants” (p. 68).

a) Assimilation

Fivaz (1986) explains that Oshindonga, like other Bantu languages, has restrictions on which vowels can follow each other in direct sequence without any intervention of consonants. Assimilation is one of the rules applied in situations like these ones. “Assimilation rules replace one vowel of a V+V sequence by a vowel more like or identical to the other vowel of the sequence” (p. 16). There are two types of assimilation, namely total (complete) and partial assimilations.

With complete assimilation, two identical vowels will result as in the examples below:

a) *Ota imbi* ‘He is singing’, becomes *Oti imbi*.

b) *Onda longa* (Simple past), becomes *Onda longo* in Present Perfect.

A complete assimilation is either progressive or regressive. “A progressive complete assimilation occurs when the first vowel of such sequence assimilates to the following vowel” (Fivaz, 1986, p.16). In the above example b), *Onda longa* (Simple past), becomes *Onda longo* in Present Perfect; the vowel [o] in *longa* has influenced the vowel [a] to become [o].

Regressive assimilation occurs “if the second vowel of the sequence assimilates to the preceding vowel” (Fivaz, 1986, p.16). In the above example a), *Ota imbi*, ‘He is singing’, becomes *Oti imbi*. So, the second vowel [i] in *imbi* has assimilated the vowel [a] in *ota* to become [i].

With partial assimilation, vowels with distinctive features influence each other. For example in applicative extension: a), *okunyoleta*, ‘to write for’ (-nyola)

b) *okutumina* ‘to send for’ (-tuma)

The vowels [o] and [e] in example a) are both low vowels, while vowels [i] and [u] in example b) are high vowels.

b) Nasalisation

Mbenzi (2008) describes nasalisation as a phonological process that involves the use of nasal consonants to form nasal compounds. This happens when some nouns are formed from verbs. Example:

Verb base	Nouns
<i>yola</i> ‘laugh’ >	<i>ondjola</i> ‘laughter’
<i>leshela</i> ‘dictate’ >	<i>ondeshela</i> ‘dictation’
<i>ulula</i> ‘make a hole’	<i>ombululu</i> ‘a hole’
<i>kolwa</i> ‘be drunk’	<i>onkolwe</i> ‘a drunkard’ (Mbenzi, 2008, p. 12)

In this case, the nasal compounds [ndj] and [nd] have replaced the semi-vowel [y] and the lateral [l] respectively, while the nasal compound [mb] has been prefixed to the verb base *lula* to form a noun *ombululu*. The velar stop [k] in *kolwa* has been replaced by the nasal velar [nk] to form a noun *onkolwe*. It can be observed that the nasals [n] and [m] have been used in this process and as a result nasal compounds [nd], [ndj], [mb] and [nk] are formed.

c) Labialisation

Mbenzi (2008) explains that labialization involves the use of the rounded high back vowel /u/. During this process, the semi-vowel /w/, plays a role. This results from a sequence of a rounded high back vowel /u/ + another vowel. Example:

gu + a = *gwa* ‘fall’ or possessive for Class 1 and 3.

lu + a = *lwa* ‘Tablet’ or possessive for Class 11 (Mbenzi, 2008, p. 12).

d) Palatalisation

Maho (1998) states that the front high vowel /i/ tends to palatalize any preceding consonant. This occurs when /i/ is followed by another vowel. For example:

li + e = *lye* (possessive Class 5) or verb ‘eat’

pi + a = *pya* verb ‘burn’ or adj. ‘ripe’.

So, it is evident that the last three processes that were described above result in some consonant compounds. Nasalisation forms the nasal compounds; while the labialisation process forms the w-compounds, and palatalization is used to form the palatal compounds.

e) Dissimilation

With this phonological process assimilation is avoided. Mbenzi (2008) notes that “with dissimilation, assimilation disappears, especially in nasalisation in Oshikwanyama, when the second nasal compound is avoided” (p. 13). Compare the following examples,

Oshindonga

Oshikwanyama

ondando

ondado English ‘price’

ongombe *ongobe* English 'cow'

It is evident from the examples above that Oshikwanyama employs dissimilation to avoid the second nasal compound. In this study, it is also important to note that if this rule is applied to inherited words; it is also possible to be applied in the integration of German words in Oshiwambo.

The five phonological processes discussed above are important in Oshiwambo because they govern the sequence of sounds in a speech system. The next sub-topic is about the morphology of Oshiwambo.

4.3 The Oshiwambo morphology

This section discusses the word structure of Oshiwambo. It looks specifically at nouns and verbs. This is because nouns and verbs have been noted to be the most borrowed word classes in most languages. It also discusses some morphological processes of word formation.

4.3.1 Oshiwambo noun structure

It is worthy to look at the structure of a noun before looking at the verb structure. Fivaz (1986), demonstrates that the structure of nouns in Oshiwambo is:

Noun prefix (es) + noun stem. The noun prefixes comprise of: definitiser + gender-number markers.

In addition, Fivaz (1986) states that:

Most prefixes occur as members of singular-plural pairs, and such pairs are gender or sortal groups to which noun stems belong. Each stem belongs intrinsically to only one gender, but for emotive and attribution,

a stem may be used with gender prefixes other than those of its intrinsic membership. (p. 31)

To exemplify what has been alluded to, look at the demonstration below:

The intrinsic membership of a noun ‘person’ is ‘*omuntu*’, but with emotion and attribution, other prefixes may be used:

oshintu, to mean bad or ugly, pejorative

okantu, to refer to diminutive,

entu, to refer to augmentative

oluntu, to mean slender and tall.

The stem in all

cases remains *-ntu* to refer to a person. Therefore, with the change of class prefixes (*-shi-*, *-ka-*, *-lu-*), a noun moves from one class to the other. This is what Mbenzi (2008) refers to as one of the noun formation processes in Oshiwambo which is by changing noun prefixes.

Mbenzi (2008, p. 24) states that in analysing nouns in Oshiwambo, one needs to know the constituents of a noun. This is illustrated below:

Noun	Pre-prefix	Prefix	Stem	Root	Suffix	English
oshikombo	o-	-shi-	-kombo	-komb-	-o	goat

etemba	e	∅	-temba	-temb-	-a	cart
okanona	o-	-ka-	-nona	-non-	-a	child
Tate	∅	∅	Tate	Tat-	-e	father

So, the constituents of a noun in Oshiwambo are pre-prefix, prefix, stem, root and suffix. From these illustrations, it is evident that in some cases a noun may not have a prefix as in the case of *etemba* (cart). This is because it is in a zero-prefix class (class 5). This means that it is in a class without a prefix. There are also some nouns that have neither a pre-prefix nor a prefix, as in *tate* (father). *Tate* belongs to noun class 1a, which is also a zero-prefix class.

A prefix is important in the structure of nouns because it determines the noun class to which a specific noun belongs; it is not only the determiner of a noun class. Therefore, it is necessary to look at the Oshiwambo Noun Gender-Number Markers Chart adopted from Fivaz (1986), in order to understand the structure of nouns in Oshiwambo. This gives insights into studying and analysing loanwords from German into Oshiwambo, and to find criteria employed in assigning them to Oshiwambo noun classes.

Table 4.4

Oshiwambo Noun Gender-Number Markers

Gender	Class	Prefix	Example	Main Significance
I	1	o-m-/o-mw-	omuntu 'person'	Human
	2	a-a-	aantu 'persons'	pl. of cl.1
Ia	1a	∅	tate 'father'	Kin, names, personification
	2a	o-o-	ootate 'fathers'	pl. of cl 1a
II	3	o-m-/o-mw-	omuti 'tree'	Natural phenomenon, trees, body parts
	4	o-mi-/o-mw-	omiti 'trees'	pl. of cl. 3
III	5	∅	eta 'drop'	Liquids, Natural phenomenon, fruit
	6	o-ma-	omata 'droplets'	Augmentatives, abstracts
IV	7	o-shi-	oshikombo 'goat'	Characteristics of ways people speak

	8	i-i-	iikombo 'goats'	Behaviour, artefacts
V	9	o-N-	ongombe 'cow'	Animals, fruits, miscellaneous
	10	o-oN	oongombe 'cows'	pl. of cl. 9
VI	11	o-lu-/o-lw-	olukaku 'shoe'	Long, thin things, diminutives
	6	oma-lu-	omalukaku 'shoes'	pl. of cl. 11
VII	12	oka-	okakambe 'horse'	Diminutives
	14	u-u-	uukambe 'horses'	pl. of cl. 12
VIII	14	u-u-	uudhigu 'difficulty'	Abstracts
		oma- (+14)	omaudhigu 'difficulties'	
IX	15	oku-	okutsi 'ear'	Body parts, seasons
	6	oma(+15)	omakutsi 'ears'	

Source: Fivaz (1986, p. 32)

The chart above shows that Oshiwambo nouns have different structures. While some have more than one prefix, some have one, yet others do not have a prefix at all. For example, Class 7 has one prefix (-*shi*-) as it appears in *oshikombo* ‘goat’. Nouns such as *omakutsi* ‘ears’ have two prefixes: ma+ku cl. 6 + cl.15 prefixes. Classes 1a and 5 do not have prefixes at all.

Having discussed the constituents of nouns in Oshiwambo, it is now important to discuss the processes employed in the formation of nouns in Oshiwambo.

4.3.2 Noun formation processes

It is noted that Oshiwambo employs different processes in the formation of nouns. Mbenzi (2008) notes that Oshiwambo employs prefixation, insertion, reduplication, suffixation, nativisation and compounding in noun formation (p. 26).

a) Prefixation

According to Karuru (2013), prefixation involves the addition of a morpheme at the initial position of a stem or root. One characteristic of Oshiwambo is that it is a prefixal language, in the sense that it employs prefixes to its nominal and adjectival systems.

As demonstrated earlier in 4.3.1, the noun or class prefix stands before a stem. Therefore, the substitution of prefixes changes noun classes too and so forms new nouns.

b) Insertion

With insertion, the stem of a verb or an adjective is inserted into a basic noun as in the examples that follow:

i) Verb stem insertion

omul**ongwapangi** (student nurse) the basic noun is *omupangi* ‘nurse’, so a verb stem *longwa* (studied) has been inserted to form a new noun.

ii) Adjective stem insertion

omul**ayintu** ‘stupid person’, the basic noun is *omuntu* ‘person’, so an adjective stem -*layi* (stupid) has been inserted to form a new noun.

iii) The insertion of a morpheme -na-

A morpheme *-na-* can be inserted to a basic noun to produce another noun with a different meaning. For example, the morpheme *-na-* can be inserted to *omikalo* ‘manners’, to make *omun**am**ikalo* ‘the one with good manners’

Similarly, *osikola* ‘school’, becomes *omun**as**ikola* ‘learner/school going person’.

c) Reduplication

According to Crystal (1991), reduplication is a term in morphology for a process of repetition whereby the form of a prefix/suffix reflects certain phonological characteristics of the root.

With reduplication, a part of the basic noun is repeated, as in the following example: *egumbogumbo*, where the basic noun is *egumbo* ‘house’, so the stem *-gumbo* has been repeated.

d) Suffixation

While prefixation places affixes before a root or stem, suffixation refers to an affix added, following a root or stem (Crystal, 1991).

Oshiwambo has some inflectional morphemes in suffixal position. Some of these suffixes are *-elela*, *(g)-ona*. The *(g)-ona* and *-ena* are diminutive suffixes. Example: *omumati* ‘boy’, *omumatyona*, ‘young boy’; and *ombwa* ‘dog’ and *ombwena* ‘puppy’ (Fivaz, 1986).

The *-elela* is a confirmation noun suffix, denoting the genuine quality of a noun. For example, *omukadhona* ‘a girl’, but *omukadhonelelela* ‘a real girl’

e) Nativisation

“Nativisation refers to the way the mother tongue speakers treat loanwords so that loanwords become phonologically and morphologically accepted in the recipient language speech system” (Zivenge, 2009, p.186). This is what Mbenzi (2008, p. 27) calls “Wambonisation”, referring to the process used in treating borrowed words from other languages to fit the Oshiwambo speech system. Hasheela, Amakali and Namuandi (1988), note that Oshiwambo has borrowed loanwords from other Bantu languages such as Otjiherero, as well as from European languages such as German, Portuguese, Afrikaans, Finnish and English (Hasheela, Amakali & Namuandi, 1988, p.223).

