

**TOWARDS WRITING A COMPREHENSIVE GRAMMAR OF
THE MAMBWE LANGUAGE**

BY
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A dissertation submitted to the University of Zambia in partial fulfilment of the
requirements for the degree of Master of Arts in Linguistic Science

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APPROVAL

This Master of **PETHIAS SIAME** has been approved as fulfilling part of the requirements for the award of the degree of Master of Arts in Linguistic Science by the University of Zambia.

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ABSTRACT

Mambwe language is spoken in Mbala and Senga districts of Northern Province in Zambia. The language has approximately 500,000 native speakers (CSO, 2010). Therefore, the study was conducted to identify, describe, analyse and write a comprehensive grammar of Mambwe language which is less documented in terms of linguistic literature.

Being a descriptive study, the data were collected using four (4) informants who were the native speakers of Mambwe language and these were distributed as follows: two (02) were the primary source of data and the other two (02) informants verified the data which were provided by the primary source. Each of the informants was given a list of words, phrases and sentences written in English and asked to provide the equivalents in Mambwe. Further, in order to ensure that the data were valid, verification was done by the other two informants. After verification process, data were further checked and mistakes were corrected.

The study was informed by a descriptive research design. The qualitative approach backed the descriptive research design to collect and analyse substantial data. Elicitation, document analysis and direct observation techniques were equally used to collect data. The researcher being a speaker of the language, introspection was equally applied in the process of data collection and analysis. The collected data were later subjected to analysis in line with the objectives of the study, which were: to describe the sound system of Mambwe language; to analyse the nominal and verbal morphology of Mambwe language; and to establish the word order of Mambwe language.

The study established that Mambwe language has twenty-five phonemes which include; eighteen permissible consonants, five vowels and two semi-vowels. The language undergoes phonological processes and has a common CV syllable structure. The study also found that the language has established nominal and verbal structures which are associated with other Bantu languages. Additionally, the language has eighteen noun classes, compound nouns and noun structures. It also has a verbal structure which expresses tense, aspect and mood, verb extensions and verbal complexes. The study further established the word order in basic sentences which include: imperative, interrogative, declarative and exclamatory sentences as; SVO, VSO, SV and OVS for sentences in the passive form. The study also established the word order in the noun phrase as; N, N+D, N+M, N+Adj, N+Demo, N+Demo+Adj, N+Adj+Adj and N+D+M. Finally, the study established the order in the verb phase as; V, Fin.VV, AuxMV and VV.

Key Words: *Towards, Writing, Comprehensive, Grammar, Language, and Mambwe.*

DEDICATION

I dedicate this document to my late father Kegwin Siame and my surviving caring mother Megrith Nampungwe for bringing me on earth and providing the much needed educational needs. I also dedicate this dissertation to my beloved wife Priscillah, our adorable children Gift, James and Michael, my precious sister Salome, grandchildren and great grandchildren to be. Thank you all for your concern, prayers and encouragements even when you were deprived of chance to be close to me during the time of writing this dissertation.

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TABLE OF CONTENTS

COPYRIGHT	i
DECLARATION	ii
APPROVAL	iii
ABSTRACT	iv
DEDICATION	v
ACKNOWLEDGEMENTS	vi
TABLE OF CONTENTS	vii
LIST OF TABLES	xiv
LIST OF APPENDICES	xv
ABBREVIATIONS	xvi
 CHAPTER ONE: INTRODUCTION AND BACKGROUND TO THE STUDY	 1
1.1. Introduction.....	1
1.2. Background to Mambwe language.....	1
1.2.1. Sociolinguistic Background.....	1
1.2.2. Historical Background.....	2
1.3. Statement of the problem.....	3
1.4. Purpose of the study.....	3
1.5. Objectives of the study.....	3
1.6. Research questions.....	3
1.7. Significance of the study.....	4
1.8. Conceptual and Theoretical frameworks.....	4
1.8.1. Conceptual framework.....	4
1.8.1.1. Lexicology.....	4
1.8.1.2. Lexicalisation.....	5
1.8.1.2.1. Word formation.....	5
1.8.1.2.1.1. Conversion.....	5
1.8.1.2.1.2. Zero modification.....	5
1.8.1.2.1.3. Borrowing.....	5
1.8.1.2.1.4. Compounding.....	5

1.8.1.2.1.4.1. Principles of compounding.....	7
1.8.1.2.1.4.1.1. Morphology of compound nouns.....	7
1.8.1.2.1.4.1.2. Headedness in compound nouns.....	7
1.8.1.2.1.4.1.3. Contrast and comparison between compounding and derivation.....	8
1.8.1.2.1.4.1.3.1. Similarities between compounding and derivation.....	8
1.8.1.2.1.4.1.3.2. Differences between compounding and derivation.....	8
1.8.1.3. Syllabification.....	8
1.8.2. Theoretical framework perspectives.....	9
1.8.2.1. Descriptive approach.....	9
1.8.2.2. Linguistic theory.....	9
1.9. Scope of the study.....	10
1.10. Limitations of the study.....	10
1.11. Structure of the dissertation.....	11
1.12. Summary.....	13
CHAPTER TWO: LITERATURE REVIEW.....	14
2.1. Introduction.....	14
2.2. Studies on Mambwe language.....	14
2.3. Studies on Cilungu language.....	17
2.4. Studies on linguistics of Zambian languages.....	21
2.5. Studies on linguistics of non-Zambian languages.....	24
2.6. Summary of literature review.....	28
CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY.....	29
3.1. Introduction.....	29
3.2. Research design: Descriptive design.....	29
3.3. Research methodology.....	30
3.3.1. Qualitative approach.....	30
3.3.2. Research techniques.....	30
3.3.2.1. Elicitation	30
3.3.2.2. Document analysis	31

3.3.2.3. Direct observations	31
3.4. Study area and sample size.....	32
3.5. Sampling techniques.....	32
3.6. Sampling procedure.....	32
3.7. Data collection techniques.....	33
3.7.1. Unstructured interviews.....	33
3.7.2. Data collection instruments.....	33
3.7.2.1. Checklists.....	33
3.7.2.2. Notebook.....	34
3.7.2.3. Recording device.....	34
3.7.2.4. Computer.....	34
3.8. Data collection procedure.....	35
3.8.1. Collection of secondary data.....	35
3.8.2. Collection of primary data.....	36
3.9. Data analysis.....	36
3.10. Ethical considerations.....	37
3.11. Summary of the chapter.....	37
 CHAPTER FOUR: SOME ASPECTS PHONOLOGY OF MAMBWE LANGUAGE.....	38
4.1. Introduction.....	38
4.2. Inventory of segmental phonemes in Mambwe language.....	38
4.2.1. Distinctiveness of sound in Mambwe language.....	39
4.2.1.1. Distinctiveness of consonants in Mambwe language.....	39
4.2.1.2. Distinctiveness of vowels in Mambwe language.....	40
4.3. Consonant sounds in Mambwe language.....	41
4.3.1. Consonantal and semi-vowel segments.....	41
4.3.2. Voiced consonants in Mambwe language.....	44
4.3.3. Unvoiced consonants in Mambwe language.....	44
4.3.4. Permissible consonant combinations in Mambwe language.....	45
4.3.4.1. Two permissible consonant combinations in Mambwe language.....	45
4.3.4.2. Three permissible consonant combinations in Mambwe language.....	46

4.3.5. Non-permissible consonants in Mambwe language.....	46
4.4. Vowel system in Mambwe language.....	47
4.4.1. Phonemic chart of vowels.....	47
4.4.2. Single vowels in Mambwe language.....	48
4.4.3. Long vowels in Mambwe language.....	48
4.4.4. Semi-vowels in Mambwe language	48
4.5. Suprasegmental phonemes in Mambwe language.....	49
4.5.1. Tone in Mambwe language.....	49
4.5.2. Length in Mambwe language	50
4.6. Nasal complexes in Mambwe language.....	51
4.7. Phonological processes in Mambwe language	52
4.7.1. Gliding/semi-vocalisation.....	52
4.7.1.1. Gliding with one vowel.....	52
4.7.1.2. Gliding followed by two vowels.....	52
4.7.2. Vowel Length.....	53
4.7.3. Vowel hiatus.....	53
4.7.4. Coalescence/Vowel fusion.....	54
4.8. Syllable structure of Mambwe language.....	57
4.8.1. Open syllables.....	57
4.8.2. Syllable patterns.....	58
5.9. Summary of the chapter	60

CHAPTER FIVE: SOME ASPECTS OF NOMINAL MORPHOLOGY OF MAMBWE LANGUAGE.....

5.1. Introduction.....	61
5.2. Simple noun structures in Mambwe language.....	61
5.2.1. Prefix + Root	61
5.2.2. Augment + Prefix + Root	62
5.3. Nominal class system in Mambwe language.....	63
5.3.1. Noun classes in Mambwe language.....	63
5.3.2. Noun class number pairings in Mambwe language.....	66

5.4. Inflectional morphology in Mambwe language.....	67
5.4.1. Word formation processes in Mambwe language.....	67
5.4.1.1. Prefixation.....	68
5.4.1.2. Suffixation.....	68
5.4.1.3. Zero modification.....	69
5.5. Some aspects of lexical morphology in Mambwe language	69
5.5.1. Compounding in Mambwe language	69
5.5.1.1. Compound nouns in Mambwe language.....	69
5.5.1.1.1. Two-word compounds.....	70
5.5.1.1.2. Triple compounds.....	70
5.5.1.1.3. Compound of ‘umwina’	71
5.5.2. Borrowing in Mambwe language.....	71
5.6. Some categories of nouns in Mambwe language	72
5.6.1. Deverbal nouns.....	72
5.6.2. Diminutives.....	73
5.6.3. Honorifics.....	74
5.6.4. Augmentatives.....	75
5.6.5. Pejoratives.....	76
5.7. Summary of the chapter.....	77

CHAPTER SIX: SOME ASPECTS OF VERBAL MORPHOLOGY OF MAMBWE LANGUAGE.....

6.1. Introduction.....	78
6.2. Verbal structure.....	78
6.2.1. Tense in Mambwe language.....	78
6.2.1.1. The present time.....	78
6.2.1.2. The past time.....	79
6.2.1.2.1. Categories of the past tense in Mambwe language.....	79
6.2.1.2.1.1. Today past tense.....	80
6.2.1.2.1.2. Remote past perfective.....	80
6.2.1.2.1.3. Recent past (non-hodiernal).....	81

6.2.1.2.1.4. Immediate past perfective.....	81
6.2.1.3. The future tense in Mambwe language.....	81
6.2.1.4. Expressing tense using habitual verbs in Mambwe language.....	82
6.2.2. Aspect in Mambwe language.....	84
6.2.2.1. Past progressive aspect.....	84
6.2.2.2. Present progressive aspect	84
6.2.2.3. Future progressive aspect	85
6.2.2.4. Persistive aspect in Mambwe language.....	86
6.2.2.4.1. Present Persistive aspect.....	86
6.2.2.4.2. Past Persistive aspect.....	86
6.2.3. Mood in Mambwe language.....	86
6.2.3.1. Indicative mood	87
6.2.3.2. Imperative mood	87
6.2.3.3. Subjunctive mood.....	88
6.2.3.4. Grammatical mood.....	88
6.2.3.5. Interrogative mood.....	88
6.2.4. Polarity in Mambwe language.....	89
6.3. Verb extensions in Mambwe language.....	89
6.3.1. Reduplication extension.....	90
6.3.2. Reciprocal extension.....	90
6.3.3. Intensive extension.....	90
6.3.4. Frequentative extension.....	91
6.3.5. Applicative extension.....	91
6.3.6. Reversive extension.....	92
6.3.7. Causative extension.....	93
6.3.8. Passive verb extension.....	94
6.3.9. Stative extension.....	94
6.3.10. Reflexive verb extension.....	94
6.3.11. Perfective verb extension.....	95
6.4. Verbal complexes in Mambwe language.....	95
6.4.1. Subject and Object Markers.....	96

6.4.2. Negation in verbal complexes.....	99
6.4.2.1. Negation with subject and object markers.....	99
6.4.2.2. Negation with the subject marker only.....	100
6.4.3. Generalisations about verbal complexes in Mambwe language.....	100
6.5. Morphophonological processes.....	101
6.6. Summary of the chapter.....	101

CHAPTER SEVEN: SOME ASPECTS OF SYNTAX OF MAMBWE LANGUAGE.....102

7.1. Introduction.....	102
7.2. Word order in Mambwe language.....	102
7.2.1. Imperative sentences.....	102
7.2.2. Declarative sentences.....	104
7.2.3. Exclamatory sentences.....	105
7.2.3.1. Exclamatory in function.....	105
7.2.3.2. Exclamatory in form.....	106
7.2.4. Interrogative sentences.....	107
7.3. Noun phrase in Mambwe language	108
7.3.1. Noun phrase by determination.....	108
7.3.2. Noun phrase by modification.....	112
7.3.3. Noun phrase by determination and modification.....	117
7.4. Verb phrase in Mambwe language.....	118
7.5. Summary of word order.....	119

CHAPTER EIGHT: CONCLUSION AND RECOMMENDATIONS.....120

8.1. Introduction.....	120
8.2. The research objectives.....	120
8.3. Summary of research findings.....	121
8.4. Conclusion.....	122
8.5. Recommendations.....	123

REFERENCES.....122

LIST OF TABLES

Table 1: Phonemic chart of consonants and semi-vowels.....	42
Table 2: Phonetic chart of vowels in Mambwe language.....	47
Table 3: Nominal class prefix of Mambwe language.....	64
Table 4: Singular and plural pairing of noun classes in Mambwe language.....	66
Table 5: Loan words in Mambwe language.....	71
Table 6: Subject and object prefixes of Mambwe language.....	96
Table 7: Summary of morphophonological processes.....	101

LIST OF APPENDICES

Appendix A: Some examples of two word compounds in Mambwe language	132
Appendix B: Some examples of countable nouns in Mambwe language	134
Appendix C: Some examples of abstract nouns in Mambwe language	135
Appendix D: Some examples of diminutive nouns in Mambwe language	136
Appendix E: Some examples of Deverbal nouns in Mambwe language	137
Appendix F: Some terms of common wild animals in Mambwe language	138
Appendix G: Some household terms in Mambwe language	139
Appendix H: Some terms used for domesticated animals and birds in Mambwe language	142
Appendix I: Some human body parts- related terms in Mambwe language	143
Appendix J: Some kinship terms used in Mambwe language	145
Appendix K: Some terms used in Agriculture in Mambwe language	147
Appendix L: Some examples of fishing-related terms in Mambwe language	149
Appendix M: Some miscellaneous terms used in Mambwe language	151
Appendix N: Sample questionnaire.....	155
Appendix O: Sample checklist.....	159

ABBREVIATIONS

ADJ:	Adjective
ASP:	Aspect
Aux:	Auxiliary
Cl.:	Class Prefix
D:	Determiner
Demo:	Demonstrative
FUT:	Future
Fin.V:	Finite Verb
FV:	Final Vowel
M:	Modifier
MV:	Main Verb
N:	Noun
ND:	Noun + Determiner (Noun followed by a determiner)
NEG. M:	Negative Marker
O:	Object
OM:	Object Marker
Pers. M:	Persistive Marker
PL:	Plural
Pref:	Prefix
S:	Subject
SM:	Subject Marker
SM:	Subject + Modifier (subject followed by a modifier)
ST:	Stem
SUFF:	Suffix
SVO:	Subject +Verb+ Object (subject followed by the verb and finally the object)
SV:	Subject + Verb (subject followed by the verb)
TAM:	Tense, Aspect and Mood
TM:	Tense marker
V:	Verb
VR:	Verb Radical

CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

1.1. Introduction

This chapter introduces the study entitled '*Towards Writing a Comprehensive Grammar of the Mambwe Language*.' Chapter one briefly discusses the background to Mambwe language which is divided into sociolinguistic and historical backgrounds. It also presents the statement of the problem, purpose of the study, objectives of the study, research questions, significance of the study, scope of the study, structure of the dissertation and summary of the chapter.

1.2. Background of Mambwe

According to CSO (2010), Mambwe language has 500,000 native speakers. However, the linguistics of Mambwe language is less documented in terms of phonology, morphology and syntax. Among the few documented literature are: the Mambwe Bible, English-Mambwe Dictionary (Halemba, 2007) and Mambwe Folktales (Halemba, 1991). Due to the above situation, this study explored, analysed and documented the linguistic description by providing a comprehensive grammar of the Mambwe language.

1.2.1. Sociolinguistic background

Mambwe is an indigenous local Zambian language which is regarded as a dialect of Fipa language in Tanzania. The native speakers of Mambwe, who are also known by the name of the language, are found in Mbala and Senga districts of Northern Province in Zambia. Mbala is surrounded by Mpulungu district where Lungu is spoken, Nakonde district where Namwanga is spoken and Mungwi, Kasama and Mporokoso districts where Bemba is spoken. On the Northern part of Mambwe land is Kashesha border post where Swahili is spoken from the Tanzanian side.

Mambwe language is mostly used in homes, church gatherings, community meetings, political rallies and community sensitisation programmes, initiation ceremonies, weddings, in local courts, traditional dances and cultural ceremonies such as *umutomolo* 'tasting of the new crops'

which is done by the Senior Chief Nsokolo, as well as during story telling in the evening when people gather around the fire.

1.2.2. Historical background

According to Guthrie (1971), Mambwe language is classified as M15. Initially, the language was classified as Fipa-Mambwe in M13 together with Pimbwe, Rungwa and Rungu on the Tanzanian side. Mambwe was initially a dialect of Fipa in Tanzania which is the origin of the language under study and was described as Fipa-Mambwe. On the contrary, Nurse (1999:14), Grimes (1996) and Wilson (1958) classified Fipa together with Mambwe-Lungu in group F10.

The languages of Africa are a diverse set of languages and may bear very little relation to one another. The above situation is due to the history of colonialism, which has a great deal of influence from European languages. Nonetheless, there are estimated 2000 African languages in Africa which also include; unclassified languages, sign language and Austronesian languages despite the closest linguistic features being non-African. In the 1950s, Joseph H. Greenberg classified the African languages by putting them together into families, branches, and groups and sub-groups those that were thought to have a common ancestor language.

According to Miti (2006:34), African languages were classified into four language families as; Afro-Asiatic, Congo Kordofanian, Nilo-Saharan, and Khoi-San. These language families are the ones indigenous to Africa. Congo- Kordofanian was sub-divided into its branches, groups and sub-groups. The two main groups were Niger-Congo and Kordofanian classified as 1A and 1B respectively. Niger-Congo is the branch in which Greenberg placed the Bantu languages, within the Bantoid sub-group of Benue-Congo. Zambian languages such as Mambwe language are found in the Bantu sub-group of African Languages.

Additionally, a British linguist Malcolm Guthrie (1948) classified Bantu languages after Wilhelm Heinrich Immanuel Bleek, who earlier coined the word 'Bantu' to refer to one of the world's largest language group. Bleek classified these languages using what he called a practical method where he classified languages into Zones.

As pointed out by Greenberg (1963), one of the salient features shared by most of the Niger-Congo languages is the noun class system and the vast majority of them are tonal languages.

Additionally, Guthrie (1948) states that language groups are categories which led to classification of languages into Zones.

1.3. Statement of the problem

Mambwe language is a less linguistically documented language. Therefore, very little is known about the phonology, morphology and syntax of the language. In terms of existing linguistic literature on Mambwe language, Bickmore (2004) states that the two most accessible sources of information are an extensive dictionary of Mambwe by Halemba (1994) and a brief grammar of the language produced in 1962 by the London Missionary Society. Additionally, the language has a New Testament Bible (Halemba, 1991). Bickmore concludes by arguing that the only linguistic work that has been done on Mambwe was established as supplementary material to understanding the *English-Mambwe Dictionary and Grammar* (Halemba, 2007). Bearing the above situation in mind, the study was undertaken to broaden the existing grammatical description of Mambwe language and endeavoured to answer the statement put in question form: how can a comprehensive grammar of the Mambwe language be written?

1.4. Purpose of the study

The purpose of the study was to provide an additional grammatical analysis of some aspects of phonology, morphology and syntax of Mambwe language.

1.5. Objectives of the study

The study sought to achieve the following research objectives:

- i. To describe the sound system of Mambwe language;
- ii. To describe some aspects of the nominal and verbal morphology of Mambwe language; and
- iii. To establish some aspects of syntax of the Mambwe language.

1.6. Research questions

The study answered the following research questions:

- i. What is the sound system of Mambwe language?

- ii. How can nouns and verbs be described in Mambwe language?
- iii. What is the word order of some aspects of syntax in Mambwe language?

1.7. Significance of the study

The study brought to light a comprehensive grammatical description of Mambwe language. It provided a grammatical analysis of the language which in turn could be a resource material for teachers, students and the general body of documentary linguistics. The grammatical analysis of Mambwe language shall be a platform and a centre of attraction for further research about the language. The study has opened doors to an inventory of sound system, nominal and verbal morphology, and the word order of Mambwe language.

1.8. Conceptual and Theoretical frameworks

1.8.1. Conceptual framework

This section has explained the major concepts that were applied in the study.

1.8.1.1. Lexicology

This is the study of lexical terms or words that have been adopted and used in the research work.

1.8.1.2. Lexicalisation

In the context of conceptual framework, lexicalisation is broadly defined as the adoption of words into the lexicon of a particular language, hence, referred to as the principle of grammatisation (Lehmann, 2002). Briton (2002) defines lexicalisation as a routine process of word formation. In addition, Ogechi (2005) describes lexicalisation as a process of developing concrete meanings of particular words.

Lexicalisation is a process of word formation which in the broader sense forms new lexemes from the existing ones (Brinton and traugott, 2005). New lexical items are also created using conversion, borrowing, derivation, compounding and other processes of word formation. During syntactic constructions, there is change of linguistic context in terms of form and meaning. Some common lexicalisation processes mentioned above have been discussed under word formation processes in this chapter.

1.8.1.2.1. Word formation

Word formation is the process of creating new lexemes or words by applying acceptable standards (Richards and Platt, 1990). Different rules are applied in different processes of word formation. Some cardinal word formation processes in this study have been discussed below.

1.8.1.2.1.1. Conversion

According to Nkolola (2010), conversion is a word formation technique which involves the replacement of the grammatical category of a word by a different one. During conversion the word simply changes its word class to another class without changing its initial word form. In this process, the word spelling does not change, what changes is the word class, thereby rendering a different meaning according to the new class such as, Blackmail as a noun (N), becomes a verb (V) [blackmail] without changing the form.

1.8.1.2.1.2. Zero modification

Zero modification is a process of word formation which does not affect word classes. The process changes nouns from singular to plural form without changing the word spelling. Zero modification is prominent in most Bantu languages as opposed to conversion.

1.8.1.2.1.3. Borrowing

Borrowing involves the formation of new words by adopting them from other languages. In most African and Zambian languages, borrowing is a common process of creating new words. According to Delabunty and Garvey (2004), the borrowed word does not maintain the spelling, pronunciation and meaning of the original word because it has to fit the phonological, morphological and syntactic patterns of the new language.

1.8.1.2.1.4. Compounding

Compounding is the process of forming a word by joining two or more existing and separate words to form one word (Trask, 1993). Compounding is another common process of word formation in English, African and Zambian languages. According to Nkolola (2010), the word which is formed by joining two different words is called a compound noun and denotes one thing. The meaning of the compound words differs from the two or more independent words that

are joined to form it. In some instances, the joined words belong to the same word class while in other instances; the words belong to different classes. For example: Car (N) + pet (N) → Carpet. The word ‘carpet’ can either be a noun (N) or verb (V) depending on how it is used.

Compounding is an important aspect under derivational morphology. It is generally known for its enriching of the vocabulary of any recognised language (Fromkin, 1993:55). Compound nouns are usually known to be formed by at least two or more words. Although the above definition lacks wholesome characteristics of compound nouns, it is descriptively necessary and valid as a centre of the compounding process (Allen, 1978).

The difference between compounding and compound nouns is that compounding is the process of forming compound nouns while compound nouns are the actual words which are formed by combining two or more words. Compound nouns usually convey the meaning which is different from the source words. In English language, there are many morphological categories of compounding. In particular, the majority of compound words are formed by two nouns or by an adjective and a noun and both having categorical output noun (Trask, 1993).

Compounding takes two major categories of formation. The first one is compound adjectives. Compound adjectives are formed with an adjective either taking the first or last position in the compound noun. The examples of such formations include: Adjective + adjective (A+A); such as ‘bitter-sweet’; Adjective + noun (A + N); such as ‘yellow lemon’; Verb + adjective (V + A); such as ‘dancing-queen’ and ‘drip-wet’; and Noun + adjective (N + A); such as ‘girl crazy’. The second category is called compound containing and has the parts of speech below: Adverbs; such as ‘upside down’, Prepositions; such as ‘*of* Mbala’, Pronouns; such as ‘*self*-motivated’, Particles; such as ‘made up’ and Verbs; such as: ‘ash tray.’

According to Bloomfield (1933), compound nouns are classified according to two notions. The two notions are called endocentricity/exocentricity and the notion of co-ordination. Endocentricity/exocentricity notion of compound nouns defines compounds by considering the presence or absence of a head constituent. The compound can either have a head or not. Bloomfield’s second notion of compound nouns is the notion of co-ordination. Co-ordination focuses its attention on the aspect of grammatical relation which holds between the two constituents of the compound(s).

The following theorists have equivalent ideas on classification of compound nouns Bloomfield (1933), Spencer (1991), Bauer (2001), Haspelmath (2002) and Booij (2005). They all classify compound nouns on the basis of two similar categories, namely; endocentric and exocentric.

1.8.1.2.1.5.1. Principles of compounding

1.8.1.2.1.5.1.1. Compounding considers the morphology of compound nouns

Bloomfield (1933) and Bauer (1989), states that the morphological structure of compound nouns take two forms of morphology, namely, inflectional and lexical morphology. Inflectional morphology deals with different types of grammatical word forms. The grammatical forms include among many characteristics, the grammatical number in terms of singular and plural, as well as the grammatical tense. On the other hand, lexical morphology is responsible for the formation of new words. The created word forms are completely different words with different meanings. For instance, the word ‘play’ is a verb and the addition of an affix [-er] changes the word form and meaning. In the above situation, the noun ‘*player*’ is formed.

1.8.1.2.1.5.1.2. Headedness in compound nouns

Headedness refers to the situation of determining whether a compound noun has a head or not. In compound nouns, the meaning of the compound word is determined by the rightmost member of the compound which is referred to as the head. Most heads of compound nouns are nouns with adjectives working as modifiers. Headed compounds follow the pluralisation rule for /s/, /z/, and /iz/ or internal vowel change. According to Bloomfield (1933:235), headedness applies on endocentric compound nouns. Some compound heads lie on the semantic point of view. The above expression implies that endocentric compounds denote the hyponym of its head. For example: *Door knob*, refers to a kind of knob meant for the door and it is endocentric.

Kaguyama (2008, 2009), defines heads as being category determinants. Namiki (2001) adds that the head should be identified on the basis of various parameters namely, morphological, semantic and morphosyntactic locus. Scalise (2009) observes that the head is not always the locus inflectionis because some endocentric compounds do not actually in real sense put any inflection on the head. For example: ‘*Red + brick* → *Red brick*’ is not inflected in the plural. On

the other hand, Scalise (2009) states that exocentric compounds have inflections as shown in: *Pickpocket* → *pickpockets*; where the compound word inflects in the plural.

Zwicky (1985:4) identifies two major types of heads; firstly, *Semantic head* is the head distribution which has its root at semantic level. Secondly, *Categorical head* is the head which has morphological and syntactic root or base. Marios (2014), conclusively classifies headedness in four categories namely, Right headed compounds, Compounds with no heads or headless compounds, left headed compounds and two heads compounds.

1.8.1.2.1.5.1.3. Contrast and comparison between compounding and derivation

1.8.1.2.1.5.1.3.1. Similarities between compounding and derivation

Compounding and derivation are both processes of word formation. The two processes build new lexemes. Lexemes are new word forms that are created after undergoing certain morphological processes. In this case, the morphological processes lead to the formation of compound words which make implied semantics (Labier, 2009 & Stekauer, 2014). The major similarity is that the two processes of word formation combine morphemes to create words. The morphemes which combine include the following roots, stems and affixes. The morphemes in both processes of word formation create a morphosyntactic interaction which consequently leads to interpretation of the output. The other similarity is that both compounding and derivation have similar structural properties, which include headedness, recursion and binary branching (Olsen, 2014).

1.8.1.2.1.5.1.3.2. Differences between compounding and derivation

Dressler and Crocco (1992) note that, the major difference between compounding and derivation is the morphological process of word formation. In addition, derivation is the process which adds an affix to a lexeme. The derived lexeme in this case can either be a root or a stem. For instance, the addition of an affix [-er] to the *verb* stem ‘play-’ creates the *noun* ‘player.’ On the other hand, compounding combines lexemes such as ‘foul’ + ‘play’ to make ‘foul play’.

1.8.1.3. Syllabification

Syllabification is the process of dividing words into their constituent parts which are called syllables. A syllable structure is a composition of words. A syllable is formed by combining

consonants and vowels. Sloat et al (1978) notes that, structurally, the syllable may be divided into three parts namely, the peak, the onset and the coda. The onset of a syllable consists of all the segments that precede the peak and are tautosyllabic with it. The coda consists of all the tautosyllabic segments that follow the peak. The peak, also known as the nucleus, is the element of greater prominence in the syllable and is usually a vowel.

In Bantu languages, there are cases where the nucleus can be a syllabic nasal. Sloat et al (1978) further states that, a syllable that has no coda is called an unchecked or open syllable and one with a coda is called a checked or closed syllable. In case of long vowels in a particular word, they are regarded as one vowel when determining syllables because they produce one sound.

1.8.2. Theoretical framework perspectives

1.8.2.1. Descriptive approach

The current work was a descriptive study hence it applied the descriptive approach. Descriptive study of language is a component of documentary linguistics which deals with languages which are less documented. The descriptive approach is useful when establishing the grammar of a language. This approach uses words and sentential expressions which are then analysed for what they are (Mutch, 2005). The approach deals with explanations of concepts to be documented and in turn contributes to documentary linguistics. This approach helped to establish and document the sound system, nominal and verbal morphology and the syntax of simple sentences, the noun and verb phrase of Mambwe language. The descriptive approach was greatly used during collection and analysis of data. The approach was used to interpret the linguistic meaning of some aspects of Mambwe language which the informants interacted with in the speech community. The analysis of the linguistic experiences was subjected to meaning based on the researcher's perception and research objectives (Merriam, 1998).

1.8.2.2. Linguistic theory

According to Sapir (1921) and Bloomfield (1933), the linguistic theory combines the three linguistic forms, namely: sound system called phonology, word formation called morphology and formation of sentences referred to as syntax. To account for the three linguistic forms above, some phonological, morphological and syntactic approaches were applied descriptively. During a

linguistic analysis of Mambwe language, the descriptive approach, supported by the linguistic theory, were used to provide a grammar of the language.

The phonological approach was responsible for identification of various sound patterns, identifying an inventory of speech sounds in terms of consonants and vowels, constraints in phoneme combination and the use of tone to express distinctiveness of sound. The phonological approach also helped in the establishment of the phonological processes as well as syllabification. The morphological theory was responsible for word formation, hence accounted for nominal and verbal morphology in Mambwe language. The concept of morphology was equally applied during the classification of the nominal prefixes and verbal complexes in the process of data presentation and analysis. Furthermore, the principles of morphology were used during disjunction of words and determination of noun classes for respective words. The syntactic concepts were used to ascertain the formulation of grammatical sentences, word order in sentences and the noun phrase.

1.9. Scope of the study

The study was concerned with some aspects of sound system, nominal and verbal class systems, and word order of Mambwe language. The study established an inventory and suprasegmentals phonemes, phonological processes and the syllable structure. Furthermore, the study endeavoured to analyse some aspects of nominal and verbal morphology. Finally, word orders of simple sentences, the noun and verb phrase were established.

The research was made possible because the researcher holds a Bachelor of Arts with Education degree in Linguistics and African languages, and English language and graduated with a distinction from the University of Zambia. Pursuing a Master of Arts in Linguistic Science which is in line with the foundation courses gave the researcher an added advantage to the successful completion of the study.

1.10. Limitations of the study

The first and crucial challenge was limited linguistic literature to review. The only materials available for reference in Mambwe language were the Mambwe Bible and the English-Mambwe Dictionary. The above situation prompted the researcher to review Cilungu language which has

similar characteristics in some aspects of language as well as studies on the linguistics of other Zambian and non-Zambian languages.