Example: **Oshindonga**

osiingelikota single quarter (English)

ondalaye draai ‘curve’ (Afrikaans) (Hasheela, Amakali & Namuandi, 1988, p. 225).

These loanwords are so nativised that their sounds and forms are like the Oshiwambo ones. It is evident that in this process, consonant clusters in the source languages have

been broken, some consonants have been substituted, and syllables have been reorganised resulting in more syllables than in the source language.

f) Compounding

Compounding is also another noun formation process that Oshiwambo employs in noun formation. Crystal, (1991, p. 70) defines compounding as “a term used widely in descriptive linguistic studies to refer to a linguistic unit which is composed of elements that function independently in other circumstances”. Mbenzi (2008), notes that Oshiwambo may join two nouns to form a new noun. For example, *eyeletumbulo* ‘proverb’ is formed from two words, namely *eyele* ‘wisdom’ and *etumbulo* ‘sentence.’ These two nouns are free morphemes because each of them can stand on its own as a word.

The noun formation processes discussed above are important in this study in that they helped the researcher to identify the morphological changes which the loanwords (nouns) undergo during the process of borrowing words from German.

Having described noun structure and noun formation processes in Oshiwambo, it is important to discuss the adjective structure too. This is necessary because the researcher felt that adjectives might be amongst the words borrowed from German into Oshiwambo. In a study by Mahlangu (2007), it was noted that “although the majority of words borrowed in most languages are nouns, there are few verbs and adjectives” (p.111).

4.3.3 Morphology of adjectives in Oshiwambo

Fivaz (1986, p. 55) states that “adjectives provide information on referents with respect to qualities such as size, age, weight, temperature, colour, aesthetics, general number...” amongst others. Mbenzi (2008) states that in Oshiwambo, an adjective is

“a word that describes a noun” (p. 39). Mbenzi (2008) further argues that the structure of an adjective is like that of the noun that it describes. This is so because the two (adjective and noun) are of the same class and have the same prefix, as in the following examples.

Example: *omumati omunene* (a big boy) cl.1

okakambe okaluudhe (a black horse) cl.12

olukaku olupe (new shoe) cl.11

The three words *omumati* (boy), *okakambe* (horse) and *olukaku* (shoe) are nouns, while *omunene* (big), *okaluudhe* (black) and *olupe* (new) are adjectives. The prefixes *-mu-*, *-ka-* and *-lu-* are found in the adjectives as well as in the nouns that each adjective describes.

For classes without prefixes, such as cl.5 and cl.9, adjectives of such classes do not have prefixes either. This is illustrated in the following example:

Example: *etemba enene* (big cart) cl.5

ongombe onene (big cow) cl.9

The *e-* and *o-* above are not prefixes but pre-prefixes as the two classes (cl.5 and cl.9) are zero prefix classes.

This suggests that any adjective that is borrowed from German into Oshiwambo is to be treated the same way, that is, it will have the same structure with a noun that it describes depending on the nominal class in which the noun is. The next sub-section discusses the structure of verbs in Oshiwambo.

4.3.4 Verb structure in Oshiwambo

Crystal (1991) defines a verb as:

A term used in the grammatical classification of words, to refer to a class traditionally defined as ‘doing’ or ‘action’ words (a description which has been criticised in linguistics, largely on the grounds that many verbs do not ‘act’ in any obvious sense, e.g. *seem, be*). The formal definition of a verb refers to an element which can display morphological contrasts of tense, aspect, voice, mood, person and number (pp. 371-372).

Moreover, Fivaz (1986) describes a verb as “predication of actions, events and states of being” (p. 77). Fivaz (1986) further explains that:

In Oshiwambo, the core of all verb constructions is the verb root which provides lexical information regarding the action or the state of being which is predicated. Other components in verbs denote such information as subject reference, object reference, affirmation/negation, time and other information in the relation of the event/action with respect to referents. (p.77)

Verbs in Oshiwambo can be analysed according to the following aspects:

“Affirmation marker, negation marker, tense marker, subject marker, object marker and verb root” (Mbenzi, 2008, p. 45), as demonstrated in the example that follows:

otatupopi ‘we are speaking’

o = affirmation

ta = tense marker

tu = subject marker

popi = root

In this case there is no object marker, and this indicates that it is optional. The demonstration above shows that Oshiwambo verbs consist of two types of morphemes; namely free and bound morphemes. According to Herbst (2010), “a morpheme is the smallest abstract linguistic unit that serves to carry meaning. While a free morpheme can appear as a word by itself, a bound morpheme cannot appear as a word by itself” (p. 84). Therefore, in the example *otatupopi* ‘we are speaking’, *o-ta-tu-* are three different bound morphemes, where each serves a grammatical function as indicated; while *popi* ‘speak’ a root, is a free morpheme expressing a lexical function.

4.3.5 Verb extensions

Fivaz (1986) explains that Oshiwambo verbs employ extensions that are placed immediately after the verb root and before the final verb suffix. They denote a variety of changed relations within the sentence whose verb does not include one of the extensions (p. 90). The following are verb extensions in Oshiwambo.

a) Reciprocal extension

One of these verb extensions in Oshiwambo is reciprocal extension. According to Fivaz (1986), reciprocal extension is a plural subject that is

simultaneously the object of the verbal action, with the meaning of ‘do to each other’.

An example can be in the context of *oya hala okumona* ‘they want to see’

vs. *oya hala okumonathana* ‘they want to see each other’

The reciprocal nature of the action is expressed by the suffix **-athan-** (Fivaz, 1986, p.90).

b) Applied extension

Here, the action is being done by someone on behalf of another, which is denoted by the suffix **-el-**

For example:

In the context of *oya hala okunyola* ‘They want to write a letter.’

vs. *Oya hala okunyolela Thomas* ‘They want to write Thomas a letter.’

c) Passive extension

Passive and neuter extensions may be followed by the agent of verb action.

While the passive extension occurs with some verb roots, the neuter extension occurs with other verb roots. This is illustrated in the examples which follow.

The passive extension may be formed with **-(i)w-** suffix

Example, *okutiwa* ‘to be said’ vs. *tya* ‘say’

okutungwa ‘to be built’ vs. *tunga* ‘build’

okumewa ‘to be shaped’ vs. *ma* ‘shape’

d) Neuter extension

This extension has the same function with the passive but occurs with some verb roots, suffix forms are **-ik-/-ek-**

Example, *okupateka* ‘to be well locked’ vs. *okupata* ‘to lock’

okuuvika ‘to be understood’ vs. *okuuva* ‘to understand’

e) Causative extension

With this extension, the verb action is the result of an action caused by an agent other than the grammatical subject, formed with suffixes **-ith-/-th-, -ek-/-ik-** as in example,

okulitha ‘to make eat’ vs. *li* ‘eat’

okufupaleka ‘to shorten’ vs. *fupi* ‘short’

f) Reversive extension

This is a verb whose action is being reversed or being done again. It has the form **-ulul-/-olol-/-unun-/-onon-/-**.

Example: *okumangulula* ‘to untie’

okukunununa ‘to sow seeds again’

okukombolola ‘to sweep again’

g) Durative extension

With this verb extension, the action is over a longer duration. The verb extension has the form **-alal-/-anan-**.

Example: *tumbalala* ‘to rise for a long period’

tanganana 'to be pointed out'

h) Intensive extension

This is a verb whose action denotes fastness. The verb takes **-lel-/-lil-/-nin-** as suffixes. Compare the following examples:

enda 'walk', *endelela* 'walk fast/hurry up'

tunga 'build', *tungilila* 'build fast'

kuna 'sow' *kuninina* 'sow fast'

i) Reduplicative extension

The stem of a verb is normally duplicated. This is done when the speaker is unhappy with the action of the verb.

Compare the following examples:

imba 'sing', *imbaimba* 'sing over and over'

Halme (2004) notes that "an extra vowel appears before reduplication, when a verb root begins with a consonant" (p. 71). For example: *nhuka* 'jump' > *nhukaanhuka* 'jump around'

j) Reflexive extension

This verb extension differs from other extensions in the sense that it does not use a suffix like other extensions but rather an affix is placed before a verb stem. This extension is known with the use of *i-* at the beginning of a verb stem. For example: cf. *hula* 'undress' *ihula* 'undress oneself'

yoga 'wash' *iyoga* 'wash oneself'

So, with this extension the agent of the sentence does something to itself.

k) Extension compounding

The speaker may combine different suffixes to express him/herself clearly. For example, when the speaker wants to indicate that two persons are doing something for one another, suffixes **-el-** (applicative) + **-athan-** (reciprocal) may be combined. For example: *Otaa kongelathana iilonga*, ‘they are searching jobs for one another.’

Some more examples are:

-ith- + -athan- *popithathana* ‘greet one another’ (causative + reciprocal)

-ek- + -athan- *simanekathana* ‘respect one another’ (neuter + reciprocal)

-ulul- + -athan- *mangululathana* ‘untie one another’ (reversive + reciprocal)

-agul- + -athan- *gandagulathana* ‘frequently shout at one another’
(frequentative + reciprocal)

So, various other verb extensions can be combined to form some more complex combinations

to express joint actions (Tirronen 1977, p.141).

The Oshiwambo verb structure and verb extensions discussed above are so important in this study in that they help the researcher to identify the morphological changes which the loanwords (verbs) undergo during the process of borrowing words from German into Oshiwambo. This also helps the researcher to identify which verb extensions can be applied to loanwords (verbs) from German into Oshiwambo.

4. 4 Phonology and morphology of German

This section discusses the phonological and morphological aspects of German.

Before these aspects are discussed, it is necessary to look at the brief background of German in Namibia.

Being a multilingual community, Namibia has 15 recognised languages taught in schools, of which German is one (MBESC, 2003). During the German colonial era from 1884 to 1915, German was the only official language in German Southwest Africa, as Namibia was then known. German is especially used in central and southern Namibia. It is also used as a mother tongue by German Namibians, yet it serves as a foreign language to some Namibian citizens. There are more than 8000 learners of German in Namibian schools who learn it as a foreign language. The University of Namibia offers German medium programmes in German studies too and German is spoken as well as utilised in the Namibia tourism sector.

Maho (1998) states that “German is also used and heard on radio and television, and there is also a daily newspaper, *Allgemeine Zeitung* (p.170).” Maho (1998) further argues that in the past German did not seem to have spread much outside the German descendent population as there was no such interest.

4.4.1 The vowel sounds in German

Fagan (2009) states that the vowel sounds in German are distinguished by five parameters namely: tongue height, tongue position, lip position, length and tenseness. Table 4.5 and fig. 4.2 show these parameters.

Table 4.5

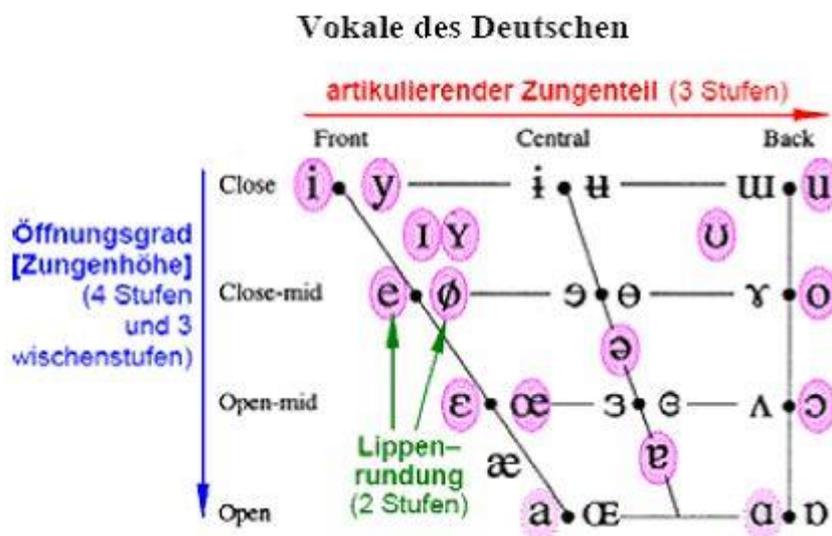
German Vowels

		front	central	back
		unrounded	rounded	unrounded
		rounded		
high	tense	i:	y:	u:
	lax	ɪ	ʏ	ʊ

mid	tense	e:	ø:	o:
	lax	ɛ: ɛ	œ	ə
				ɐ
low			a a:	

Source: Fagan (2009, p. 7)

Fig.4.2 German Vowel Chart



Therefore, both **Table 4.5** and **Fig.4.2**, show that vowel for example, [i:] is a high, front, tense, long unrounded vowel, while [ɔ] is mid, front, lax, short unrounded vowel. The vowels discussed above are monophthongs only.