Secondly, each language has its own special kind of grammar, though the linguistic characteristics have some similarities. In linguistic study, grammar is a very wide topic because it incorporates morphology and syntax in all areas. Therefore, the study was limited to '*Towards Writing a Comprehensive Grammar of Mambwe Language.*'

The study was also limited to some aspects of phonology, morphology and syntax of Mambwe language. The analysis was inclined to the aspects of grammar which are applicable to phonemes, words in isolation as well as the sentences. For the purpose of this study, the examples of words were given in Mambwe and subsequently glossed. Key aspects in this study were either written in italics or underlined for easy reference.

The other limitation to this study was financial constraints. This came about because the researcher was a self-sponsored student and that the distance from Kapiri Mposhi, where the researcher stays to Mbala where Mambwe language is spoken was far apart. In this regard, the financial position of the researcher constrained the movements in which only two were undertaken. The first movement was to identify the key informants, distribute and collect the research instruments. The second movement was to submit the analysed data for verification.

Distance was another limitation to the study. There were about 800 kilometers between Kapiri Mposhi and Mbala. Therefore, most of the processes of data collection and analysis in terms of interviews were done using phone calls, short message services and exchange of electronic mails (Emails). It was practically cheaper to buy air time and data bundles than to travel.

1.11. Structure of the dissertation

This dissertation is organised into eight chapters. Chapter One introduces the study by providing brief background information of *Towards Writing a Comprehensive Grammar of the Mambwe Language*. The chapter also presents the statement of the problem, the research objectives, research questions, purpose and significance of the study. Chapter One further contains conceptual and theoretical frameworks, an outline of the scope of the study, structure of the dissertation and closes with a summary of the items discussed in the chapter.

Chapter Two presents literature review of some available materials which were considered relevant, similar and valid to the current study thereby provided a justification for undertaking it. The review of related literature is grouped into four major categories namely, literature on Mambwe language; related studies on Cilungu; related studies on linguistics of Zambian languages and the studies on the linguistics of non-Zambian languages. The chapter closes with a summary of the literature reviewed.

Chapter Three discusses the research design and methodology which were used to collect and analyse data in a quest to answer the research questions raised in chapter one of this study. The chapter presents details relating to research design, research methodology, ethical consideration and a summary of the chapter.

Chapter Four presents some aspects of phonology of Mambwe language. The chapter discusses some aspects of sound system in Mambwe language in terms of phonemes. Consonants and vowels were accounted for in this chapter and answered the research question for the first objective. The other aspects discussed in this chapter are: the distinctiveness of sound, tone, phonological processes and the syllable structure. It closes with a summary of the chapter.

Chapter Five discusses some morphological aspects in Mambwe language. The chapter analyses the nominal morphology which has tackled the first part of the second objective. The chapter has brought to light that Mambwe language has an established noun class system like any other Bantu language. The other aspects discussed include: the noun structure, noun pairings, inflectional and lexical of Mambwe and closes with a summary.

Chapter Six is a continuation of chapter six on some morphological aspects of Mambwe language. The chapter analyses some aspects of verbal morphology in terms of verbal structure of the Mambwe language and answered the second part of the second research question (objective). In this study, the verbal morphology includes tense, aspect, mood, polarity, verb extensions, verbal complexes, morphophonological processes and ends with a summary.

Chapter Seven contains some aspects of syntax of Mambwe language. The chapter presents the word order of the four basic simple sentences in Mambwe language namely declarative, interrogative, exclamatory and imperative sentences. The chapter also establishes the word order in the noun phrase as well as the verb phrase. The chapter closes with a summary.

Chapter Eight presents the conclusion and recommendations for further research on Mambwe language. The chapter restates the objectives, frameworks and methodology. It provides a summary of presentation of findings and analysis based on chapter four, five, six and seven. The chapter closes with a conclusion of the study based on the findings and provides recommendations for further research.

1.12. Summary of the chapter

Chapter one has introduced the study. It has discussed the sociolinguistic and historical background, statement of the problem, purpose of the study, research objectives, research questions, and significance of the study, scope of the study, conceptual and theoretical frameworks, limitations of the study, structure of the dissertation and a summary of the chapter.

The next chapter presents literature review. The review of related literature is grouped into four major categories which are literature on Mambwe language; studies on Cilungu; related studies on linguistics of Zambian languages and the studies on the linguistics of non-Zambian languages.

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

The previous chapter introduced the study. It discussed the background to the study, statement of the problem, purpose of the study, research objectives and questions, significance of the study, scope of the study, frameworks, and limitations of the study and structure of the dissertation.

This chapter presents review of literature that has been conducted on the grammar of African languages. Review of literature is vital in order to establish scholarly works that have been done on the linguistics of Mambwe and related languages. Literature review has provided alternative methodological dimensions, broadened knowledge and contextualised the present study in the framework of similar earlier studies (Dawson, 2002). The review of related literature is grouped into four major categories. The chapter starts with review of literature on Mambwe, a language under study; studies on Cilungu language; related studies on linguistics of Zambian languages and the studies that have been done on the linguistics of non-Zambian languages. The chapter closes with a summary.

2.2. Studies on Mambwe language

In terms of existing linguistic literature on Mambwe language, Bickmore (2004) says the two most accessible sources are a very extensive dictionary of Mambwe written by Andrzej Halemba (1994) and a brief grammar written in 1962 by the London Missionary Society (LMS). He adds that the above mentioned books are not tone-marked. Halemba (2007) is the only linguistic work that has been done on Mambwe. It was established as a supplementary material to the understanding of the *English-Mambwe Dictionary and Grammar*. Halemba establishes the alphabet in terms of vowels, consonants and what he called half vowels. The half vowels are the vowels which in linguistics are called semi-vowels. This part of grammar does not account for the consonantal and semi-vowel chart to determine the voiced and unvoiced consonants hence the need for the current study to provide comprehensive grammar of the Mambwe language.

Halemba (2007) also provides a brief description of changes of sounds. He states that the prefix before a word causes the last vowel or the first vowel of a word to change. He adds that the most drastic changes of sounds in the words in Mambwe occur with the nasal consonant /n/ when it is used as a personal prefix of the first person singular. He further states that /n/ before the reflexive prefix /i/ becomes [-nj-] as in *kanjisumbe* ‘let me cast/throw myself down’. The study only provided an example of the changes created when a nasal is introduced before the reflexive /i/ but could not account for all nasal complexes and their restrictions in terms of position and combinations in the words, a gap the current study intends to bridge.

Halemba (2007) further describes the sound system in terms of fusion of two adjacent vowels. The writer just gives few examples of fusion and does not explain how the vowels fuse. In his work, he uses elision and fusion interchangeably. The interchange of the two terms creates problems to the readers because elision is mostly applicable in consonants where the weak consonant is not pronounced, such as /t/ in ‘listen’ which is elided in pronunciation while fusion is applicable in vowels. Due to the fact that the researcher was dealing with vowels, the best term should have been fusion or coalescence of adjacent vowels. The researcher also needed to use fusion and elision of sounds when dealing with both concepts. In this portion, Halemba only dealt with fusion of vowels without addressing other phonological processes such as vowel deletion, gliding and hiatus, assimilation, nasalisation and vowel maintenance a gap the current study intends to fill.

Halemba (2007) has provided a statement: *Ukuntaputuka* ‘never ending’ which he has divided into syllables: *u-ku-nta-pu-tu-ka*. The statement was meant to shed light about separating words into syllables for better understanding of the dictionary. He further states that in Mambwe, consonant groups are never divided when dividing words into syllables as shown in the example above. It should be noted that the concept of syllable is vital as they are the building block of words and the nucleus determine the boundaries of syllables. In the concept of syllabification, Halemba does not illustrate whether Mambwe language exhibits both open and closed syllables or not. The other gap is that the study does not give other options of the syllable structure in Mambwe language apart from the common CV structure structure in Bantu languages hence a gap which the current study intends to explore and document.

Halemba (1991) uses vowel lengthening at the beginning of words as in; *aakamutontela* ‘those who obey him’; at the middle of words as in: *ukutaasya* ‘to separate those who are fighting’; and at the end of words as in: *ulupapuloluu* ‘this testament’. Halemba adds that a vowel at the beginning of an abstract word that begins with [u] is always long. He further suggests that lengthening of vowels should always be done on syllables that are before the final one in the verbs that are in the intensive form (Halemba, 2007). Vowel lengthening is just one of the phonological processes in Mambwe language, therefore the current study intends to explore other phonological processes such as gliding, coalescence and assimilation. The study further intends to investigate whether tone assignment as a suprasegmental phoneme exists in Mambwe language as is the case of other tonal languages like Bemba.

Halemba (2007), states that Mambwe has a word structure and nearly all the words are composed of a prefix + root. Nouns and verbs practically always have a prefix. The pre-prefix or augment is usually optional in both nouns and verbs. Verb roots are usually compounded into single words with various prefixes where the first prefix denotes the subject, the second denotes tense and sometimes other prefixes denote object pronouns. From the foregoing, Halemba only provided the word structure for nouns and the gap is that he did not account for the verbal structure and its constituents such as tense, aspect, mood and negation on verbal complexes.

Halemba (2007) establishes a nominal system of nine noun classes. He states that the first noun class comprises all intelligent beings, human or otherwise, agents, including foods and foreign words and is headed by the (pre-prefix) and prefix [(u)mu-] for singular nouns and [(y)a-] for plural nouns. The second noun class is formed using the prefix [(u)mu-] for the singular nouns and [(i)mi-] for plural nouns where the initial [u] or [i] is soft and sometimes drops completely. The third noun class begins with [(i)n-] or [(u)lu-] in the singular nouns and (i)n- in the plural nouns in which [(i)n-] changes into [(i)m-] if it comes before /p/, /b/, /f/ and /v/; hence the qualifying singular prefix becomes [i/lu-] and the plural is always [zi-]. According to Halemba (2007), class three prefixes are used to emphasise quantity and variety. The fourth noun class uses the prefix [(i)ci-] for singular nouns and [(i)vi-] for plural nouns and is used to form augmentative and pejorative nouns. Class five of nouns uses the prefix [(i)li-] or [i-] for the singular noun and [(a)ma-] for the plural nouns. Class six uses the prefix [(a)ka-] for singular and [(u)tu-] for plural and include diminutive nouns. Class seven uses prefixes [u-] and [(u)lu-]

to form collective or abstract nouns. Class eight uses the prefix [(u)ku-] and comprises infinitives of verbs. Class nine is a class of locatives which are formed from the following prefixes: [(u)mu-], [(u)ku-] and [(a)pa-]. However, other studies indicate that Zambian languages such as *Bemba* have eighteen noun classes. The current study examines whether it is true or not that Mambwe language has nine noun classes as opposed to eighteen.

Halemba (2007) also worked on some aspects of derivative verb forms. The researcher provides definitions to verb extensions and states that the list of extended verb forms is not exhausted. His work identifies the following extensions applicative, causative, and reversion, verbs of state, repetitive, intensive, reciprocal, completive, reduplicative and reflexive. Halemba's brief grammar on verb extensions does not account for the frequentative verb extension and verbal complexes as an extended derivative form in terms of positive and negation of verbs which the current study intends document and analyse.

Halemba (2007) has attached simple sentences to demonstrate how sentences can be translated from English to Mambwe language in the dictionary. The author has not provided sufficient syntax which he attached to the extensive dictionary. He has simply provided examples about how a reader can identify a verb and a noun in the sentence. The current study intends to deal with the syntax of some aspects of the basic sentences, the noun phrase and the verb phrase.

2.3. Studies on Cilungu language

Cilungu literature is concerned with the Lungu speakers of Mpulungu district. Cilungu language is closely related to Mambwe and its geographical position is in the neighborhood of Mambwe speakers. Cilungu is a Bantu language (M14) which is spoken in parts of the Northern Province of Zambia as well as in the Southern Tanzania (Guthrie, 1948).

While it is beyond the scope of this study to provide a detailed comparison between Cilungu and related languages, it is clear that Cilungu's closest relative is Mambwe. The two 'languages' have a shared cognate rate of 92%. They are mutually intelligible and thus linguists might correctly classify the two 'languages' as dialects of a common language, rather than as two separate languages. Be that as it may, speakers of each language can clearly distinguish between the two as there are a number of phonological, morphological and lexical differences between them (Kashoki and Mann, 1978).

Bickmore (2004) says, with regard to most Bantu languages, the most common syllable type in Cilungu is CV, though syllables of the shape V are also amply attested. The only consonant clusters found are of the form (a) nasal + obstruent, and (b) C + glide. With very few exceptions, any consonant can precede any vowel. While length is contrastive for vowels, it is not for consonants; that is, there are no geminate consonants and consequently no consonantal codas in Cilungu. The researcher, therefore, concludes that all consonants as well as consonant clusters as being part of an onset, can all occur word-initially as well as word-medially (Bickmore, 2004). The study does not give other options of the syllable structure in Lungu language apart from the common CV structure structure in Bantu languages hence a gap which the current study intends to explore and document.

In view of Bickmore (2004), all obstruent in Cilungu language can be preceded by a nasal such as: *mb, mp, nd, nt, ng, nk, mv, mf, nz, ns, nsh, nj and nch*. Of course, the question arises as to whether these are unitary phonemes or consonant clusters. In a monomorphemic word like *yèèmbà* ‘lake’ it is admittedly somewhat ambiguous as to whether the [mb] is a unitary phoneme or a sequence of /m/ and /b/. Due to the above, it is assumed that some phonological processes could change one representation into the other. It is clear, however, that some instances of surface [nC] must begin as two separate phonemes. With regard to C + glide sequence, the glides in question being [y] and [w], nearly any consonant can be followed by one of these two glides in the output. The only consonant which never precedes the labio-velar glide [w] is the alveopalatal nasal [ɲ] which is realised as [ny]. There are more restrictions on what consonants can precede [y]. The question arises as to whether all surface glides can be derived from the high vowels /i/ and /u/ or some must be set up as phonemes themselves. The work did not account for consonants where there are restrictions with the glides during consonant combinations hence the current study intends to establish such consonants.

Bickmore (2004) states that if the stem begins with a voiced plosive /b/, /d/, /j/, or /g/, then the nasal class prefixes remains. This seems to be a strategy to avoid intervocalic voiced plosives. Cilungu does not permit /d/, /j/ or /g/ inter-vocalically anywhere in the language, and while /b/ is attested inter-vocalically by surfacing as [ɓ], the number of such occurrences is relatively small compared to other consonants in the language. The work on Cilungu gives an overview of the nominal tonology, phonetics of High tone lowering as well as the use of feet in accounting for

binary spreading (Bickmore, 2003). In addition, Kagaya published a dictionary (1987) and four papers on Cilungu with tone which is thoroughly marked. Bickmore and Doyle (1995) make reference to the thorough marking of tone in Cilungu. The gap is that the above work did not account for vowels as segmental phonemes as well as suprasegmentals phonemes which include tone and length.

Bickmore (2004), in his study reveals that while Cilungu employs the cross-linguistically common processes of gliding and vowel deletion to resolve most instances of underlying VV hiatus, there are in fact a number of instances of surface VV hiatus. Some of these are due to either the first vowel being underlying long or an underlying C between the two Vs which later delete. The first case of surface vowel hiatus that does not result from one of these two situations is the one created by an onsetless Subject Marker being followed by a root-initial vowel. In this one case, a High-toned mora gets inserted between the two vowels in hiatus. Bickmore (2004) adds that both vowel deletion and gliding target only short vowels in chilungu language. The second case where vowel hiatus is tolerated on the surface is when there is a consonant underlying between the two vowels which ultimately deletes. In Cilungu there are no surface *[wu] or *[wo] sequences. When such occur, the [w] will delete. This deletion process is bled by hardening /w/ to [b] after a heteromorphemic nasal in which an underlying /g/ will delete, unless preceded by a nasal. In situations where the /w/ or /g/ has been deleted, the language tolerates a surface hiatus. It turns out that while rising tones are attested in Cilungu, their distribution is not completely free. However, Bickmore only dealt with vowel deletion, gliding and vowel hiatus but could not account for other phonological processes such as assimilation, nasalization and vowel maintenance.

Bickmore's study (2007), established that Cilungu maintains a contrast in vowel length as well as tone in verb roots. The researcher states that the first in verbal complexes of Cilungu elements in the verb is the Subject Marker which is followed by a singular Object Marker, and in each case the verb ends with the root and Final Vowel. Cilungu like many other languages employ various strategies to avoid surface vowel hiatus. In general, when the morphology creates a VV sequence, the hiatus is repaired by an alteration of the first V in the sequence, viz. if it is high it glides and if it is low it deletes. It does not seem possible to restrict vowel deletion or gliding to some specific part of the verbal complex. With regard to what can appear in the object marker

position, it should be noted that the reflexive prefix /í-/ , when present, occurs in this position. The research reveals that all Subject and Object markers in Cilungu are bound morphemes. In cases where they must appear alone, a corresponding independent pronoun must be used (Bickmore, 2004). The gap is that this work did not account for negation on verbal complexes.

According to Bickmore (2004), when the noun in class 1a/2a becomes diminutive, then the class prefixes surface with a long vowel and the pre-prefix is never present. Augmentatives are formed in class 7/8 prefix. Class 7/8 class prefix is added to the inherent class prefix of the noun. As was the case in the diminutives, the class 5 prefix is always realised as /li-/ and the class 2 prefix is always realised as /ya-/ . When the augmented noun is from class 9/10 the inclusion of the class 9/10 prefix is often optional but, just as was seen with the diminutives, if the root begins with a voiced plosive, then the class prefix is obligatorily maintained. When the noun to be augmented is in class 1a/2a, then the toneless prefixes /cii-/ and /vii-/ are used. The gap is that this work did not address the issue of noun class prefix pairing.

Bickmore (2004) adds that the nominal stem is most often monomorphemic, but not always. The most obvious case of a bimorphemic stem is seen in the class 15 words, which are used as verbal infinitives. In those cases, the stem comprises both a verbal root as well as the “Final Vowel” /-a/. In bimorphemic nominal stems, Deverbal nominative nouns are transparently derived from verbs. Bickmore (2004) further states that the stem consists of a verb root plus a nominalising suffix. Each of the five vowels can be used as a Deverbal suffix. The precise semantics that these vowels contribute is not completely transparent. The vowel /-i/ can be used as an agentive suffix, though this is not always the case. The vowel /-o/ can be used as an instrumental, but again, this is not always synchronically true. While in most cases these nominal roots are bimorphemic, it is possible for them to be more than two morphemes. The data provided in the study does not account for inflectional and lexical morphology which this study intends to work on.

As is the case in all Bantu languages, Cilungu has extensions on the verbs. The language has a range of derivational verbal extensions that often though not always change the number of augments of the verb. The following are some of the verb extensions found in the work on Cilungu: causative, intensive, passive, stative, reciprocal and applicative. The above extensions are also found in Mambwe (Halemba, 2007). From the foregoing, both positive and negative verbal complexes have not been addressed hence the gap for the current study.

The study on Cilungu phonology brought to light the following morphophonological processes that affect vowel length: vowel deletion, gliding, nasal demorification and word final shortening (Bickmore, 2004). The above work covers the sound system and the nominal and verbal morphology of the language but does not account for syntax hence the gap.

2.4. Related linguistic studies on Zambian languages

This sub heading discusses the linguistic works done in Zambia which are related to the current study. The following scholarly works have been reviewed: Kashoki (1967), Hyman (1991), Chanda (1985), Givon (1969), Nkolola (1997), Kangwa (2007), Mann (1999), Carter (2002), Chiyonga (2009) and Collins (1962).

Kashoki (1967) establishes an inventory of phonemic contrasts in Ibibemba for segmental and suprasegmentals. This study was purely descriptive in nature. The first concepts discussed is the Bemba phonemic contrast, covering some ideas such as key symbols, phonemic chart for consonants, vowels, tonemes, allotones, and so on. The second concept is phonemic syllable structure, covering areas such as the Bemba phonemic syllable, phonemic status of syllabic nasals, phonemic status of [w] and [y], and the third concept is the distribution of phonemes, which include consonant phonemes, two-consonant clusters and vowel clusters. Kashoki's work did not cover phonological processes, nominal class system, and verbal structure in terms of tense, aspect, mood, verb extensions and verbal complexes as well as some aspects of syntax such as noun phrase and the verb phrase.

The second scholar reviewed is Hyman (1991) who has given Bemba underlying segments. He identifies seven underlying vowel phonemes as follows: /i/, /u/, /e/, /o/, /a/, /i̥/ and /u̥/. He argues that /i̥/ and /u̥/ are reflexes of historical superclosed vowels of the Proto-Bantu which though phonetically identical in present-day Bemba are distinguished from them for two reasons: Superclosed vowels do not undergo height harmony. Additionally, superclosed vowels trigger consonant mutation. Hyman (1991) adds that the two superclosed vowels /i̥/ and /u̥/ do not display any phonetic differences. He further says non-diacritic /i/ is subject to vowel harmony and gliding while the diacritic /i̥/ is not subject to vowel harmony and gliding and induces consonant mutation or spirantisation. The study dealt with phonetics and phonology and did not

consider nominal and verbal morphology as well as some aspects of syntax such as the sentences, the noun phrase and the verb phrase a gap which this study intends to fill.

Chanda (1985) described the phonological variation and functions of the verb extension -il- in Bemba. He has shown that in Bemba, the phonological variation of extensions on verbs is determined by the process of vowel harmony, nasal harmony, metathesis and imbrication. He argues further by stating that Guthrie's account of the functions of extensions is not adequate. He has however, shown that the extension is used to signal at least seven grammatical relations namely; the benefactive, locative, possessive, goal, causative, instrument and manner. Chanda's work on Bemba was based on verb extensions under verbal morphology and some phonological processes and did not deal with nominal morphology and some aspects of syntax which include the basic sentences, the noun phrase and the verb phrase.

Kashoki (1999) states that Bemba nouns, locatives and adjectives have tonal pattern variations according to the immediate grammatical environments in which they appear even though he describes these facts as tentative. The existence of the relationship between syntax and Phonology in the Bemba tonal system is thus not clearly stated. This study has a gap because it did not address verbal morphology and word order in sentences, noun phrase and verb phrase.

Givon (1969), in his classification of Bemba verbals considered a causative extension a supplement to the various verbal structures. He treats the causative as a complementising verb which can be taken only by human agents. He adds that the morphology of the causative suffix in Bemba is -i- or -y- although it is realised as such only if following very few tonal consonants on the surface. He indicates that the suffix is *-enshya* or *-inshya* and that in some transitive verbs, the causative can also be marked by the suffix *-ka* or *-eka*. The researcher does not provide details on the verb roots with regard to causative extension shapes. This omission makes the researcher fail to account for certain phonological processes such as vowel harmony and gliding. Furthermore, Givon (1969) assertion that the causative can only be taken by human agents is not true because in Bemba for instance, not all agents in the performance of the action of the verb are humans. Givon's study did not account for the nominal morphology, only deals with the causative verb extension leaving out others such as frequentative, passive, reversive and reduplicative. The author does not also address the elements of the verbal structure such as tense,

aspect and mood, Persistent aspect and negation on verbal complexes which the current study intends to deal with.

Nkolola (1997) conducted research on the verb extensions on Tonga. Her work analysed the applied, causative and passive extensions. She states that in verbal morphology, affixes are added to the verb radical to indicate the subject, object, tense, aspect, negation, mood and other grammatical and lexical constituents. She adds that Tonga verb constituents include the pre-prefix, prefix, post prefix, tense and aspect marker, object marker, root extension and ending in that order of occurrence. Nkolola's work did not address some aspects of phonology, nominal morphology and sentence constituents such as the noun and the verb phrase. Furthermore, Nkolola used Government Binding Theory while the current study intends to use the descriptive and linguistic approaches because the study is descriptive in nature.

Kangwa (2007) conducted a study on *English-derived loan words in Bemba*. He points out that Bemba language has borrowed words from other languages such as English, Swahili and Kabanga. Kangwa indicates that it has become inevitable to borrow words since this enables language users to keep abreast of different domains of development in modern life. The study centered on some aspects of phonology, morphology, syntax, semantics and sociolinguistics of English-derived loan words in Bemba. In his findings, Kangwa (2007) states that since the syllable structure of English differs from that of Bemba, the aim of his research was to collect and study more data on English-derived loan words in Bemba. The research reveals that Bemba has borrowed many verbs and nouns from English. Kangwa's study did not account for mood, Persistent aspect as well as negation on verbal complexes which are the gap of the current study.

Kashoki (2006) adds that word borrowing normally occurs principally in areas where the recipient language is deficient in lexical repertoire. The researcher set out to gather and compile data on stems of adoptive in Bemba and Luunda. He further states that other areas where borrowing takes place are those situations where indigenous lexical items are wholly or partially displaced by adoptive whether because of prestige associated with them or because of their great usefulness or appropriateness in a contemporary setting seen to be preferred by the speaker of the borrowing language. As can be noticed from the foregoing, there is a distinction between Kashoki's study and the current one in that the former's study focused on borrowed words whereas the present study is concerned with identifying and analysing the linguistics of some

aspects of phonology, morphology and syntax which incorporates borrowing as a process of word creation.

The other notable works on Bemba is that of Mann (1999) who conducted a study on *Bemba Grammar*. In his study, he establishes that Bemba has a phonological system which comprises eighteen (18) consonant sounds and five (5) vowel sounds. He further deals with the nominal class system of Bemba and establishes that the language's class system is similar to other Bantu languages. In particular, he states that Bemba has eighteen (18) noun classes. In his study, he discusses subject and tense markers and tone patterns associated with the Bemba verb form. In addition, he discusses mood of the verb and types of words found in Bemba, besides components of a sentence. Mann's work is important as it provides a clear descriptive analysis of Bemba, which has been used to inform the analysis of the data in the current study. However, Mann's work does not discuss the Persistent aspect and negation on verbal complexes which this study intends to establish, describe and analyse.

The other piece of work worth mentioning is '*An Outline of Chitonga Grammar* (Carter, 2002). This study concentrated on the sound system and orthography. It brings to light some aspects of morphology and syntax. The work by Carter did not categorise nominal morphology in terms of inflectional and lexical categories. Furthermore, the work did not discuss the mood and the Persistent aspect including negation on verbal complexes which the current study should address.

Chiyonga (2009) conducted a study on the *Grammar of Compound Nouns in Tonga*. She established that a phoneme is a minimum unit of sound capable of distinguishing words of different meanings. She added that minimal pair drills help to determine which sounds belong to the same class. Her study on grammar brought to light some aspects of phonology, morphology, syntax and semantics. She makes reference to Katamba (1993) and Bloomfield (1933) when referring to the structure of words and sentences in relation to compound nouns. She established verbal and nominal class systems in Tonga. Chiyonga argues that the segments of tone, stress and intonation of spoken language are the vowels and consonants which combine to produce syllables, words and sentences. Her work did not address the Persistent aspect as well as negation on verbal complexes which is the gap of the current study.

Collins (1962) worked on *Tonga Grammar*. The study comprises fifteen chapters. Each chapter deals with a particular aspect of grammar. The study deals with preliminaries and references to the grammatical aspects, word classes of nouns and adjectives, verbal and adverbials, prepositional affixes, pronominal, demonstratives, numerical, relative clauses, subordinate clauses and conditional sentences. This work did not discuss the Persistent aspect and negation of verbal complexes under verbal morphology hence the gap.

2.5. Related linguistic studies on non-Zambian languages

The works of non-Zambian languages on linguistic analysis covers the studies of the following scholars: William (1993), Sloat et al (1978), Katamba (1989 and 1993), Clark and Yallop (1999), Moran (2006), Gleason (1961), Merrifield (2010), Brown (2009), and Fromkin (1993).

William (1993) worked on a grammatical sketch of Dogama. The scholar accounted for an inventory of consonants and vowels. The study reveals that the language has fourteen consonants and six vowels. The consonants include the following: /p/, /b/, /t/, /d/, /k/, /g/, /s/, /z/, /ʃ/, /ʒ/, /m/, /n/, /r/, and /h/. The following are the vowels which are established in Dogama: /i/, /e/, /a/, /o/, /u/ and /ə/. The scholar adds that the language has voiceless stops which are aspirated before the vowels. The vowels /e/ and /o/ are glided in speech. Additionally, high vowels are voiceless when they occur between voiceless obstruent while voiced obstruent pre-nasalise at morpheme boundaries. However, the scholar did not account for the syllable structure of Dogama, inflectional and lexical morphology, verbal morphology in terms of Persistent aspect and negation on verbal complexes as well as some aspects of syntax such as the noun and the verb phrase which this study intends to establish in Mambwe language.

Sloat et al (1978) conducted a study which identified prosody as a study of length, stress and tone in relation to the syllable, and intonation in relation to phonetic phrases and sentences. The scholar described length in terms of the number of speech sounds which can either be vowels or consonants. On the other hand, tone is restricted to vowels. Both length and tone are used to express sound distinctiveness. This work was restricted to phonology; however, the current study intends to account for some aspects of nominal and verbal morphology, and syntax.

According to Katamba (1993) one aspect of phonological analysis is syllabification. He defines a syllable as the heart of phonological representations which is a unit in terms of which

phonological systems are organised. Katamba agrees with Rubba (2000) in terms of syllable identification as being neither grammatical nor a semantic unit. According to the duo, syllables do not deserve any meaning-signaling function in a language. This work only accounted for some aspects of phonology; however, the current study intends to account for some aspects of nominal and verbal morphology, and syntax.

Katamba (1989) states that, tone is exclusively used to distinguish word meaning in minimal pairs which is the case in many African languages. He adds that tonal language exhibits syntactic tones in nominal. According to Katamba, syntactic tones are a linguistic phenomenon also known as syntax-phonology interface that describes tonal pattern variations due to syntactic environments. The implication is that phonology provides a reliable source of information about syntax. This work accounted for the relationship between tone and syntax and did not account for other aspects of phonology such as the syllable structure, inflectional and lexical morphology, Persistent aspects and negation on verbal complexes, the noun phrase and verb phrase.

Clark and Yallop (1999) worked on tone. The duo has defined tonal language as a language in which tone is a feature of the lexicon which is described in terms of prescribed pitches for syllables or sequences of pitches for morphemes or words. In short, the scholars describe pitch in terms of distinguishing the meaning of words by using tone marking. In most cases, tone marking is used to indicate the rising (H) and the falling (L) tone which is usually shown on the vowels. The study only addressed tone under phonology and left out other aspects such as minimal pairs, phonological processes and the syllable structure. The study did not also address nominal and verbal morphology as well as some aspects of syntax.

Moran (2006) worked on the linguistic description of Western Sisaala, a language which was previously undocumented and unwritten in Ghana. The study places emphasis on describing the language's phonological system and establishing a writing system (orthography) for use by its speakers. The study aimed at establishing a grammatical sketch of Sisaalo. The scholar indicates that the grammatical sketch and description is a foundation for producing the grammar of a language. The work by Moran did not account for the Persistent marker, Persistent aspect as well as negation on verbal complexes.

The work of Gleason (1961) describes descriptive linguistics as a discipline which studies languages in terms of their internal structures and is more biased to morphology. Descriptive grammar is, therefore, an approach that illustrates the grammatical structure of a language without making any evaluative judgments about its repute in the community. It is necessary to state that the descriptive approach is widely used in linguistics as a standard to investigate a corpus and to describe its pattern in detail. Gleason's work did not deal with aspects of phonology and syntax because we are informed that it was biased to morphology.

Merrifield (2010) established the grammar of Lolo language of Yunnan China. The work sought to depict the most cardinal salient features of the language's word classes, phrases, clauses and sentences with special attention to verb serialisation. The study established that the language has a dominant verb complex with concatenating verbs. The grammatical sketch reveals that the language has multiple reduplication processes, diverse locatives and directional words, several existential verbs and numerous three and four syllable expressions. The language uses following strategies for creation of new words: Compounding- to produce nouns and verbs; Affixation and reduplication- to produce a large variety of words; Nominalization- to produce nouns; Complex phrases- to produce temporal and locative expressions; Idioms- to produce adjectival; and Loan words- to produce nouns. Merrifield adds that reduplicated adjectives, verbs and auxiliaries are used to formulate yes/no questions. The study concludes that the language has both monoclausal and multiclausal verb sequences. Nevertheless, the study did not account for the elements of verbal structure such as the Persistent aspect, mood and negation on verbal complexes.

Brown (2009) provides a grammatical sketch of Urama which previously had no grammatical description. The work makes special reference to the contrastive vowel length and tone. The study analysed some aspects of tense, aspect and mood (TAM) using subject and object marking on verbal complexes. The work also considered some elements of sentences such as declaratives. The study further dealt with some verb extensions such as the perfective extension which places the current study within its confinement. However, the study did not account for nominal morphology, the Persistent aspect, negation on verbal complexes, the noun phrase and the verb phrase respectively.

Fromkin (1993) defines grammar as everything people know about their language in terms of sound system called phonology, system of meaning called semantics, rules of word formation

called morphology and the rules of sentence formation called syntax. He sums up his argument by stating that the study of grammar is the study of language. The above scholar did not address the Persistent aspect under verbal morphology and negation on verbal complexes hence the gap.

2.6. Summary of the chapter

The chapter reviewed related literature on the linguistic study of Mambwe. In so doing, the researcher understood and conceptualised the research problem clearly and fostered an understanding of the relationship between the research problem and the body of knowledge in linguistics. Conducting a review of studies was beneficial in that it helped the researcher to improve the research methodology, broaden knowledge and contextualise the findings.

The literature was grouped into four categories. The first category contains studies on Mambwe grammar; the second on studies of Cilungu phonology; the third on related linguistic studies of Zambian languages; and the fourth on related linguistic studies of non-Zambian languages.

Studies conducted on Mambwe were brief introductions to grammar targeted at understanding the translation of the English-Mambwe Dictionary (Halemba, 2007). From the literature reviewed, there is no specific literature in linguistics that has been established in Mambwe language apart from Halemba's work. The above situation prompted the researcher to review works of the related language to provide a basic understanding of the grammatical sketch of Mambwe language (Bickmore, 1997, 2004).

For each category reviewed, the relationship between previous studies and the current one was established. In this way, the undertaking of literature review placed the current analysis of Mambwe within the context of similar studies such as (Halemba 2007; Bickmore 1997; Chiyonga 2009; Nkolola 1997; Chanda 1985 and Givon 1969). The above named scholars enriched a linguistic analysis and grammatical sketch of Mambwe language and, therefore, provided a justification for this study.

The next chapter presents the research design and methodology which were used to collect and analyse data in a quest to answer the research questions raised in chapter one of this study.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1. Introduction

The previous chapter reviewed related literature on the linguistic study of Mambwe. Conducting a review of literature was beneficial in that it helped the researcher to improve the research methodology, broadened knowledge and contextualised the findings.

This chapter presents the research design and methodology which were used to collect and analyse data in the quest to answer the research questions stated in chapter one. The chapter presents the research design, research methodology, ethical considerations and a summary.

3.2. Research design: Descriptive design

According to Dawson (2002), a research design is the conceptual structure within which research would be conducted. Additionally, a research design is a systematic study plan which is used to turn research questions into a ‘testing project’ or ‘experimental study’. A research design can also be said to be a set of decisions that are made in advance to make up the master plan specifying the methods and procedures for collecting and analysing the information which is needed (Kothari, 2004). The selection of a research design for a particular research problem considers the following critically: objectives of the research study; method(s) of data collection to be adopted; source of information; tools for data collection; and whether data analysis will involve either qualitative or quantitative approaches.

This study used the descriptive research design because the objectives of the study were ones meant to describe, explain, interpret and analyse the grammar of the Mambwe language. The purpose of a descriptive design is to examine a phenomenon that is occurring at a specific place and time. Considering that the objectives of the research were descriptive, explanatory and predominantly non-statistical in nature, the qualitative approach was used within the descriptive research design.

3.3. Research methodology

The study employed four methods to collect and analyse data. The approaches and techniques which were used include qualitative, elicitation, document analysis and direct observation.

3.3.1. Qualitative approach

Qualitative research approach refers to holistic, non-numerical, inductive, subjective and process-oriented methods used to understand, describe, interpret and develop theory on a phenomenon or a setting (Burns and Grove, 1998:35). Burns and Grove (1997); and Brink and Wood (1998) argue that qualitative research is a better means of understanding aspects which are difficult to quantify by means of assigning numerical values, such as sound systems. Further, qualitative research focuses on understanding the whole and not the part, hence, its use in the present study provided a holistic understanding of a grammatical analysis. By using abstract thinking processes which qualitative research encourages, meaning and theoretical implications emerged, satisfying the fact that qualitative research uses research designs which are flexible and unique and evolve throughout the research process (Burns and Grove, 1997; and Brink and Wood, 1998).

This study was informed by the qualitative approach. The above mentioned approach was chosen because the research findings obtained using the qualitative technique are often reported descriptively using words and sentential expressions (Mutch, 2005). During the data collection and analysis, the descriptive design supplemented the qualitative approach. The qualitative approach was used to collect and interpret the linguistic meaning of some aspects of Mambwe language which the informants possess and experience within the speech community. The analyses of the linguistic experiences were subjected to meaning based on the researcher's perception and research objectives (Merriam, 1998).

3.3.2. Research techniques

3.3.2.1. Elicitation

The study used elicitation to collect information from the informants. In view of this study, elicitation is the act of obtaining language data from another person. Elicitation is used for discovering or testing particular words and sentences. The technique is especially used in

exploring the following aspects of language phonology, syntax, language learning, vocabulary and lexical relations (www.01.sil.org./linguistics/glossary.com). In addition, elicitation procedure is any data collection technique in social sciences and other fields that are used to gather knowledge or information from people.

The current study elicited information by asking informants oral questions. The researcher met informants face to face and conducted oral and in depth interviews. In most cases, the researcher conducted oral interviews through phone calls, Short Message Service (SMS) and Electronic mail (Email) correspondence. In order to collect correct sound system, the researcher used phone calls because distinctive sounds needed to be heard and recorded while other aspects of nominal and verbal class systems and word order were collected through Email and Short Message Service communications.

3.3.2.2. Document analysis

Chaleunvong (2009) states that document analysis is the process of identifying documents that contain useful data about studies that have already been conducted by other researchers though may not necessarily have been published, but act as reference materials. Chaleunvong (2009) adds that identifying and retrieving secondary sources of data required for the study is the systematic starting point of efficient data collection. In this regard, the researcher located and analysed documents that had data regarding; studies on Mambwe language (Halemba, 1991; 1997 and 2007), studies on Lungu language (Bickmore, 1995; 2004 and 2007), studies on other Zambian languages (Kashoki, 1967; Hyman, 1991; Chanda, 1985; Givon, 1969; Nkolola, 1997; Kangwa, 2007; Mann, 1999; Carter, 2002; Chiyonga, 2009; and Collins, 1962) and studies on non-Zambian linguistic materials (William, 1993; Sloat et al, 1978; Katamba, 1989 and 1993; Clark and Yallop, 1999; Moran, 2006; Gleason, 1961; Merrified, 2010; Brown, 2009; and Fromkin, 1993). The above mentioned documents enriched the current study in identifying the sound system, establishing nominal class system and verbal morphology as well as determining the word order in simple sentences and the noun phrase.

3.3.2.3. Direct observations

Direct observation is a useful research technique which helps the researcher to observe events as natural as they occur in society or a given environment (Flick, 2006). In addition, Zohrabi (2013)

indicates that in direct observation, the researcher only watches and records the proceedings of the activities of the target group without taking part in the activities. In this technique of direct observation, the observer or researcher does not participate in the activities of the target group, but sits on the sidelines and watch. During the study, the observation was mainly used in two areas, namely, when establishing the sociolinguistic background of Mambwe language and when identifying some sound patterns where distinctiveness was sought.

3.4. Study area and sample size

The study was conducted in Mbala and Senga-Hills districts in Northern Province where native speakers of Mambwe, who are also known by the name of the language, are found. Mambwe language is surrounded by Swahili and Fipa speakers in Tanzania. Mbala is further surrounded by Mpulungu district where Lungu is spoken, Nakonde district where Namwanga is spoken and Mungwi, Kasama and Mporokoso districts where Bemba is spoken.

The study had a sample size of four key informants for data collection who were native speakers of Mambwe. Two informants were the primary source of data collection while the other two informants verified the data which were collected from the primary informants. The informants represented the estimated population of 500,000 native speakers of Mambwe (CSO, 2010).

3.5. Sampling techniques

During this study, a purposive sampling criterion was used to identify the four native speakers of Mambwe language who participated in the study. A snowball technique was equally used to identify the fourth informant.

3.6. Sampling procedure

In order to identify the four key informants, the researcher consulted the well-meaning residents of Mbala and Senga-Hill districts who were also native speakers of Mambwe. Firstly, the residents proposed one informant who helped to identify other informants. Secondly, the identified informant led the researcher to the second informant and one verifier of the data who had worked with Halemba during the translation of the English-Mambwe New Testament Bible and the formulation of the English-Mambwe Dictionary (Halemba, 1991 and 2007). Thirdly, when the fourth respondent, who needed to be the second verifier of the data, was not found, the

researcher used the snowball approach and asked the three informants to identify the fourth one to verify the data who was later found. It should be stated that there was gender imbalance in terms of informants because all were males. The female native speakers of Mambwe language gave excuses that they were busy.

3.7. Data collection techniques

3.7.1. Unstructured interviews

This study used unstructured interviews to collect the required data from the informants. In the first place, an interview is not an ordinary everyday form of communication or conversation, but is conducted with a specific purpose, such as research or case study about a certain topic (Dyer, 1995). The interview guides were question-based and involved the interviewer and the interviewee. The interviewer had questions which the interviewees answered. The structured interviews had three categories namely, personal interviews, face-to-face interviews as well as open ended questions which demanded immediate responses.

In this study, the interviews were prepared in line with the research objectives and the informants answered the research questions. The interviews were structured to address the following study objectives; the sound system, nominal and verbal morphology and the word order of some aspects of syntax.

The study used unstructured questions for oral and in depth interviews to collect and analyse data from the primary source. Additionally, a cellular phone was used to make calls and send text messages to the informants.

3.7.2. Data collection instruments

3.7.2.1. Checklists

The study used a checklist to collect the required data from the informants. A checklist is a data collection instrument which contains facts, names, verbs and other words to be referred to for verification purposes during an interview (America Heritage Dictionary, 2016). The words, expressions, sentences and paragraphs are usually written in English and the informants translate into their local official language. Checklists were made according to the three objectives of the

study using the English language and informants were asked to provide the equivalents in Mambwe language. The first checklist contained data on the sound system of some aspects of Mambwe language. The second checklist contained words referring to nominal class system and the verbal structure. On the other hand, there was a checklist which contained simple sentences and the noun phrases in English language and the informants were expected to provide the equivalents of the word order in the Mambwe language.

3.7.2.2. Notebook

As pointed out by Chrispin (1988), a note book and a diary were necessary instruments in this study. A note book and a diary acted as permanent records for data which were collected from the primary source and were portable and easily accessible. A notebook was used by the researcher during data collection to write specific sounds produced when answering the in-depth structured oral interviews. During the interviews, the researcher also used the notebook to record the nominal class system and the verbal structure of Mambwe language. The notebook was also used to write important points regarding the word order of simple sentences and the noun phrase.

3.7.2.3. Recording device

A recording device was used to speed up the process of data collection. The device was used to store the main points during the interviews for future reference during data analysis. During the recording of the interviews, the researcher observed the maximum ethics and privacy of individual responses. Although the study was not harmful, great respect was given by treating individual responses from informants confidential except in situations where permission was sought from respective informants to share their responses with other informants.

3.7.2.4. Computer

The current study used a laptop to type structured oral questions, to send emails for interviews and findings for data verification; hence it was used as a data collection aid.

3.8. Data collection procedure

Data collection is the actual gathering of the required information to answer the research questions in line with the theoretical framework. The study used two sources for data collection namely secondary and primary.

The procedure for collecting information was as follows: firstly, the researcher prepared word and sentence lists. The word and sentence lists were typed and saved on the laptop in the Microsoft word. This gesture was necessary for the purpose of retrieval of information during emailing and phone call interviews. The lists contained information in English on phonemes, that is, permissible consonants, vowels and all other aspects of sound system, nominal and verbal class systems and sentences for determination of word order. Secondly, informants were identified. Thirdly, appointments were made with informants for oral interviews. Lastly, informants were either visited or reached on phone and elicited using structured oral interview questions, word and sentence lists. Informants translated phonemes, nominal and verbal class systems as well as sentences which they were given into Mambwe. Optionally, informants were also reached by short message service (SMS) and email communication when the work was thought-provoking and needed the actual written work to be seen and assessed.

3.8.1. Collection of secondary data

The secondary sources of information were ways of obtaining information other than the primary source. The researcher supplemented the data from the informants who were the primary source by consulting the library at the University of Zambia, using internet and textbooks. The first category of secondary data was collected from the books talking about the linguistics of Mambwe language (Halemba, 1991; 1997 and 2007). The second category of secondary data was collected from the resource materials about Lungu language (Bickmore, 1995; 2004 and 2007). The third category of secondary data was collected from books with data on the linguistics of Zambian languages (Kashoki, 1967; Hyman, 1991; Chanda, 1985; Givon, 1969; Nkolola, 1997; Kangwa, 2007; Mann, 1999; Carter, 2002; Chiyonga, 2009; and Collins, 1962). The fourth category that provided secondary data was based on studies conducted on linguistics of non-Zambian languages (William, 1993; Sloat et al, 1978; Katamba, 1989 and 1993; Clark and Yallop, 1999; Moran, 2006; Gleason, 1961; Merrifield, 2010; Brown, 2009; and Fromkin, 1993).

3.8.2. Collection of primary data

The primary source involved the collection of data from the actual native speakers of Mambwe language. The primary source of data collection included the four identified informants. Data were collected from two (2) informants who were the primary source and provided answers to unstructured oral interviews. The other two informants verified the data which were collected from the primary informants. The researcher used word and sentence lists which acted as interview guides. The word lists contained phonemes, that is, consonants and vowels which helped to identify permissible and non-permissible consonants in the language. Word lists were also used to analyse the nominal and verbal class systems. On the other hand, the sentence lists contained data for determination of word order in the simple sentence as well as in the noun phrase in Mambwe language. In addition, oral interviews were conducted and responses from informants were recorded for reference during data analysis.

3.9. Data analysis

Data analysis was done in accordance with the set objectives of the study. The analysis answered the set research questions. Analysis was dependent on the data which were collected from primary and secondary sources of information. Data were analysed in line with the following objectives: describing the sound system of Mambwe language; describing nominal and verbal morphology; and establishing the word order of some aspects of syntax. The analysed data were interpreted in tabular and descriptive forms. The study used both qualitative research design and descriptive skills to analyse the data. Additionally, the current research used inductive approach during the collection and analysis of data.

The sound system was analysed using minimal pairs to arrive at consonant and vowel phonemes. Tone was equally used to establish the sound distinctiveness. Nominals and verbals were analysed descriptively by using tables to disjunct and classify nouns and verbs. The word order of sentences, the noun and verb phrase were analysed by using tables, segmenting sentences and assigning particular noun classes.

3.10. Ethical considerations

The study took into account the ethical values by treating each informant as an individual. The informants were informed that the collected data were only meant for academic purposes and that the findings were going to be treated with maximum confidentiality. There were no conflicting issues regarding ethical issues because the study was friendly and did not have anything to do with private and personal data. In order to avoid unprecedented infringements during the study, consent was sought from informants who participated in the study. Therefore, the informants participated in the study willingly. In addition, the informants allowed the researcher to use a recording device during interviews for future reference during data analysis

3.11. Summary of the chapter

This chapter provided details of the methodology which was used to collect and analyse data in the quest to answer the research questions raised in chapter one. It further looked at; research design, research methods, and sample population, sampling procedure, and data collection instruments, sources of data collection, data collection procedure and data analysis procedure.

The next chapter presents the findings of the study and discussion of data gathered. The presentation, discussion and analysis of data in this study have been packaged with respect to the order of the three objectives of the study. Each objective deals with an independent chapter.

CHAPTER FOUR

SOME ASPECTS OF PHONOLOGY OF MAMBWE LANGUAGE

4.1. Introduction

The previous chapter provided details of the research design and methodology which were used to collect and analyse data in the quest to answer the research questions raised in chapter one of this study.

This chapter presents some aspects of sound system found in Mambwe language. In this study, the phonology of the language has been described in terms of phonemes. The other aspects discussed in this chapter are segmental phonemes, suprasegmentals phonemes, phonological processes and syllabification.

4.2. Inventory of segmental phonemes in Mambwe language

The study revealed that Mambwe language has *twenty five* phonemes which include *eighteen consonants*: /b/, /d/, /v/, /z/, /m/, /n/, /ŋ/, /l/, /w/, /j/, /p/, /t/, /tʃ/, /dʒ/, /k/, /f/, /s/, /h/ , *five vowels*: /a/, /e/, i, /o/, /u/ and *two semi-vowels*: /w/ and /j/ respectively. Phonemes are used to represent the meanings of sounds people make in their various languages. Similarly, Mambwe has sound systems which are used for communication in oral form. The sounds are perceived by the ears and meaning is inferred for effective communication.

During the study, phonemes of Mambwe language were arrived at by identifying the sound patterns such as consonants and vowels in the language. The differences of sound sound patterns for elements which occupied the same environment were tested. Consonants and vowels were identified by using minimal pairs. Permissible consonants and vowels were identified by comparing phonemes in contextualised words or sentences which were provided by the informants. Using minimal pairs, distinctiveness of consonant and vowel phonemes acceptable in Mambwe language were established and documented. Minimal pairs helped the researcher to take an inventory of segmental phonemes which include permissible consonants, vowels and semi-vowels of the language under study.

Vowel length and tone were other aspects of sound which were used to account for permissible phonemes in Mambwe language. Consonants were subjected to analysis to determine the permissible and non-permissible ones, voiced and unvoiced. The analysis further led to the identification of long vowel sounds as well as determination of the positions of the vowel sounds using the vowel chart. In order to account for the phonemes to establish the number of consonants and vowels in Mambwe language, minimal pairs were used and documented.

4.2.1. Distinctiveness of sound in Mambwe language

The study established that in Mambwe language, distinctiveness of sound is expressed using consonants, vowels as well as tone. Distinctiveness is the process of producing different meanings while using different phonemes in the same environment or place of the word.

4.2.1.1. Distinctiveness of consonants in Mambwe language

The findings of the study were that, in order to establish the consonant phonemes in Mambwe language, minimal pairs were used. Minimal pairs were used to distinguish between one consonant phoneme and the other as in the following examples:

- (1) *Zaana* ‘to find’ and *Kaana* ‘to deny, refuse, reject’
- (2) *Siimbwa* ‘dog’ and *Liimbwa* ‘to be planted’
- (3) *Tamba* ‘to watch’ and *Pamba* ‘English fish’
- (4) *Pama* ‘to slap, bang’ and *Tama* ‘to break’
- (5) *Zunga* ‘troublesome’ and *Sunga* ‘to keep’
- (6) *Tena* ‘to make a mistake’ and *Pena* ‘to be mad’
- (7) *Mwaaka* ‘year’ and *Fwaaka* ‘tobacco’
- (8) *Fuunda* ‘to teach’ and *Fuunga* ‘to close, fold’
- (9) *Laamba* ‘to cross a body of water’ and *Taamba* ‘to watch’
- (10) *Cina* ‘to dance, play’ and *Tina* ‘to press something’
- (11) *Vwanga* ‘to speak’ and *Fwanga* ‘just die’
- (12) *Laanda* ‘to talk’ and *Paanda* ‘to acquire witchcraft’
- (13) *Senka* ‘to go/move away’ and *Penka* ‘to penetrate’
- (14) *Nunka* ‘to smell bad’ and *Punka* ‘to hit a non-moving object’
- (15) *Zanga* ‘to be happy’ and *Panga* ‘to make’

During the analysis, the following consonant minimal pairs were arrived at: (1) /k/ and /z/, (2) /s/ and /l/, (3) /t/ and /p/, (4) /p/ and /t/, (5) /z/ and /s/, (6) /t/ and /p/, (7) /m/ and /f/, (8) /n/ and /g/, (9) /l/ and /t/, (10) /c/ and /t/, (11) /v/ and /f/, (12) /l/ and /p/, (13) /s/ and /p/, (14) /n/ and /p/ and (15) /z/ and /p/. From the minimal pairs above, it can be argued that Mambwe language exhibits distinctiveness in consonants when one consonant phoneme is replaced by another in the same word or environment. The above example demonstrations revealed that when minimal pairs are used, three things happen; the *form*, *sound* and *meaning* of the word changes.

The analysis revealed that most of the minimal pairs in Mambwe language happen on consonants which take the *first position* in the words as observed in example (1) where /z/ and /k/ are in the first position. The similar pattern was observed in examples (2) to (7) and (9) to (15).

However, the analysis also established that there are few instances in which minimal pairs of consonants take place other than the first position in the words as seen in example (8) where the phonemes /n/ and /g/ take the middle positions in the words.

It was further observed that distinctiveness of consonants shows that where there is a difference in one consonant between a minimal pair, a semantic difference was made between such a pair of words as can be noticed in example (4) above where the change of the consonant phoneme /p/ in the word *pama* ‘to slap, bang’, when replaced by the phoneme /t/ changed the meaning as in the word *tama* ‘to break’.

4.2.1.2. Distinctiveness of vowels in Mambwe language

The study revealed that Mambwe language expresses distinctiveness on vowels using minimal pairs as in the following examples:

- (16) *Mume* [mume] ‘beat him/her’; *Mumu* [mumu] ‘there in’
- (17) *Umulimo* [umulimo] ‘work’; *Umulimi* [umulimi] ‘farmer’
- (18) *Lyonga* [lyonɔga] ‘once, one time’; *Lyanga* [lyanɔga] ‘continue eating’
- (19) *Lenga* [lenɔga] ‘to ask for something’; *Langa* [lanɔga] ‘crack or show’
- (20) *Fuundi* [fu: ndi] ‘expert, hunter’; *Fuunda* [fu: nda] ‘to teach’
- (21) *Pusa* [pusa] ‘to miss’; *Pasa* [pasa] ‘to scatter, to have twins’
- (22) *Pezya* [pezya] ‘to treat somebody badly’; *Pozya* [pozya] ‘to cure, heal’

- (23) *Puza* [puza] ‘to rest’; *Peza* [peza] ‘kind of fish’
- (24) *Cina* [tʃina] ‘to dance, massage’; *Cena* [tʃena] ‘to play or kindergatern’
- (25) *Tina* [Tina] ‘to press’; *Tuna* [tuna] ‘to be blunt’
- (26) *Zanga* [zaŋga] ‘to be happy’; *Zunga* [zuŋga] ‘to make trouble’
- (27) *Tinya* [tinya] ‘to threaten’; *Tonya* [tonya] ‘to press, to touch breasts’
- (28) *Panta* [panta] ‘to kick’; *Ponta* [ponta] ‘to blaspheme’

Based on the above examples of minimal pairs, the following pairs of vowels were arrived at: (16) /e/ and /u/, (17) /o/ and /i/, (18) /o/ and /a/, (19) /e/ and /a/, (20) /i/ and /a/, (21) /u/ and /a/, (22) /e/ and /o/, (23) /u/ and /e/, (24) /i/ and /e/, (25) /i/ and /u/, (26) /a/ and /u/, (27), /i/ and /o/ and (28) /a/ and /o/. The above pairs suggested that distinctiveness of vowels shows that there is a difference in one vowel between a minimal pair.

The analysis of minimal pairs involving vowels also revealed that some minimal pairs took place at the middle or first vowel of the words as observed in examples (18), (19) and (20) to (28), and on the vowels at the end of the words as in examples (16), (17) and (20).

The analysis further revealed that the use of minimal pairs expressed a semantic difference between words containing different vowels as in example (28) where the change of the phoneme from /a/ to /o/ also changed the meaning from ‘to kick’ to ‘to blaspheme’. Therefore, the change of one vowel in paired words expressed different meanings.

4.3. Consonant sounds of Mambwe language

Having identified the phonemes, the findings of the study revealed that Mambwe language has *eighteen* permissible consonant sounds as shown below:

/b/, /d/, /v/, /z/, /m/, /n/, /ŋ/, /l/, /w/, /j/, /p/, /t/, /tʃ/, /dʒ/, /k/, /f/, /s/, /h/

4.3.1. Consonantal and semi-vowel segments

A consonant is a speech sound which is produced by significantly obstructing the flow of air. The different kinds of obstruction involved determine classification of consonantal segments. For example, when the vocal tract is blocked completely, then the closure results in releasing sudden plosive like the sound [d]. On the other hand, when the vocal tract is blocked completely and the

closure is released slowly, the friction noise produces an affricate like [tʃ]. When the vocal tract is not completely blocked, but is just reduced, at some point to a tiny opening through which the air is forced thereby producing a friction noise, the result is a fricative (Trask, 2007).

Roach (1991) argues that [w] and [j] are both consonant sounds which are found at the beginning of words. For instance, ‘wet’ and ‘yet’. He adds that these consonants are semi-vowels or approximants. The most important thing to take note of is that approximants are phonemes that are phonetically like vowels but phonologically take the form of consonants. When the segments are viewed from the phonetic perspective, the articulation of [j] is practically the same as that of a front closed vowel [i:], but it is very short. On the other hand, the segment [w] is closely similar to the high back [u:]. Despite this vowel-like character, the semi-vowels are used like consonants. Therefore, consonants only occur before vowel phonemes; this is a typically consonantal distribution.

In view of Roach (1991) and Trask (2007), the study established that Mambwe language exhibits both consonantal and semi-vowel segments. Table 1 provides the distribution of consonants and semi-vowels in Mambwe:

Table 1: Phonemic chart of consonants and semi-vowels in Mambwe language

	Bilabial	Labio-dental	Alveolar	Alveolar-palatal	Velar
Plosive	p b		t d		k g
Nasal	m		n	ny	ng'
Fricative		v f	s z	sy	
Affricative			tʃ dʒ		
Lateral			l		
Glides				j	w

Referring to the above table, Spitulnik and Kashoki (1996, 1998) respectively, observed that the segments [b], [d] and [ʃ] are allophones of the phonemes /B/, /l/ and /s/ respectively. This study established that in Mambwe language, the consonant [b] occurs only when preceded by the homorganic nasal [m] as in *Mbwele* [Mbwele] ‘should I return?’ derived from N- (1st person singular) –bwel- (verb root), -e (subjunctive); where [N] becomes [m] in homorganic harmony with the following [b].

Below is the list of some words which contain consonantal and semi-vowel segments as Phonemes in Mambwe language:

- (29) /b/ a voiced bilabial plosive as in: *Imba* [imba] ‘to sing’
- (30) /p/ a voiceless bilabial plosive as in: *Iposo* [iposo] ‘food’
- (31) /m/ a voiced bilabial nasal as in: *Maama* [ma:ma] ‘woman, grandmother’
- (32) /d/ a voiced alveolar plosive as in: *Landa* [landa] ‘to talk’
- (33) /k/ a voiceless velar plosive as in: *Kavya* [kavja] ‘to heat’
- (34) /g/ a voiced velar plosive as in: *Panga* [paŋga] ‘to make, create’
- (35) /ŋ/ a voiced velar nasal as in: *Ijanda* [ijanda] ‘house’
- (36) /ɲ/ a voiced palatal nasal as in: *Inyenjele* [iɲɛndʒele] ‘bell’
- (37) /j/ a voiced palatal approximant as in: *Yaame* [ja:me] ‘my dear’
- (38) /β/ a voiceless bilabial fricative as in: *Ibotoolo* [iboto: lo] ‘bottle’
- (39) /f/ a voiceless labio-dental fricative as in: *Fuuta* [fu: ta] ‘to rub, erase’
- (40) /t/ a voiceless alveolar plosive as in: *puuta* [pu: ta] ‘blow the air’
- (41) /s/ a voiceless alveolar fricative as in: *Sola* [sola] ‘choose, pick’
- (42) /tʃ/ a voiceless postalveolar affricate as in: *Inciinga* [intʃi: ŋga] ‘a bicycle’
- (43) /l/ a voiced alveolar lateral as in: *Landa* [landa] ‘to talk’
- (44) /dʒ/ a voiced postalveolar affricate as in: *Ukucenjezya* [ukutʃɛndʒezya] ‘to blackmail’
- (45) /w/ a voiced labio-velar approximant as in: *Wize* [wize] ‘you should come’

Spitulnik and Kashoki (1996, 1998) points out that the consonant [d] occurs only when preceded by homorganic nasal [n] as in *Indye* [indje] ‘should I eat?’ The postal-veolar [ʃ] occurs before [i]. In addition, the consonants [dʒ] and [g] never occur word initially or between vowels; they are

always preceded by a homorganic nasal in nasal clusters represented orthographically as [-nj-] and [ng-] as in; *Injelwa* [*ɪndʒelwa*] ‘bricks’ and *Ng’unza* [*ng’unza/ŋunza*] ‘hamming’.

4.3.2. Voiced consonants of Mambwe language

The study established that Mambwe language has *eleven* voiced consonant sounds as exemplified below:

- (46) /b/ as in: *Ukuwomba* ‘to work’
- (47) /d/ as in: *Indo* ‘to sleep, where to sleep’
- (48) /v/ as in: *Vulumu* ‘starting at fast/high speed’ and *Vwanga* ‘to speak’
- (49) /z/ as in: *Zuula* ‘to undress’
- (50) /m/ as in: *Moonsi* ‘man or male’
- (51) /n/ as in: *Naata* ‘I stop’
- (52) /ŋ/ as in: *Ing’anda/Iyanda* ‘house’ and *Ing’ombe/Iyombe* ‘cow/cattle’
- (53) /l/ as in: *Laanda* ‘to talk’
- (54) /w/ as in: *Weeni?* ‘Who?’
- (55) /j/ as in: *Yumbe* ‘headman’
- (56) /h/ as in: *sichilima* ‘farmer’

The analysis of the above demonstrations justified that voiced consonants make sounds using the vibration of vocal folds in the larynx or voice box. The consonants are produced with a puff of air such as /b/ in example (46) above which is a voiced bilabial plosive. It was also observed that the glottal /h/ in example (56) above is mostly used in proper nouns as the first letter begins with a capital letter as in *Sichilima* ‘name of a male to refer to the family of farmers’.

4.3.3. Unvoiced consonants of Mambwe language

The study revealed that Mambwe language has *six* unvoiced consonants as shown below:

- (57) /p/ as in: *Poonda* ‘to pound’
- (58) /t/ as in: *Twaala* ‘to take something to someone, to marry’
- (59) /tʃ/ as in: *Cifiita* ‘An African’
- (60) /k/ as in: *Ikoofi* ‘a punch’
- (61) /f/ as in: *Fuuta* ‘to rub, erase’

- (62) /s/ as in: *See* ‘very hot’

Arising from the contextualised phonemes above, it was analysed that unvoiced consonants did not use vibration of vocal folds during the production of sounds; instead they made sounds using movement of air through the teeth, tongue, lips and other articulators. The unvoiced consonants did not produce sounds with a puff of air because they were voiceless such as /tʃ/ in example (59) above which is a voiceless postalveolar affricate.

4.3.4. Permissible consonant combinations in Mambwe language

The findings of the study revealed that the phonotactics of Mambwe language is dependent on permissible consonants for combinations. The language under study exhibits two kinds of permissible consonant combinations namely; two consonant and three consonant combinations.

4.3.4.1. Two permissible consonant combinations in Mambwe language

The study established that Mambwe language has *two permissible consonant combinations* as in:

- (63) /nk/ as in: *Koonka* ‘to follow’
(64) /ng/ as in: *Nga* ‘if’
(65) /nd/ as in: *Ndangini* ‘show me’
(66) /fw/ as in: *Fwülwa* ‘widow, widower’
(67) /mw/ as in: *Umweenzo* ‘heart’
(68) /vw/ as in: *Nuvwa* ‘I understand’
(69) /lw/ as in: *Lwaala* ‘to fall sick’
(70) /zy/ as in: *Zuuzya* ‘to fill up’
(71) /nz/ as in: *Inzovu* ‘an elephant’
(72) /pw/ as in: *Pweela* ‘a mouse’
(73) /ns/ as in: *Umuunsi* ‘pestle’
(74) /vy/ as in: *Ivyala* ‘corpses’
(75) /zw/ as in: *Umuzwa* ‘cooking stick’ and *zwa* ‘to cook’
(76) /fy/ as in: *Fyuula* ‘to slaughter, to kill’
(77) /kw/ as in: *Kweela* ‘to climb, to go to the top’

The analysis of the two consonant combinations in Mambwe language revealed that combinations took either the *first* or *middle* position in the word. It was observed that there were restrictions in the combinations of permissible consonants which imply that some combinations could not take certain positions in the word. However, it was also noticed that two consonant combinations formed syllables at the beginning of words as in examples above (64) to (66), (69), (72), (76) and (77); in the middle of the word as in examples (65), (67) (71) and (74) above; as well as at the end of the word as in examples (66), (67), (68), (70), (73) and (75) above. Therefore, it can be argued that in Mambwe language, the consonant combinations do not take the last position in the word if it does not end with a vowel.