German has three diphthongs namely: [aɪ], *mein* 'my'

[aʊ], *haus* 'house'

[ɔɪ] *neu* 'new' (Fagan, 2009, p. 9).

4.4.2 The consonant sounds in German

Fagan (2009) states that five types of consonants are observed in German, namely stops, fricatives, nasals, laterals and trills.

Stops are those consonants produced by a complete closure in the vocal tract and then a release of the closure, resulting in an explosion of air.

Fricatives are those consonants that are produced by placing two articulators close together to create a narrow passage through which air is forced, producing a turbulent airflow.

Nasals are produced by forming a complete closure in a vocal tract and lowering the velum so that air escapes through the nasal passage. There are three nasals in German and they are all voiced.

The sound [l] is an approximant, a sound produced by bringing two articulators close together without producing a turbulent airflow. It is a lateral sound produced by placing the tongue blade against the alveolar ridge and allowing air to escape on either side of the tongue.

The final type of consonant is trills. They are produced by holding an articulator loosely close to another articulator so that the airstream sets it in vibration (Fagan, 2009, pp.10-14).

Table 4.6 below shows the five types of consonant sounds, the place of articulation, and the manner of articulation of each sound. For example, the sound [p] in *Pass* 'passport', is a voiceless, bilabial stop. The production of this sound [p] involves both lips to form a closure and a release that results in an explosive sound, while the vocal cords are apart during the closure (voiceless).

Table 4.6

Consonant sounds in German

		Bilabial	Labio dental	Alveolar	Post alveolar	Palatal	Velar	Uvular	Glottal
Stop	Voiced	b		d			g		
	Voiceless	p		t			k		ʔ
	Voiceless aspirated			tʰ					
Fricative	Voiced		v	z	ʒ	j		ʁ	
	Voiceless		f	s	ʃ	ç	x		h
Nasal		m		n			ŋ		
Lateral				l					
Trill				r				R	

Source: Fagan (2009, p. 10)

4.4.3 Syllable structure in German

Fagan (2009) maintains that German allows a variety of syllable types. This includes syllables that consist solely of a nucleus, and those that contain onsets and codas made

up of multiple segments. In German, all combinations of onset, nucleus, and coda are possible.

A nucleus is usually a vowel (a monophthong or a diphthong), which forms the core of the syllable. The onset of a syllable is made up of the segment or segments that precede the nucleus. The coda consists of the segment or segments that follow the nucleus. This is demonstrated in the examples below:

- a) By definition, each syllable must have a nucleus

Kirche ‘church’, the bolded vowels (***ir***, ***e***) form up the nucleus.

- b) Onsets can consist of up to three segments

one segment *lebt* ‘lives’

two segments *klebt* ‘sticks’,

three segments *Sprache* ‘language’ the bolded segments /l/, /kl/, /spr/ form the onsets because they precede the nucleus which is a vowel.

- c) Codas can have up to four segments

one segment *mit* ‘with’

two segments *kalt* ‘cold’

three segments *filmt* ‘films’

four segments *hilfst* ‘help’, the bolded segments /t/, /lt/, /lmt/, /lfst/ form the coda because they follow the nucleus (Fagan, 2009, p. 33).

4.5 Morphology of German

This section looks at the structure of words in German. It focuses mainly on nouns and verbs which are the most common types of words borrowed from German to Oshiwambo.

Fagan (2009) explains that words in German can be analysed as consisting of morphemes which are the smallest units of language that bear meaning. Exemplifying this, the word *Frauen* ‘women’ is made up of two morphs: /*frau*/ which bears the meaning ‘woman’; and / *ən*/ which has the meaning ‘more than one’. Two types of morphemes are noted: the potentially free morphs and the obligatorily bound morphs. The former can be used on their own as word forms. The latter cannot occur alone as word forms (Fagan, 2009, p. 55).

The free morphs serve as root or base, while bound morphs serve as affixes. “A root is a form which is not further analysable, either in terms of derivational or inflectional morphology, while a base is any form to which affixes of any kind can be added” (Herbst, 2010, p. 86). Different kinds of affixes that are relevant to German are prefix, suffix and circumfix. A prefix is attached before a base, while a suffix is attached after a base. A circumfix is a discontinuous affix that is attached around a base. For example;

prefix: *Urtext* ‘original (text)’

suffix: *schuldig* ‘guilty’ (adj.)

circumfix: *gekauft* ‘bought’ past participle (*ge...t*) (Fagan, 2009, p. 56).

4.5.1 Inflection

Fagan (2009), states that inflection plays an important role in the morphology of German. “Inflection is the creation of different word forms of a lexeme, typically, although not always, through the addition of affixes” (p. 56). Two types of inflections are discussed in this subsection namely, inflection of nouns and inflection of verbs.

a) Inflection of nouns

The inflection of nouns in German is based on gender and number.

i) Gender

Each noun in German has one of the three features of grammatical gender: feminine, masculine or neuter. There are three nominative singular forms of the definite article in German: *die* (feminine), *der* (masculine) and *das* (neuter). The following words have been assigned to a respective gender, for example:

die Gabel ‘the fork’

der Löffel ‘the spoon’

das Messer ‘the knife’ (Fagan, 2009, p. 58).

Fagan (2009) argues that the assignment of gender in German appears to be essentially arbitrary, as the meaning and form of a noun can be often used to determine its gender (p. 58). Fagan (2009) further states that one aspect that determines a noun’s gender is the suffix that it ends with. For example, words ending in *-heit*, such as *die Freiheit* ‘freedom’ are feminine (p. 58).

ii) Number

Fagan (2009) maintains that German nouns, like in English, are inflected for number. There are several different affixes that are used to signal the plural, for example:

Singular

plural

die Freundschaft ‘friendship’ = *die* Freundschaften

das Bein ‘leg’ = *die* Beine

der Scheck ‘check’ = *die* Schecks (Fagan, 2009, p. 61).

iii) Inflection of verbs

Fagan (2009) states that verbs in German are inflected for morphosyntactic categories, person, number, tense, mood, participle and infinitive. The dictionary form of a verb is the infinitive, a form that ends in *-(e)n*: *lieben* ‘to love’ (Fagan, 2009, p. 75).

4.5.2 Derivation

“Derivation is a word formation process that creates a new lexeme, typically by adding an affix to a base” (Fagan 2009, p. 89). Four derivational processes are noted in German: prefixation, suffixation, circumfixation and conversion.

a) Prefixation

“Derivational prefixation is described as the process of attaching prefixes to a base to create a new lexeme” (Fagan, 2009, p. 91). With verbal prefixation, new verbs are derived from nouns, adjectives and adverbs. For example,

i) noun *Fleck* ‘stain’ > *beflecken* ‘to stain’

ii) adjective *frei* ‘free’ > *befreien* ‘to free’

iii) adverb *lugen* ‘to lie’ > *belügen* ‘to lie to’ (Fagan, 2009, p. 92).

Derivational prefixation is also common in Oshiwambo, where nouns are formed from other word classes such as verbs. Prefixes are added to the verb root to produce nouns. For example, nouns *epulo* ‘question’ and *omupuli* ‘the one who asks’ have been derived from a verb *pula* ‘ask’.

b) Verbal suffixation

Verbal suffixation occurs in relatively small number of verbs, for example:

alt ‘old’ (adj.) > *altern* ‘to begin to get old’ (Fagan, 2009, p. 95).

c) Conversion

“Conversion, also known as zero-derivation, is the creation of a new lexeme by changing the word class of an existing lexeme without the use of affixation” (Fagan, 2009, p. 96). Therefore, verbs can be formed from nouns. For example: *fischen* ‘to fish’ from *der Fisch* ‘fish’, “**-en** suffix is an inflectional suffix and not derivational one” (p. 96). So, the inflection of *fisch-* to *fischen* is to form the infinitive form of the verb from a noun.

d) Verbal circumfixation

The main verbal circumfix is **be...ig**, which is used to form verbs, for example:

die Erde ‘earth’ > **beerdigen** ‘to bury’ (Fagan, 2009, p. 96).

Conclusion

While the first section of this chapter discussed the phonological and morphological aspects of Oshiwambo, the last section discussed the same aspects of German. This section is important in this study because it sheds some light on the phonology and morphology of the two languages, German being the source language of loanwords and Oshiwambo the recipient. It is evident from the discussion that the two languages (Oshiwambo and German) differ widely in terms of phonetic inventories, syllable structures, phonotactics and word structure. Therefore, borrowed words should be transformed to suit the phonological system of Oshiwambo, thus they appear to have lost their foreignness.

CHAPTER 5

RESEARCH RESULTS AND DISCUSSION

5.1 INTRODUCTION

This chapter is devoted to analysing, discussing and presenting the research findings of this study. This study investigated the phonological and morphological integration of German loanwords into Oshiwambo. These two languages (Oshiwambo and German) differ widely in terms of phoneme inventories, syllable structures, phonotactics and word structure. This difference is a result of these two languages being members of two different language families: which are the Bantu and West Germanic families respectively.

Fivaz (1986) states that Oshiwambo has several dialects of which Oshindonga and Oshikwanyama are the two officially recognized literary forms.

Oshiwambo has borrowed words from languages such as English, Afrikaans, Finnish, German and Portuguese. However, this study restricted itself to German loanwords only. It focused on loanwords which have been so modified that they have lost their foreignness and most Oshiwambo speakers often use them without noticing their foreign nature. The study further investigated the phonological and morphological processes which the German loanwords undergo during the process of borrowing. Lastly, the study examined the criteria employed in assigning these loanwords to Oshiwambo nominal classes.

This chapter has three sections, namely, the phonological adaptation processes, the morphological adaptation processes and the criteria for assigning loanwords to the Oshiwambo nominal class system. The phonological section looks at how Oshiwambo speakers use phonological rules in handling German words with different

vowels, consonants and consonant clusters that are not recognized in Oshiwambo. The morphological section looks at how Oshiwambo speakers use the morphological rules in handling loanwords to fit the Oshiwambo word structure. The phonological and morphological processes account for the phonological and morphological changes from German to Oshiwambo. These changes are necessary because for a loanword to be accepted into the Oshiwambo linguistic environment, it must conform to certain phonological and morphological patterns of Oshiwambo.

The last section presents the criteria for assigning loanwords to nominal classes because Oshiwambo assigns inherited nouns to nominal classes, and so loanwords (nouns) are also assigned to nominal classes.

The next sub-section discusses the phonological adaptation processes responsible for phonological integration of German words in the Oshiwambo speech system.

5.2 Phonological adaptation processes

This section discusses how the different sound systems of German and Oshiwambo are handled, to account for the way Oshiwambo speakers articulate German loanwords. Abdul (as cited in Zivenge, 2009, p.187), argues that “no two languages share the same phonological systems.” This suggests that the phonological systems of these two languages (Oshiwambo and German) must be different too. The phonological processes are necessary to handle vowels, monophthongs and diphthongs, consonants and consonant clusters in German so that the loanwords are accepted in the Oshiwambo speech system.

5.2.1 Phonological processes in handling vowels

The Oshiwambo vowel system differs greatly from that of German as observed in the present study. Therefore, any German word that has been borrowed into Oshiwambo

undergoes some vowel changes for it to fit into the speech system of Oshiwambo. Four phonological processes, namely substitution, glide epenthesis, resyllabification and consonant addition have been observed in handling vowels when German words are borrowed into Oshiwambo.

a) Vowel substitution

According to Iboil (as cited in Zivenge, 2009, p. 233), sound substitution refers to the replacement of one linguistic item by another at a particular place in a structure. Therefore, vowel substitution in this study refers to the process whereby German vowels are replaced by Oshiwambo vowels during the process of borrowing.

The data below show how each German vowel has been treated. This helps to establish which Oshiwambo vowel has been used in substituting a German vowel and to find the underlying principles.