4.3.4.2. Three permissible consonant combinations in Mambwe language

The study revealed that Mambwe exhibits *three permissible consonant combinations* as in:

- (78) /mfw/ as in: *Imfwele* ‘Sheep’
- (79) /nkw/ as in: *Nkwangu* ‘Last born’
- (80) /ndy/ as in: *Indya insima* ‘I have eaten nsima’
- (81) /mbw/ as in: *Siimbwa* ‘dog’
- (82) /ngw/ as in: *Uwengwa* ‘beer’

Arising from the above examples, it was observed that combinations of consonants in this category are equally restricted. The order of the three consonants should not be changed in any way, as doing so renders the combination non-permissible. It was also observed that the three permissible consonant combinations took the *first* and *middle* positions in the word. Just like two consonant combinations, the three permissible consonant combinations did not take the last position in the word without the presence of a vowel at the end. The analysis further established that three consonant combinations took place in the first syllables as in example (79); middle syllables as in examples (78) and (80) above and the last syllable as in examples (81) and (82).

4.3.5. Non-permissible consonants in Mambwe language

The findings of the study established that Mambwe language has *four* non-permissible consonants which include: [j], [q], [r] and [x].

The study further established that non-permissible consonants are neither used individually nor combine with any other consonant in the language under study.

4.4. Vowel system of Mambwe language

According to Roach (1991) a vowel is any open sound which is produced without obstruction or blocking by active articulators such as the teeth, tongue, lips and the palate. The findings of the study were that Mambwe language has *five* vowels, namely; /a/, /e/, /i/, /o/ and /u/. The language has short vowels, long vowels, semi-vowels and the phonological processes acting on them.

4.4.1. Phonemic chart of vowels

Table 2 represents the vowels that are found in Mambwe language and their positions:

Table 2: Phonemic chart of Mambwe language Vowel System

POSITION	FRONT	BACK
HIGH	i	u
MID	e	o
LOW	a	

Below is a summary of the vowels according to their positions:

/i/; is described as a high front vowel;

/e/; is described as a mid-front vowel;

/a/; is a low front vowel;

/u/; is a high back vowel;

/o/; is a mid-back vowel.

Based on the analysis of the table above, the study established that /i/, /e/ and /a/ are front vowels. The research findings also revealed that /u/ and /o/ are back vowels. Furthermore, it was established that /a/ is a low central vowel.

4.4.2. Single vowels in Mambwe language

The study established that Mambwe language has *five* single vowels as shown below:

- (83) /i/ as in: *Impika* ‘trouble/problem’
- (84) /u/ as in: *Iluka* ‘realise’
- (85) /e/ as in: *Yenza* ‘grasshopper/red’
- (86) /a/ as in: *Katoote* ‘first born’
- (87) /o/ as in: *Ukulokota* ‘to quench fire into ashes’

Based on the provided demonstrations, it can be urged that single vowels are short vowels. These are vowels which are not diphthongs. Halemba (2007), states that Mambwe language does not have actual diphthongs. The vowels are called single or short because they appear alone between consonants and their sound is short.

4.4.3. Long vowels in Mambwe language

The findings of the study revealed that Mambwe language has *five* long vowels. The study established that, /i:/, /u:/, /e:/, /o:/ and /a:/ are long vowel phonemes as exemplified below:

- (88) /i:/ as in: *Siimbwa* ‘dog’
- (89) /u:/ as in: *Umuuzo* ‘your friend’
- (90) /e:/ as in: *Leeza* ‘God’
- (91) /o:/ as in: *Umoonsi* ‘man’
- (92) /a:/ as in: *Akaantu* ‘a thing’

The analysis of the above examples suggested that long vowels in Mambwe language occur when a short vowel follows another of the same type. It was observed that long vowels have a full colon (:) symbol after the first vowel. The colon represents the vowel which is the same as the one which comes before the colon. It was further observed that some long vowels are basically longer versions of short vowels, such as /i/ and /i:/.

4.4.4. Semi-vowels

The study established that Mambwe language uses /w/ and /j/ as semi-vowels in the production of sound as shown in:

- (93) /w/ as in: *Weenga* ‘alone, one’
 (94) /j/ as in: *Iyiiya* ‘they have stolen’

The analysis of the above illustrations revealed that semi-vowels are phonemes which are written as consonants but are pronounced as vowels. The findings further illustrated that Mambwe language uses semi-vowels which have a form of consonants, that is the outlook, and the sounds are for vowels in which /u/ in example (93) is realised as [w] and the vowel /i/ in (94) is realised as a consonant [y].

4.5. Suprasegmental phonemes in Mambwe language

The study revealed that suprasegmentals phonology exists in Mambwe language. The language has two segmental phonemes namely; tone and length.

4.5.1. Tone in Mambwe language

The study established that tone in Mambwe language is another element of sound system which is used both at word and sentence level. Minimal pairs involving tone marking were used to establish distinctiveness of vowel phonemes as in:

- (95) *Ímbá* [ím bá] ‘to sing’ and *Imbá* [im bá] ‘to dig’
 (96) *Lèmbá* [lè mb á] ‘to write’ and *Lémbá* [lé mb á] ‘development of leaves’
 (97) *Lémá* [lé má] ‘to hold’ and *Lè má* [lè má] ‘planting of tubers’

The above examples revealed that Mambwe is a tonal language which has two basic tones, high (H) and low (L). High (H) is marked with an acute accent while L is unmarked. Tone as a kind of a phonemic musical pitch is an important functional marker in Mambwe language, hence signals semantic distinction between words.

The study established that tonal contrasts exist at grammatical level as in:

- (98) *Wááfísile* [wá: fí:sile] ‘He/she arrived yesterday’ and *Wááfísilé* [wá: fí:sílé] ‘He/she arrived a long time ago’.

The analysis of the above sentence suggested that in Mambwe language, tonal contrasts signal distinctiveness of tenses in words and sentences. It can be argued that tonal contrast of sounds in Mambwe language express grammatical difference.

The study further revealed that, in speech, tonal patterns are complex to be identified in Mambwe language because they interact with other morphosyntactic, morphophonological and prosodic features at sentence level as in:

- (99) *Tukúúlya* [tukú: lja] ‘We are eating’
- (100) *Tukúúlyá caanĩ?* [tukú: lja ca: ní] ‘What are we eating?’
- (101) *Tumáályá caanĩ?* [tumá: ljaca: ní] ‘What shall we eat?’
- (102) *Tuláályá caanĩ?* [tulá: ljaca: ní] ‘What will we eat?’

The analysis of the above examples (99) and (100), revealed that, the tense marker [-kuu-] and [-maa-] in (101) carry a high tone followed by [-a] which is also a high tone. In examples (101) and (102), the double vowel [-a-] in *caani* ‘what’ has a low tone followed by [-i] which has a high tone. It can, therefore, be concluded that Mambwe language has high and low tones on both long and short vowels.

4.5.2. Length in Mambwe language

Length is another suprasegmental phoneme. According to Crystal (2008), length is used in phonetics to refer to the physical duration of a sound or utterance, and in phonology to refer to the relative durations of sounds and syllables when these are linguistically contrastive. In view of Spitulnik and Kashoki (1996, 1998), there is semantic distinction between short and long vowels. The study established that doubling of vowels exist in Mambwe language and represents vowel lengths as can be seen in the examples that follow:

- (103) (a) *Ukupama* [ukupama] ‘to slap, beat’ the vowel in syllable /pa/ is short;
Ukupaama [ukupaa:ma] ‘to be bold, brave or couragous’ the vowel in the syllable /paa/ is long.
- (b) *Ukuma* [ukuma] ‘to beat’ the vowel in the syllable /ku/ is short;
Ukuuma [uku:ma] ‘to be dry’ the vowel in the syllable /kuu/ is long.

The study further revealed that a syllable before a nasal compound is always long and so is a syllable containing the semi-vowels /y/ and /w/ as illustrated in the following examples:

- (104) *Ukupenda* [ukupe:nda] ‘to count’
- (105) *Ukulamba* [ukula:mba] ‘to cross a body of water’
- (106) *Ukupyata* [ukupja:ta] ‘to make a rope’
- (107) *Ukwazima* [ukwa:zima] ‘to borrow’

Based on examples (104) and (105) above, the vowels in the syllables /pe/ and /le/ are long because they immediately precede nasal compounds [-nd-] and [-mb-] respectively. Furthermore in examples (106) and (107) the vowels in the syllables /pya/ and /kwa/ are long because they immediately follow the semi-vowels [j] and [w], respectively. The analysis also shows that there is no need to write the vowel double before a nasal compound or after the semivowel /y/ or /w/ because the syllable is long as shown in the examples above. It can, therefore, be concluded that length of vowels as a suprasegmental phoneme is used to express the distinctiveness of words.

4.6. Nasal complexes in Mambwe language

The study revealed that Mambwe language has three nasal consonants namely; [m], [n] and [ng’ or ŋ] as in:

- (108) [mb] as in: *Ukuwoomba* [ukuwo: mba] ‘to work’
- (109) [mb] as in: *Imbuzi* [imbuzi] ‘goat, goats’
- (110) [nd] as in: *Indao* [indao] ‘weeds’
- (111) [nd] as in: *Iinda* [i: nda] ‘pregnancy’
- (112) [ng] as in: *Inguzi* [inguzi] ‘streams, rivers’
- (113) [nk] as in: *Inkoko* [inkoko] ‘chicken(s)’
- (114) [nz] as in: *Inzovu* [inzovu] ‘elephant, elephants’
- (115) [ng’] as in: *Ing’oombe* [iŋo: mbe] ‘cow, cattle’

The findings suggested that nasal complexes in Mambwe language are prominent in nouns. In the above examples, only example (108) was a verb, the rest were nouns. It is worth stating that not all permissible consonants are permitted to combine with nasals to form nasal complexes. It was also observed that nasal complexes occur on consonants which are nasals by nature. The

analysis suggested that, a nasal always takes the first position in the cluster; in short, a nasal heads the nasal complex. Based on the foregoing, it can be concluded that a nasal complex is a phonological process which involves the combination of two or more consonants with the presence of a nasal in such a cluster.

4.7. Phonological processes in Mambwe language

Phonological processes act on the phonemes which include consonants and vowels during the sound realisations. This study has considered gliding, vowel length, vowel hiatus, coalescence and tone. Assimilation and vowel maintainance have been discussed under coalescence.

4.7.1. Gliding/semi-vocalisation

The study established that gliding occurs in Mambwe language. A glide is a sound that is produced when a vowel comes after a semi-vowel. In Mambwe language, gliding takes two forms. The first form happens with one vowel while the second one happens with two vowels following each other.

4.7.1.1. Gliding with one vowel

Mambwe language has manifestations of gliding. The study established that in Mambwe, semi-vocalisation or gliding involves a semi-vowel followed by one vowel as demonstrated below:

(116) *Umu + ana = umwana* ‘child’

(117) *Imi + alu = imyalu* ‘gaps after the loss of teeth in the mouth’

(118) *Umu + enyi = umwenyi* ‘visitor’

(119) *Uku + inya ikuulu = ukwinya ikuulu* ‘having a sprain on the leg’

The analysis of examples (116), (118) and (119) illustrated that when the preceding vowel is [u], it glides into [w]. On the other hand, example (117) suggested that when the preceding vowel is [i], it glides into [y].

4.7.1.2. Gliding followed by two vowels

The study revealed that Mambwe language has this peculiar characteristic in which two phonological processes happen simultaneously as in:

- (120) *U-mu-e-ez-i* [umweezi] ‘moon, moonlight, month’
- (121) *I-mi-u-ung-a* [imyuunga] ‘thorns’
- (122) *I-mi-o-on-o* [imyoono] ‘fishing trap’
- (123) *U-mu-a-and-o* [umwaando] ‘rope’
- (124) *U-mu-a-ak-a* [umwaaka] ‘a year’

The above examples demonstrated that gliding and vowel lengthening were realised in one word. Firstly, the vowel glided into either the semi-vowel [w] or [y]. Secondly, the language allowed doubling of the vowel that followed the glide. It was observed that, when a semi-vowel glided with the vowel, the next vowel was doubled to make a long vowel sound.

4.7.2. Vowel Length

The study established that Mambwe language has the aspect of length which is also referred to as the quantity of vowels as demonstrated in:

- (125) *Zaana* [za:na] ‘to find’
- (126) *Fuunda* [fu:nda] ‘to teach’
- (127) *Fuunga* [fu:nga] ‘to lock, close, fold fist’
- (128) *Laamba* [la:mba] ‘to cross a body of water’

The analysis established that length is accounted for by doubling the vowels. When vowels are doubled, a long sound is produced. A full colon (:) is put after the first vowel to signal length. On the other hand, the examples underwent nasalisation as demonstrated in examples (125) to (127). It was also observed that long vowels were followed by nasal complexes as seen in examples (125) to (127).

4.7.3. Vowel hiatus

The study revealed that while Mambwe employs the cross-linguistically common processes of gliding and vowel deletion to resolve most instances of underlying VV hiatus, there were in fact a number of instances of surface VV hiatus as shown below:

- (129) *Umu-ana* ‘child’ → *umwana* ‘child’
- (130) *Aka-unyi* ‘small bird’ → *akuunyi* ‘small bird’

The analysis of the above examples revealed that Mambwe maintained a contrast in vowel length as well as tone in verb roots. It was observed that when the morphology created a VV sequence, the hiatus was repaired by an alteration of the first V in the sequence, that is, if the vowel was high it glided as in example (128) where [u] glided to [w] and if it was low it deleted or was assimilated as in (129) where [a] was assimilated to [u].

4.7.4. Coalescence/Vowel fusion

The findings of the study established that Mambwe language undergoes vowel fusion. This is a situation in which two vowels following each other combine to form one sound as in:

(131) *Umoonsi* [u-mu-**o**ns-i] ‘a man’

The analysis of the above example illustrated that when /u/ and /o/ vowels were added, the vowel /o/ was maintained while the vowel /u/ was assimilated and the result was a long vowel, where: u+o→/oo/.

When any of the five core vowels is added to the vowels: i, e, o, u, it results into glide formation as shown in:

(132) *Iya* [i-**i**-a] ‘husband’

(133) *Umwenzo* [u-mu-**e**nz-o] ‘the heart’

The analysis of example (131) was that when [i] was added to [a] →/ya/; in which [i] glided to [y] and in example (132), the addition of [u] to [e] →/we/; where [u] glided to [w]. It was further observed that in the above examples, the semi-vowels /w/ and /j/ were realised in front of the second vowel.

When vowel fusion takes place, different sound realisations take place. The most prominent formations and analyses in Mambwe language are shown below:

(134) *Vwangini* ‘speak’ + *inkuvwa* ‘I am listening’ → *Vwanginiinkuvwa* ‘speak, I am listening’

The analysis of the above sentence suggested that [i] + [i] → /ii/, where the vowels maintained their form and positions, hence there were no changes that took place apart from making a long sound.

(135) *Kalye* [ka-**li-e**] ‘go and eat’

In the above word, [i] + [e] → /ye/, where the first vowel changed to the semi-vowel /y/ and the last vowel maintained its form. In this case, gliding or semi-vocalisation took place.

(136) *Ukulya* [u-ku-**li-a**] ‘to eat’

The analysis of the formation of the above word indicated that [i] + [a] → /ya/, in which the first vowel changed to the semi-vowel /y/ and the second vowel maintained its form. Gliding or semi-vocalisation took place.

(137) *Imyoono* [i-**mi-o**-on-o] ‘fishing basket/trap’

In the above word, [i] + [o] → /yo/, where the first vowel changed to a semi-vowel /y/ while the second vowel maintained its form. Semi-vocalisation occurred.

(138) *Imyuungu* [i-**mi-u**-ung-u] ‘yams’

The analysis of the above example established that [i] + [u] → /yu/, in which the first vowel /i/ changed to /y/ while the second vowel maintained its form. Semi-vocalisation took place.

(139) *Mwaame imunene* → *Mwaameemunene* ‘call him for the message I have’

In the above example, the vowels [e] + [i] → /ee/; where the second vowel /i/ was assimilated to produce long /e/ in spoken language.

(140) *Imyono* [i-**mi-on**-o] ‘fishing traps’

The fusion of [i] and [o] in the above demonstration resulted into /yo/, in which the vowel /i/ changed to /y/ through the process of gliding while /o/ maintained its form.

(141) *Umooto* [u-**mo-ot**-o] ‘fire’

In the above illustration, it was observed that the fusion of [o] and [o] →/oo/, where both the first and second vowel maintain their form thereby producing long vowel.

(142) *Umoonsi* [u-mu-**ons**-i] ‘a man’

The analysis of the word above proved that the fusion of [u] + [o] →/oo/, where the second vowel /u/ is assimilated to produce long /o/.

(143) *Umwipwa* [u-mu-**ipu**-a] ‘nephew’

The analysis of the above example revealed that the fusion of [u] + [i] → /wi/. The vowel /u/ glided with /i/ to form /wi/.

(144) *Umwenyi* [u-mu-**eni**-i] ‘visitor’

The analysis of the above fusion illustrated that [u] + [e] →/we/, in which the vowel /u/ changed to /w/ and /e/ maintained its form. Semi-vocalisation or gliding took place.

(145) *Siimbwa* [si-im**bu**-a] ‘a dog’

The analysis of the above word demonstrated that [u] + [a] →/wa/, where the vowel /u/ glided to a semi-vowel /w/ while the last vowel maintained its form, thereby producing /wa/.

(146) *Umuuzo* [u-mu-**uz**-o] ‘your friend’

In the above example, the analysis suggested that the fusion of [u] and [u] →/uu/, in which each vowel maintained the form and produced a long vowel /u/.

Arising from the above analyses regarding vowel fusion, it can be deduced that the vowels in question were either the same or different. In addition, it was observed that when the two vowels fused, they produced a long sound during reading. It was further established that during pronunciation, additional phonological processes to coalescence were realised in the above given examples, such as; assimilation in examples (131), (139) and (142); gliding in examples (132), (133), (135) to (138), (140), (143), (144) and (145); and vowel maintenance in examples (134), (141) and (146) above.

4.8. Syllable structure of Mambwe language

The findings of the study revealed that Mambwe language has a syllable structure like any other Zambian and Bantu language. A syllable is formed by combining consonants and vowels. Mambwe language does not form syllables without the presence of vowels. A vowel is a nucleus of the syllable. The nucleus of the syllable is also called the *syllabic peak*. The segments which precede the nucleus in the syllable are called the *onset* and the segments which follow the peak are called the *coda*. Consonant and vowel phonemes play a big role by coming together to form syllables, words, phrases, clauses and sentences.

Sloat et al (1978) notes that, structurally, the syllable may be divided into three parts namely, the peak, the onset and the coda. The onset of a syllable consists of all the segments that precede the peak and are tautosyllabic with it. The coda consists of all the tautosyllabic segments that follow the peak. The peak, also known as the nucleus, is the element of greater prominence in the syllable and is usually a vowel.

In Bantu languages, including Mambwe language, there are cases where the nucleus can be a syllabic nasal. Sloat et al (1978), states that a syllable that has no coda is called an unchecked or open syllable and the one with a coda is called a checked or closed syllable. It should be indicated that Mambwe language has unchecked or open syllables.

In case of long vowels in words, they are regarded as one vowel when determining syllables because they produce one sound. The language under study only exhibits open syllables.

4.8.1. Open syllables

Mambwe language has open syllables which are formed by Prefixation as demonstrated in:

(147)	Singular	Plural
a.	<i>Kuuza</i> [ku-uz-a] ‘rat’	<i>Yakuuza</i> [i-a-kuuz-a] ‘rats’
b.	<i>Siimbwa</i> [si-imbu-a] ‘dog’	<i>Yasiimbwa</i> [i-a-simbu-a] ‘dogs’

The above analysis suggested that Mambwe language forms open syllables by Prefixation. Open syllables allow the addition of other elements at the beginning of the words. In the above open

syllables, a singular noun took an element [ya-] to form a plural. The element [ya-] became a syllable through the process called pre-prefixation. Additionally, the vowel [i] glided to /j/.

Mambwe language also forms open syllables by suffixation. This is a situation where a suffix is added to the verb root. The process exists in the verb extensions such as long causatives which take on the suffix [-iisya] as in example (224. a-c); passive extension with the suffix [-wa] as in (225.a-b) and stative extension with the suffix [-ika/-eka] as in (226.a-b)

Therefore, both prefixation and suffixation were applicable to open syllables in Mambwe language because they allowed the addition of elements either at the beginning or the end.

4.8.2. Syllable patterns

The study revealed that syllable patterns exist in the phonology of Mambwe language. Syllable patterns were accounted for by first identifying the syllables under the process of syllabification as demonstrated in the examples given below:

- (148) *Ya* ‘this one’. The syllable signifies honor or respect.
- (149) *Nga* ‘if’;
- (150) *Ci/na* ‘dance’;
- (151) *Vwi/le!* ‘Sure!’
- (152) *Taa/ta* ‘father’;
- (153) *Pa/nga* ‘to make’;
- (154) *I/mfwa* ‘death’;
- (155) *A/maa/no* ‘intelligence’;
- (156) *U/mwaa/na* ‘child’;
- (157) *A/ka/mu/ti* ‘small tree’;
- (158) *I/ci/pa/nga/no* ‘Agreement, Testament’

It was observed that syllables in a word were divided using a slash (/). Syllables were formed by combining vowels and consonants. Some syllables were formed by consonants only provided there was a semi-vowel which was pronounced as a vowel. When a vowel took the initial position in the word, it became a syllable. Some syllables were formed by combining either a consonant and a vowel or vowels. Other syllables were formed by combining consonants and a

vowel or vowels. Additionally, semi-vowels combined with vowels to form syllables. It can be deduced that the language under study has words with one, two, three, four and five syllables.

The following observations were further made regarding the syllabification of the above examples of words in Mambwe language:

- a) (148) and (149) have *one syllable*;
- b) (150), (151), (152), (153) and (154) have *two syllables*;
- c) (155) and (156) have *three syllables*;
- d) (157) has *four syllables*;
- e) (158) has *five syllables*.

The above analyses imply that examples (148) and (149) were made up of a syllable; examples (150), (151), (152), (153) and (154) had two syllables; (155) and (156) had three syllables; (157) had four syllables; and (158) had five syllables.

The findings of the study revealed that Mambwe language forms syllable patterns by combining consonants and vowels.

(159) Below are some example illustrations of syllable patterns for open syllables:

- a. CV as in: *ya* ‘this one, these ones’ the syllable signifies honor, plural;
- b. CCV as in: *Nga* ‘if’;
- c. CVCV as in: *Cina* ‘dance’;
- d. CCVCV as in: *Vwile!* ‘Sure!’
- e. CVVCV as in: *Taata* ‘father’;
- f. CVCCV as in: *Panga* ‘to make’;
- g. VCCCV as in: *Imfwa* ‘death’;
- h. VCVVCV as in: *Amaano* ‘intelligence’;
- i. VCCVVCV as in: *Umwaana* ‘child’;
- j. CCVVCCV as in: *Mweenzo* ‘heart’;
- k. VCVCVCCVCV as in: *Icipangano* ‘agreement, testament’.

Based on the above syllable patterns, the study suggested that Mambwe language has the following word constructions; examples (159. a-b) have one syllable; examples (159. c-j) have two syllables; examples (159. h-i) have three syllables; and example (159. k) has five syllables. It was also observed that the syllables either started with a vowel as in examples (159. g-i and k) or a consonant as in examples (159. a-f and j). The study further analysed that in each syllable pattern above, there was always a vowel.

4.9. Summary of the chapter

The chapter has discussed some aspects of phonology. It has discussed in detail the two kinds of phonemes which were used to take an inventory of phonemes, namely, consonants and vowels. The chapter has also discussed distinctiveness of consonants and vowels, consonantal and semi-vowel segments, suprasegmentals phonemes, nasal complexes, phonological processes as well as syllabification as some aspects of phonology of Mambwe language.

The next chapter presents some morphological aspects of Mambwe language. The morphological aspects in this chapter are centered on the nominal class system.

CHAPTER FIVE

SOME ASPECTS OF NOMINAL MORPHOLOGY OF MAMBWE LANGUAGE

5.1 Introduction

The previous chapter dealt with some aspects of phonology in which an inventory of phonemes was established. Distinctiveness of consonants and vowels, consonantal and semi-vowel segments, nasal complexes, phonological processes as well as syllabification was also discussed.

This chapter deals with some morphological aspects of language in particular the nominal class system. Lyons (1970), states that morphology is a level of structure between phonology and syntax. He adds that, what is meant by morphology is to say it is complementary to syntax. Lyons further states that morphology accounts for the internal structure or form of words, that is, they are typically a sequence of morphemes. This chapter, therefore, discusses some key aspects of nominal class system found in Mambwe language which include noun class system, inflectional and lexical morphology. The chapter closes with a summary of the chapter.

5.2. Simple noun structures in Mambwe language

The research findings revealed that simple noun structures in Mambwe language are formed from augments, prefixes and roots. An augment is an element which is a vowel and comes before the prefix. A prefix is an element and sometimes a syllable which comes before the stem/root or is attached to the stem/root on the left hand side. The stem/root is the heart or central part of the word which is found between the prefix and the suffix. The suffix is an element which is attached to the stem/root at the far right and is always a vowel. The structures in Mambwe language are formed using two (2) and three (3) elements or constituents of a noun structure as illustrated in the subsequent discussions.

5.2.1. Prefix + Root

The study established that Mambwe language has two component parts in some nouns. The two elements are the prefix and the root as shown below:

- (160) *Aantu* (Cl.2) ‘people’ where *a*=prefix and *-antu* =root. The noun is shown in component parts as: *a-antu*.

- (161) *Yaataata* (Cl.2a) ‘father’ in which: yaa= prefix and -taata = root.
The noun is segmented as follows: *yaa-taata*.
- (162) *Kaakuza* (Cl.12a) ‘rat’ where: kaa- =prefix and- kuuza = root.
The structural parts are: Kaa-kuuza.
- (163) *Moonsi* (Cl.1) ‘man’; in which: mu = prefix and -onsi = root. The component parts are: *mu-onsi*. In this case, [u] is assimilated to form [o].

In the above demonstrations, the study established that in Mambwe language, the prefix is either a vowel or a syllable involving a vowel and the suffix is usually a vowel. The analysis further revealed that some nouns in Mambwe language have the word structure; prefix, followed by a root which always has a vowel at the end.

5.2.2. Augment + Prefix + Root

The study also established that Mambwe language has noun structures with three components as illustrated in:

- (164) *Icipya* (Cl.7) ‘a new thing’; where: i- = augment, -ci- = prefix, -pya = root. Therefore, *icipya* ‘a new thing’ is segmented in component parts as: i-ci-pya. The vowel [i] in the root glides to [y].
- (165) *Icipangano* (Cl.7) ‘testament, agreement’ is realised as: *i-ci-pangano*; where: i- = augment, -ci- =prefix and -pangano = root.
- (166) *Umutwe* (Cl.3) ‘head’; where: u- = augment, -mu- = prefix and -twa = root. The segmented noun is: *U-mu-twe*. The vowel [u] in the root is realised as [w], hence [u] glides to [w].
- (167) *Icinyama* (Cl.7a) ‘huge animal’ which is segmented as: *i-ci-nyama*; where: i = augment, -ci- = prefix and -nyama = root.
- (168) *Akuunyi* (Cl.12) ‘small bird’; segmented as: *a-ka-unyi*; where a- =augment, -ka- = prefix and -unyi = root. The vowel [i] in the root is realised as [y].

The above demonstrations revealed that some nouns in Mambwe language have structures with four component parts segmented as; *augment* which is usually a vowel, *prefix*, which is a syllable and the *root* which contains a final vowel.

5.3. Nominal class system

The study revealed that Mambwe language has an established nominal class system. This stage of the study discusses noun classes, noun class number pairings in terms of singular and plural.

5.3.1. Noun classes in Mambwe language

The study established that Mambwe language has noun classes like other Bantu languages. Noun classes are groups into which various nouns fall. The noun classes are determined by the class prefixes. A prefix is an element of the word which is attached before the stem or root. An augment is optional in the Mambwe noun class system. Additionally, an augment is a morpheme or particle that precedes a nominal prefix and is usually identical to the vowel of the nominal prefix it is representing.

According to Halemba (2007), there are nine noun classes in Mambwe language. However, the analysis during this study, based on data collected suggested that the language has eighteen noun classes. Each established noun class system in Bemba for instance as outlined by Mann (1999), is also represented in the language under study. Mambwe language has a complex noun class system which involves signification of pluralisation patterns, agreement marking and patterns with regard to pronominal reference.

Mann (1999) points out that every noun in Zambian languages belongs to a class. He uses the word class in the sense of agreement-class so that *umu-ntu* ‘person’ in class 1 agrees with *a(ya)-ntu* ‘people’ in class 2. The noun consists of a class prefix and a stem, for example the noun *umuntu* ‘person’ has these parts *u-mu-ntu*; the parts [-mu-] and [-ntu] are a prefix and a stem respectively while the first element *u-* is an augment. The same arrangement applies to the noun *a(ya)ntu* [*a(ya)-ntu*] ‘persons/people’. The two nouns *umuntu* ‘a person’ and *a(ya)ntu* ‘persons/people’ are a manifestation that suggests that the class system of nouns has a semantic content and that the nouns have regular patterns of singular and plural forms. Mambwe nouns with nominal prefixes take augments which precede nominal prefixes of nouns.

Based on the research findings, it can be argued that Mambwe language has *eighteen* noun classes as opposed to *nine* noun classes (Halembe, 2007). The noun classes were identified and outlined in Table 3.

Table 3: Nominal class prefix of Mambwe language

<i>Noun Class</i>	<i>Augment</i>	<i>Noun Prefix</i>	<i>Examples of Nouns</i>	<i>Gloss</i>
1	u	mu	u-mu-ntu → umûntu	Person
1a	∅	∅	yaama	Uncle
2	Ø	a(ya)	a(ya)-ntu → a(ya)ntu	People
2a	∅	yaa	yaa-maayo → yaamaayo	Mother (in-law)
3	u	mu	u-mu-twe → umutwe	Head
4	i	mi	i-mi-twe → imitwe	Heads
5	i	i	i-tete → itete	Reed
	i	li	i-li-nso → ilinso	Eye
5a	∅	lii	lii-maama → liimaama	Huge woman
6	a	ma	a-ma-tete → amatete	Reeds
7	i	ci	i-ci-sela → icisela	Sweet potato
7a	∅	cii	cii-cuula → ciicuula	Big/ugly frog
8	i	vi	i-vi-ntu → ivintu	Things
8a	∅	vii	vii-cuula → viicuula	Big/ugly frogs
9	i	n	i-n-koko → inkoko	Chicken
9a	∅	∅	paani	Pan
10	i	n	i-n-koko → inkoko	Chickens
11	u	lu	u-lu-se → uluse	Mercy
12	a	ka	a-ka-nu-a → akanwa	Mouth
12a	∅	kaa	kaa-kuuza → kaakuuza	Small rat
13	u	tu	u-tu-nu-a → utunwa	Small mouths
13a	∅	tuu	tuu-kuuza → tuukuuza	Small rats
14	u	wu	u-wu-ntu → uwuntu	Human

14a	∅	wuu	wuu-kateeka → wuukateeka	Leadership, presidency
15	u	ku	u-ku-fwa → ukufwa	To die
16	(a)	pa	(a)pa-pela → (a)papela	On top, on high
	∅	pali	pa-li-motoka → palimotoka	At, near, on the car
17	(u)	ku	(u)ku-muzi → (u)kumuzi	In the village
17a	∅	kuli	kuli-yaso → kuliyaso	To your father
18	(u)	mu	(u)mu-ilindi → (u)mwilindi	In the grave
18a	∅	mu	mu-ilindi → mwilindi	In the grave

Nouns in Mambwe, as is the case in most Bantu languages, are paired into singular and plural based on their prefixes and syntactic value. The first pair denotes the singular and the second one represents the plural class. The pairs are as follows: 1/2, 1a/2a, 3/4, 5/6, 5a/6, 7/8, 9/10, 11/10, 12/13, 14/6, 15/6 and 16/17/18. The noun classes in Mambwe were paired following the pattern presented by Mann (1999). The examples of paired noun classes are provided in *table 5* in this chapter under item 6.2.2. Below are the pairs of nouns and what they represent:

- a) Classes 1 and 2 denote human beings.
- b) Class 3 and 4 tend to be animate, agentive or plants.
- c) Class 5 and 6 denote things that are in pairs or multiples.
- d) Class 7 and 8 denote augmentatives and pejoratives.
- e) Class 9 and 10 represent animals.
- f) Classes 11 and 10 represent abstract nouns and plurals of birds respectively.
- g) Class 12 and 13 are for diminutives.
- h) Class 14 denotes nouns of abstract nature which represent humanity.
- i) Class 15 denotes verbal infinitives which are used morphosyntactically as nouns.
- j) Classes 16, 17 and 18 are locatives.