German word	German vowel	Phonetic transcription	Loanword	Oshiwambo
Kühler	y:	/ky:lə/	okila	[i]
Tüte	y:	/'ty:tə/	otite	
Kino	i:	/'ki:no/	okino	[i]
Maschine	i:	/ma'ʃi:nə/	omashina	
Schlips	i	/ʃlips/	ofilipusa	[i]
billig (adj.)		/biliç/	ombiliha	
Radio	a:	/ra:diə/	oladiyo	[a]

Draht		/dra:t/	odhalate	
Zucker	ɐ	/tsukɐ/	osuka	[a]
Koffer	ɔ	/'kɔfɐ/	okofa	[o]
Karte	ə	/kartə/	okaalita	[a]
Mine		/mi:nə/	omina	
Matratze	ə	/ma'tratsə/	omatalashe	[e]
Geschäft		/gə'ʃɛft/	ongeshefa	
Stunde	ə	/'ʃtʊndə/	otundi	[i]
Deutsche		/dɔytʃə/	omundowishi	
Hotel	ɛ	/ho'tɛl/	ohotela	[e]
Benzin		/ben'tsi:n/	openzina	
Kamel	e:	/ka'me:l/	ongamelo	[e]
Apotheke		/apo'te:kə/	oapoteka	
Brötchen	ø:	/brø:tʃən/	okambilishena	[i]
Brot	o:	/bro:t/	omboloto	[o]
Kartoffel	ɔ	/kar'tɔfl/	okatofola	[o]
Kombi	ɔ	/'kɔmbi/	okumbi	[u]
kurz	ʊ	/kɔrts/	okotse	[o]

Strümpf		/ʃtrɒmpf/	oshitolofe	
Stunde	ʊ	/ʃtɒndə/	otundi	[u]
Butter		/'bʊtə/	ombuta	
Kuchen	u:	/'ku:xn/	oshikuhuna	[u]
Bluse		/'blu:zə/	ombuluse	

Data above show that each German vowel that does not exist in Oshiwambo has been replaced by an Oshiwambo vowel that has distinctive features close to that of German vowels. For example, German vowels /y:/, /i:/ and /i/, have been retained by the Oshiwambo vowel /i/. They share phonetic features such as -high, and -front. Similarly, German vowels /ʊ/, /u:/ and /ɔ/ have been replaced by the Oshiwambo vowel /u/. In this case, the same principle has been applied since these vowels share some phonetic features; that is they are back vowels. However, partial vowel assimilation is also observed. The German vowel /ʊ/ in words 'ʃtɒndə (otundi) and kurts (okotse) has been replaced by Oshiwambo vowels /u/ and /o/ respectively. This has occurred because /u/ and /i/ are high vowels, while /o/ and /e/ are low vowels.

b) Glide epenthesis

Crystal (as cited in Zivenge, 2009, p.193) defines epenthesis as “the intrusion or insertion of an extra sound, medially in a word, while glides are semi-vowels, [w] and [j]”. So, glide epenthesis is the insertion of a semi-vowel in a word. The Oshiwambo and German vowel systems differ greatly. German has monophthongs and diphthongs, while Oshiwambo has monophthongs only. A semi-vowel is inserted to separate the German vowels that do not exist in Oshiwambo, as demonstrated in the examples which follow:

English	German	Phonetic	Oshiwambo
captain	Kapitän	/kapi'te:n/	kapitiya
radio	Radio	/ra:diu/	oladiyo
German (person)	Deutsche	/dɔytʃə/	omundowishi
tar	Teer	/te:ɐ/	oteya

The palatal continuant /j/ was epenthised to break German vowels which do not occur in Oshiwambo, and these are: /ɛ:/, /io/ and /e:ɐ/. The labiovelar continuant /w/ was epenthised to break vowel /oy/ in German Deutsche.

c) Resyllabification

Zivenge (2009, p. 187) defines resyllabification as “the reorganizing of the syllable tier”. One difference between German and Oshiwambo is in their syllable patterns. While German recognises both open and closed syllables, Oshiwambo recognises open syllables only. However, it can be argued that Oshiwambo recognises closed syllables to a lesser extent especially in interjections and silent /u/ after /m/, as in *omntu* (person). An open syllable is a consonant-vowel sequence (CV), because it is not closed by another consonant, while a closed syllable is a vowel-consonant sequence (VC) pattern (Crystal, 1991).

Regarding interjection, especially when a person is surprised, he or she might interject by saying *Mem!* (Mother) instead of *meme*. This results in a CVC syllable pattern.

For example, the German word *Teer* /te:ɐ/ is monosyllabic, but when it was nativised into Oshiwambo through glide epenthesis to become *oteya*, it became a polysyllabic word with three syllables (VCVCV) *o.te.ya*, in which all syllables are open.

d) Consonant addition

Addition or epenthesis refers to a type of intrusion, where an extra sound has been inserted in a word (Crystal, 1991). In this regard, a consonant is inserted in a word for some phonetic reasons. The example which follows clarifies this:

English	German	Phonetic	Oshiwambo	Inserted consonant
car	Auto	auto	<i>ehawuto</i>	/h/

From the example above, the /h/, the glottal fricative has been inserted to avoid creating diphthong (not permissible in Oshiwambo) by the last vowel on a prefix of a particular nominal class and *auto*. If /h/ was not inserted, this could result in diphthongs which are not permissible in Oshiwambo. This could result in having words such as:

eawuto, Cl 5

oshiawuto, Cl 7

oluawuto Cl 11

This is also proven in other cases from other languages such as *omahooli* 'oil' from *olie* in Afrikaans. The underlying principle here is that epenthesis has been applied to avoid the creation of diphthongs in Oshiwambo.

5.2.2 Phonological processes in handling consonants

It is observed that Oshiwambo and German have different consonant systems, although similarities exist too. Therefore, German words that enter Oshiwambo have to undergo some consonantal changes. This is particularly common when such a word carries a consonant or consonants that do not exist in Oshiwambo.

This section therefore discusses consonantal changes observed when German words enter the Oshiwambo speech system and these are a result of sound substitution, deletion, consonant nasalisation and epenthesis.

a) Consonant substitution

Ibdoil (as cited in Zivenge, 2009, p. 233) describes sound substitution as “the replacement of one linguistic item by another at a particular place in structure”. In this study, consonant substitution refers to the replacement of German consonants with Oshiwambo consonants. It is observed that some German single consonants are adopted as they are, while others undergo phonological changes to suit the Oshiwambo phonemic system. The examples below illustrate such a process:

English	German	Phonetic	Oshiwambo	Substitutes
mattress	Matratze	ma'tratsə	omatalashe	/sh/ and /l/

Although the alveolar affricate /ts/ exists in both German and Oshiwambo, the alveolar affricate /ts/ was substituted with the alveopalatal fricative /sh/. This was done because the two consonants share the same place of articulation. They are both alveolar fricatives. It is evident that the substitution of consonants occurs between consonants which share the similar place of articulation.

The laterals /l/ and /r/ exist in Oshiwambo among its dialects and act as free variants. However, /l/ is more preferred than /r/. Therefore, in the German word *Matratze*, /r/ has been replaced with /l/ as a result.

b) Consonant nasalisation

Crystal (1991) states that a nasalised consonant would refer to a consonant which is articulated in a nasal manner because of an adjacent nasal sound. Therefore, some consonants undergo the process of nasalisation as in the examples below:

English	German	Phonetic	Oshiwambo
bread	Brot	/bro:t/	<i>omboloto</i>
dam	Damm	/dam/	<i>ondama</i>

Fivaz (1986) explains that in Oshindonga, the voiced labial stop /b/ and the voiced alveolar stop /d/, occur only in nasal compounds, namely /mb/, /mbw/ and /mby/; and /nd/, /ndw/ and /ndy/ respectively. Therefore, in German, words such as *Brot* and *Damm*, sounds /b/ and /d/ have been nasalised to /mb/ and /nd/ respectively in the initial position. The voiced labial stop /b/ has been nasalised with /m/ the voiced bilabial nasal while the voiced alveolar stop /d/, has been nasalised with /n/ the voiced alveolar nasal. The sounds /b/ and /m/ are bilabial while /d/ and /n/ are alveolar. The underlying principle here is that place of articulation plays a role in the process of consonant nasalisation.

c) The Kwanyama Law

Kwanyama Law is one of the phonological processes in Oshiwambo, especially the in Oshikwanyama dialect. According to Halme (2004), the Kwanyama Law denasalises the second of two successive pre-nasalised voiced consonants in a word in Oshindonga. Comparing the two dialects of Oshiwambo, Oshikwanyama and Oshindonga, the following examples illustrate this law:

Oshindonga

ondj**amba** (elephant)

ong**ombe** (herd of cattle)

Oshikwanyama

ondj**aba**

ong**obe** (Halme, 2004, p.16).

As seen above, the second pre-nasalised voiced consonant /mb/ in Oshindonga has been denasalized to /b/ in Oshikwanyama because Oshikwanyama does not allow two successive pre-nasalised voiced consonants /mb/ in *ondjamba* and *ongombe* in Oshindonga.

It should not be concluded that it is only the /mb/ that can be denasalised. Observe this from the examples which follow. A word *ondondo* in Oshindonga (*grade* in Eng.) is pronounced as *ondodo* in Oshikwanyama. It is obvious that the /nd/ in the second syllable in Oshindonga has been denasalised in Oshikwanyama to /d/.

The Kwanyama Law has been observed with loanwords from German too. The German word *Bibel* is nativised in Oshiwambo as *ombimbeli* in Oshindonga and *ombibeli* in Oshikwanyama. So, the Kwanyama Law has been applied in nativising German words into Oshikwanyama.

d) Devoicing

This is the process by which a voiced consonant becomes devoiced. Kennedy (2007) argues that devoicing takes place when the recipient language lacks voiced consonants in its phonemic inventory which are present in the source language.

This study has observed devoicing of phonemes as well. The German words *Benzin* (English petrol) and *Abfall* (English waste) are nativised as *openzina* and *oapufala* in Oshiwambo respectively. So, the voiced bilabial plosive /b/ in the two words has been replaced by a voiceless bilabial plosive /p/. Although the phoneme /b/ is present in Oshiwambo and has been realised as /b/ or /mb/, as it appears in *ombimbeli/ombibeli*

(Bible), it is not well established why it has been devoiced to a voiceless bilabial plosive /p/. However, it can be admitted that the two phonemes /b/ and /p/ share the same feature, being bilabial plosives; hence they can substitute one another. Sounds /b/ and /p/ are both bilabial plosives, one being voiceless /p/ while the other one, /b/, is voiced.

Therefore, devoicing in this case is not a result of lack of a voiced consonant in the recipient language as argued by Kennedy (2007). Devoicing has thus occurred as a substitution of a voiced consonant by a voiceless consonant that shares the same feature.

5.2.3 Phonological processes in handling consonant clusters

A cluster refers to any sequence of adjacent consonants occurring initially or finally in a syllable (Crystal 1991, p. 58). Zivenge (2009) argues that consonant clusters are not permissible in Bantu languages (p. 236). Therefore, Oshiwambo too, does not permit consonant clusters. Therefore, some ways of handling consonant clusters in loanwords are vowel insertion, deletion and extra-syllabic consonant truncation, discussed in the next sub-section.

a) Vowel insertion

Evans (2014) defines vowel insertion as a linguistic process where a vowel is added to a borrowed word. Batibo (1996) defines vowel insertion or vowel epenthesis as a linguistic process that involves the insertion of a vowel between two consonants or after a final position; whereas John (as cited in Zivenge, 2009, p. 212) defines vowel epenthesis as the insertion of a vowel into a word segment.

The difference between German and Oshiwambo is that German recognises consonant clusters while Oshiwambo does not. However, Oshiwambo recognises complex

consonants. Zivenge (2009) differentiates the two terms, *consonant clusters and complex consonants*. While the former refers to consonants that follow each other in a CC (consonant consonant) sequence pattern without being articulated simultaneously, the latter refers to consonants that are articulated in a CC sequence as a unitary segment. So, for some German words which have CC clusters, a vowel is to be inserted between consonants for a word to conform to the Oshiwambo syllable structure. The examples below illustrate this:

English	German	Phonetic	Oshiwambo	Inserted vowel(s)
map	Karte	/kart _s /	okaalita	/o/, /i/
wire	Draht	/dra:t/	odhalate	/o/, /a/ and /e/

In the German words *Draht* and *Karte*, /dr/ and /rt/ are consonant clusters which Oshiwambo does not allow, therefore vowels /a/ and /i/ have been inserted to break these clusters respectively.