The study suggested that locative prefixes function in analogous manner as shown below:

- (169) Ku-muzi → *ku muzi* ‘to the village’
 (170) Pa-a-muti → *paa muti* ‘on the tree’
 (171) Pa-a-mwamba → *paa mwamba* ‘on the mountain’
 (172) Mu-ilindi → *mwilindi* ‘In the grave’

Therefore, the study established that some class prefixes in Mambwe have derivational semantic function; they either replace the basic class prefix or occur as a secondary prefix on the noun form as shown in example (172) above.

5.3.2. Noun class number pairings

The findings of the study revealed that Mambwe language has noun class pairings to show singular and plural forms of nouns. The study also established that in Mambwe language, classes other than noun classes 14, 15 and the locative classes are grouped into *seven pairs* to express singular and plural as shown in Table 4.

Table 4: Singular and plural pairings of noun classes in Mambwe language

<i>Gender</i>	<i>Classes</i>	<i>Singular/Plural Examples</i>	<i>Gloss</i>
1	1 and 2	<i>Umntu/ A(ya)ntu</i>	person/persons
2	3 and 4	<i>Umutwe/ Imitwe</i>	head/heads
3	5 and 6	<i>Iluwa/ Amaluwa</i>	flower/flowers
4	7 and 8	<i>Iciintu/ Iviintu</i>	thing/things
5	9 and 10	<i>Inkoko/ Inkoko</i>	chicken/chickens
6	11 and 10	<i>ulukusa/ Inkusa</i>	fibre/fibres
7	12 and 13	<i>Akanwa/ Utunwa</i>	small mouth/small mouths

As can be observed from the table above, number pairings for noun classes occur in African languages. In Bantu languages, like Mambwe, number pairings on noun classes is a common feature. Most classes are paired for singular and plural. Pairing of classes is done to express grammatical number.

Based on the number pairings table above, it was observed that class 1 and 3 are differentiated on concord grounds. Katamba (2003) notes that human beings always occur in classes 1/2 and particular classes are used for diminutives and augmentatives. It was established that body parts/objects occur in classes 3/4. In Mambwe language, classes 1/3 (prefixes *mu-*) are distinguished on the basis of agreement other than meaning. Noun classes 1 and 2 include human beings while most of those in class 3 and 4 include some names of body parts, natural phenomena and plants.

The noun class prefixes for class 9 (singular) and class 10 (plural) are the same, hence differentiated by observing the concord on the other elements of the noun phrase. The subject-verb agreement differs as exemplified below:

(173) *Inzovu izile pa ng'anda* 'The elephant came at the house'

(174) *Inzovu zizile pa ng'anda* 'The elephants came at the house'

It was observed that in class 14, most nouns are abstract and mass nouns and they have no plural. Similarly, in most cases, class 15 is used for infinitives and they do not take plural forms. The locative prefix is added to the noun before the existing noun class prefix. Pre-fixation in locative classes is additive rather than substitutive. It is worth noting that locatives do not have plural counterparts too.

5.4. Inflectional morphology in Mambwe language

5.4.1. Word formation processes in Mambwe language

In line with Crystal (1989), the study established that Mambwe language has word formation processes. The study revealed that Mambwe language creates new words by; prefixation, suffixation, zero modification, compounding as well as borrowing. The word formation processes take place on both nouns and verbs.

5.4.1.1. Prefixation

The study revealed that Mambwe language forms new words through the process of prefixation as shown in the example below:

(175)	<i>Main word</i>	<i>Prefix</i>	<i>New word</i>
a.	yaama Ø-yaama Cl.1a-uncle 'uncle'	yaa-	ya a yaama yaa -yaama Cl.2a-uncle 'uncle – honorific, uncles'
b.	akapuno aka-puno Cl.12-nose 'small nose'	Pa-	pa kapuno pa -kapuno Cl.16-small nose 'on the small nose'

The example above revealed that new words were created by prefixation in which elements were added before or in front of the stem/root. Mambwe language undergoes prefixation by using the prefixes such as: [ya/yaa-], [pa], [mu-] and [wa-] in the singular form and [ya-] and [iya-] in the Plural form.

5.4.1.2. Suffixation

The study established that Mambwe language forms new words through suffixation as in:

(176)	<i>Main verb</i>	<i>Suffixed verb</i>
a.	<i>Ukuuma</i> [u-ku-um-a] 'to beat'	<i>Ukuumwa</i> [u-ku-umu-a] 'to be beaten'
b.	<i>Ukuiimba</i> [u-ku-viimb-a] 'to cover'	<i>Ukuiimbwa</i> [u-ku-viimbu-a] 'to be covered'

The above examples have suffixes which are added after the stem/root to create new words where [u] is realised as [w] through gliding. The study also revealed that, in Mambwe language, the suffix is usually added at the end of the base using the passive extension. The extension is formed by adding the element /-u-/ between the stem/root and the suffix which is realised as [w].

5.4.1.3. Zero modification

Mambwe undergoes zero modification instead of conversion when converting nouns as in:

(177)	<i>Main noun</i>	<i>Zero modification</i>
a.	<i>imbuzi</i> <i>i-mbuzi</i> Cl.5-goat 'Goat' (sg.)	<i>imbuzi</i> <i>i-mbuzi</i> Cl.5-goat 'Goats' (pl)
b.	<i>imfwewe</i> <i>i-mfwewe</i> Cl.5-sheep 'Sheep' (sg.)	<i>imfwewe</i> <i>i-mfwewe</i> Cl.5-sheep 'sheep' (pl)

The analysis established that in the above process of word formation, the words changed from singular to plural. The change in Mambwe language did not affect word classes but nouns changed from singular to plural form without affecting or changing the word spelling.

5.5. Some aspects of lexical morphology in Mambwe language

5.5.1. Compounding

Compounding is a process of word formation where the two or more base forms are added or joined to form a new word form with a new meaning.

5.5.1.1. Compound nouns in Mambwe language

Compound nouns are usually known to be formed by at least two or more words (Allen, 1978). The study revealed that Mambwe language forms compound nouns in three main ways; namely, open or spaced compound nouns, hyphenated compounds and closed compounds. The findings of the study suggested that Mambwe language has three types of compound words, namely, two words compounds, triple compound nouns and compound of *umwina* 'ownership' as elaborated below using examples.

5.5.1.1.1. Two-word compounds

The findings of the study revealed that Mambwe language has compound words which are formed from two other words as in:

(178) *Chilyamafwa* ‘eater of leaves’ →Vegetarian

The above demonstration is an example of *closed* compound nouns. In this category, the two words were joined together without leaving any space to form a compound word.

(179) *Mweene muzi* ‘owner of the village’ →Headman

In the above example, the two compound words are *spaced* and are also referred to as *open* compound words. However, the meaning conveyed by spaced compound words is different from the actual words which are used to form the compound word.

(180) *Nyoko-lume* ‘brother to one’s mother’ →Uncle

The example above demonstrated *hyphenated* compound nouns. The two nouns are connected by a hyphen and convey different semantics from the individual words used to form the above compound word.

The two main forms of compound words in Mambwe language further suggested that they are formed from two words namely; Noun + noun, and Adjective + noun. The demonstrations also concluded that Mambwe language has *closed or solid*, *spaced* and *hyphenated* compound words.

5.5.1.1.2. Triple compounds words

The study established that Mambwe has compound words which are made from *three* different words in series that is, following each other as in:

(181) *Nyina-senge mwance* ‘young sister to one’s father’ →Aunt

(182) *Nyina-kulu mukalamba* ‘elderly mother to one’s father or mother’ →
Grand mother

(183) *Muka nyoko-lume* ‘wife of one’s uncle’ →Aunt

The above examples suggested that the three compound words give one meaning and it is usually not related to any of the three compound words. The analysis further revealed that either the first two or the last two compound nouns are hyphenated in triple compound nouns as observed in examples (180) to (182) in the illustrations above.

5.5.1.1.3. Compound of ‘umwina’

These are compounds which are associated to the place. The following are some of the examples of the compound of ‘umwina’ found in Mambwe language:

- (184) *Umwina Zambia* ‘a person whose nationality is Zambia, Zambian’
- (185) *Umwina Mwanga* ‘a Namwanga speaker’
- (186) *Umwina Leeza* ‘a Godly person’
- (187) *Umwina Mbala* ‘a resident of Mbala
- (188) *Umwina Muzi* ‘a villager’

The above demonstrations suggested that the compound of *umwina* ‘owner’ is usually followed by a noun and is, therefore, capitalised to show that it is a proper noun. It was also established that ‘*Umwina*’ refers to ‘ownership’ of the place. Furthermore, ‘umwina’ always take the first position in the compound.

5.5.2. Borrowing in Mambwe language

The study established that Mambwe language borrows words from other languages during word creation. Borrowing which is also called loaning, is another process of word formation which exists in Mambwe language. The borrowed words are also called loan words and are accepted and incorporated in the vocabulary of the native speakers as illustrated in Table 5.

Table 5: Loan words in Mambwe language

(189)	<i>Source word</i>	<i>Source language</i>	<i>Loan word (Mambwe language)</i>
a.	Mwalimu	Swahili	<i>Mwalimu</i> [<i>mu-alim-u</i>] ‘teacher’
b.	Tie	English	<i>Taayi</i> [<i>ta-ay-i</i>] ‘brother/sister in-law’
c.	Chain	English	<i>Ceeni</i> [<i>ce-in-i</i>] ‘chain’
d.	Cup	English	<i>Kaapu</i> [<i>ka-ap-u</i>] ‘cup’

The above analysis suggested that most of the loan words in Mambwe language come from English language and usually end with a vowel. It was further established that the majority of the borrowed words from a source language are nouns and have been accepted in the vocabulary of the target language. Mambwe language creates new words using this process.

It was also observed that in Mambwe language, all the borrowed words from English language end with a vowel. This implies that all words in English which end with a consonant, when borrowed, a vowel is introduced after it and that vowel becomes a suffix.

5.6. Some categories of nouns in Mambwe language

This section discusses nouns which are either derived from verbs or from other nouns. The following are some of the nouns which are found in Mambwe language which are discussed under this section: Deverbal, diminutive, honorific, augmentative and pejorative nouns.

5.6.1. Deverbatives (Deverbal nouns) in Mambwe language

The term Deverbal means formed from verb(s). This is another process of word formation prominent in Mambwe language in which nouns are derived from verbs. The findings of the study established that Mambwe language has deverbal nouns some of which are shown below:

(190)	<i>Verb</i>	<i>Deverbal noun (sing.)</i>
a.	<i>ukusambilizya</i> <i>ku-sambilizya</i> Cl.15-teach 'teaching'	<i>kasambilizya</i> <i>ka-sambilizya</i> Cl.12-teach 'teacher'
b.	<i>ukuviimba</i> <i>ku-viimba</i> Cl.15-swell 'to swell'	<i>iciviimbe</i> <i>ci-viimbe</i> Cl.7-swollen 'swollen part'
c.	<i>ukuvyaala</i> <i>ku-vyaala</i> Cl. 15-bear a child 'to bear a child'	<i>umuvyaazi</i> <i>mu-vyaazi</i> Cl.1-parent 'a parent'

d.	<i>ukutuunda</i> <i>ku-tuunda</i> Cl.15-urinate 'to urinate'	<i>Amatuunzi</i> <i>ma-tuunzi</i> Cl.6-urine 'urine'
e.	<i>ukuwoomba</i> <i>ku-woomba</i> Cl.15-work 'to work'	<i>umuwoonvi</i> <i>mu-woonvi</i> Cl.1-worker 'a worker'

During the analysis of the above examples about deverbal nouns in Mambwe, three observations were made:

- a) The prefix [-ku-] in the verb changes to [-mu-], [-ma-] and [-ci-] to form nouns.
- b) All verbs end with the suffix [-a]. When the verbs are changed to nouns, the suffix [-a] changes to [-a], [-e] and [-i].
- c) Furthermore, the last consonant in the root of the noun:
 - i. In example (190.a), *maintained* the form it has in the verb;
 - ii. In example (190.b) was *deleted* together with the suffix;
 - iii. In example (190.c) [l] *changed* to [z] because the roots had the presence of semi-vowels;
 - iv. In example (190.d) [d] in the nasal complex *changed* to [z];
 - v. In example (190.e), the nasal complex [mb] in the verb *changed* completely to [nv] in the formation of nouns.

Therefore, deverbal nouns are nouns which are derived or formed from verbs. The analysis can be concluded that the formation of deverbal nouns in Mambwe language is dependent on the verbs.

5.6.2. Diminutive nouns in Mambwe language

The study established that Mambwe language has diminutive nouns as demonstrated below:

(191)	<i>Actual noun</i>	<i>Diminutive noun</i>
a.	<i>impuno</i> <i>imu-puno</i> Cl.3-nose 'nose'	<i>(a)kapuno</i> <i>(a)ka-puno</i> Cl.12-nose 'small nose'
b.	<i>kuuza</i> <i>ku-uza</i> Cl. 15 'rat'	<i>kaakuuza</i> <i>kaa-kuuza</i> Cl.12a-rat 'small rat'
c.	<i>imiti</i> <i>imi-ti</i> Cl.4-trees/medicine 'trees/medicines'	<i>(u)tumiti</i> <i>(u)tu-miti</i> Cl.13-medicine 'small trees/medicines'

The analysis of the table above demonstrated that diminutives are words or nouns which reduce the actual size and value of something. These nouns make things become smaller than they really are. The diminutives lack honour or respect for whatever they refer to and are formed by adding the 12th and 13th noun class prefix to the noun in question. It was observed that there are two pre-prefixes which are used to form diminutives, namely; [(a)ka-] and [(u)tu-]. [(A)ka-] goes with singular nouns while [(u)tu-] refers to plural nouns.

5.6.3. Honorific nouns in Mambwe language

The study revealed that Mambwe language forms honorific nouns. These are nouns which are spoken or written to express honour to one person and sound as if it is a plural as illustrated in the example below:

(192)	<i>Noun</i>	<i>Honorific noun</i>
a.	<i>umukazyana</i> <i>umu-kazyana</i> Cl.1-girl 'a girl'	<i>Akazyana</i> <i>a-kazyana</i> Cl.2-girl 'girls'

b.	<i>umuuzo</i> <i>umu-uzo</i> Cl.1-friend 'friend'	<i>auzo</i> <i>a-uzo</i> Cl.2-friend 'friends'
c.	<i>umwenyi</i> <i>umu-enyi</i> Cl.1-visitor 'Visitor'	<i>ayenyi</i> <i>a-yenyi</i> Cl.2-vistors 'visitors'
d.	<i>mukombe</i> <i>mu-kombe</i> Cl.1-old man 'old man'	<i>yamukombe</i> <i>ya-mukombe</i> Cl.2- elder 'elderly man'

The examples in the above table illustrates that honorifics are words which are used to express respect towards the noun being referred to. When honorific is used to refer to a proper noun, the respect sounds as if the noun is plural. It was also observed that honorific nouns are used to express respect for the father, mother, uncle, aunt, father/mother in-law and all elderly people. To express respect, pre-prefix [(y)a-] is used before the root in which the element (y) is optional.

5.6.4. Augmentative nouns in Mambwe language

The study established that Mambwe uses augmentatives to construct nouns as shown below:

(193)	<i>Actual noun</i>	<i>Augmented noun</i>
a.	<i>impuno</i> <i>imu-puno</i> Cl.3- nose 'nose'	<i>icipuno</i> <i>ici-puno</i> Cl.7-nose 'big nose'
b.	<i>amaye</i> <i>ama-yele</i> Cl. 6-breast 'breasts'	<i>Ivimaye</i> <i>ivi-maye</i> Cl.7-breasts 'big breasts'

The analysis suggested that augmentatives make normal things sound as if they are big or huge or extra-large. The nouns in this category are strictly used to enlarge the size of the noun which is being described. It was observed that augmentative nouns are found in noun classes 7*a* and 8*a* respectively. It was further observed that the nouns take a pre-prefix [(i)ci-] for singular nouns and [(i)vi-] for plural nouns. The analysis proved that the pre-prefix [(i)] is optional.

5.6.5. Pejorative nouns in Mambwe language

The study revealed that Mambwe language exhibits pejoratives in the formation of nouns as in:

(194)	<i>Actual noun</i>	<i>Pejorative noun</i>
a.	<i>umuza</i> <i>umu-uza</i> Cl.3- air ‘air’	<i>(i)cimuza</i> <i>ici-muza</i> Cl.7-air ‘bad air’
b.	<i>iluunda</i> <i>ulu-unda</i> Cl.11 ‘stomach’	<i>(i)ciluunda</i> <i>ici-luunda</i> Cl.7-stomach ‘ugly stomach’
c.	<i>aana</i> <i>a-ana</i> Cl.2-child ‘children’	<i>(i)viyaana</i> <i>ivi-yaana</i> Cl.7 children ‘bad children’

The analysis revealed that pejorative nouns are closely related to augmentatives in their formation. They use the same rule of attaching a pre-prefix [(i)ci-] to singular nouns and [(i)vi-] to plural nouns to form pejoratives. Pejoratives also belong to noun classes 7*a* and 8*a* respectively. Similarly, the element [(i)] which is attached to the pre-prefix is optional because some nouns do not take it in the formation of pejoratives. The difference between augmentatives and pejoratives lies in the meaning which is conveyed. Pejoratives make nouns sound bad or ugly and unpleasant to the listeners.

5.7. Summary of the chapter

The chapter discussed the nominal class system in Mambwe language. The language has an established noun class system like any other Bantu language. The other aspects discussed include; noun class prefixes, noun class pairings, noun structure, some aspects of inflectional and lexical morphology. Under inflectional morphology, word formation processes such as prefixation, suffixation, compounding and zero modification have been discussed. In terms of lexical morphology, nouns which are derived from other words have been discussed and they include; deverbal nouns, diminutive, honorific, augmentative and pejorative nouns.

The next chapter presents some aspects of verbal morphology in Mambwe language. The chapter analyses the verbal structure of Mambwe language in details.

CHAPTER SIX

SOME ASPECTS OF VERBAL MORPHOLOGY OF MAMBWE LANGUAGE

6.1. Introduction

The previous chapter discussed morphology in terms of the nominal class system in Mambwe language which include; noun structure and classes, and inflectional and lexical morphology.

This chapter presents a continuation of some morphological aspects of Mambwe language with respect to verbal structure, morphophonological processes and a summary of the chapter.

6.2. Verbal structure of Mambwe language

In many Bantu Languages, the overall verbal structure which is assumed for finite verbal forms is given below:

[SM NEG TAM [MACROSTEM OM [STEM Root Extension(s) TAM FV].

The verb, as noted above, has two relevant morphological domains inside it. First, the *verbal stem* consists of the verb root, any verb extensions, certain Tense, Aspect and Mood (TAM) suffixes and the Final Vowel. The larger domain is the *macro stem* which consists of the Object Marker including the reflexive prefix and the stem (Hyman & Ngunga, 1994; Hyman & Mtenje, 1999 and Bickmore, 2000). Some of the elements of verbal structure in Mambwe language discussed in this study are tense, aspect, mood, polarity, verb extensions and verbal complexes.

6.2.1. Tense in Mambwe language

Tense is a component of verbal morphology in which time regarding the performance of actions is considered. Halemba did not discuss tense discussed here. There is tense for yesterday, today and tomorrow. The tense which is used to express ‘today’ is referred to as ‘present tense’, the tense for ‘yesterday’ is ‘past tense’ and the tense for ‘tomorrow’ is called ‘future tense’.

6.2.1.1. The present tense in Mambwe language

The study established that Mambwe language has verbs which talk about actions happening at the present time which are also referred to as present tenses as in:

(195)	<i>Present tense</i>	<i>Realisation</i>	<i>Gloss</i>
a.	<i>Ukulya</i>	U-ku-li-a	‘to eat’
b.	<i>Ukuuma</i>	<i>U-ku-um-a</i>	‘to beat’
c.	<i>Ukupita</i>	<i>U-ku-pit-a</i>	‘to walk, to go’
d.	<i>Ukumwa</i>	<i>U-ku-mu-a</i>	‘to drink’

The above demonstrations revealed that verbs expressing the present tense in Mambwe language have a common prefix [-ku-]. The study also established that a high vowel [i] is realised as [y] as in example (194. a) while [u] is realised as [w] as demonstrated in example (194.d).

6.2.1.2. The past tense in Mambwe language

The study revealed that Mambwe language has verbs which express time in the past. These are common verbs which express the past simple and past participle tense as shown in:

(196)	<i>Present tense</i>	<i>Past simple/participle (sing.)</i>	<i>Past simple/participle (pl)</i>
a.	<i>Vwanga</i> [Vu-ang-a] ‘to speak’	<i>Wavwanzile</i> [U-a-vu-anzil-e] ‘he/she spoke’	<i>Yavwanzile</i> [I-a-vu-anzil-e] ‘they spoke’
b.	<i>Lya</i> [Li-a] ‘to eat’	<i>Waliile</i> [U-a-liil-e] ‘he/she ate’	<i>Yaliile</i> [-a-liil-e] ‘they ate’

The analysis in the example above suggested that in Mambwe language, both the past simple and the past participle tense attract the prefix [wa-] for singular and [ya-] for the plural, and the suffix [-ile] when changing the verb from the present tense. It was established that there are no verbs in Mambwe language which represent the past simple and the past participle tense separately, but they are distinguished when explanations are provided.

6.2.1.2.1. Categories of the past tense

This is another concept Halembe did not account for. The current study identified four categories of the past which are common in Mambwe language. The categories of the past include the today (hodiernal), the remote past, the recent past (non- hodiernal) past and the immediate past perfective tense.

According to Crystal (1997), hodiernal refers to a time frame that is within the day. Therefore, past tenses are morphologically marked by considering the expression of the verbal structure with respect to time. Adverbials are morphologically used to distinguish the degrees of the past tenses in question.

6.2.1.2.1.1 Today past

The today past is also called the hodiernal past and is used to mark events that happened earlier in the same day or sometime within the same day (today) as illustrated below:

(197)	Word/sentence:	<i>Yamusenzile</i>			
	Disjuncts:	<i>Ya-</i>	<i>mu-</i>	<i>senzi-</i>	<i>-ile</i>
	Verbal structure:	3PL	TM	RAD	PERF. SUFF
	Gloss:	‘They took him/her’			

This is the past tense form on which all other past perfectives are based. The tense marker refers to the action which happened during the day when communication took place, such as, *Yamusenzile ileelo* ‘**They took him/her** today’.

6.2.1.2.1.2. Remote past perfective

Remote past perfective is a tense which talks about events that happened a long time ago as in:

(198)	Word/sentence:	<i>Yamusenzile</i>			
	Disjuncts:	<i>Ya-</i>	<i>mu-</i>	<i>senzi-</i>	<i>-ile</i>
	Verbal structure:	3PL	TM	RAD	PERF. SUFF
	Gloss:	‘they took him/her’			

The remote past perfective expresses time for a long time, that is, a year or years ago when an event happened. For instance the above glossed remote past perfective *Yamusenzile* ‘They took him/her’ can be contextualised in: *Yamusenzile umwacizo* ‘They took him/her last year’. Therefore, the remote past perfective is marked with the general tense marker [-*mu-*] and perfective suffix [-*ile*]. [-*mu-*] is used to express the singular form.

6.2.1.2.1.3 Recent past (non- hodiernal)

This tense marks specific events that occurred before sunrise today and as far back as a week ago or so as illustrated below:

(199)	Word/sentence:	<i>Yatusenzile</i>			
	Disjuncts:	<i>Ya-</i>	<i>tu-</i>	<i>senzi-</i>	<i>-ile</i>
	Verbal structure:	3PL	TM	RAD	PERF. SUFF
	Gloss:	‘They took us’			

The tense marker in the above demonstration refers to singular where the speaker is part of the group which was taken. The recent past is marked with the general tense marker [*tu-*] to represent the plural of the TM on which the action was preformed and perfective aspect [*-ile*].

6.2.1.2.1.4. Immediate past perfective

The immediate past tense shows that something has just happened within a short time and usually not long ago from the time of speaking as illustrated below:

(200)	Word/sentence:	<i>Yamusenzile</i>			
	Disjuncts:	<i>Ya-</i>	<i>mu-</i>	<i>senzi-</i>	<i>-ile</i>
	Verbal structure:	3PL	TM	RAD	PERF. SUFF
	Gloss:	‘They have taken him/her’			

Based on the illustration above, the immediate past can be exemplified as follows: *Yamusenzile likwene* ‘they have just taken him’. In the above contextualised sentence, **just** is the word which qualifies the tense to be immediate past. Therefore, the use of **just** in this case implies that the action has taken place within a short period of time.

6.2.1.3. The future tense in Mambwe language

The study revealed that Mambwe language expresses tomorrow using the future tense. Consider the example demonstrations below:

(201)	<i>Present tense</i>	<i>Future (Singular)</i>	<i>Future (plural)</i>
a.	<i>Ukupyela</i> [u-ku-pi-el-a] 'to sweep'	<i>Alapyela</i> [a-la-pi-el-a] 'he/she will sweep'	<i>Yalapyela</i> [i-a-la-pi-el-a] 'they will sweep'
b.	<i>Ukuvwa</i> [u-ku-vu-a] 'to understand'	<i>Aluvwa</i> [a-lu-vu-a] 'he/she will understand'	<i>Yaluvwa</i> [i-a-lu-vu-a] 'they will understand'
c.	<i>Ukufwa</i> [u-ku-fu-a] 'to die'	<i>Alafwa</i> [a-la-fu-a] 'he/she will die'	<i>Yalafwa</i> [i-a-la-fua-a] 'they will die'
d.	<i>Ukufunya</i> [u-ku-funi-a] 'to scratch'	<i>Alafunya</i> [a-la-funi-a] 'he/she will scratch'	<i>Yalafunya</i> [i-a-la-funi-a] 'they will scratch'

The analysis in the table above revealed that the future tense is expressed by adding the element [-*ala-*] before the root/stem. Based on the examples above, it was also established that Mambwe language use [*la-*] as can be seen in (200. a, c, d) and [*lu-*] as in (200. b) for the future singular verbs while [*ya-*] is used for future plural tense.

6.2.1.4. Expressing tense using habitual verbs in Mambwe language

Halemba did not account for this tense. The findings of the study established that Mambwe language expresses tense using habitual verbs. Habitual verbs express habits or actions which are done repeatedly. Repeated actions are used to express the past, present or the future tense.

The past habitual verbs are expressed both in singular and plural as demonstrated below:

(202)	<i>Present Habit</i>	<i>Past (Singular)</i>	<i>Past (Plural)</i>
a.	<i>Ukulya</i> [U-ku-li-a] 'to eat'	<i>Walyanga</i> [U-a-li-ang-a] 'she/he used to eat'	<i>Yalyanga</i> [i-a-li-ang-a] 'they used to eat'
b.	<i>Ukuvwanga</i> [u-ku- vu-ang-a] 'to talk'	<i>Wavwanganga</i> [U-a-vu-angang- a] 'she/he used to talk'	<i>Yavwanganga</i> [I-a-vu- angang-a] 'they used to talk'
c.	<i>Ukwiiya</i> [U-ku-iiy- a] 'to steal'	<i>Wiyanga</i> [U-i-i-ang-a] 'she/he used to steal'	<i>Yiyanga</i> [I-i-i-ang-a] 'they used to steal'
d.	<i>Ukucina</i> [U-ku- cin-a] 'to dance'	<i>Wacinanga</i> [U-a-cinang-a] 'she/he used to dance'	<i>Yacinanga</i> [I-a-cinang-a] 'used to dance'

The analysis of the above table showed that in Mambwe language, the past habit is expressed using the suffix [-nga]. The study also established that the prefix [wa-/wi-] is used for the past singular while [ya-] is used for past plural verbs. The study further revealed that the prefix [yi-] is used to express the past habit in plural form.

The study revealed that Mambwe language accounts for the present habits in singular and plural form as shown below:

(203)	<i>Present verb (Habit)</i>	<i>Present simple (Singular)</i>	<i>Present simple (Plural)</i>
a.	<i>Ukulya</i> [u-ku-li-a] ‘to eat’	<i>Akaalya</i> [a-kaa-li-a] ‘he/she eats’	<i>Yakaalya</i> [i-a-kaa-li-a] ‘they eat’
b.	<i>Ukuvwanga</i> [u-ku-vu-ang-a] ‘to talk’	<i>Akaavwanga</i> [a-kaa-vu-ang-a] ‘he/she talks’	<i>Yakaavwanga</i> [i-a-kaa-vu-ang-a] ‘they talk’
c.	<i>Ukucina</i> [u-ku-cin-a] ‘to dance’	<i>Akaacina</i> [a-kaa-cin-a] ‘he/she dances’	<i>Yakaacina</i> [i-a-kaa-cin-a] ‘they dance’

The above table suggested that the present habit is expressed by adding the element [-akaa-] before the root/stem [kaa-] for present singular and [ya-] for present plural verbs. It was observed that, in Mambwe, the role of the present habit is performed by the present simple tense.

The study revealed that Mambwe language expresses verbs using the future habit both in singular and plural form as in:

(204)	<i>Present (Habit)</i>	<i>Future (Singular)</i>	<i>Future (plural)</i>
a.	<i>Ukulya</i> [u-ku-li-a] ‘to eat’	<i>Alalya</i> [a-la-li-a] ‘he/she will eat’	<i>Yalalya</i> [i-a-la-li-a] ‘they will eat’
b.	<i>Ukuvwanga</i> [u-ku-vu-ang-a] ‘to talk’	<i>Alavwanga</i> [a-la-vu-ang-a] ‘he/she will talk’	<i>Yalavwanga</i> [i-a-la-vu-ang-a] ‘they will talk’
c.	<i>Ukwiiya</i> [u-ku-ii-a] ‘to steal’	<i>Aliiya</i> [a-li-ii-a] ‘he/she will steal’	<i>Yaliiya</i> [i-a-li-ii-a] ‘they will steal’
d.	<i>Ukucina</i> [u-ku-cin-a] ‘to dance’	<i>Alacina</i> [a-la-cin-a] ‘he/she will dance’	<i>Yalacina</i> [i-a-la-cin-a] ‘they will dance’

The analysis in the table above revealed that the future habit is expressed by adding the element [-*ala-*] before the root/stem. It was also established that Mambwe language use [*la-*] and [*lil-*] for the future singular verbs while [*ya-*] is used for future plural habitual verbs. It was observed that the future habitual verbs have similar characteristics in terms of gliding of /y/ and /w/ as well as the formation of the prefix and augment in terms of singular and plural.

6.2.2. Aspect in Mambwe language

The study revealed that the language under study has aspect which is expressed by use of progressive verbs. In Mambwe language, the progressive or continuous action is expressed using the past, present and future verbs.

6.2.2.1. Past progressive verbs

The findings of the study revealed that past progressive verbs talk about continuous actions in the past as illustrated below:

(205)	<i>Present</i>	<i>Past progressive</i>
a.	<i>Vwanga</i> [vu-ang-a] ‘to talk’	(<i>Wa/ya</i>) <i>vwanganga</i> [(u-a/i-a)-vu-angang-a] ‘was/were talking’
b.	<i>Ukulya</i> [u-ku-li-a] ‘to eat’	(<i>Wa/ya</i>) <i>lyanga</i> [(u-a/i-a)-li-ang-a] ‘was/were eating’
c.	<i>Tukana</i> [tu-kan-a] ‘to insult’	(<i>Wa/ya</i>) <i>tukananga</i> [(u-a/i-a)-tu-kanang-a] ‘was/were insulting’
d.	<i>Ukucina</i> [u-ku-cin-a] ‘to dance’	(<i>wa/ya</i>) <i>ciinanga</i> [(u-a/i-a)-cii-nang-a] ‘was/were dancing’

The analysis of the above examples revealed that the past progressive tense in Mambwe language is formed by adding the suffix [-nga]. The prefix [wa-] is singular while [ya-] denotes plurals of past progressive actions. It was also noticed that the root attracts double vowels.