There are three types of vowel insertions applied to German loanwords entering the Oshiwambo inventory. They are prothesis, word medial vowel epenthesis and paragodic vowel epenthesis.

Prothesis refers to a type of intrusion where an extra sound has been inserted initially in a word (Crystal, 1991). John (as cited in Zivenge, 2009, p. 213, 222) explains that “while word medial vowel epenthesis refers to insertion of vowel in the middle of a word, paragodic vowel insertion refers to insertion of a vowel at the end of a word”.

Data collected show that all the three types of vowel epenthesis have been applied in the nativisation of loanwords from German into Oshiwambo as in the examples which follow:

Table. 5.1

Three types of vowel epenthesis

English	German	Loanword	Prothesis vowel	Mid-word vowel	Paragogic vowel
wire	Draht	<i>odhalate</i>	o	a	e
bread	Brot	<i>omboloto</i>	o	o	o
waste	Abfall	<i>oapufala</i>	o	u	a

It is important to note the underlying principles used in the vowel epenthesis process. This takes us to what Kennedy (2007) refers to as mirror vowel epenthesis in Bemba. This rule states that the same vowel before or after the consonant cluster determines the vowel to be inserted in a consonant cluster. The German word *Draht* has a vowel /a/ after the cluster /dr/, therefore it is the same vowel to be inserted in the cluster. Similarly, a German word *Brot* has a vowel /o/ following the consonant cluster /br/, as a result it is the same vowel inserted in the cluster and at the end of the word. However, a German word *Abfall*, the consonant cluster /bf/ initially sounds as if there is /u/ between /b/ and /f/ hence /u/ is inserted. The vowel /a/ that is inserted in the final segment of *Abfall* is a result of the vowel /a/ that follows the consonant cluster /bf/. The initial vowel /o/ in each of the loanwords in Table 5.1 has been inserted for morphological reasons. That is, it is an augment or a pre-prefix for nominal class 9 in Oshiwambo where all the three loanwords have been assigned.

b) Consonant deletion

As stated earlier, Evans (2014) describes consonant deletion as a linguistic process in which a consonant in a word is eliminated from its position. This process is also noticed in the integration of German loanwords into Oshiwambo as demonstrated in the examples that follow:

English	German	Phonetic	Oshiwambo	Consonant deleted
shop	Geschäft	/gə'ʃɛft/	ongeshefa	/t/
potato	Kartoffel	/kar'tɔfl/	okatofola	/r/

There are two reasons why consonant deletion is applied: to avoid undesirable consonant clusters (not preferred sequence) in a recipient language or to avoid a sound that does not exist in a recipient language inventory. In the examples above, the former has been applied. The consonant clusters /ft/ and /rt/ are undesirable in Oshiwambo, therefore sounds /t/ and /r/ have been deleted.

c) Extra-syllabic consonant truncation

Batibo (1996) states that with this rule a syllabic part of a word is truncated to avoid undesirable clusters or to avoid a word from being too long if other methods are used. There is no exception to this rule in Oshiwambo when treating German loanwords as in the examples below:

English	German	Phonetic	Oshiwambo	Truncated part
bakery	Bäckerei	/bɛkə'rai/	ombeka	/rai/
butchery	Schlahterei	/ʃlaxtə'rai/	oshilahite	/rai/

The syllable /rai/ (CV) has been omitted from the German words to avoid a word from being too long if other methods were used. For example, if glide epenthesis was used, the German word ‘Schlachtereier’ (butchery) would be *oshilahitelayi* (o.shi.la.hi.te.la.yi) with seven syllables in Oshiwambo. It can be suggested that truncation was employed in this case to avoid words from being too long.

Similarly, this strategy has been observed when Oshiwambo borrowed words from Portuguese too, as seen in the following examples:

English	Portuguese	Oshiwambo	Truncated part
	eucalyptus	omungalipi	-tus
	Portuguese	Oshiputu	-guese

As can be seen above, the two syllables *-tus* and *-guese* have been cut off from the two words *eucalyptus* and *Portuguese* respectively.

d) Consonant cluster tolerance

Batibo (1996) and Mahlangu (2007) argue that typical Bantu languages do not permit consonant clusters, which is why vowel insertion is employed in order to break up these clusters. However, speakers who are bilingual, or exposed to foreign languages which allow consonant clusters, tend to use consonant clusters as they occur in the foreign language forms. This is also observed amongst Oshiwambo speakers in pronouncing loanwords from languages in which consonant clusters are permissible.

In this study, some loanwords from German into Oshiwambo have two possible forms. One form is for the literate speakers or bilinguals, while the other form is for the illiterate or monolingual ones, as shown in the following examples:

Table 5.2

Consonant cluster tolerance in loanwords

English	German	Bilinguals/Literate	Monolinguals/ Illiterate	Tolerated clusters
mattress	Matratze	om <i>at</i> rashe/om <i>at</i> lashe	omatalashe	<i>tr/tl</i>
bread	Brot	om <i>br</i> oto/om <i>bl</i> oto	omboloto	<i>br/bl</i>
blouse	Bluse	om <i>bl</i> use	ombuluse	<i>Bl</i>
socks	Strümpfe	osh <i>str</i> om <i>mf</i> e/osh <i>stl</i> om <i>mf</i> e	oshisitolofe	<i>str/stl, mf</i>

These data have demonstrated that the degree of bilingualism of speakers of Oshiwambo has a great influence in tolerating consonant clusters. The more speaker is exposed to foreign languages, the higher the possibility of tolerating the consonant cluster. Those monolinguals that do not have foreign language exposure do not tolerate consonant clusters and therefore insert vowels to break up the clusters.

However, the consonant clusters /tr/, /br/, /bl/ and /str/ have been maintained in the loanwords when pronounced by the bilinguals. The consonant cluster /mpf/ in *Strümpfe* has been modified with the omission of /p/, hence there is /mf/. However, when these words are pronounced by the monolinguals, the consonant clusters have been broken through vowel insertion.

5.2.4 Phonological free variations and loanwords

Mompean (2008) defines phonological free variation as “a well-known phenomenon that occurs when two or more phonemes - the free variants - may replace each other in the same position without any change in meaning” (p. 2).

The Aawambo speak a cluster of dialects or languages which are jointly known as Oshiwambo. These dialects are: Oshikwanyama (spoken in southern Angola as well), Oshindonga, Oshingandjera, Oshikwambi, Oshikwaluudhi, Oshimbalanhu, Oshikolonkadhi, Oshiunda, Oshimbadja, Oshikwankwa and Oshindombodhola. It is observed and noted that most of the words in the different dialects of Oshiwambo differ with one or more phonemes in the same phonetic environment. This is because some phonemes may exist in one dialect while they may be absent in the other.

This sub-section therefore discusses how loanwords from German are phonologically handled in different dialects of Oshiwambo. This is analysed by looking at those phonemes that may be present in one dialect while they may be absent in another dialect. This is evident in the following examples:

Table 5.3

Phonological free variations and loanwords

English	German	Oshindonga	Oshikwanyama	Oshimbalanhu	Free variants
shorts	Kurz	okotse	okotwe	okotswe	<i>ts/tw/tsw</i>
wire	Draht	<i>odhalate</i>	<i>odalate</i>	ovalate	<i>dh/d/v</i>
sugar	Zucker	osuuka	<i>oshuuka/</i> <i>ofyuuka</i>	osuuka	<i>s/sh/fy/s</i>
base	Bass	ombaatha	ombaafa	ombaafa	<i>th/f/f</i>

It is evident that some German phonemes have been substituted by different Oshiwambo phonemes. From these data it is obvious that Oshiwambo dialects have

different phonemic inventories that is why different Oshiwambo phonemes are used in substituting the different German phonemes.

It is evident that the free variants and the German phonemes that have been substituted have something in common as observed in these examples. The free variants share the same features. Free variants /*ts/ /tw/ /tsw/* are alveolar sounds replacing the German sound /*ts/* which is an alveolar sound. Free variants /*dh/ /v/* are dental fricatives, replacing the German alveolar stop /*d/*. Free variants /*s/ /sh/* are alveolar sounds while /*fy/* is a labio-dental sound, replacing the German alveolar sound /*z/*. Free variants /*f/ /th/* are dental fricatives replacing the German alveolar fricative /*s/*.

From this observation, it is evident that the place of articulation plays an important role in free variation among dialects. Thus, sounds with the same place of articulation but with a different manner of articulation form free variants as in the case of the dental fricatives /*dh/ /v/*, the dental fricatives /*f/ /th/*, and the alveolar sounds /*ts/ /tw/ /tsw/*. However, places of articulation that are adjacent play a role in the production of free variants too. Thus, /*d/* the alveolar stop and /*v/* the dental fricative are produced at two adjacent places (alveolar and dental).

The lateral sound /l/ and /r/ in Oshiwambo as free variants of Oshiwambo

The two sounds /l/ and /r/ are used as free variants. Mbenzi (2008) argues that:

The use of the lateral sound /l/ is going out of fashion at present for several reasons. Firstly, the use of the lateral /l/ is associated with the Aambuga people of Ondonga who use strong /l/ and they (Aambuga), are stereotyped as witches or wizards. That is why the new or young generation of Aambuga shy away from the use of /l/.

Secondly, the other Oshiwambo speakers such as Aakwambi, Aangandjera, Aakwaluudhi, Aambalantu and Aakolonkadhi inherently use lateral /r/, and it is assumed that they might have influenced the speakers of Oshindonga and Oshikwanyama to drop /l/ and use lateral /r/ instead.

Thirdly, the use of /r/ is associated with modernity, while the use of /l/ is associated with primitive life, therefore the educated Aawambo tend to use *r* instead of /l/. (p. 15)

The use of /r/ in Oshiwambo is also associated with the cosmopolitans who are exposed to Otjiherero in which /r/ is inherently dominant.

Therefore, the educated Oshiwambo speakers are associated with the use of /r/ as it appears in the examples which follow: oshisoromfe, omboroto, omatarashe and omburuse.

The next section discusses the morphological adaptation processes employed in the integration of German words into the Oshiwambo speech system.

5.3 Morphological adaptation processes

As stated earlier, this study argues that although loanwords are similar to the source words, they are morphologically modified to make them adopt the structure of the recipient language system. For this modification to be achieved, some morphological strategies are to be applied, and this results in some morphological changes on a loanword. These are the strategies that this section discusses.

Before discussing these morphological adaptation strategies, it is important to shed some lights on the Oshiwambo noun structure. Karuru (2013) argues that most loanwords in languages are nouns. So, in this study more nouns were collected from German than other parts of speech.

According to Fivaz (1986), the structure of nouns in Oshindonga is:

Noun prefix (es) + noun stem. The noun prefixes comprise of: definitiser + gender-number markers. “A stem is that part of the word-form which remains when all inflectional affixes have been removed” (Herbst, 2010, p. 86).

In another study, Fivaz (1986) states that:

Most prefixes occur as members of singular-plural pairs, and such pairs are gender or sortal groups to which a noun stem belongs. Each stem belongs intrinsically to only one gender, but for emotive and attribution, a stem may be used with gender prefixes other than those of its intrinsic membership.
(p. 31)

To exemplify what this means, look at the demonstration below:

The intrinsic membership of a noun ‘person’ is ‘*omuntu*’, where -ntu refers to ‘person’, but with emotion and attribution other prefixes may be used:

oshintu, to mean bad or ugly, *okantu*, to refer to diminutive (small), *oluntu*, to mean slender and tall. The stem in all cases remains -ntu to refer to ‘person’. Therefore, with the change of class prefixes (-*shi*-, -*ka*-, -*lu*-), a noun moves from one class to the other. This is what Mbenzi (2008) refers to as one of the noun formation processes in Oshiwambo, which is the changing of noun prefixes.

Below is the Oshindonga Noun Gender-Number Markers Chart, adopted from Fivaz (1986). As stated earlier, in the process of loanword integration, loanwords are morphologically modified to adopt the structure of the recipient language system. This means that a loanword (noun) is assigned to a noun class and it should therefore adopt the structure of that class. It is therefore necessary to study the Oshiwambo Noun

Gender-Number Markers Chart to understand how loanwords are handled and assigned to noun classes in Oshiwambo.

Table 5.4

Oshiwambo nominal class chart

Gender	Class	Prefix	Example	Main Significance
I	1	o-m-/o-mw-	omuntu 'person'	Human
	2	a-a-	aantu 'persons'	pl.of cl. 1
Ia	1a	∅	tate 'father'	Kin, names, personification
	2a	o-o-	Ootate 'fathers'	pl.of cl. 1a
II	3	o-m-/o-mw-	omuti 'tree'	Natural phenomenon, trees, body parts
	4	o-mi-/o-mw-	omiti 'trees'	pl.of cl. 3
III	5	∅	eta 'drop'	Liquids, Natural phenomenon, fruit
	6	o-ma-	omata 'droplets'	Augmentatives, abstracts

IV	7	o-shi-	oshikombo 'goat'	Characteristics of ways people speak
	8	i-i-	iikombo 'goats'	Behaviour, artefacts
V	9	o-N-	ongombe 'cow' animals, fruit, miscellaneous	
	10	o-oN	oongombe 'cows'	pl. of cl. 9
VI	11	o-lu-/o-lw-	olukaku 'shoe'	Long, thin things
	6	oma-lu-	omalukaku 'shoes'	pl. of cl. 11
VII	12	oka-	okakambe 'horse'	Diminutives
	14	u-u-	uukambe 'horses'	pl. of cl. 12
VIII	14	u-u-	uudhigu 'difficulty'	Abstracts
		oma- (+14)	omaudhigu 'difficulties'	pl. of cl. 14
IX	15	oku-	okutsi 'ear'	Body parts, seasons

	6	oma(+15)	omakutsi 'ears'	pl.of cl. 15
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Source: Fivaz (1986, p. 32)

This chart is important in this study as it provides the noun/class prefixes that can help one to understand the morphological changes that loanwords undergo during the process of borrowing words from German to Oshiwambo. Each noun that has been borrowed into Oshiwambo has to be modified with one of the class prefixes that will make it acceptable into a class of the Oshiwambo nominal system.

Having said that, it is now time to look at the morphological processes which account for the adaptation of German loanwords into Oshiwambo. Six processes have been noted and they are prefixation, suffixation, reduplication, substitution, insertion and derivation.

5.3.1 Prefixation

According to Karuru (2013), prefixation involves the addition of a morpheme at the initial position of a stem. One characteristic of Oshiwambo is that it is a prefixal language in the sense that it employs prefixes to its nominal and adjectival systems. Morphologically, nouns and adjectives of a particular class in Oshiwambo have the same form. As earlier demonstrated in 5.3, the noun or class prefix stands before a stem. The prefixes indicate the class in which particular nouns are assigned as well as the singularity or plurality of a noun. Therefore, any German loanword integrated into Oshiwambo has been prefixed with a particular class prefix. In Oshiwambo, the singular-plural morphemes are placed before the noun stem as in the examples below:

English German Loanword

		Singular	Plural
German (pers.)	Deutsch	<i>omundowishi</i>	<i>aandowishi</i>
car	Auto	<i>ehawuto</i>	<i>omahawuto</i>
cake	Kuchen	<i>oshi</i> kuhuna	<i>ii</i> kuhuna

From these data, it is observed that each prefix serves two functions: namely the class and the gender. For example, prefixes *omu-* and *aa-* indicate gender I and classes 1 and 2 respectively.

5.3.2 Suffixation

While prefixation places affixes before a root or stem, suffixation refers to an affix added, following a root or stem (Crystal, 1991).

Oshiwambo has some inflectional morphemes in suffixal position. Some of these suffixes are *-elela*, *-ena (g)-ona*. One of such examples is the diminutive as in the case of *omumatyona*, ‘young boy’; and *ombwena* ‘puppy’ (Fivaz, 1986). Since this strategy is applied to inherited nouns, it could be applied to noun loanwords as well.

For example:

okahautwena, diminutive suffix (a small car, German stem ‘Auto’)

ongamelona diminutive suffix (a young camel, German stem ‘Kamel’)

ehautwelela, confirmation of being genuine (the real car)

omundowishelela (the real German person, German stem ‘Deutsch’).

It is evident from these examples that suffixation has been applied in the integration of German words into Oshiwambo.

5.3.3 Reduplication

According to Crystal (1991), “reduplication is a term in morphology, for a process of repetition whereby the form of a prefix/suffix reflects certain phonological characteristics of the root” (p. 293). With regards to reduplication, Mbenzi (2008) states that one noun formation strategy in Oshiwambo is reduplication. In this process a stem or root of a noun is repeated, for example:

Using *egumbo* ‘a house’ to demonstrate this, as an example is: a) *egumboombo* or b) *egumbogumbo* ‘a real house’. In the first example, the last syllable of the stem (-*mbo*) has been repeated while in the last one the whole stem (-*gumbo*) has been repeated. Since this strategy is applicable to inherited nouns, it could be applied in treating German loanwords as well as shown in the examples below:

ehautohauto or *ehautootoo* (a real car) from German stem ‘Auto’

okofakofa or *okofaafaa* (a real suitcase/ of good quality) from German stem ‘Koffer’.

It is clear that either the whole stem or the last syllable of a word is repeated. The use of suffix *-elela* and reduplication serves the same purpose; the confirmation of something being genuine. From the data above, it is evident that German loanwords could be handled through reduplication once integrated into Oshiwambo.

5.3.4 Substitution

As stated previously, according to Iboil (as cited in Zivenge, 2009, p. 233), sound substitution refers to “the replacement of one linguistic item by another at a particular place in structure.” Data analysed in this study reveal that certain morphemes in some

loanwords adapted from German into Oshiwambo are substituted by noun class prefixes. This can be seen in the examples below:

English	German	Oshiwambo
suit	<i>Anzug</i>	<i>omutsuhu</i>
briefcase	<i>Aktentasche</i>	<i>okataasa</i>

From the examples above, the German morphemes, *an-* and *akte-* have been replaced with the Oshiwambo noun class prefixes *omu-* and *oka-* respectively. With this substitution, the two nouns are placed in classes 3 and 12 respectively, because of prefixes *omu-* and *oka-*.

5.3.5 Insertion/ epenthesis

Insertion or epenthesis refers to a type of intrusion, where an extra sound has been inserted in a word (Crystal, 1991). Mbenzi (2008), notes that Oshiwambo employs insertion as a noun formation process. With this strategy, a morpheme *-na-* is inserted in a noun as in the examples that follow:

English	German	Loanword	insertion (-na-)	meaning
shop	Geschäft	ongeshefa	omunangeshefa	shop owner
farm	Farm	ofalama	omunafalama	farmer

The prefix *-mu-* denotes 'human being' while the morpheme *-na-* refers to someone with such characteristics.

It has been proven that the five noun formation processes which are used in forming inherited nouns are also employed in the morphological adaptation of German loanwords into Oshiwambo.

5.3.6 Derivation

“Derivation is a word formation process that creates a new lexeme, typically by ending an affix to a base” (Fagan 2009, p. 89). That is to mean prefixation and suffixation are examples of derivation. Herbst (2010, p. 86) defines a base as “any form to which affixes of any kind can be added.” According to Crystal (1991, p.199) a lexeme refers to “a term used in linguistics to refer to the minimal distinctive unit in the semantic system of a language.”

It is observed that from certain German loanwords, new words have been derived. This is done by forming verbs from nouns or vice versa, as demonstrated in the following examples:

Table 5.5
Derivation

English	German	Verb	Loanword (noun)	(Noun) Person
walk/tour	spazieren (v.)	<i>pashiyona</i>	<i>epashiyono</i> cl.5 (tour/walk) <i>okupashiyona</i> cl.15 (to walk)	<i>omupashiyoni</i> cl.1 (traveller/tourist)
Shop	Geschäft	<i>ngeshefa</i>	<i>ongeshefa/</i> cl.9 (shop) <i>omangeshefelo</i> cl.6 (market) <i>okungeshefa</i> cl.15 (to run business)	<i>omunangeshefa</i> cl.1 <i>nakungeshefa</i> cl.1a (shop owner)

Farm	Farm	<i>falama</i>	<i>ofalama</i> cl.5 (farm)	omunafalama (farmer)	cl.1
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It is evident from the examples above that from the three German bases, nouns and verbs have been formed through derivation. Both prefixes and suffixes have been used in the process of derivation.

The next sub-section discusses how borrowed verbs from German are handled in Oshiwambo by applying verbal extensions.

5.3.7 Verbal extensions in loanwords

In chapter four, it was discussed that Oshiwambo employs various extensions that are placed immediately after the verb root and before a final suffix. A German verb *backen* ‘bake’ *mbaka* in Oshiwambo is a good example to demonstrate the verbal extensions in loanwords.

This can be well understood when the verbs are used in sentences as shown in the following examples:

English

Oshiwambo

- | | |
|--|---------------------------------------|
| i) Timo bakes bread. | Timo oha <i>mbaka</i> omboloto. |
| ii) Timo, bake bread for me! | Timo mbakela ndje omboloto! (request) |
| iii) Timo uses a little oil in baking bread. | Timo oha mbakitha uugadhi uushona. |
| iv) The bread is well baked. | Omboloto oya mbakeka. |
| v) The bread is baked. | Omboloto oya mbakwa. |
| vi) Timo baked himself bread. | Timo okwi imbakele omboloto. |

vi) Timo bakes bread over and over. Timo ota *mbakaambaka* omboloto.

In example i), there is no verbal extension yet, that is how the verb *backen* (bake) was taken as a stem (*mbaka* with a root *mbak-* and a final suffix *-a*). In example ii), the extension *-el-* is applied. This is an applied extension, showing that someone (Timo) should bake bread on behalf of someone else (me). Example iii), *mbakitha*, the extension *-ith-* which is the causative extension, is applied. It shows that the verb action is the result of an action caused by an agent other than the grammatical subject. The grammatical subject here is Timo, while the agent is little oil (*uugadhi uushona*).

In example iv), *mbakeka*, with *-ek-* suffix, the neuter extension, which has a passive voice function, is applied to show that the action is well done, not just done.

In example v), *mbakwa*, the passive extension with *-w-*, is applied.

In example vi) is a combination of reflexive extension and applied extension. The affix *i-* before the verb root *-mbak-* indicates that Timo did it for himself, while suffix *-el-* indicates that Timo did something for someone. However, that someone is himself as represented by the affix *i-*.

In example vi), reduplicative extension is applied. A verb stem *mbaka* is repeated, with an addition of vowel *a*. This vowel has appeared because a verb stem (*mbaka*) begins with a consonant */mb/*. As earlier stated, reduplicative extension is used when a speaker is unhappy with the action being spoken.

From the data above, it is observed that the verb *mbaka* (*bake*) can use as many verbal extensions as possible. However, it should be noted that some verbs take more extensions than others.

Therefore, it is evident that verbal extensions are not applied to inherited verbs only, but to loanwords (verbs) as well.

The next subsection discusses how adjectives from German are treated during the process of borrowing.

5.3.8 Adjectives borrowed from German

Data collected show that apart from nouns and verbs, Oshiwambo has also borrowed adjectives. German adjectives *billig* ‘cheap’, *blau* ‘blue’ and *kurz* ‘short’ are noted. As discussed in subsection 4.3.3, in Oshiwambo the structure of adjectives is like the nouns. This means that the structure of an adjective is the same as that of the noun it describes, depending on the noun class in which a noun is. For example: ‘a blue car’ cl.5 *ehawuto embulawu*,

cl.12 *okahawuto okambulawu*

cl.7 *oshihawuto oshimbulawu*

In this case, prefixation has been applied, the same way it is applied to nouns (See 5.3.1)

Adjectives are also treated through reduplication, where part of a word is repeated. When something is absolutely blue, it would be referred to as blue-blue *oshimbulawumbulawu*. The stem *mbulawu* is repeated.

Apart from reduplication, suffixation is also applied. For example, the suffix *-elela* (confirmation) is added to the stem *mbulawu* and it becomes *oshimbulawelela* ‘real blue’.

The German word *billig* ‘cheap’ is an adjective. In Oshiwambo, it may be used without a noun it refers to. It can occur in any syntactic environment where nouns too can occur.

For example, a) This car is cheap. = Oshihauto shika oshi na *ombiliha*. (adj.)

b) Being cheap is nice. = *Ombiliha* oshinima oshiwana. (noun)

So, *ombiliha* functions as an adjective and a noun. That is why it is allocated to Cl. 9 only and it cannot be prefixed to any other noun classes.