6.2.2.2. Present progressive verbs

The study established that the language under study has present progressive verbs which express continuous actions in the present situation as in:

(206)	<i>Present</i>	<i>Present progressive verbs</i>
a.	<i>Vwanga</i> [vu-ang-a] ‘to talk’	<i>Ya(a)kuvwanga</i> [i-a(a)-ku-vu-ang-a] ‘they/(she/he) are/(is) talking’
b.	<i>Ukulya</i> [u-ku-li-a] ‘to eat’	<i>Ya(a)kulya</i> [i-a(a)-ku-li-a] ‘they/(s/he) are/(is) eating’
c.	<i>Ukucina</i> [u-ku-cin-a] ‘to dance’	<i>Ya(a)kucina</i> [i-a(a)-ku-cin-a] ‘they(s/he) are/(is) dancing’
d.	<i>Ukulima</i> [u-ku-lim-a] ‘to cultivate/farm’	<i>Ya(a)kulima</i> [i-a(a)-ku-lim-a] ‘they/(s/he) are/(is) farming/cultivating’

The analysis of the above examples suggested that in Mambwe language, the prefix [ku-] is added to the stem/root with an optional augment [a-] to denote singular or pre-prefix [ya-] to denote the plural form of the verb.

6.2.2.3. Future progressive verbs

These are verbs which express the continuous aspect in the future as shown in:

(207)	<i>Present</i>	<i>Future progressive verbs</i>
a.	<i>Ukuvwanga</i> [u-ku-vu-ang-a] ‘to talk’	<i>Ya(a)laavwanga</i> [i-a(a)-laa-vu-ang-a] ‘they (he/she) will be talking’
b.	<i>Ukulya</i> [u-ku-li-a] ‘to eat’	<i>Ya(a)laalya</i> [i-a(a)-laa-li-a] ‘they (he/she) will be eating’
c.	<i>Ukucina</i> [u-ku-cin-a] ‘to dance’	<i>Ya(a)laacina</i> [i-a(a)-laa-cin-a] ‘they (he/she) will be dancing’
d.	<i>Ukulwa</i> [u-ku-lu-a] ‘to fight’	<i>Ya(a)laalwa</i> [i-a(a)-laa-lu-a] ‘they (he/she) will be fighting’

The examples above revealed that the future progressive verbs in Mambwe language are formed by the prefix [laa-]. Optionally, the augment [a-] is used to denote singular while the pre-prefix [ya-] denotes plural formation.

6.2.2.4. Persistent aspect

This is another concept of aspect which Halemba did not consider when he established a small grammar to understanding of the English-Mambwe dictionary.

6.2.2.4.1. Present Persistent aspect

This is the aspect in which the verbs take the morpheme [-*cili*-] which means ‘still’. It implies that the activity started happening sometime and is still going on as can be seen in the example:

(208)	Word/sentence:	<i>Tucilitukuwomba</i>					
	Disjuncts:	<i>Tu-</i>	<i>cili-</i>	<i>tu-</i>	<i>ku-</i>	<i>-womb-</i>	<i>a</i>
	Verbal structure:	SM	Per. M	SM	TM	VR	FV
	Gloss:	‘we are still working’					

Based on the above illustrations, it can be noticed that the persistent marker is infixed between the subject markers which denote the same referent. It has also been observed that persistent verbs denote the idea that the action or the state expressed by them is still in progress.

6.2.2.4.2. Past Persistent aspect

Past persistent is used for events that started sometime in the past and were on-going up until the time of temporal reference as shown in the illustration below:

(209)	Word/sentence:	<i>Twalitucilitukuwomba</i>							
	Disjuncts:	<i>Tu-</i>	<i>ali-</i>	<i>tu-</i>	<i>cili-</i>	<i>tu-</i>	<i>ku-</i>	<i>-womb-</i>	<i>a</i>
	Verbal structure:	SM	TM	SM	Per. M	SM	TM	VR	FV
	Gloss:	‘we were still working’							

Based on the illustration above, it can be established that the past Persistent aspect is used to express the near past and also for events that have a temporal reference point in the remote past. The past persistent aspect is expressed by the verb [-*ali*-] ‘were’ a plural verb in the past which functions as a tense marker (TM) representing the verb to be and precedes the persistent aspect [-*cili*-]. Even in this aspect, the Persistent marker is infixed between subject markers (SM).

6.2.3. Mood in Mambwe language

Mood is another category of verbs which Halemba did not discuss. According to Katamba (1993:222), the main function of the mood is to “describe an event in terms of whether it is necessary, possible, permissible, and desirable”. In grammar, mood refers to a verb category which indicates the situation in which the verb is expressed. Mood in verbs has nothing to do with frame or state of the mind as in being sad or happy, but rather expresses the state in which the verb has been applied. Therefore, this section of the verb category discusses indicative, imperative, grammatical, subjunctive and interrogative mood.

6.2.3.1. Indicative mood in Mambwe language

These are verbs which express facts, opinions and assertions as can be observed in the example below:

(210) *Nakwata yamama yatatu* ‘**I am married to** three women or **I have** three wives’

In the sentence above, the word *Nakwata* ‘I am married to’ is the indicative verb. The analysis shows that the verb above expresses the truth about the man in question.

6.2.3.2. Imperative mood in Mambwe language

This is the category of verbs which express mood by giving an order or command to someone or listener. Verbs under this category merely give instructions and are not questioned. When imperative verbs are used, the listener has no choice but to follow as can be seen in the example below:

(211) *Iza kuno!* ‘**Come** here!’

In the sentence above, the imperative mood is expressed using the verb *iza* ‘come’. When the above mentioned verb is used, the listener is obliged to follow the command. It can be argued that when imperative verbs are used to express mood, an exclamation mark is put at the end of the sentence. It can further be argued that verbs which express the imperative mood in Mambwe language are emotive in nature because they convey strong feelings through commands.

6.2.3.3. Subjunctive mood in Mambwe language

This category of mood also exists in verbs of Mambwe language. This kind of mood is expressed through verbs which talk about wishes as demonstrated below:

(212) *Nga naali kateeka, antu yoonsi nga yakwata incito* ‘**If I were** the president, all people or citizens would have been employed’

Based on the above example, we can infer that *Nga naali* ‘If I were’ is not real, but an imagined situation. Verbs under this category of mood express mental pictures or illusions which are not likely to happen. The verb expressing the subjunctive mood can either take the first position in the subordinate or the main clause. It can also be suggested that the subjunctive verbs are used to express the impossible conditional sentences. It can be concluded that subjunctive mood is the opposite of declarative mood as can be observed in the next category.

6.2.3.4. Grammatical mood in Mambwe language

Grammatical mood is best described using declaratives. Therefore, grammatical mood is also referred to as declarative mood. Verbs under this category are used to express statements of facts for instance:

(213) *Michael akulya uwowa* ‘Michael **is eating** mushrooms’.

Based on the example above, *akulya* ‘is eating’ is the verb which expresses the declarative or grammatical mood. It is observed that declarative mood expresses the level of certainty in what a person is saying or in the manner one desires other people to interpret the situation. Verbs under this category express the real situations hence are the opposite of subjunctive mood. The other revelation is that these verbs talk about specific state of affairs in the real world such as people, places and things which do exist in the real sense. The analysis of the above example also reveals that verbs indicating the declarative mood are always written in the present tense and express a direct statement.

6.2.3.5. Interrogative mood

Under this category, the verbs which are used signal that the speaker intends or wishes to ask the other person as can be seen in the example below:

(214) *Uzye wawilwe mwakaci* ‘**When** were you born?’

In the example above, we can infer that the question word *uzye* ‘when’ is immediately followed by a verb. It can further be suggested that verbs under this category are used to ask questions and is evidenced by a question mark at the end of the sentence. It can also be concluded that verbs under this kind of mood are used to elicit information based on the utterance from the addresser.

6.2.4. Polarity in Mambwe language

Polar verbs are those which are used to express a positive and negative dichotomy. In Mambwe language, such verbs do exist as shown below:

(215)	<i>Positive verb</i>	<i>Negative verb</i>
a.	<i>Iya</i> [i-a-a] ‘steal’	<i>Utiya</i> [u-ti-i-a] ‘Do not steal’
b.	<i>Tama</i> [t-am-a] ‘break’	<i>Utatama</i> [u-ta-tam-a] ‘Do not break’
c.	<i>Vwangini</i> [v-u-angin-i] ‘talk’	<i>Mutavwanga</i> [mu-ta-vu-ang-a] ‘Do not talk’
d.	<i>Yalwala</i> [i-a-lu-al-a] ‘they are sick’	<i>Yatalwala</i> [i-a-ta-lu-a] ‘They are not sick’

Based on the examples above, it was observed that the morphemes */-ti-/* and */-ta-/* take the position of a prefix to change a positive verb to a negative one. It was further observed that the morpheme */-ta-/* as seen in examples (214. b-c) is used to refer to both singular and plural negation. It can therefore be concluded that polarity is that part of verbal structure which expresses negation of the positive verb.

6.3. Verb extensions

The study ascertained that Mambwe language undergoes extensions on the verbs. The extensions increase the intensity of the meaning of the root/stem. There are various types of extensions that are made to the verbs. However, this study accounted for the following verb extensions: reduplication, reciprocal, intensive, frequentative, applicative, reversive, causative, passive, stative, reflexive and perfective extensions. Halemba attempted to discuss the first eight extensions, but could not account for the morphological make up. This study has analysed the formation of the first eight extensions and has identified and analysed the last three extensions.

6.3.1. Reduplication extension

The findings of the study established that reduplication as a process of extending the verbs by repeating the stem/root exists in Mambwe language as in:

(216)	<i>Main verb</i>	<i>Reduplicated verb</i>
a.	<i>Ukuvwanga</i> [u-ku-vu-ang-a] ‘to talk’	<i>Ukuvwanga-vwanga</i> [u-ku-vu-ang-a- vu-ang-a] ‘talking repeatedly’
b.	<i>Ukutunda</i> [u-ku-tund-a] ‘to urinate’	<i>Ukutunda-tunda</i> [u-ku-tu-nd-a- tu-nd-a] ‘urinating repeatedly’

The analysis above ascertained that the reduplicative verb extension is used to express the action in the present simple tense. The verb expresses a habit or something which is done always. The extended verb is also used to express either a good or bad habit. The reduplicated stem is linked to the main verb by a hyphen (-) to form one word and express repetition of the action.

6.3.2. Reciprocal extension

The study revealed that Mambwe language has reciprocal verb extensions as illustrated in:

(217)	<i>Main verb</i>	<i>Reciprocated verb</i>
a.	<i>Ukusaakula</i> [u-ku-saakulan-a] ‘to comb hair’	<i>Ukusaakulana</i> [u-ku-saakulan-a] ‘to comb each other’
b.	<i>Ukupama</i> [u-ku-pam-a] ‘to slap’	<i>Ukupamana</i> [u-ku-paman-a] ‘to slap each other’

The examples above demonstrated that reciprocated verbs are formed by adding the reciprocal /-an-/ to the transitive verb to give the sense of performing an action to each other. Transitive verbs take or have a direct object.

6.3.3. Intensive extension

This verb extension refers to doing something a lot and exists in Mambwe language as in:

(218)	Main verb	Intensive verb
a.	<i>Ukutina</i> [u-ku-tin-a] ‘to press’	<i>Ukutinisya</i> [u-ku-tinisi-a] ‘to press a lot’
b.	<i>Ukuleeta</i> [u-ku-leet-a] ‘to bring’	<i>Ukuleetesya</i> [u-ku-leetesi-a] ‘to bring a lot’

The analysis of the above examples suggested that the intensive extension is formed by adding the suffix [-isi] to the root/stem. The suffix phonologically assumes [-isy-] or [-esy-]. It was also observed that intensive verbs are formed by changing the final vowel [-a] into [-isya] after [a], [u] or [i] and [-esya] after [o] or [e].

6.3.4. Frequentative extension

The study established that the frequentative verb extension talks about doing something repeatedly. The other term that means frequentative is repetitive extension as illustrated below:

(219)	Main verb	Frequentative verb
a.	<i>Vunika</i> [vu-nik-a] ‘be broken’	<i>Vuneeka</i> [vu-neek-a] ‘be broken into small pieces’
b.	<i>Putuka</i> [pu-tuk-a] ‘be broken’	<i>Putooka</i> [pu-took-a] ‘be broken into small pieces’
c.	<i>Koma</i> [ko-m-a] ‘chop, cut’	<i>Komoola</i> [ko-mool-a] ‘cut into pieces’

In the above illustrations for frequentative verb extension, the findings revealed that verbs ending in [-ula], [-uka] or [-ika] changed into [-ola], [-oka] and [-eka] respectively. Additionally, [-uka] is used as a derivation suffix for verbs ending in [-ula] to show repetition of the action.

6.3.5. Applicative extension

The study established that the applicative verb extension is about applying something and is sometimes referred to as prepositional verb form. The verb form shows the relationship which a person or thing has with what the action is being done for. Applicative verbs are realised in *three* different ways as demonstrated in the examples that follow.

The first realisation of the applicative verb extension is demonstrated in the example shown below:

(220)	Main verb	Applicative verb
a.	<i>Tama</i> [t-am-a] ‘to break’	<i>Tamila</i> [ta-mil-a] ‘break for’
b.	<i>Lema</i> [l-em-a] ‘to hold’	<i>Lemela</i> [le-mel-a] ‘hold for’

The analysis of the first demonstration above suggested that when a verb root contains [a], [i], or [u], the final vowel is changed into [-ila]; and when a verb contains [e] or [o], the final vowel is changed into [-ela].

The second realisation of the applicative verb extension is illustrated below:

(221)	Main verb	Applicative verb
a.	<i>Solola</i> [so-lol-a] ‘to choose’	<i>Solwela</i> [so-lu-el-a] ‘to choose for someone’
b.	<i>Salula</i> [sa-lul-a] ‘to fry’	<i>Salwila</i> [sa-lu-il-a] ‘to fry for someone’

The analysis of the second example of the applicative extension established that verbs ending with [-ula] or [-ola], changed into [-wila] after [a], [i], or [u] in the verb root, and into [-wela] after verb roots which do not have [a], [i] or [u].

The third realisation of the applicative verb extension is shown below:

(222)	Main verb	Applicative verb
a.	<i>Panya</i> [pa-ni-a] ‘to dress chicken’	<i>Panyizya</i> [pa-ni-izi-a] ‘to dress chicken for’
b.	<i>Sezya</i> [se-zi-a] ‘to remove’	<i>Sezezya</i> [se-zezi-a] ‘to remove for’

The analysis of the third demonstration about the applicative verb extension further established that verbs which end with [-ya] changed into [-izya] after [a], [i], or [u] in the verb root and into [-ezya] after [e] or [o] in the verb root.

6.3.6. Reversive extension

Mambwe language experiences reversion verb extension as shown below:

(223)	Main verb	Reversive verb
a.	<i>Ukufuunga</i> [u-ku-fuung-a] ‘to lock’	<i>Ukufuungula</i> [u-ku-fuungul-a] ‘to unlock’
b.	<i>Ukuziika</i> [u-ku-ziik-a] ‘to burry’	<i>Ukuziikula</i> [u-ku-ziikul-a] ‘to dig out’
c.	<i>Ukunyunga</i> [u-ku-ni-ung-a] ‘to sieve’	<i>Ukunyungulula</i> [u-ku-ni-ungulul-a] ‘to re-sieve’

Arising from the above examples, the study established that reversion verbs are formed by adding the suffix [-ula] as in example (223. a. and b.) or [-ulula] in (223.c). The reversion verbs undo or act in an opposite manner hence contradicts the action of the main verb.

6.3.7. Causative extension

The study revealed that causative extension exists in Mambwe language. Causative verbs influence the result of an action. There are short and long causatives shown below:

(224)	Main verb	Short causative verb
a.	<i>Ukukoma</i> [u-ku-kom-a] ‘to be strong’	<i>Ukukomya</i> [u-ku-komi-a] ‘to make strong’
b.	<i>Ukutiina</i> [u-ku-tiin-a] ‘to fear’	<i>Ukutiinya</i> [u-ku-tiini-a] ‘to frighten’
c.	<i>Ukwankana</i> [u-ku-a-ankan-a] ‘to share’	<i>Ukwankanya</i> [u-ku-a-ankani-a] ‘to divide’

In the above examples, short causatives are formed by adding a suffix /-i-/ which glides to [y] before a non-identical vowel thereby causing a change of the preceding consonant.

Mambwe language form extensions using long causative verbs as demonstrated below:

(225)	Main verb	long causative verb
a.	<i>Ukwaazima</i> [u-ku-a-azim-a] ‘to borrow’	<i>Ukwaazimiisya</i> [u-ku-a-azimiisi-a] ‘to lend’
b.	<i>Ukupeepa</i> [u-ku-peep-a] ‘to smoke’	<i>Ukupeepeesya</i> [u-ku-peepeesi-a] ‘to cause to smoke’
c.	<i>Ukupoompa</i> [u-ku-poomp-a] ‘to inflate’	<i>Ukupoompeesya</i> [u-ku-poompeesi-a] ‘to cause to inflate’

The examples above illustrated *long causatives*. Long causatives were formed by adding the suffix [-iisi] which changed to [-iisy-] or [-eesy-] as shown by the suffix in the examples.

6.3.8. Passive verb extension

The findings of the study revealed that Mambwe language extends verbs by using the passive extension as shown in:

(226)	Main verb	Passive verb
a.	<i>Ukuuma</i> [u-ku-um-a] ‘to beat’	<i>Ukuumwa</i> [u-ku-umu-a] ‘to be beaten’
b.	<i>Ukuiimba</i> [u-ku-viimb-a] ‘to cover’	<i>Ukuiimbwa</i> [u-ku-viimb-a] ‘to be covered’

The analysis suggested that the passive extension is formed by adding the passive element /-u-/ between the stem/root and the suffix, and is realised as [w]. The passive verb extension acts on the object which receives the action. This extension considers the action of the receiver of the action (object) and not the doer of the action (subject).

6.3.9. Stative extension

The study established that Mambwe has stative verb extensions as demonstrated below:

(227)	Main verb	Stative verb
a.	<i>Ukufula</i> [u-ku-ful-a] ‘to wash’	<i>Ukufulika</i> [u-ku-fulik-a] ‘to be washed’
b.	<i>Ukutama</i> [u-ku-tam-a] ‘to break’	<i>Ukutameka</i> [u-ku-tamek-a] ‘to be broken’

The analysis above revealed that stative verbs were formed by adding the suffix [-ik-] after the vowel [a], [i], [o], [u] or [-ek-] after [e] or [o]. The addition of a suffix was necessary in order to change verbs from transitive to intransitive.

6.3.10. Reflexive verb extension

The study established that Mambwe language has the reflexive verb extension as illustrated below:

(228)	Main verb	Prefix	Reflexive verb
a.	<i>Letelela</i> [le-telel-a] ‘to bring trouble’	i-	<i>Iletelela</i> [i-le-telel-a] ‘to bring trouble upon oneself’
b.	<i>Temwa</i> [te-mu-a] ‘to love’	i-	<i>Itemwa</i> [i-te-mu-a] ‘to love oneself’

In the above example, the reflexive verb extension shows the action which is done by oneself. The analysis suggested that the reflexive extension is formed by attaching the vowel [i] before the stem/root of the verb. It was established that the vowel [i] is invariable and always remains despite all verbal changes. The examples further reviewed that the vowel [i] works as a reflexive pronoun and does not fuse with any vowel before and after it.

6.3.11. Perfective verb extension

The study revealed that Mambwe has perfective verbs. Perfective verbs show the degree or care of a particular action as demonstrated below:

(229)	Main verb	Perfective verb
a.	<i>Poka</i> [p-ok-a] ‘take by force’	<i>Pokelela</i> [po-kelel-a] ‘take forever’
b.	<i>Pata</i> [p-at-a] ‘to hate’	<i>Patilila</i> [pa-tilil-a] ‘to hate forever’
c.	<i>Kwata</i> [ku-at-a] ‘to have’	<i>Kwatilila</i> [ku-atilil-a] ‘to have for good’

The above examples suggested that the perfective verb shows that the action has been brought to completion. The verb expresses the perfect result of an action. It was established that the formation of the perfective verb resembles the applicative verb, the difference is that in perfective extension, [-ila] and [-ela] changed to [-ilila] and [-elela].

6.4. Verbal complexes

Halemba did not account for this category. The study established that Mambwe like any other Bantu language has a basic verbal structure which comprises a root or radical and affixes. According to Miti (1988) the affixes may include a subject marker, object marker, tense marker and various verbal derivational suffixes or completely ungrammatical.

In many Bantu Languages, one verbal form is used for ‘today’ events and another for ‘before today’ events regardless of their current relevance (Crystal, 2008). Crystal’s expression proves the complexity of verbal forms. The overall structure which is assumed for finite verbal forms is given below:

[SM NEG TAM [MACROSTEM OM [STEM Root Extension(s) TAM FV]

The verb, as noted above, has two relevant morphological domains inside it. First, the *verbal stem* consists of the verb root, any verb extensions, certain Tense, Aspect and Mood (TAM) suffixes and the Final Vowel (/ -e/ for subjunctive and / -a/ for neutral/indicative). The next larger domain is the *macro stem* which consists of the Object Marker including the reflexive prefix and the stem (Hyman and Ngunga, 1994; Hyman & Mtenje, 1999 and Bickmore, 2000).

6.4.1. Subject and Object Markers

The findings of the study established that Mambwe language uses both subject and object markers to express the past, present and future tense. The subject markers are elements in the word which represent the subject while the object markers are word constituents which denote the object. Subject and object markers are used to disjunct the verbs and nouns according to their component parts. It should be stated that in Mambwe, certain words represent phrases, clauses and sentences when translated into English language. Therefore, subject and object marking is done with reference to prefixes and word classes which they represent. Table 6 shows the Subject and Object marker prefixes in relation to the class to which they belong:

Table 6: Subject and Object prefixes of Mambwe language

<i>Class</i>	<i>Subject prefix</i>	<i>Object Prefix</i>
1	mu-	mu-
2	a-/ya-/yaa-	a-/ya-/yaa-
3	mu-	mu-
4	mi-	mi-
5	i-/li-/lii-	i-/li-/lii-
6	ma-/mi-	ma-/mi-
7	ci-/cii-	ci-/cii-

8	vi-/vii-	vi-/vii-
9	n-	n-
10	n-	n-
11	lu-	lu-
12	ka-/kaa-	ka-/kaa-
13	tu-	tu-
14	wu-/wuu-	wu-/wuu-
15	ku-	ku-
16	pa-/pali-	pa-/pali-
17	ku-/kuli-	ku-/kuli-
18	mu-/muli-	mu-/muli-

In the table above, Subject and Object prefix for class 3 singular is generally /u-/ before a vowel and /a-/ elsewhere. All these Subject and Object markers are bound morphemes. A bound morpheme is a morpheme which cannot stand on its own. Bound morphemes are generally meaningless when they are not attached to other morphemes. In cases where the bound morpheme must appear alone, a corresponding independent pronoun must be used. The following are the independent pronouns which are found in Mambwe language:

- a) *Neene* ‘I’
- b) *Wewe* ‘you (sg)’
- c) *Wii* ‘he/she’
- d) *Sweswe* ‘us’
- e) *Mwemwe* ‘you (pl)’
- f) *Yaa* ‘they’

The table below demonstrates the Object marker position in Mambwe language:

- (230) U-ku-lol-a → *ukulola* ‘to see’, it changes to: U-ku-**i**-lol-a → *ukuilola* ‘to see oneself’

With regard to what can appear in the Object marker position in the example above, the reflexive prefix /i-/, when present, comes after the tense marker (TM).

The study established that Mambwe language does allow for some combinations of multiple Subject markers as shown below in:

(231)	Word/sentence:	<i>Tucilitukuwomba</i>					
	Disjuncts:	<i>Tu-</i>	<i>cili-</i>	<i>tu-</i>	<i>ku-</i>	<i>womb-</i>	<i>a</i>
	Verbal complexes:	SM	Per. M	SM	TM	VR	FV
	Gloss:	‘we are still working’					

In the above analysis, the persistive marker [-*cili-*] is infixed between the subject markers which have the same referent. Therefore, [-*cili-*] expresses the *present continuous* tense.

It was observed that Mambwe language has verbs that have only four elements, namely; subject marker, tense marker, verb root/stem and the final verb as elaborated in:

(232)	Word/sentence:	<i>Naliimanga</i>			
	Disjuncts:	<i>N-</i>	<i>alii-</i>	<i>mang-</i>	<i>a</i>
	Verbal complexes:	SM	TM	VR	FV
	Gloss:	‘I was cultivating, I used to farm’			

The analysis of the above construction reveals that the sentence has no object marker and it expresses the *past continuous* or *progressive tense*.

Mambwe language experiences subject, tense and object marking in verbal constructions as in:

(233)	Word/sentence:	<i>Tulamwazwa</i>				
	Disjuncts:	<i>T-</i>	<i>ula-</i>	<i>mu-</i>	<i>azu-</i>	<i>a</i>
	Verbal complexes:	SM	TM	OM	VR	FV
	Gloss:	‘we will help him/her’				

The above demonstration in Mambwe language expresses the verb in the *future simple* tense when [-*la-*] has a short vowel. During the subject marking, tense marking and object marking, it

was observed that the vowel /u/ became /w/ through the phonological process of gliding. This process happens before the vowel /a/ in the disjuncts for OM and FV.

Mambwe language uses tense markers with long vowels. The use of the long vowels in the TM does not express the future simple tense as shown below:

(234)	Word/sentence:	<i>Tulaamwazwa</i>				
	Disjuncts:	<i>T-</i>	<i>ulaa-</i>	<i>mu-</i>	<i>azw-</i>	<i>a</i>
	Verbal complexes:	SM	TM	OM	VR	FV
	Gloss:	‘we will be helping him/her’				

On the contrary, the analysis in the above example shows that when the tense marker in the sentence has a long vowel /a-/, the verb does not express the future simple tense, instead it changes the TM to *future progressive or continuous tense*.

6.4.2. Negation in verbal complexes

The findings revealed that Mambwe language expresses negation in verbal complexes. Negation in Mambwe is expressed in the past, present and future tense. In Mambwe, negation for past, present and future tense is expressed using the following elements in the brackets:

- Using [*ntala-*] if negation is done by a singular noun (I);
- Using [*tu-*] if the negation involves plural nouns (us/we);
- Using [*uta-*] if negation is done by the second person singular (you);
- Using [*muta-*] if negation is done by the second person plural (you); and
- Using [*yata-*] if negation involves the third person plural (they).

6.4.2.1. Negation with subject and object markers

(235)	Word/sentence:	<i>Yatalamulola</i>					
	Disjuncts:	<i>Ya-</i>	<i>ta-</i>	<i>la-</i>	<i>mu-</i>	<i>lol-</i>	<i>a</i>
	Verbal complexes:	Neg	SM	TM	OM	VR	FV
	Gloss:	‘They will not see him/her’					

According to the above example, it was established that Mambwe language expresses negation in verbal complexes using [yata-] ‘will not’ to express the future in the presence of both subject and object markers. This kind of negation involves the use of the third person plural ‘they’.

6.4.2.2. Negation with the subject marker only

(236)	Word/sentence:	<i>Ntalakusenda</i>				
	Segments:	<i>Nt-</i>	<i>ala -</i>	<i>ku-</i>	<i>send-</i>	<i>a</i>
	Verbal complexes:	Neg	SM	TM	VR	FV
	Gloss:	‘I will not go with you’				

In the above example, it was established that in Mambwe language, there are verbs which express negation in the future using the segment [nt-] and have no object markers. Such sentences express the *future simple* tense.

6.4.3. Generalisations about verbal complexes in Mambwe language

While additional research needs to be undertaken to fully explore this topic, preliminary findings in this area suggested that the following generalisations were established about verbal complexes in Mambwe language:

- The presence of two object markers is only grammatical if one of them is a first person prefix -either /n-/ ‘me’ or /tu-/ ‘us’.
- When the first person prefix /n-/ is used, it always represents the indirect object and occurs after the other OM that it appears with.
- When the plural /tu-/ is used, it always occurs first and is the indirect object.
- In examples of semi-vocalisation, /u/ in the subject and object markers occurs as a result of it immediately preceding the vowel /a/, and the rule can be formalised as: /u/→/w//—/a/ which is interpreted as /u/ becomes /w/ if it comes before /a/.
- The negative of the verb structure is expressed using ‘ta’ when it precedes the subject marker, with the exception of first person singular subject marker [n] which takes [-sy-] followed by [-akale-] as illustrated below:

/u/→/w//—/i/

6.5. Morphophonological processes

The morphophonological processes act on morphology and phonology. These processes have been applied in a grammatical analysis of Mambwe language and conform to the Bantu languages class system. The morphophonological processes at play in this study depend on morphology at word level and phonology at vowel and consonant level. The application of the processes results into derivation such as in class 1/2, *mu/(ya)a* which denote humans. The derivations are either denominal or deverbal. Denominative is the process of deriving a noun from another noun while deverbative is a process of deriving a noun from a verb. It should be stated that both derivational processes mentioned above have been applied in this work.

Table 7: Summary of some morphophonological processes in Mambwe language

<i>S/N</i>	<i>Morphophonological process</i>	<i>Example</i>
1	Coalescence/fusion	e+i = ee; as in: <i>Mwame+immuneene</i> → <i>Mwameemuneene</i> ‘call him to receive the message’
2	Vowel lengthening	a+a = aa; as in: <i>Ana+akwe</i> → <i>Anaakwe</i> ‘his children’
3	Gliding	i+a = ya; as in: <i>Insimbi +aane</i> → <i>Insimbiyaane</i>
4	Nasalisation	n+d = nd, as in: <i>Indaala</i> ‘am asleep’
5	Assimilation	a changes to e; as in: <i>Lenga</i> ‘ask’ + <i>-ela</i> → <i>Lengela</i> ‘ask something for someone’
6	Gliding followed by vowel lengthening	m-u-a-a = <i>mwaa</i> ; as in: u-m-u-a-an-a→ <i>Umwaana</i> ‘child’
7	Form retention	<i>Imfweele</i> ‘sheep (sg)’ → <i>Imfweele</i> ‘sheep (pl)’

6.6. Summary of the chapter

The chapter has discussed some morphological aspects of Mambwe language. Verbal morphology in terms of verbal structure which includes tense, aspect, mood, polarity, verb extensions and verbal complexes has been discussed in details.

The next chapter presents some aspects of syntax in Mambwe language. It contains the word order of simple sentences, the noun and verb phrase. It closes with the summary of the chapter.

CHAPTER SEVEN

SOME ASPECTS OF SYNTAX OF MAMBWE LANGUAGE

7.1. Introduction

The previous chapter discussed some morphological aspects of Mambwe language in terms of the verbal morphology. The chapter explored the verb structure with regard to tense, aspect and mood. The verb extensions and verbal complexes were equally dealt with.

This chapter presents some aspects of syntax found in Mambwe language. The first aspect is the word order in simple sentences which include the following; imperative, declarative, exclamatory and commands. The second aspect is that the chapter contains the noun phrase in terms of determination and modification. The third aspect is the word order in the verb phrase. It should be pointed out that Halemba did not account for any of the aspects of syntax discussed under this chapter. The chapter closes with a summary of word order in the simple sentences, the noun phrase and finally, the verb phrase.

7.2. Word order in Mambwe language

This section looks at the syntax of Mambwe language, particularly the word order in the simple sentence. The study has discussed the word order of the four major types of simple sentences which include; imperative, declarative, exclamatory and interrogative. The study has also analysed the formation and constituents of the above four identified simple sentences, and has further analysed the word order of the noun phrase (www.English.Grammar.Revolution.com).