Unlike the other two adjectives *billig* and *blau*; *kurz* is adapted in Oshiwambo as a noun only. Although *kurz* means ‘short’ in English, ‘-fupi’ in Oshiwambo, as a loanword *kurz* (*okotse*) means short trousers *Kurzhose* in German. This means extra syllable truncation is applied in the process, where *Hose* has been cut off otherwise there could be something like *okotsehawusa* for *Kurzhose*. Like *ombiliha*, *okotse* is placed in Cl. 9, a zero-prefix class.

With this discussion, it can be concluded that prefixation, suffixation, reduplication and extra-syllable truncation are used as morphological processes in the adaptation and integration of German adjectives into Oshiwambo. Similarly, these processes are applied to nouns as well.

The next section discusses the criteria which are employed in assigning German loanwords into the Oshiwambo nominal class system.

5.4 Allocation of German loanwords to the Oshiwambo nominal class system

Oshiwambo has borrowed a wide range of words from various parts of speech which include nouns, verbs and adjectives amongst others. Like other Bantu languages,

Oshiwambo assigns its inherited nouns to its nominal class system and loanwords are treated in the same way. Loanwords in Oshiwambo are allocated to the nominal classes in different ways. Loanwords may be assigned to classes according to semantic, phonological or morphological characteristics.

5.4.1 Semantic assignment

Katamba (as cited in Kayigema, 2010, p. 86), states that “by semantic assignment, loanwords are allocated to nominal classes based on being animates/humans or inanimate, or on the basis of most noticeable properties of the entity denoted by a noun such as its shape or size”. From data collected, it is evident that some German loanwords were allocated to Oshiwambo classes through this criterion.

Class 1/2 denotes animates, that is human beings, kinship terms, names, titles and personification. The class prefix markers of this class are *-mu-*, *-mw-*, *zero* (no prefix at all), (singular); *a-a-* and *-o-o* (plural). Some German loanwords have been allocated to this class. Examples of semantic assignment are given below:

Table 5.8
Semantic assignment to Cl.1 and Cl. 2

German	English	Loanword	Pre-prefix	Prefix	Stem	Pl/Sing.
Deutsche/r	a German	omundowishi	o-	-mu-	-ndowishi	sing.
		aandowishi		aa-	-ndowishi	pl.

Farm	a farmer	omunafalama	o-	-mu-	(na) -falama	sing.
		aanafalama		aa-	(na)-falama	pl.
Fräulein	Miss	Feelani	∅	∅	Feelani	sing.
		oofeelani		oo-	Feelani	pl.
Kapitän	captain	kapitiya	∅	∅	Kapitiya	sing.
		ookapitiya		oo-	Kapitiya	pl.
Vorman	foreman	folomana	∅	∅	folomana	sing.
		oofolomana		oo-	folomana	pl.
Dezember	December	Dezemba	∅	∅	Dezemba	sing.
		ooDezemba		oo-	Dezemba	pl.
Schwein	Pig! (personified)	Shuwayena	∅	∅	Shuwayena	sing.
		ooShuwayena		oo-	Shuwayena	pl.

The data above demonstrate that all these nouns refer to human beings as nationals, kinship, names or personification, which are major features of these classes.

Semantically, class 12/14 denotes diminutives and abstractness. Prefixes *-ka-* (singular) and *u-u-* (plural) are general class markers. Although there are several words allocated to this class, not all of them are semantically allocated. Some other

words have been phonologically assigned to this class as discussed in 5.4.2. The following example could be semantically justifiable.

German	Loanword	English
Brötchen	<i>okambilishena</i> (sing.) <i>uumbilishena</i> (pl.)	brotchen roll

Aawambo still refer to a brotchen roll as *bread*. It could be that a brotchen roll has been compared to a loaf of bread which is bigger than it; hence, it is given a diminutive form. Coincidentally, *Brötchen* is also a diminutive in German.

Furthermore, class 7/8 generally denotes things, trees, languages, behaviour and pejoratives amongst others. Prefixes *-shi-* (sing.) and *i-i-* (pl.) are general class markers. The following loanwords have therefore been assigned to this class:

German	Loanword	English
Veranda	<i>oshiwalanda</i>	veranda
Kissen	<i>oshikusinga</i>	pillow
Deutsch	<i>Oshindowishi</i>	German (language)
Kuchen	<i>oshikuhuna</i>	cake

Likewise, some loanwords have been semantically assigned to classes 5 and 6, which generally refer to liquids, fruits and augmentatives. For example, *ehauto* (car) from *Auto* in German, has been allocated to class 5 on augmentative base, especially when a car is of a bigger size. Therefore, semantics has been used in assigning German words to Oshiwambo nominal classes.

5.4.2 Phonological assignment

By this criterion, Ngorosho and Demuth (as cited in Kayigema, 2010, p. 88) assert that “loanwords can be placed in the noun classes that fit their phonological form rather than the class that might fit their semantic characteristics”. The same view has also been shared by Tirronen (1977). Similarly, Kayigema (2010) argues that prefix markers play a very important role in the process of noun assignment to nominal classes. Kayigema (2010) further argues that loanwords which have an initial syllable which resembles a recognised class prefix are allocated to such classes.

In this study, German loanwords with these behaviours have been noticed:

German assigned	Loanword	English	Class
Aktentasche	okataasa	briefcase	12/14
Karte	okaalita/ uuwalita	map	
Kartoffel	okatofola/ uutofola	potato	
Katechismus	okatekisa/okatekimusa/ uutekisa	catechism	

It is observed that these loanwords have been assigned to class 12 because of their first syllable which resembles class 12 class marker *-ka-* (sing.). As a result their plural form takes *u-u-* which is the class marker for cl. 14.

Another example is to demonstrate class 5/6, which denotes liquids, paired body parts, natural phenomena, fruit, augmentatives and abstracts. Prefixes *-e-* (sing.) and *o-ma-* (pl.) are general markers of this class. Some German loanwords have been phonologically assigned, as in the following examples:

German	Loanword	English	Class
assigned			
	Plural	singular	
Matratze	omatalashe/etalashe	mattress	5/6
Maschine	omashina/eshina	machine	
Matte	omamate/emate	mat	
Mercedes	omashete/eshete	Mercedes	

It is evident that these loanwords have been assigned to this class phonologically, that is, by using their first syllable /*ma-*/, in entering the nominal system through class 6 (as plural nouns) and later to form their singular in class 5. It is interesting to note that the stems of these loanwords have changed on their way to the singular form because they lost their first syllables /*ma-*/, /*mer-*/ in German. Hence, we see: *e-talashe*

e-shina

e-shete

However, *emate* keeps its stem (mat-), and employs the Oshiwambo prefix *-ma-*, to form its plural, hence *omamate*.

For class 7/8, it is seen how some German loanwords have been assigned to it on semantic basis. However, other loanwords have been assigned there on phonological basis. Once more, prefixes *-shi-* (sing.) and *-i-i-* (pl.) are general class markers. Some German loanwords have been assigned there because they carry an initial syllable which resembles this class prefix. Look at these words:

German	Loanword	English	Class
assigned			
Strümpfe	<i>oshitolofe/iitolofe</i>	socks	7/8
Schlachtere	<i>oshilahite/iilahite</i>	butchery	
Mund	omwoonda	mouth	3

These German words carry the phonemes [ʃ] and [m] in their initial position, which resembles the class 7 prefix marker (*-shi-*) and, class 3 prefix marker (*-mu-/mw-*) respectively.

Unlike in the case of class 5/6 where loanwords have entered the nominal system through the plural form (*-ma-*), loanwords here have entered the nominal system through the singular form, and later find the plural form by applying the predominant pattern as done to inherited nouns.

5.4.3 Morphological Assignment

Morphologically, class 9/10 is the zero prefix class, although it has a pre-prefix (*o-*). Analysing loanwords in Kinyarwanda, which is a Bantu language like Oshiwambo, Kayigema (2010) states that loanwords denoting inanimates and those with no recognizable noun prefix are allocated to class 9 and rarely to class 5. This is so because they are zero prefix classes.

Data in this study also reveal that most loanwords have been allocated to class 9 as in the table below:

German	Loanword	English
Brot	omboloto	bread
Schlips	ofilipusa	necktie

Geschäft	ongeshefa	shop
Benzin	openzina	petrol
kurz	okotse	short
Zange	oshange	pliers

It can be concluded that loanwords have been allocated to class 9/10 by applying either semantic or morphological characteristics. As stated earlier, the morphological reason is that class 9 is a zero-prefix class. Semantically, this class caters for nouns denoting some animals such as *ongombe*, ‘cow’ (therefore *ongamelo*), some food (*ohima* ‘traditional bread’ therefore *omboloto*), some natural phenomena (*ondima* ‘cultivation’ therefore *ongeshefa*).

Analysing patterns of lexical borrowing in Chichewa, a Bantu language widely spoken in Malawi and in parts of Zambia, Mozambique and Zimbabwe, Matiki (2016) notes that the “majority of loanwords from English in Chichewa fall into the so-called ‘garbage’ classes, 5/6 and 9/10” (p. 90). Similarly, data collected suggest that classes 9/10 are also more hospitable than any other classes to loanwords in Oshiwambo, and this is due to the absence of class prefixes. Evidence is provided in the appendix of this work.

5.5 Conclusion

From data collected, it is observed that it is not only nouns that have been borrowed but adjectives and verbs too have joined the Oshiwambo lexicon. It is also observed that phonological processes such as substitution, addition, deletion, insertion and resyllabification account for phonological changes in German loanwords into Oshiwambo, while morphological processes such as prefixation, reduplication, suffixation and derivation account for morphological changes in loanwords into Oshiwambo. Three criteria: semantics, phonology and morphology have been

employed in allocating German loanwords to the Oshiwambo nominal class system.

It is also noted that some noun classes are more hospitable to loanwords than others.

Each noun that has been borrowed is assigned to the Oshiwambo nominal class. It should be noted that a noun can be taken from one class to the other by changing class prefixes. This means that nouns are not fixed to one class only, but they can be used in any class depending on the attitude of a speaker with respect to the referent.

A list of the German-derived loanwords in Oshiwambo with their phonetic transcriptions in two languages, the Oshiwambo nominal classes each word has been assigned to and the phonological strategies employed in integrating them into Oshiwambo is provided in appendix section of this work.

CHAPTER 6

CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This chapter gives the summary, conclusion and recommendations of the study, and suggestions for further research.

6.2 Conclusion

This study, which investigated how German words are handled in the Oshiwambo linguistic environment, accounted for various ways in which words borrowed from German into Oshiwambo are phonologically and morphologically adapted. One objective of this study was to unveil how loanwords from German are phonologically and morphologically altered to adhere to the Oshiwambo phonological and morphological constraints. The study discussed various processes which account for phonological and morphological changes of these words. These processes include vowel and consonant substitution, deletion, addition, insertion, glide epenthesis, re-syllabification, prefixation, suffixation and reduplication. The researcher targeted these processes because they are the ones which account for differences between these two languages, namely Oshiwambo and German. Any change to the German words in the Oshiwambo linguistic environment was subjected to these processes. These processes were selected to enable the researcher to observe and explain changes in words from German to Oshiwambo.

The other objective of the research was to unveil the strategies employed in assigning loanwords (nouns) to the Oshiwambo nominal classes. The study revealed that loanwords (nouns and adjectives) are assigned to the Oshiwambo nominal classes based on phonology, morphology and semantics. The study also revealed that

Oshiwambo has borrowed a wide range of German words from various parts of speech which include nouns, verbs and adjectives.

The qualitative research design has been used to do the qualitative content analysis of the phonological and morphological integration of German loanwords into Oshiwambo. This design focuses on meanings and interpretation, and therefore tries to understand how and why people act in particular ways. This design has been therefore found to be appropriate and suitable in investigating and interpreting the phonological and morphological processes that German loanwords undergo during the process of borrowing into Oshiwambo.

The researcher obtained valuable data from the sampled sources. Data were collected from different sources such as Oshiwambo printed materials, daily conversations and personal experiences and vocabulary in the recipient language of the researcher.