7.2.1. Imperative sentences in Mambwe language

The study revealed that Mambwe language has imperative sentences. An imperative sentence is a sentence which gives a command or an order. The following are some of the imperative sentences in relation to the word order:

(237) a.	Sentence:	<i>Yaala iciseko/icisaasa!</i>	
	Segments:	<i>I-a-al-a</i> [yaala]	<i>i-ci-sek-o</i> [iciseko]
	Class pattern:	Cl.2a (You) shut	Cl.7 door
	Gloss:	‘(You) shut the door!’	
	Word order:	S+V+O (SVO)	
b.	Sentence:	<i>Yapeele utuunyi!</i>	
	Segments:	<i>I-a-peel-e</i> [yapeele]	<i>u-tu-uni-i</i> [utuunyi]!
	Class pattern:	Cl.2 give them	Cl.13 small birds
	Gloss:	‘Give them the small birds!’	
	Word order:	V+S+O (VSO)	
c.	Sentence:	<i>Ufuume umung’anda!</i>	
	Segments:	<i>U-fu-um-e</i> [ufuume]	<i>u-mu-ng’and-a</i> [umung’anda]
	Class pattern:	Phra.V. (you) get out	Cl.18 in the house
	Gloss:	‘(You) get out of the house!’	
	Word order:	S+V+O (SVO)	
d.	Sentence:	<i>Mupele umusilya!</i>	
	Segments:	<i>Mu-pel-e</i> [mupele]	<i>u-mu-sili-a</i> [umusilya]
	Class pattern:	Cl.1 (you) give	Cl.3 salt
	Gloss:	‘(You) give him/her salt!’	
	Word order:	S+V+O (SVO)	

The analyses above in (237 a, c, d) demonstrate that the word order of imperative sentences in Mambwe is: S+V+O (SVO) while example (237.b) has V+S+O (VSO). Imperative sentences may end with a period or *exclamation mark* (!). A command is a sentence which asks or tells people to do something. The imperative sentence assumes the subject ‘you’ and is implied at the beginning of the sentence. The subject in a command is always ‘you’ because a person is always speaking to someone or something and the subject is referred to as *you understood* and written like this: (you). It is called so because it is not written or spoken in sentences, but is simply understood and written in parenthesis as in: Shut the door (imperative) → (You) shut the door.

7.2.2. Declarative sentences in Mambwe language

The findings established that Mambwe language has declarative sentences. Declarative sentences are statements, hence are also referred to as statement sentences as shown below:

(238) a.(i)	Sentence:	<i>Ivisela vili umu-isaka [umwikaasa].</i>		
	Segments:	<i>I-vi-sel-a</i> [ivisela]	<i>vi-l-i</i> [vili]	<i>u-mu-isaak-a</i> [umwisaaka]
	Class pattern:	Cl.8 potatotes	Cl.8agr.are	Cl.18 in the bag
	Gloss:	‘Sweet potatoes are in the basket.’		
	Word order:	S+V+O (SVO)		
a.(ii)	Sentence:	<i>Mwisaaka muli ivissela [Passive of a.(i)]</i>		
	Segments:	<i>Mu-isaak-a</i> [mwisaaka]	<i>mu-l-i</i> [muli]	<i>i-vi-sel-a</i> [ivisela]
	Class pattern	Cl.18 in the bag	Cl.18 agr.are	Cl.8 potatotes
	Gloss:	‘The old man is eating maize’		
	Word order:	O+V+S (OVS)		

In the above examples, it was observed that declarative sentences end with a *full-stop* (.). The above demonstrations suggest that the word order in declarative sentences in Mambwe language is: S+V+O (SVO) for active sentences and OVS for passive sentences.

7.2.3. Exclamatory sentences in Mambwe language

The study established that Mambwe language has exclamatory sentences. These sentences are declarative in nature, but are used to express emotions and are understood in two ways.

7.2.3.1 Exclamatory in function in Mambwe language

The study revealed that Mambwe language has exclamatory in function sentences as in:

(239) a.	Sentence:	<i>Nta muweni cipuzi!</i>		
	Segments:	<i>Nta-</i>	<i>mu-u-en-i</i> [muweni]	<i>ci-puz-i</i> [cipuzi]
	Class pattern:	Neg. not	Cl.3 seen	Cl.7 pumpkin
	Gloss:	‘I have not seen the pumpkin(s)!’		
	Word order:	S+V+O (SVO)		
b.	Sentence:	<i>Na- lola tuukuuza!</i>		
	Segments:	<i>Na-</i>	<i>l-ol-a</i> [lola]	<i>tuu-kuuz-a</i> [tuukuuza]
	Class pattern:	Pron.I	Tens.(V) see	Cl.13a small rats
	Gloss:	‘I have seen small rats!’		
	Word order:	S+V+O (SVO)		

The analysis in the above sentences indicated that sentences which are ‘exclamatory in function’ end with an *exclamation mark*. It was suggested that sentences in this category, when the speaker is providing responses express strong emotions. Exclamatory sentences in function in Mambwe language have a Subject + Verb + Object (S+V+O or SVO) word order.

7.2.3.2. Exclamatory in form in Mambwe language

The study revealed that Mambwe language has exclamatory in form sentences. The sentences below demonstrate the word order in exclamatory in form sentences:

(240) a.	Sentence:	<i>Wevimatwi uukulu vino-wakwaata!</i>		
	Segments:	<i>U-e-vi-ma-tu-i</i> [we-vimatwi]	<i>u-kul-u</i> [ukulu]	<i>vi-no-u-a-ku-at-a</i> [vino-wakwaata]!
	Class pattern:	Cl.7 ears	Adj.big	Cl.7 agr.you have
	Gloss:	‘What big ears you have!’		
	Word order:	S+V (SV)		
b.	Sentence:	<i>Weviimaanso nukulu viino-wakwata!</i>		
	Segments:	<i>U-e-vii-maans-o</i> [we-viimaanso]	<i>nu-kul-a</i> [nukulu]	<i>vii-no-u-a-ku-at-a</i> [viino-wakwata]!
	Class pattern:	Cl.8a. eyes	Adj.big	Cl.8a agr.she has
	Gloss:	‘What big eyes she has!’		
	Word order:	S+V (SV)		
c.	Sentence:	<i>Weciimulomo ukwipa ciino-wakwata!</i>		
	Segments:	<i>U-e-cii-mulom-o</i> [weciimulomo]	<i>u-ku-ip-a</i> [ukwipa]	<i>cii-no-u-a-ku-at-a</i> [ciino-wakwata]!
	Class pattern:	Cl.7 huge mouth	Adj.ugly	Cl.7 agr.you have
	Gloss:	‘What a terrible mouth you have!’		
	Word order:	S+V (SV)		

In the above example demonstrations, it was observed that exclamatory in form sentences in Mambwe begin with the morpheme [we-] ‘what’ which is usually prefixed to the class prefix of the noun in question. These sentences are not interrogatives, but express strong emotions. Exclamatory in form sentences do not end with a question mark but an *exclamation mark*. The analysis further revealed that the word order is: Subject + Verb (S+V or SV).

7.2.4. Interrogative sentences

The study established that Mambwe language has interrogative sentences. The following are some of the question sentences in Mambwe language:

(241) a.	Sentence:	<i>Ukulonda amacungwa?</i>				
	Segments:	<i>U-ku-lond-a</i> [ukulonda]		<i>a-ma-cungu-a</i> [amacungwa]?		
	Class pattern:	A.V.would you		Cl.6 oranges		
	Gloss:	‘Would you like oranges?’				
	Word order:	S+V+O (SVO)				
b.	Sentence:	<i>Icaani cino cisama akaliila antu?</i>				
	Segments:	<i>I-ca-an-i</i> [icaani]	<i>c-in-o</i> [cino]	<i>ci-sam-a</i> [cisama]	<i>a-ka-liil-a</i> [akaliila]	<i>a-nt-u</i> [antu]?
	Class pattern:	Q.why	A.V does	Cl.7 lion	Cl.2 agr.eat	Cl.2 people
	Gloss:	‘Why does a lion eat people?’				
	Word order:	S+V+O (SVO)				

According to the above demonstrations, it can be argued that interrogative sentences are sentences which are in *question form*. When people want to ask questions, interrogative sentences are used. In this type of sentence, the subject ‘you’ is put within the verb phrase as in: Would *you* like tea? ← You would like tea

The analysis also revealed that questions usually have an auxiliary verb (helping verb) or another word before the subject. For instance: in the above sentence, *would* is working as a helping verb. The analysis further suggested that the word order of interrogative sentences in Mambwe language is: S+V+O (SVO).

7.3. The noun phrase in Mambwe language

In this study, it was established that Mambwe language forms the noun phrase by either combining the noun and determiner(s), the noun and modifier(s) and by combining the noun, followed by a determiner and finally a modifier. The study, therefore, identified noun phrase by determination and modification which are discussed in details in the subsequent sub-headings.

7.3.1. Noun Phrase by Determination in Mambwe language

According to Roberts (1992:34) *determination* in Bantu Languages comes after the noun. The study established that in Mambwe language, a noun phrase is headed by a noun. Determiners in Mambwe come after the noun and are in various forms. Some of the determiners are numerals, possessives such as ‘my’, articles such as ‘the’, and quantifiers such as ‘some’. For instance:

(242)	<i>Noun phrase:</i>	<i>Akazyana yaili</i>	
	<i>Segments:</i>	<i>A-kazi-an-a</i> [akazyana]	<i>i-a-il-i</i> [yaili]
	<i>Class pattern:</i>	Cl.2 girls (N)	Cl.2 agr. (Det.) two
	<i>Gloss:</i>	‘The two girls’	
	<i>Word order of NP:</i>	N+D (SD)	

Based on the above illustration, it can be argued that the noun *akazyana* ‘girls’ has two determiners in English, namely, ‘the’ and *yaili* ‘two’. The two determiners in English are equivalent to ‘one’ determiner in Mambwe which is numerical. Therefore, the word order involving the article and a numeral is: ND, where [N] is the subject and [D] is a determiner

The study revealed that Mambwe does not use the article ‘the’ in the noun phrase as in:

(243)	Noun phrase:	<i>Akazyana yaili</i>	
	Segments:	<i>A-kazi-an-a</i> [akazyana]	<i>i-a-il-i</i> [yaili]
	Class pattern:	Cl.2 girls (N)	Cl.2 agr. (Det) two
	Gloss:	‘Two girls’	
	Word order of NP:	N+D (ND)	

With reference to the above example, *akazyana* ‘girls’ has one determiner *yaili* ‘two’. It can be argued that the number of determiners in the noun phrase in the English sentence construction does not match with those in Mambwe language because the formation in examples (242) and (243) are the same. Based on the above two given demonstrations, it was established that both noun phrases in Mambwe language have one determiner *yaili* ‘two’ while sentence (242) has two determiners in the English construction.

In view of Crystal (2003: 222), the study revealed that while *determination* in the noun phrase of English language comes before the noun, the aforesaid happens in the controversy in Mambwe language as shown below:

(244)	Noun phrase:	<i>Akazyana yaili</i>	
	Segments:	<i>A-kazi-an-a</i> [akazyana]	<i>i-a-il-i</i> [yaili]
	Class pattern:	Cl.2 girls (N)	Cl.2 agr. (Det). Two
	Gloss:	‘The two girls’	
	Word order of NP:	N+D (ND)	

In the above demonstration in Mambwe language, a noun came before the determiner. In the same example, the determiner is *yaili* ‘two’ which is a numeral. It was observed that the noun and the determiner in the above expression or demonstration form the noun phrase.

The study established that determination in the noun phrase in Mambwe language takes the form of the *possessive* pronoun *wane* ‘my’ as shown in the example demonstration below:

(245)	Noun phrase:	<i>Umuto wane</i>	
	Segments:	<i>U-mut-o</i> [umuto]	<i>u-an-e</i> [wane]
	Class pattern:	Cl.1 young brother/sister (N)	Poss.Pro. my (Det.)
	Gloss:	‘My young brother/sister’	
	Word order of NP:	N+D (ND)	

In the above illustration, *wane* ‘my’ is the possessive pronoun which in this case plays the role of a determiner and is preceded by *umuto* ‘young brother/sister’ which is a noun. The determiner ‘my’ is used when the speaker is related to the noun being referred to as demonstrated in example (245).

Determination in the noun phrase in some instances takes the *definite article* ‘the’. Below is an example demonstration to illustrate the above point:

(246)	Noun phrase:	<i>Umulumendo</i>
	Segments:	<i>U-mu-lumend-o</i> [umulumendo]
	Class pattern:	Cl.1 boy
	Gloss:	‘Boy’
	Word order of NP:	N

In English language, there is need for the above phrase to start with the determiner ‘the’ to be grammatically correct. ‘The’ as a determiner carries meaning in the noun phrases that are in the English sentence constructions because without it, the sentence becomes grammatically wrong.

In the English sentence construction, the determiner ‘the’ qualifies the noun ‘boy’ both as a noun and a noun phrase and is grammatically correct as shown below:

(247)	Noun phrase:	<i>Umulumendo</i>
	Segments:	<i>U-mu-lumend-o</i> [umulumendo]
	Class pattern:	Cl.1 boy (N)
	Gloss:	‘The boy’
	Word order of NP:	N

To the contrary, the article ‘the’ when it assumes the role of a determiner has no significance in the noun phrase in Mambwe language.

The study suggested that the absence of the determiner ‘the’ in Mambwe makes the noun function both as a noun and as a noun phrase as shown below:

(248)	Noun phrase:	<i>Alumendo yatatu</i>	
	Segments:	<i>A-lumend-o</i> [alumendo]	<i>i-a-tat-u</i> [yatatu]
	Class pattern:	Cl.2 boys (N)	Cl.2 agr. (Det.) three
	Gloss:	‘The three boys’	
	Word order of NP:	N+D (ND)	

In the example above, ‘the’ as a determiner in Mambwe language has no equivalence and is usually ignored. Additionally, two determiners in English language are regarded as one determiner in Mambwe language and are represented by the numeral *yatatu* ‘three’ as in examples (247) and (248) above.

The other type of determination in a noun phrase in Mambwe language is *yamwi* ‘some’. Some as a determiner is used to express part of the required quantity or number. ‘Some’ means not all or everything. The determiner ‘some’ is exemplified in Mambwe language as shown below:

(249)	Noun phrase:	Asambi yamwi	
	Segments:	<i>A-samb-i</i> [asambi]	<i>i-a-mu-i</i> [yamwi]
	Class pattern:	Cl.2 pupils (N)	Cl.2 agr.(Det.) some
	Gloss:	‘Some pupils’	
	Word order of NP:	N+D (ND)	

In the above illustration, the noun phrase is *asambi yamwi* ‘some pupils’ where *yamwi* ‘some’ as a determiner implies that not all the pupils did the activity. It was established that when ‘some’ is used as a determiner in the noun phrase, it has its equivalence in Mambwe language as shown in example (248) above. The analysis further suggested that the word order is N+D.

7.3.2. Noun phrase by modification in Mambwe language

Modification exists in Mambwe language in the noun phrase. Modification is done using modifiers. Modifiers include adjectives, demonstratives and adverbs (Hornby, 2005: 946). According to Mann (1999:19), there are very few adjectives in Bantu languages. The function of adjectives in English sentences is performed by participles in Mambwe language and sometimes by nouns with a possessive pre-prefix such as ‘u’ in *uwamanyikwa* ‘a famous person’. Piere (1973:39) agrees with Mann by stating that, “modifiers are classes of grammatical categories and patterns of agreement, marked in Bantu languages by characteristic prefixes.”

Referring to Mann’s work (1999), it was established that Mambwe language has two kinds of adjectives which work as modifiers. The first category of adjectives is ‘*like-suma*’ as in:

(250)	Noun phrase:	Yaisi yakalipa	
	Segments:	<i>I-a-is-i</i> [yaisi]	<i>i-a-kalip-a</i> [yakalipa]
	Class pattern:	Cl.2 father (N)	Cl.2agr.(Adj.) fierce
	Gloss:	‘The fierce father’	
	Word order of NP:	N+Adj	

(251)	<i>Noun phrase:</i>	<i>Icifula icipya</i>		
	<i>Segments:</i>	<i>I-ci-ful-a</i> [icifula]		<i>i-ci-pi-a</i> [icipya]
	<i>Class pattern:</i>	Cl.7 well (N)		Cl.7 agr. (Adj.) new
	<i>Gloss:</i>	‘The new well’		
	<i>Word order of NP:</i>	N+Adj		
(252)	<i>Noun phrase:</i>	<i>Umulumendo umwance</i>		
	<i>Segments:</i>	<i>U-mu-lumend-o</i> [umulumendo]		<i>u-mu-anc-e</i> [umwance]
	<i>Class pattern:</i>	Cl.1 boy (N)		Cl.1 agr. (Adj.) young
	<i>Gloss:</i>	‘The young boy’		
	<i>Word order of NP:</i>	N+Adj		
(253)	<i>Noun phrase:</i>	<i>Icimuti cii icikulu/icikalamba</i>		
	<i>Segments:</i>	<i>I-ci-mut-i</i> [icimuti]	<i>cii</i>	<i>i-ci-kul-u</i> [icikulu]
	<i>Class pattern:</i>	Cl.7 tree	Demo. this	Cl.7 agr. (Adj.) big
	<i>Gloss:</i>	‘This big tree’		
	<i>Word order of NP:</i>	N+Demo.+Adj		
(254)	<i>Noun phrase:</i>	<i>Umulumendo umwipe</i>		
	<i>Segments:</i>	<i>U-mu-lumend-o</i> [umulumendo]		<i>u-mu-ip-e</i> [umwipe]
	<i>Class pattern:</i>	Cl.1 boy		Cl.1 agr.(Adj.) ugly
	<i>Gloss:</i>	‘The ugly boy’		
	<i>Word order of NP:</i>	N+Adj		

It was observed that Mambwe language uses the adjective *like-suma* to modify nouns. The – *suma* ‘good’ adjectives in most cases behave like nouns. These adjectives have stable forms and full and short unstable forms and they fit into the same tone-sets as nouns.

The analysis further revealed that adjectives *like-suma* ‘good’ work as modifiers in Mambwe as shown in example (250) *-kalipa* ‘fierce, vicious, angry’; example (251) *-pya* ‘new’; example (252) *-nce* ‘small’; example (253) *-kalamba /-kulu* ‘big’; and *-ipe* ‘bad’ as demonstrated in example (254).

The second category of adjectives used in the noun phrase in Mambwe language is ‘*like-uze*’ as in *muuze* ‘other, another’. The noun phrase is demonstrated in the example below:

(255)	Noun phrase:	<i>Umoonsi muuze</i>	
	Segments:	<i>U-mu-ons-i</i> [umoonsi]	<i>mu-uz-e</i> [muuze]
	Class pattern:	Cl.1 man (N)	Cl.3 another (Mod.)
	Gloss:	‘Another man’	
	Word order of NP:	N+M (NM)	

The analysis in the above table indicated that the word/element [-uze] ‘other or another’ is used to modify the nouns as shown in example (255). Adjectives *like -uze* have one stable form. This category of adjectives has a special stable form more like that of nouns which they modify in the noun phrase. The word order is N+M (NM).

The study established that there are other categories of adjectives in Mambwe language which are used in the noun phrase apart from the classified ones discussed above as demonstrated in examples below:

(256)	Noun phrase:	<i>Alumendo yoonsi</i>	
	Segments:	<i>A-lumend-o</i> [ulumendo]	<i>i-o ons-i</i> [yoonsi]
	Class pattern:	Cl.2 boys	(Adj.) all
	Gloss:	‘All the boys’	
	Word order (NP):	N+Adj	

(257)	<i>Noun phrase:</i>	<i>Kaasimbwa kene kaakalipa</i>		
	<i>Segments:</i>	<i>Kaa-simbu-a</i> [kaasimbwa]	<i>ke-en-e</i> [keene]	<i>kaa-kalip-a</i> [kaakalipa]
	<i>Class pattern:</i>	Cl.12a small dog	Adj. as for	Cl.12a agr.(Adj.) fierce
	<i>Gloss:</i>	‘As for the small dog, it is fierce’		
	<i>Word order (NP):</i>	N+Adj+Adj		
(258)	<i>Noun phrase:</i>	<i>Alumendo yaanga?</i>		
	<i>Segments:</i>	<i>A-lumend-o</i> [alumendo]	<i>yaanga?</i> [i-aang-a]	
	<i>Class pattern:</i>	Cl.2 boys	Cl.2 agr (Adj.) how many	
	<i>Gloss:</i>	‘How many boys?’		
	<i>Word order (NP):</i>	N+Adj		
(259)	<i>Noun phrase:</i>	<i>Iwakoma ing’ombe wenga</i>		
	<i>Segments:</i>	<i>I-u-a-kom-a</i> [iwakoma]	<i>i-ng’-omb-e</i> [ing’ombe]	<i>u-e-ng-a</i> [wenga]
	<i>Class pattern:</i>	Cl.9 agr. Slaughtered	Cl.9 cow	Adj.alone
	<i>Gloss:</i>	‘He/she slaughtered the cow alone ’		
	<i>Word order (NP):</i>	N+Adj		

The analysis of the above noun phrase in example (256) is formed using the modifying element [-onsi] ‘every/all’ and in example (257) using the element [-ene] ‘as for the (person/thing)’. It was further observed that in example (258), the element [-nga] ‘how many?’ and in example (259) -wenga ‘alone, oneself’ were used to form the noun phrase.

The study established that Mambwe language has two demonstratives. Mann (1999:20) identified two demonstratives in Bantu languages which work as adjectives to modify the noun to function as a noun phrase as illustrated below:

(260)	Noun phrase:	<i>Pa ng'anda pano</i>		
	Segments:	<i>Pa</i>	<i>ng'-and-a</i> [ng'anda]	<i>p-an-o</i> [pano]
	Class pattern:	Cl.16 at	house (N)	Cl.16 agr. (Demo.) this
	Gloss:	'At this home/house'		
	Word order of NP:	N+Demo.		

The analysis of the above table shows that the first demonstrative is *-no* 'this' as in *pano* 'this' in example (260) is used to express the nearness of what is being talked about to the speaker. The above demonstrative in Mambwe language works in the same way adjectives *like-uze* 'other, another' function. The word order is N+Demo.

The second category of demonstratives which function in the same way adjectives *like-uze* 'other, another' works in Mambwe language are shown below:

(261)	Noun phrase:	<i>Kaasimbwa kaaka kaakalipa</i>		
	Segments:	<i>Kaa-siimbu-a</i> [kaasimbwa]	<i>kaa-k-a</i> [kaaka]	<i>kaa-kalip-a</i> [kaakalipa]
	Class pattern:	Cl.12a small dog	Cl.12a agr.(that)	Cl.12a agr.(Adj) fierce
	Gloss:	'That small fierce dog'		
	Word order (NP):	N+Dem+Adj (NDemAdj)		

The analysis of the above example suggested that the demonstratives [*-iya* and *-kaaka*] 'that' are used as modifiers to refer to things which are at a distance from both the speaker and the listener. It was also observed that the demonstrative [*kaaka*] 'that' agrees with the diminutive [*kaasimbwa*.Cl.12a] 'small dog'. The word order is N+Dem+Adj (NDemAdj).

7.3.3. Noun phrase by determination and modification in Mambwe language

The study revealed that determiners in Mambwe language come before the modifier. In this case, in the noun phrase, the noun takes the first place, followed by the determiner and then a modifier as illustrated in:

(262)	Noun phrase:	<i>Alumendo yatatu asuma</i>		
	Segments:	<i>A-lumend-o</i> [alumendo]	<i>i-a-tat-u</i> [yatatu]	<i>a-sum-a</i> [asuma]
	Class pattern:	Cl.2 boys	Det. Three	Cl.2 agr. (Mod.) handsome
	Gloss:	'Three handsome boys'		
	Word order (NP):	N+D+M (NDM)		

In the above noun phrase, *asuma* 'handsome' as a modifier in Mambwe language comes after *yatatu* 'three' which is a determiner, while in the English noun phrase, the modifier comes before the noun 'boys' and after the determiner 'three', therefore, the word order is [N+D+M].

The study suggested that numbers in Mambwe language also function as modifiers in the noun phrase as demonstrated below:

(263)	Noun phrase:	<i>Inkoko ikumi na yonga</i>			
	Segments:	<i>I-n-kok-o</i> [inkoko]	<i>i-kum-i</i> [ikumi]	<i>Na</i>	<i>i-ong-a</i> [yonga]
	Class pattern:	Cl.10 chickens	Det.ten	Conj. and	Adj. one
	Gloss:	'Eleven chickens'			
	Word order of NP:	N+D+Adj (NDAdj)			

In the above demonstration, *yonga* 'one' is the adjective which agrees with *ikumi* 'ten'. *Yonga* 'one' also agrees with *inkoko* 'chickens' which is the topic of discussion. It was also observed that numbers up to five are adjectives, and follow the words they agree with. It was further noted

that in Mambwe language, numbers above five also follow words they agree with though they fall under the category of nouns and agree with what precedes them. The word order in the noun phrase which has both a determiner and an adjective is N+D+Adj.

7.4. The verb phrase in Mambwe language

The study revealed that Mambwe language has a verb phrase. A verb phrase is a combination of the verb and other constituents as can be seen in the examples below:

(264)	Verb phrase:	<i>Ukulima</i>	
	Segments:	<i>U-kulim-a</i> [ukulima]	
	Class pattern:	cultivating (V)	
	Gloss:	‘cultivating’	
	Word order (VP):	V (V)	
(265)	Verb phrase:	<i>Watalya</i>	
	Segments:	<i>Wat-</i>	<i>-ali-a</i> [alya]
	Class pattern:	Has (finite verb)	Eaten (V)
	Gloss:	‘Has eaten’	
	Word order (VP):	Fin.Verb+V	
(266)	Verb phrase:	<i>Akulya</i>	
	Segments:	<i>A-[a]</i>	<i>-ku-li-a</i> [kulya]
	Class pattern:	is (Aux)	eating (MV)
	Gloss:	‘is eating’	
	Word order (VP):	Aux+MV (AuxMV)	

(267)	Verb phrase:	<i>Waile umukuswela</i>	
	Segments:	<i>U-a-il-e</i> [waile]	<i>u-mu-kuswel-a</i> [umukuswela]
	Class pattern:	went (V)	fishing(V)
	Gloss:	‘went fishing’	
	Word order (VP):	V+V(VV)	

Based on the examples above, it can be suggested that Mambwe language has four major categories of the word order in the verb phrase. In example (264) above, the word order in the verb phrase shows a Verb only (V). In example (265), it is observed that the word order of the verb phrase is a finite verb followed by a Verb (Fin.VV). The third word order which has been established in example (266) above is the one which starts with an Auxiliary verb and is followed by the Main Verb (AuxMV). The study also established that some verb phrases have the word order starting with a Verb followed by another Verb as observed in example (267) above. It can, therefore be concluded that the word order in the noun phrase of Mambwe language is not fixed. Therefore, a verb phrase in Mambwe language is always headed by the main verb.

7.5. Summary of the chapter

The study established has established Subject + Verb + Object (SVO), Verb + Subject +Object (VSO) and Subject + Verb (SV) word order in active sentences. In the passive sentence construction, the language allows Object+Verb +Subject (OVS) word order. The study also revealed that Mambwe language has word order for the noun phrase can be summarized as follows: N, ND, NAdj, NAdjAdj, NDemo, NDemoAdj, NM and NDM. The word order in the Verb phrase includes some of the following: V, Fin.VV, AuxMV and VV.

The next chapter presents the conclusion of the study and the recommendations for further research on Mambwe language.

CHAPTER EIGHT

CONCLUSION AND RECOMMENDATIONS

8.1. Introduction

The previous chapter established the word order of the basic four simple sentences and the noun phrase in Mambwe language. The study also revealed that the language under study has determination and modification in the noun phrase.

This chapter presents the conclusion on '*Towards Writing a Comprehensive Grammar of the Mambwe Language.*' The chapter starts with the specific objectives that the study had set to address. The objectives are followed by a summary of the findings. Thereafter, the conclusion is made based on the findings of the study in relation to the research objectives. The study ends with some suggested recommendations for further research on the Mambwe language.

8.2. The research objectives

The research objectives of the study were presented in chapter one. The main aim of the study was to provide a grammatical analysis of Mambwe language in terms of some aspects of phonology, morphology and syntax. The study established a comprehensive grammar of the Mambwe language. In order to analyse and establish a comprehensive grammar, the following were the specific objectives of the study:

- i. To describe the sound system of Mambwe language;
- ii. To describe the nominal and verbal morphology of Mambwe language; and
- iii. To establish some aspects of syntax of Mambwe language.

The above listed research objectives were guided by the conceptual and theoretical framework. The study was descriptive in nature, hence adopted an eclectic and descriptive approach. In this case, concepts were lexicalised and applied in the study (Lehmann, 2002). In the context of conceptual framework, the study was anchored on the following terminologies; the principle of grammatisation and the development of concrete meanings of particular words (Lehmann, 2002 and Ogechi, 2005); and the formation of new lexemes from the existing ones (Brinton and traugott, 2005) using conversion (Nkolola, 2010), borrowing (Delabunty and Garvey, 2004), zero

modification (Richards and Platt, 1990), and compounding (Trask, 1993; Fromkin, 1993; Bloomfield, 1933 and Allen, 1978). In respect of theoretical perspectives, the study adopted the descriptive approach because it uses words and sentential expressions to explain the concepts when documenting the grammar of a language, which in turn, contributes to documentary linguistics (Mutch, 2005). Furthermore, the linguistic theory was applied which combined the three linguistic forms at the centre of the study, namely: sound system called phonology, word formation called morphology and formation of sentences referred to as syntax (Sapir, 1921 and Bloomfield, 1933). In addition to conceptual and theoretical perspectives, the analysis of the linguistic experiences was subjected to meaning based on the researcher's perception and research objectives (Merriam, 1998).

8.3. Summary of research findings

It is important to start by stating that the findings were presented according to the order of the research objectives in chapter one of this study. Therefore, chapter five contains data on some aspects of phonology, chapter six has some aspects of morphology, chapter seven is a continuation of other aspects of morphology, chapter eight contains some aspects of syntax, and chapter nine closes the study with conclusion and recommendations for further research.

Chapter five has dealt with the first (i) objective of the study. The chapter contains data on some aspects of phonology. The study revealed that Mambwe language has an established sound system with two phonemes which include consonants and vowels. The language has *eighteen* permissible consonants and *four* non-permissible consonants, *twelve* permissible voiced consonants and *six* unvoiced permissible consonants. It has one, two and three permissible consonant combinations. Mambwe has *five* core *vowel* sound system and *two semi-vowels* [w] and [y] respectively. The language has consonantal and semi-vowel segments. Mambwe language expresses distinctiveness of sound using consonants and vowels and has three nasal consonants (complexes) namely; [m], [n] and [ng' or ŋ] which combine with permissible consonants. The chapter also highlighted some prominent phonological processes in Mambwe language which include; gliding, vowel fusion or coalescence, vowel length and tone. The chapter closed with syllabification, syllable structure and syllable patterns.

Chapter six has dealt with the second (ii) objective. It accounted for some aspects of morphology in Mambwe language. The language has two simple noun structures, namely, prefix + root and augment + prefix + root. The chapter described the nominal class system. Contrary to the nine noun classes of Mambwe language by Halemba (2007), this study established and analysed eighteen noun classes, just as outlined by Mann (1999) when referring to Bemba. The chapter discussed inflectional morphology which highlighted word formation processes in terms of prefixation, suffixation and zero modification. The chapter further discussed some aspects of lexical morphology which include; borrowing and compounding, and some categories of nouns such as deverbal, diminutives, honorifics, augmentatives and pejoratives were described.

Chapter seven has dealt with objective (ii) of the study. It has dealt with verbal morphology. The chapter has further accounted for the verbal structure. The following verbal structure aspects have been discussed in this chapter: tense, mood and aspect verbs, verb extensions and verbal complexes. The verb extensions discussed are; passive, reversive, reduplicative, applicative, reciprocative, stative, perfective, intensive, causative, frequentative and reflexive. The chapter closed with the morphophonological processes.

Chapter eight has dealt with the third (iii) objective. The chapter contains data on some aspects of syntax. It accounted for the word order of simple sentences, the noun and the verb phrase in Mambwe language. The simple sentences discussed include; the imperative, declarative, interrogative, exclamatory in form and exclamatory in function sentences. In addition, the noun phrase by determination and modification has been addressed in this chapter. Finally, the chapter addressed the word order in the verb phrase.