To analyse the data systematically, a theoretical framework was designed and adopted. The study adopted two theories, the Natural Generative Phonology and general word formation theories. The Natural Generative Phonology theory was used because it applies phonological rules which account for phonetic information, while general word formation theory was necessary for considering morphological and syntactic information in loanwords. The theoretical framework was also needed to guide the researcher in data analysis, presentation and discussion.

Apart from the theoretical framework, the researcher discussed the phonology and morphology of both Oshiwambo and German, in Chapter Four. This was deemed necessary to shed more light on the two aspects of the two languages, to predict how Oshiwambo influences German in the process of borrowing words. The phonological

and morphological processes in Oshiwambo were also included in the discussion. These processes are the control discussion of the findings in Chapter 5.

The findings show that Oshiwambo does not have diphthongs in its vowel inventory, but it rather has pure vowels. Therefore, in handling diphthongs in German words, which are not permitted in Oshiwambo, glides or semi-vowels are used to break diphthongs in the nativisation of German words to fit the Oshiwambo phonology. By breaking diphthongs, glides introduced additional syllables to the words.

The data further suggest that Oshiwambo does not accept some German vowels. The German vowels which do not exist in Oshiwambo are substituted with Oshiwambo pure vowels which share similar feature values with them.

From the data, it was also established that German has consonant clusters, while Oshiwambo has complex consonants. The data confirm that Oshiwambo does not accept consonant clusters; however, consonant clusters are permitted to a lesser extent. These clusters are therefore dealt with by breaking them up and this is done by vowel epenthesis. Vowels are epenthesised at the initial, mid and paragogic positions of a word. This epenthesis results in CV syllabic words (open) as opposed to CVC syllabic German words. Vowel epenthesis is used to change the German closed syllables to Oshiwambo open syllables, since Oshiwambo does not recognise the closed syllable structures. However, closed syllable structures are observed in some cases, especially among the Oshiwambo speakers who are exposed to, and familiar with the European languages.

The data also suggest that some German consonants are substituted with their equivalencies in Oshiwambo. It was observed that sounds with similar feature values

substitute one another. The analysis of the findings also showed that the German sounds /b/, /d/ and /g/ are pre-nasalised by using the nasals /m/ and /n/ to form nasal compounds such as /mb/, /nd/ and /ng/ in the process of borrowing.

The data also revealed that morphologically, Oshiwambo employs prefixation, suffixation and reduplication processes in the borrowing of German words into Oshiwambo.

The data further revealed that any loan that has been borrowed into Oshiwambo is assigned to an Oshiwambo nominal class based on phonology, morphology or semantics. This happens because like other Bantu languages, Oshiwambo assigns its inherited nouns to its nominal class system and it does so to loanwords as well.

The study also revealed that some noun classes are more hospitable to loanwords than others. Class 9/10, which is a zero prefix class, although it has a pre-prefix (o-), has been noted to have accommodated the most loanwords. Lastly, the data also reveal that the most common words borrowed are nouns with a few adjectives and verbs.

6.3 Recommendations

This research has unveiled valuable data and also developed some interesting areas of research. There are many loanwords in Oshiwambo, but their origin is unknown. German, Afrikaans and English are phonologically close, and one may fail to determine from which language a certain word has been borrowed. Therefore, a lot needs to be done to trace the origin of these words. This study suggests that etymological dictionaries of loanwords are introduced including word origin (source languages), the phonological, the morphological and the semantic development.

The research also recommends that other similar research can be opened in all other minority languages of Namibia and the rest of Africa to preserve and develop these languages which are under threat of extinction.

In addition, this work suggests a comparative study on how two related languages like Otjiherero and Oshiwambo nativise words from a common source language like German, English or Afrikaans.

Similarly, this work recommends research on semantic changes of loanwords in Oshiwambo. Tonal changes in loanwords could also be one of the interesting areas for further research.

Furthermore, this research recommends similar studies on the integration of loanwords from Portuguese into Oshiwambo.

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APPENDICES

Appendix A: Research Permission Letter

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RESEARCH PERMISSION LETTER

Student Name: Mr Johannes Uushona

Student number: 9233911

Programme: MA in Oshiwambo

Approved research title: Phonological and morphological integration of German loan words into Oshiwambo

TO WHOM IT MAY CONCERN

I hereby confirm that the above mentioned student is registered at the University of Namibia for the programme indicated. The proposed study met all the requirements as stipulated in the University guidelines and has been approved by the relevant committees.

The proposal adheres to ethical principles as per attached Ethical Clearance Certificate. Permission is hereby granted to carry out the research as described in the approved proposal.

Best Regards

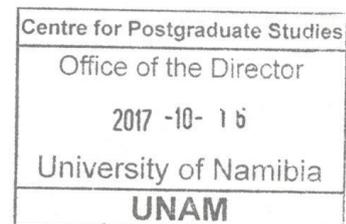

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Date



Appendix B: Loanword Corpus

English	German	Phonetic	Oshiwa mbo	Cla ss	Strategy employed
cooler	Kühler	/ky:lə/	okila		Substitution, addition
base	Bass	/bas/	ombaatha		Pre-nasalisation, addition
map	Karte	/kartə/	okaalita		Substitution, vowel insertion
bread	Brot	/bro:t/	omboloto		Substitution, vowel insertion
Bible	Bibel	/'bi:bl/	ombiibeli /ombiimbeli		Vowel insertion, nasalisation
ink	Tinte	/tɪntə/	otinda		Substitution, addition
camel	Kamel	/ka'me:l/	ongamelo		Pre-nasalisation, addition
radio	Radio	/ra:diə/	oladiyo		Glide epenthesis/substituti on

suit	Anzug	/anzug/	omutsuhu cl.3	Substitution, addition
brotchen	Bröchen	/brø:tçən/	okambilishina cl.12	Vowel insertion/substitutio n
car	Auto	/'aʊto/	ehauto cl.5	Consonant addition
farm	Farm	/farm/	ofalama cl.9	Vowel insertion
kino	Kino	/'ki:no/	okino cl.9	Prefixation
necktie	Schlips	/ʃlɪps/	ofilipusa cl.9	Substitution
hammer	Hammer	/'hame/	ohamala cl.9	Substitution
office	Büro	/by'ro/	ombelewa cl.9	Addition, substitution
mattress	Matratze	/ma'tratsə/	omatalashe cl.6	Vowel insertion, substitution
machine	Maschine	/ma'ʃi:nə/	omashina cl.6	Vowel insertion, substitution

shop	Geschäft	/gə'ʃɛft/	ongeshefa cl.9	Pre-nasalisation, deletion, addition
mine	Mine	/mi:nə/	omina , cl.9	Vowel addition
prayer	Andacht	/andaxt/	o(w)andaha cl.9	glide epenthesis
petrol	Benzin	/bɛn'tsi:n/	openzina cl.9	Substitution, vowel addition, devoicing
cheap	billig (adj)	/bɪlɪç/	Ombiliha	Addition, substitution
hour	Stunde	/'ʃtʊndə/	otundi cl.9	Substitution
miss	Fräulein	/frøylain/	Feelani cl.1a	Substitution
potato	Kartoffel	/kar'tɔfl/	okatofola cl.12	Vowel substitution, addition
short	kurz (adj.)	/kɔrts/	okotse cl.9	Addition, substitution
December	Dezember	/de'tsɛmbɛ/	Dezemba cl.1a	Substitution

punishment	Strafe	/'ʃtra:fə/	ositalafa cl.9	V-insertion, substitution, addition
bag	Tüte	/'ty:tə/	otite cl.9	Vowel substitution, addition
pillow	Kissen	/'kɪsn/	oshikusinga cl.7	Addition, substitution
veranda	Veranda	/ve'randa/	oshiwalanda cl.7	Substitution
foreman	Vormann	/vorman/	Folomana cl.1a	Vowel insertion, substitution
dam	Damm	/dam/	ondama cl.9	Nasalization
captain	Kapitän	/kapi'te:n/	kapitiya cl.1a	Vowel insertion, glide epenthesis
chocolate	Schokolade	/ʃoko'la:də/	oshokolade cl.9	Substitution, addition, devoicing
socks	Strümpfe	/ʃtrɒmpf/	oshitolofe /oshitolofe cl.7	Vowel insertion, addition

catechism	Katechismus	/,kate'çismos/	okatekisa/okate kimusa cl.12	Deletion, addition
German language	Deutsch	/dɔytʃə/	Oshindowishi cl.7	Substitution, addition, glide epenthesis
sugar	Zucker	/tsøkə/	osuuka cl.9	Substitution, addition
suitcase	Koffer	/'kɔfə/	okofa cl.9	Vowel addition
butchery	Schlachtere	/ʃlaxtə'rai/	oshilahite cl.7	Vowel insertion, deletion
hotel	Hotel	/ho'tel/	ohotela cl.9	Addition
bakery	Bäckerei	/bəkə'rai/	ombeka cl.9	Nasalization, deletion
bake	backen (v.)	/bakn/	Mbaka	Addition
pliers	Zange	/tsaŋə/	oshange cl.9	Substitution,
zero	Null	/nɔl/	onola cl.9	Addition, substitution

blouse	Bluse	/'blu:zə/	ombuluse cl.9	Nasalition, vowel insertion
cake	Kuchen	/'ku:xn/	oshikuhuna cl.7	Substitution, addition
butter	Butter	/'bʊtə/	ombuta cl.9	Nasalition
german person	Deutsche/r	/'dɔytʃə/	omundowishi cl.1	Addition, addition, glide epenthesis
mat	Matte	/'matə/	emate c. 5	Addition
borehole	Bohrloch	/'bo:ə,lɔx/	omboola cl.9	Deletion, nasalisation, substitution
wire	Draht	/dra:t/	ondalate cl.9	Nasalization, vowel insertion,
briefcase	Aktentasche	ˈaktən,təʃə/	okataasa cl.12	Deletion, substitution
tar	Teer	/te:ɐ/	oteya cl.9	Glide epenthesis, addition
factory	Fabrik	/fa'brɪ:k/	ofambilika cl.9	Vowel insertion, nasalisation

mercedes	Mercedes		omashete cl.6	Substitution, addition
waste	Abfall	/'ap,fal/	oapufala cl.9	Substitution, vowel insertion, devoicing
pharmacy	Apotheke	/apo'te:kə/	oapoteka cl.9	Addition, substitution
a pig	Schwein	/ʃvain/	Shuwayena cl.1a	Vowel insertion, addition
boys	Junge	/'jʊŋə/	oyongeni cl.9	Addition, substitution
luther	Luther	/lʊtə/	Luteri cl.1a	Addition
lutheran	Lutherisch	/lʊtəriʃ/	omukwaluteri cl.1	Prefixation, deletion, insertion
mouth	Mund	/mont/	omoonda cl.3	Substitution
blue	blau (adj.)	/blau/	o(ombulawu	Glide epenthesis, prefixation
bed	Bett	/bet/	ombete cl.9	Nasalisation

walk/stro ll	spartzieren (v.)	/spatsi:rən/	okupashiyona cl.15	Substitution
mule	Maultier	/'maʊl,tɪ:ə/	omulutiya cl.9	Glide epenthesis

Appendix C: Loanwords allocated to Classes 9 and 10

German	Loanword	English
Kühler	okila	cooler
Bass	ombatha	base
Brot	omboloto	bread
Bible	ombiimbeli	bible
Tinte	otinda	ink
Kamel	ongamelo	camel
Radio	oladiyo	radio
Farm	ofalama	farm
Kino	okino	cinema
Schlips	ofilipusa	necktie
Hammer	ohamala	hammer
Büro	ombelewa	office
Geschäft	ongeshefa	shop
Mine	omina	mine
Andacht	owandaha	prayer
Benzin	openzina	petrol
Stunde	otundi	hour
kurz	okotse	short

Strafe	ositalafa	punishment
Tüte	otite	bag
Damm	ondama	dam
Schokolade	oshokolade	chocolate
Zucker	osuuka	sugar
Koffer	okofa	suitcase
Hotel	ohotela	hotel
Bäckerei	ombeka	bakery
Zange	oshange	pliers
Null	onola	zero
Bluse	ombuluse	blouse
Butter	ombuta	butter
Bohrloch	omboola	borehole
Draht	odhalate	wire
Teer	oteya	tar
Fabrik	ofambilika	factory
Passah	opaasa	passover
Abfall	oapufala	waste
Apotheke	oapoteka	pharmacy
Junge	oyongeni	boys

billig

ombiliha

cheap