8.4. Conclusion

A comprehensive grammar of the Mambwe language which is classified as M15 has been established. The study established that Mambwe language has a sound system with *eighteen* permissible consonants, *four* non-permissible consonants, *twelve* permissible voiced consonants and *six* unvoiced permissible consonants, *five* vowels, *two* semi-vowels and *three* nasal consonants, namely, [m], [n] and [ng' or ŋ]. Mambwe expresses distinctiveness of sound using consonants and vowels, has phonological processes and an established common CV syllable structure like other Bantu languages. Secondly, the language has a complex noun class system

which involves signification of pluralisation patterns, agreement marking and patterns with regard to pronominal reference. It has a nominal class system like other Bantu languages with eighteen noun classes as well as a verbal structure which is used to express Tense Aspect and Mood. It has habitual and progressive verbs in the past, present and future tenses. Mambwe has processes of word formation which include prefixation, suffixation, compounding, zero modification and borrowing. Additionally, word complexes exist in verbs and nouns. Moreover, the language has morphophonological processes. Thirdly, Mambwe language has SVO, VSO, OVS and SV word order in simple sentences. Furthermore, the noun phrase is formed by combining the noun with any of the following: the determiner, a modifier, an adjective and a demonstrative. Finally, a verb phrase can be formed by combining a verb with any of the following; a preposition, a noun, an auxiliary verb, another verb, an adjective or an adverb.

8.5. Recommendations

Based on the conclusion of the study, the research has established a comprehensive grammar of the Mambwe language. This, therefore, suggests that further research is required to enrich the language's grammatical material. For further study, the following are the suggested topics:

- i. Syntactic study of Mambwe language;
- ii. The grammar of idioms in Mambwe language;
- iii. The pragmatic significance of *Umutomolo* 'tasting of first fruits' among Mambwes;
- iv. A linguistic study of loan words in Mambwe language;
- v. The significance of proverbs in Mambwe language;
- vi. Linguistic variations of Mambwe, Lungu and Namwanga languages;
- vii. A sociolinguistic study of Kasesha boarder post in Mbala district;
- viii. A study of verbal complexes in Mambwe language;
- ix. A study of nasal complexes in Mambwe language.
- x. A morphosyntactic study of compound nouns in Mambwe language;
- xi. A morphosemantic study of compound words in Mambwe language;
- xii. A stylistic study of Mambwe language;
- xiii. The effects of translation from English to Mambwe language;
- xiv. A semantic study of Mambwe language; and
- xv. Tonology of Mambwe language.

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APPENDICES

APPENDIX: A

SOME EXAMPLES OF COMPOUND WORDS IN MAMBWE LANGUAGE

S/N	COMPOUND NOUN	TYPE	LITERAL MEANING	DEEPER MEANING
01	Icaka cipya	Spaced	Year new	New year
02	Umuvyala muzo	Spaced	Child of your aunt/uncle	Cousin
03	Intuka izi	Spaced	Inflammation on foot	Foot sores
04	Sikulu muntu	Spaced	One's grandparent	Grand father
05	Umwikala muzi	Spaced	One who lives in the village	Villager
06	Cela mushuke	Spaced	Metal which is lucky	Hard lucky/by chance
07	Icipangano cipya	Spaced	Agreement which is new	New Testament
08	Taata mukulu	Spaced	A father who is old	A male senior citizen
09	Icipangano campiti	Spaced	Agreement which is old	Old Testament
10	Cimila nsima	Spaced	One who swallow nsima	Trouble maker
11	Icilundu musi	Spaced	Movement of the hill	Earthquake/tremor
12	Nyoko-senge	hyphenated	Sister of one's father	Aunt
13	Nyina-kulu	hyphenated	Mother of one's mother	Grandmother
14	Monsi mukulu	Spaced	Man who is old enough'	Old man
15	Simbwa mukali	Spaced	Fierce dog	Aggressiveness
16	Nyoko-kulu	hyphenated	Mother of your mother'	Grandmother
17	So-kulu	hyphenated	Father of one's father'	Grandfather
18	Iciminsi minsi	Spaced	Christ mass	Christmas
19	Umweene Mfwambo	Spaced	Owner of Mfwambo area	Chief Mfwambo
20	Namafwa	Closed	Owner of vegetation	Green snake
21	Umweene Nsokolo	Spaced	Owner of Nsokolo area	Chief Nsokolo
22	Umweene Mwamba	Spaced	Owner of Mwamba area	Chief Mwamba

23	Kwimba kati	Spaced	To dig roots	Using herbs/herbalist
24	Ikunta nsoce	Spaced	Shaker of thorny grass	The last rains
25	Ikanda ulamba	Spaced	To soil animals	The last rains
26	Citunkamavi	Closed	pusher of feaces	Feace pusher
27	Kaluku luku	Spaced	Bird which drops off feathers	Peacork

APPENDIX: B

SOME EXAMPLES OF COUNTABLE NOUNS IN MAMBWE LANGUAGE

S/N	SINGULAR NOUN	GLOSS	PLURAL NOUN	GLOSS
01	Ikutwi	Ear	Amatwi	Ears
02	Ikasa	Hand	Amakasa	Hands
03	Umutwe	Head	Imitwe	Heads
04	Umuzwa	Cooking stick	Imizwa	Cooking sticks
05	Mukolwe	Cock	Yamukolwe	Cocks
06	Ise	Hoe	Amase	Hoes
07	Iyaayi	An egg	Amayaayi	Eggs
08	Ikuulu	Leg	Amakuulu	Legs
09	Ulupamba	Thigh	Impamba	Thighs
10	Ulutungu	Hip	Intungu	Hips
11	Iiinso	An eye	Amaanso	Eyes
12	Akakando	A toe	Utukando	Toes
13	Umunwe	Finger	Iminwe	Fingers
14	Ifwa	Leaf	Amafwa	Leaves
15	Isumo	Spear	Amasumo	Spears
16	Mususwe	Lizard	Yamususwe	Lizards
17	Lunzi	A fly	Yalunzi	Flies
18	Iciye	Shoulder	Iviye	Shoulders

APPENDIX: C

SOME EXAMPLES OF ABSTRACT NOUNS IN MAMBWE LANGUAGE

S/N	ABSTRACT NOUN	GLOSS
01	Uusuma	Beauty
02	Uuwana	Childhood
03	Uloozo	Jealous
04	Wukaitemwe	Selfishness
05	Ukutonta	Tiredness
06	Ukusoka	Anger
07	Insansa, Uluzango	Happiness
08	Uukali	Aggressiveness, harshness
09	Ulupato	Hatred
10	Uluseko	Laughter
11	Ulwimbo	Song
12	Imfwa	Death
13	Uwumi	Life
14	Utailo	Hope
15	Icicetekelo	Faith
16	Iciiya	Forgetfulness
17	Ukuicefya, Ukutontela	Humility
18	Uwulanda, Ukukungumala	Sorrow

APPENDIX: D

SOME EXAMPLES OF DIMINUTIVES IN MAMBWE LANGUAGE

S/N	NOUN	GLOSS	DIMINUTIVE	GLOSS
01	Umunsi	Pestle	(A)kamunsi	‘Small pestle’
02	Indowo	Bucket	(A)kandowo	‘Small bucket’
03	Iswelo	Fishing hook	(A)kaliswelo	Small fishing hook
04	Iinda	Pregnancy	(A)kaanda	‘Small pregnancy’
05	Ing’anda	House	(A)kang’anda	Small house
06	Umoonsi	Man	(A)koonsi	Small man
07	Umuza	Wind	(A)kamuza	Small, weak wind
08	Pwela	Mouse	Kapwela	Small mouse
09	Kuuza	Rat	Kakuuza	Small rat
10	Nyau	Cat	Kanyau	Small cat
11	Insalu	Piece of cloth	Akasalu	Small piece of cloth
12	Cipambasi	Bull	Kacipambasi	Small bull
13	Nankoko	Hen	Kanankoko	Small hen
14	Cisama	Lion	Kacisama	Small lion
15	Umulyango	Door way	Akamulyango	Small door way
16	Uluunda	Belly	Akaluunda	Small belly
17	Tolozi	A pair of trousers	Katolozi	Small pair of trousers
18	Ulumbao	Wood, plank	Akalumbao	Small wood, plank

APPENDIX: E

SOME EXAMPLES OF DEVERBATIVES IN MAMBWE LANGUAGE

S/N	VERB	GLOSS	DEVERBATIVE(NOUN)	GLOSS
01	Ukulima	Farming, cultivating	Umulimi	Farmer
02	Ukuteya	Playing	Kateya	Player
03	Ukusambilizya	Teaching	Kasambilizya, mwalimu	Teacher
04	Ukukoma	To kill	Kakoma	Killer
05	Ukuluunga	Hunting	Kaluunga, Umuluunzi	Hunter
06	Ukutuunda	To urinate	Amatuunzi	Urine
07	Ukupeela	To give	Kapeela	Giver
09	Ukuomba	To work	Umuoonvi	Worker
10	Ukuvimba	to swell	Icivimbe	swollen part
11	Ukulemala	To be lame	Icilema	Lame person
12	Ukuvyaala	To bear a child/children	Umuvyaaazi	Parent
13	Uwucende	Adultery	Umucende	Adulterer
14	Ukutwala	To marry	Utwazi	Marriage
15	Ukuloonda	To guard	Maloonda	A guard
16	Ukucema	To shepard	Kacema	Shepard
17	Ukulya	To eat	Kalya	Eater
18	Ukupata	To hate something	Kapata	Hater

APPENDIX: F

TERMS OF SOME COMMON WILD ANIMALS IN MAMBWE LANGUAGE

SN	ITEM IN ENGLISH	EQUIVALENCE IN MAMBWE
01	Lion	Cisama
02	Rhino	Cipembele
03	Elephant	Inzovu
04	Antelope	Mpombo
05	Wathog	Munjili
06	Hare	Kalulu wa mumpanga
07	Civet-cat	Zumbwe
08	Monkey	Kolwe
09	Leopard	Imbwili
10	Mole	Tunko
11	Mouse	Pwela
12	Buffalo	Imbo
13	Wild dog	Cimbwi
14	Hippopotomous	Civu
15	Crocodile	Ing'weena

APPENDIX: G

SOME HOUSE HOLD ITEMS IN MAMBWE LANGUAGE

SN	ITEM IN ENGLISH	EQUIVALENCE IN MAMBWE
01	Clay pot	Inyungu
02	Key	Amaki, Imfungulo, Kii
03	Relish	Icifwa
04	Bread	Umukaate
05	Milk	Umukaka
06	Peanut butter	Icinkonko
07	Cooking oil	Amafuta yakwelekela
08	Fireplace	Pipembo, Piziko
09	Bottle	Iwotolo
10	Fire wood	Inkwi
11	cup	Ulusembo, Kaapu
12	Umbrella	Umwanyuli
13	Fire	Umooto
14	Needle	Insindano
15	Toothbrush	Umuswaki, Imiswaki (pl)
16	Razor blade	Akalwembe, Akanezala, Utunezala (pl)
17	Bicycle	Injinga
18	Syringe	Icituwo, Ivituwo (pl)
19	Sitting room	Umuputule wakwizizyamo, pa siiti, piwalazya
20	Soft broom	Icisanzi
21	Honey	Uci
22	Belt	Umusipi, Imisipi (pl)
23	Bow and arrow	Ulapwa
24	Shoes	Insapato
25	Hammer	Inondo
26	Ring	Ininda minwe

27	Kitchen	Umuputule wakwelekelamo
28	Brazier	Imbewula
29	Bamboo basket	Umuse wansengu, Imise ya nsengu (pl)
30	Water	Amanzi
31	Hard broom	Umukuwo , imikuwo (pl)
32	Stool	Aka/Icilimba, Utu/Ivilimba (pl)
33	Mat made from reeds	Icitala ca matete, Ivitala vya matete (pl)
34	Basket made from reeds	Umuse wa matete, Imise ya matete (pl)
35	Sickle	Icikwakwa ca kwipila isote
36	Slasher	Impupo
37	Winnowing basket	Ulupe, impe (pl)
38	Calabash	Inkolo
39	Cooking stick	Umuzwa, Imizwa (pl)
40	Salt	Umusilya
41	Chair	Umupando, imipando (pl)
42	Mirror	Icilola, Ivilola (pl)
43	Egg	Iyayi, Amayayi (pl)
44	Cassava powder	Uusu wakwe kalundwe
45	Maize meal powder	Uusu wakwe cisaka
46	Radio	Akalimba, icilimba
47	Room	Umuputule, Imiputule (pl)
48	Door	Iciseko/Icisaasa, Iviseko/Ivisaasa (pl)
49	Clay pot for storing water	Insembo
50	pot	Impooto
51	Axe	Impasa
52	Doorway	Umulyango, Imilyango (pl)
53	Bed	Apakulala, Pabedi
54	knife	Umupeni, Imipeni (pl)
55	Pestle	Umuunsi, Imiinsi (pl)
56	Mortal for pounding	Iciina, Iviina (pl)

57	Spear	Isumo, Amasumo (pl)
58	Plate	Imbale
59	Sieve	Ulunyungo, Inyungo (pl)
60	Pillow	Umusamilo, Imisamilo (pl)

APPENDIX: H

SOME DOMESTICATED ANIMALS AND BIRDS IN MAMBWE LANGUAGE

SN	ITEM IN ENGLISH	EQUIVALENCE IN MAMBWE
01	Dog	Simbwa , Ya simbwa (pl)
02	Goat	Kapwata/ Imbuzi, Yakapwata/Imbuzi (pl)
03	Cat	Nyau , Yanyau (pl)
04	Sheep	Imfweele
05	Duck	Imbata
06	Guinea fowl	Ikanga, Amakanga (pl)
07	Rabit	Kalulu wa kuteeka, Yakalulu yakuteeka (pl)
08	Chicken	Inkoko
09	Hen	Nankoko, Yanankoko(pl)
10	Cock	Mukolwe, Yamukolwe (pl)
11	Cattle	Ing'ombe
12	Pig	Kapoli, Yakapoli (pl)
13	Dove	Inkunda
14	Bull	Cipambasi, Yacipambasi (pl)
15	Castrated bull	Masaye, Yamasaye (pl)
16	Donkey	Punda, Yapunda (pl)
17	John white	Simbiliki, Yasimbiliki (pl)
18	Peacork	Kaluku luku

APPENDIX: I

SOME HUMAN BODY PARTS-RELATED TERMS IN MAMBWE LANGUAGE

SN	ITEM IN ENGLISH	EQUIVALENCE IN MAMBWE
01	Lip	Umulomo, Imilomo (pl)
02	Tongue	Ululimi, Indimi (pl)
03	Tooth	Iiino, Amiino (pl)
04	Skin	Inkaanda
05	Neck	Insingo
06	Breast	Iyele, Amayale (pl)
07	Nose	Impuno
08	Pot belly	Ulunda, Amalunda (pl)
09	Hair	Inyele
10	Head	Umutwe, Imitwe (pl)
11	Face	Icinso, Ivinso (pl)
12	Chin	Icilezu
13	Mouth	Akanwa, Utunwa (pl)
14	Chest	Icisawo, Ivisawo (pl)
15	Ear	Ukutwi, Amatwi (pl)
16	Eye	Iiinso, Amaanso (pl)
17	Back of the head	Inkoto
18	Blind	Impafu
19	Thumb	Icala, Ivyala (pl)
20	Finger	Umunwe, Iminwe (pl)
21	Beards	Ivilezu
22	Palm	Icizanza, Ivizanza (pl)
23	Heel	Akatende, Ututende (pl)
24	Stomach	Muunda
25	Hand	Ikasa, Amakasa (pl)
26	Elbow	Akankonci, Utunkonci (pl)

27	Knee	Ikokola, Amakokola (pl)
28	Finger nail	Ingala
29	Grey hair	Invwi
30	Armpit	Ukwapa, Amaapa (pl)
31	Shoulder	Iciye, Iviye (pl)
32	Back	Itundu, Amatundu (pl)
33	Backbone	Umongo, Imyongo (pl)
34	Eye lid	Icipa ci linso, Ivipa vya manso (pl)
35	Eye lashes	Inkopyo
36	Waist	Umusana, Imisana (pl)
37	Gum	Icanvu, Ivyanyvu (pl)
38	Cheek	Itama, Amatama (pl)
39	Thigh	Ulupamba, Impamba (pl)
40	Leg	Ikuulu, Amakuulu (pl)
41	Foot	Ulwazo, ingazo (pl)
42	Toe	Akakondo, Utukando (pl)

APPENDIX: J

SOME KINSHIP TERMS IN MAMBWE LANGUAGE

SN	ITEM IN ENGLISH	EQUIVALENCE IN MAMBWE
01	Father	Umuvyazi umoonsi, Taata
02	Mother	Umuvyazi umwaanaci, Maayo
03	Son	Umwaana umoonsi, Aana aonsi (pl)
04	Daughter	Umwaana umwanci, Aana anaci (pl)
05	Cousin	Umuvyala, Avyala (pl)
06	Nephew	Umwipwa, Ayipwa (pl)
07	Niece	Umwaana senge, Aana senge (pl)
08	Brother	Ndume , Aandume (pl)
09	Sister	Kaci/Nkazi, Yakaci/Yankazi (pl)
10	Elder brother	Silenzi, Yasilenzi (pl)
11	Elder sister	Nyina lenzi, Yanyina lenzi (pl)
12	Younger brother	Umuto umulumendo, Ndume umunoono
13	Family	Ulupwa
14	Grandfather	Siikulu, kuku
15	Grandmother	Nyina kulu, Maama
16	Younger sister	Umuto umukazyana/Namaayo
17	Paternal aunt	Maayo senge
18	Maternal aunt	Maayo munono/Mukalamba
19	Paternal uncle	Taata munono/Mukalamba
20	Brother in-marriage	Citwazi, Yacitwazi (pl)
21	Sisterin-law	Mulamu umukazyana/Namaayo
22	Sister in-marriage	Cuufi, Yacuufi (pl)
23	Descendant	Uluko/intuntuko
24	Totem	Umukowa , Imikowa (pl)
25	Ancestors/forefather (s)	Icikolwe, Ivikolwe (pl)
26	Fiancée	Umoonsi akweti maama uwakutwaala

27	Parent(s)	Umuvyazi, Avyazi (pl)
28	child (ren)	Umwaana, Aana (pl)
29	fiancé	Mama akweti umoonsi uwakumutwaala
30	wife	Umuci, Maama
31	Husband	Iya, Yaiya (pl)
32	Grandson	Umwizikulu umulumendo/Umoonsi
33	Granddaughter	Umwizikulu umukazyana
34	Brother-in law	Mulamu umoonsi
35	Sister-in law	Mulamu umwanaci
36	Father-in law	Taata vyala/Sovyala
37	Mother- inlaw	Mangu vyala/Nyoko vyala
38	Great grandson	Icizikululwa umulumendo
39	Great granddaughter	Icizikululwa umukazyana
40	Maternal uncle	Nyokolume umunoono/Umukalamba

APPENDIX: K

SOME TERMS USED IN AGRICULTURE IN MAMBWE LANGUAGE

SN	ITEM IN ENGLISH	EQUIVALENCE IN MAMBWE
01	Cassava leaves	Katapa
02	Beans	Cilemba
03	Mango	Umwembe, Imyembe (pl)
04	Bean leaves	Ndela
05	Cucumber	Iciyimbi, Iviyimbi (pl)
06	Water melon	Icitanga
07	Tomato	Tomato, Matimati
08	Onion	Kanyense
09	Monkey nuts	Insusami
10	Groundnuts	Imbalala
11	Cowpeas	Ilanda
12	Rice	Umupuunga
13	Orange	Icuungwa, Amacungwa (pl)
14	Lemon	Indiimu
15	Hoe	Ise, Amase (pl)
16	Wheat	Ingano
17	Pepper/hot chilli	Impilipili
18	Marrow/ gourd	Umungu, Imyungu (pl)
19	palm tree (grown for oil)	Amafuta ya ngazi
20	Agriculture	Ulimi
21	Pineapple	Icinanazi, Ivinanazi (pl)
22	Farmer	Sicilima/Umulimi, Yasicilima/Alimi (pl)
23	Vegetables	Umusaalu
24	Fertilizer	Umuvuundo
25	Seed	Imbezu
26	Planting	Ukukomela

27	Axe	Impasa
28	Crop	Icilimwa, Ivilimwa (pl); Icizao, Iviza (pl)
29	Bundle of banana	Umuso wankonde, Imiso yankonde (pl)
30	Sow	Ukukanya, Ukuta
31	Maize	Cisaka
32	Cassava	Kalundwe
33	Sugar cane	Icisaali, Ivisaali (pl)
34	Sweet potato	Icisela, Ivisela (pl)
35	Irish potato	Imbataata
36	Pumpkin	Cipuzi, Yacipuzi (pl)
37	Millet	Amalezi
38	Sorghum	Amasaka
39	Guava	Ipeela, Amapeela (pl)
40	Banana	Inkoonde
41	Pumkin leaves	Cuungwa

APPENDIX: L

SOME TERMS USED IN FISHING IN MAMBWE LANGUAGE

SN	ITEM IN ENGLISH	EQUIVALENCE IN MAMBWE
01	Fishing basket	Umoono, Imyoono (pl)
02	Fishing net	Isuumbu, Amasuumbu (pl)
03	Floater(s) on a fishing net	Impeepa
04	Fishing hook	Isweelo, Amasweelo (pl)
05	Fisherman	Umuloondo, Aloondo (pl)
06	Rope / bark fibre string	Ulukusa
07	Fish	Inswi
08	Canoe	Akawato, Utumaato (pl)
09	Deep of the river	Iziya , Amaziya (pl)
10	Fishing camp	Inkambi ya kukomelapo inswi
11	Place where river seperates	Pa mampatu
12	Oar	Inkafi
13	Roasted fresh fish	Inswi izyoce
14	Long dry stick used to push a canoe/boat on the water	Inkafi
15	Catching fish by using fishing baskets	Ukuteya imyoono
16	Catching fish using hooks	Ukusweela
17	Hookson the rope for catching fish	Amasweelo
18	Bait	Lyambi
19	Fish trap	Umoono
20	Spear	Isumo
21	Leaves used to poison fish in order to catch them	Uutupa
22	Sein net (used to catch fish)	Umukwau
23	Fishing	Ukulema inswi
24	To catch fish	Ukukoma inswi
25	Leech	Umunsundu

26	Floods (innundation)	Ilyeezi
27	To drown	Ukuwunda
28	River	Uluuzi
29	Lake	Yeemba
30	Crocodile	Ing'weena
31	Hippopotomous	Civu

APPENDIX: M

SOME MISCELLANEOUS TERMS USED IN MAMBWE LANGUAGE

SN	ITEM IN ENGLISH	EQUIVALENCE IN MAMBWE
01	Hole	Uwiina
02	Wealth	Ivyuma, Unoonsi
03	Room	Umuputule
04	Pile/heap	Umutuumba
05	Bundle	Umwaanzi
06	Drive	Pisya
07	To tie (verb)	Ukunyepa
08	Shade	Icisawo
09	Shadow	Icinzingwa
10	Breastfeed	Ukonka, Ukonsya
11	Bed bug	Icilumi, Ivilumi (pl)
12	End	Impela, Ukuleka
13	Deaf person	Nkomamatwi, Yankomamatwi (pl)
14	Dumb person	Ciwulu, Yaciwulu (pl)
15	Nail	Ulusunga , Insunga (pl)
16	To dissolve in water	Ukusunguluka umu manzi, Ukusungulula umu manzi
17	Bird	Akunyi/Icunyi, Utunyi/Ivyunyi (pl)
18	Cause to drink	Ukumwesya
19	To drown in water	Ukumwela umu manzi
20	Drum	Ingoma
21	Roofing pole	Ulusondo, Insondo (pl)
22	Roof	Ipaala, Amapaala (pl)
23	Apex of a roof	Pansongo yipaala
24	To provoke	Ukukalifya
25	To wake up/get up	Ukuzyuuka

26	Turning something inside out	Ukufutula
27	Laziness	Ukasu
28	Mania for prying into other people's business	Ukwakwa
29	To split	Ukupatula, Ukupatuka, Ukupatukana
30	Gap when one loses tooth	Umwalu, Imyalu (pl)
31	No	Awe
32	Mix, blend	Ukusanzya
33	Be happy/contented	Sansamuka
34	Crowd	Iwumba, Amawumba (pl)
35	Forgetfulness	Iciiya
36	Church	Iwuvi, amawuvi (pl)
37	Agreement/contract	Ukulembesyanya, Ukuzumilizyanya
38	Beloved person/one	Umutemwikwa, Umukunzi
39	Envoy/ messenger	Intumi, Inkombe
40	Obedience	Icuvwila
41	Tradition	Intambi, Ivisilano
42	Well (noun)	Icifula, Ivifula (pl)
43	Thing	Icintu , Ivintu (pl)
44	Wedding dress	Icanda luwa, Ivyanda luwa (pl)
45	To chew	Ukusyeta
46	To eat	Ukulya
47	Small ant-hill	Akalenga, Utulenga (pl)
48	Village	Umuzi, Imizi (pl)
49	Beer	Uwengwa
50	Witch doctor	Sing'anga wa cimuntu
51	Time	Insita, kasita
52	war	Uwulwi, Inkondo
53	Needle	Insindano
54	Lizard	Mususwe, Yamususwe (pl)
55	Medical doctor	Sing'anga wa mucipatala

56	Locust	Makanta, Yamakanta (pl)
57	Wood, planks	Ulumbawo, Imbawo (pl)
58	Palace	Kwisano
59	To be very stout; fat and short	Ukufuluntana
60	To hide oneself	Ukufisama
61	Traveller	Umupita nzila, Apita nzila (pl)
62	Visitor	Umwenyi, Ayenyi (pl)
63	Firefly	Kamungu, Tumungu (pl)
64	Again	Nupya
65	Last born	Nkwangu, Yankwangu (pl)
66	Thief	Kabolala/Umupuupu, Apuupu (pl)
67	Shepherd	Umucemi, Acemi (pl)
68	Quickly	Zuwa-zuwa
69	That	Ciici/Ciica, Viivi/Viivya (pl)
70	Liar	Uwaufi, Awufi (pl)
71	Village headman	Yumbe, yayumbe (pl)
72	Hunter	Kalunga/Fuundi, Yakalunga/Yafuundi(pl)
73	Gun	Imfuti
74	Trap (for rats)	Akapama, Utupama (pl)
75	Chief's constable	Kapaaso, Yakapaaso (pl)
76	Baby	Akanya, Utunya (pl)
77	Hiccup	Ukusikwa
78	Diminish	Ukucepa, Ukusila kwacintu
79	Sneeze (noun)	Icifine
80	Great thing	Icintu icikulu, Ivintu ivikulu (pl)
81	Sew	Ukusuma
82	A pair of trousers	Tolozzi, Yatolozzi (pl)
83	Pimple	Ulufine, Imfine (pl)
84	Start	Ukutampa

85	Motorcycle	Mpumpumpu/onda, Yampumpumpu (pl)
86	Bicycle	Incinga
87	Temporary storage structure/ban	Intanta
88	Thistles	Cilasa, Yacilasa (pl)
89	Climb	Ukukwela
90	Path	Akazila tondo, Utuzila tondo (pl)
91	Road	Umusewo, Imisewo (pl)
92	Medicine	Umulembo
93	Hospital, clinic	Icipatala, Ivipatala (pl)
94	Shrill cries of welcome, joy or jubilation or ululating	Akapundu, Utupundu (pl)
95	Forge	Ukusula
96	Orphan	Umwana cisyale, Umwana wansiwa
97	To heal	Ukupola
98	Mosquito	Munyinyi, Yamunyinyi (pl)
99	Peck	Ukukompa
100	Drunkard	Umukolesi, Akolesi (pl)

APPENDIX N: SAMPLE QUESTIONNAIRE

Instructions to informants:

- a. Do not write your name on this questionnaire*
- b. Answer all questions as precise as possible*
1. State at least **three** ways in which you use Mambwe language
 - a.*
 - b.*
 - c.*
2. How many vowels does Mambwe language have?
.....
3. List the vowels you have mentioned in question (2) above
.....
4. Write at least **five** words in Mambwe language which start with different consonants but the rest of the consonants are the same
 - a.*
 - b.*
 - c.*
 - d.*
 - e.*
5. Write at least **five** words in Mambwe language which begin or end with three consonants before a vowel is introduced.
 - a.*
 - b.*
 - c.*
 - d.*
 - e.*
6. State **three** words in Mambwe language which have two vowels following each other.
 - a.*
 - b.*
 - c.*

7. Write **two** words which have [w] in them in Mambwe language
 - a.....
 - b.....
8. List **three** words which contain [y] in them in Mambwe language
 - a.....
 - b.....
 - c.....
9. Write the consonants which are not used in Mambwe language

.....
10. List at least **five** words which are formed from other languages
 - a.
 - b.
 - c.
 - d.
 - e.
11. State any **three** names which are formed from verbs in Mambwe language
 - a.
 - b.
 - c.
12. Write the words which you use in Mambwe language to mean the following:
 - i. I do not want=
 - ii. We do not want =
 - iii. They do not want =
 - iv. She/he does not want =
13. Write the following statements in Mambwe language to express **tense**:
 - a. We ate =
 - b. They were eating =
14. Write the following statements in Mambwe language:
 - a. They took her =
 - b. We will be eating =

15. How do you write the word **dog** in Mambwe language when you want to make it sound smaller than its actual size?.....
16. Write the word **dog** in Mambwe language to make it sound bigger than its size
.....
17. Write the word **snake** in Mambwe language to make it sound ugly or bad
.....
18. How do you write the word **father** in Mambwe language when you want to express respect?
19. How do you write the word **to be broken** in Mambwe language if it is done repeatedly?
.....
20. Write **three** compound words which are found in Mambwe language
 - a.
 - b.
 - c.
21. What are the meanings of the compound words you have written in (20) above?
 - a.
 - b.
 - c.
22. Translate the following sentences into Mambwe language:
 - a. I have not seen the pumpkins =
 - b. What big eyes you have! =.....
 - c. Why does a lion eat people? =.....
 - d. Shut the door! =
 - e. Sweet potatoes are in the basket =
 - f. If I were the president, I would have employed all the people =
.....
 - g. Michael is eating mushrooms =
 - h. Come here! =
 - i. I have three wives =
23. What are the equivalents of the following phrases in Mambwe language?
 - a. The two girls =
 - b. Two girls =

- c. My young brother/sister =
- d. The three boys =
- e. Some pupils =
- f. The fierce father =
- g. The new well =
- h. This big tree =
- i. Another man =
- j. All the boys =
- k. As for the small dog, it is fierce =
- l. At this house =
- m. Eleven chickens =
- n. Has eaten =
- o. Is eating =
- p. Went fishing =
- q. I will not go with you =
- r. They will not see him or her =
- s. We will help him/her
- t. We will be helping him or her =
- u. We are still working =
- v. We were still working =
- w. To see onself =
- x. To the village =
- y. On the tree =
- z. In the grave =

24. Write the words below in Mambwe language:

- a. Cultivating =
- b. Visitor =
- c. Fire =
- d. Yams =
- e. Agreement or Testament =

THANK YOU FOR ANSWERING QUESTIONS!

APPENDIX O: CHECKLIST

1. Settings where Mambwe language is used
2. Vowel fusion in Mambwe language
3. Permissible semi-vowels in Mambwe language
4. The permissible consonants found in Mambwe language
5. The non-permissible consonants in Mambwe language
6. Two permissible consonant combinations in Mambwe language
7. Three permissible consonant combinations in Mambwe language
8. Tone and length in Mambwe language
9. Phonological processes in Mambwe language
10. Syllable structures found in Mambwe language
11. Noun structures of Mambwe language
12. Noun class prefixes and noun class pairings in Mambwe language
13. Word formation processes in Mambwe language
14. Verbal structure of Mambwe language
15. Tense, aspect, mood and polarity in Mambwe language
16. Verb extensions and verbal complexes in Mambwe language
17. Word order of basic sentences in Mambwe language
18. Word order of the noun phrase and verb phrase in Mambwe language
19. At least 20 household items in Mambwe language
20. Some domesticated animals and birds in Mambwe language
21. Examples of countable nouns in Mambwe language
22. Categories of compound nouns or words in Mambwe language
23. Some examples of abstract nouns in Mambwe language
24. Diminutive, honorific, augmentative and pejorative nouns in Mambwe language
25. Some kinship terms used in Mambwe language
26. Common names of wild animals in Mambwe language
27. Names of human body parts in Mambwe language
28. Some names which are created from verbs in Mambwe language
29. Some names used in agriculture in Mambwe language
30. Words or names which are used in everyday life in Mambwe language