ACQUISITION OF CONCRETE NOUNS BY 2-5-YEAR OLD CHICHEWA L1 SPEAKING PRESCHOOL CHILDREN

MASTER OF ARTS (APPLIED LINGUISTICS) THESIS

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UNIVERSITY OF MALAWI

SEPTEMBER, 2021

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DECLARATION

I, the undersigned, hereby declare that this thesis is my own original work which has not been submitted to any other institution for similar purposes. Where other people's work has been used, acknowledgements have been made.

_____

Full Legal Name

_____

Signature

_____

Date

CERTIFICATE OF APPROVAL

The undersigned certify that this thesis represents the learner's own work and effort and has been submitted with our approval.

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DEDICATION

To my father and mother, Mr. and Mrs. J. Changadeya, my brothers and sisters, as well as my wife Lyna, and my daughter Heavenly for your support and understanding as you bring me to this level.

May the good Lord bless you all.

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ABSTRACT

Despite having studies on acquisition of concrete nouns, it is not clear how children acquire different categories of concrete nouns in Bantu languages. This is because most studies have concentrated on English language. Considering that the noun structure in English language is different from the noun structure in Bantu languages, the findings on noun acquisition in English language might not be applicable to the acquisition of Bantu nouns. Therefore, this study purposed to investigate how concrete nouns were acquired by 2-5-year old Chichewa L1 speaking preschool children. Being an experimental design, the research used quantitative approach. However, qualitative approach was used to clarify the quantitative data. The research had 40 participants sampled through simple random sampling. Data was collected through stimulus naming. The collected data was analysed using Statistical Package for Social Sciences. Categorisation model was used to explain the acquisition of concrete nouns. It was established that the acquisition of concrete nouns in Chichewa starts with the recognition of the existence and function of a noun. This is followed by the acquisition of the superordinate features at around 2-years. The acquisition of the superordinate features is followed by the acquisition of the subordinate features of the concrete nouns. It has been observed that this is most common among 4-and 5-year olds although the behaviour is also present among 3-years olds for the most common concrete nouns. The study has further found out that the category of items used at home is acquired early in all age groups. This is followed by the category of human body parts, then the category of food items. The category of animals is acquired last. Lastly, the study results show that there is a correlation between age and acquisition of concrete nouns. As the age of the Chichewa L1 speaking preschool children increases, the acquisition of the four categories of concrete nouns also increases. Thus, vocabulary on concrete nouns increases as children grow up.

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LIST OF ABBREVIATIONS

AGR	Agreement
ANOVA	Analysis of Variance
AP	Applicative
CD	Compact Disk
CM	Categorisation Model
CON	Conditional
FOC	Focus
FUT	Future
FV	Final vowel
MCP	Malawi Congress Party
NC	Noun class
NP	Noun phrase
PL	Plural
PR	Present
PST	Past
SG	Singular
SPSS	Statistical Package for Social Sciences
SVO	Subject- Verb- Object
VP	Verb phrase

CHAPTER ONE

INTRODUCTION

1.0 Chapter overview

This chapter introduces the study on acquisition of concrete nouns by 2-5 year old Chichewa L1 speaking preschool children. The study investigates how concrete nouns are acquired by 2-5 year old Chichewa L1 speaking preschool children. Section 1.1 provides background to the study. Section 1.2 describes the Chichewa language. Section 1.3 presents the statement of the problem. Section 1.4 presents the aim and objectives of the study. Section 1.5 presents research questions that the study is trying to answer. Section 1.6 presents significance of the study. Lastly, Section 1.7 explains the organisation of the dissertation.

1.1 Background to the study

This research is in the area of language acquisition, specifically, children's acquisition of concrete nouns. Many study results on acquisition of nouns suggest that some nouns have acquisition advantage over other nouns (Kako, 2005). This has been demonstrated in earlier studies on acquisition of concrete nouns by Rosch et al. (1976) who analysed acquisition of hierarchical categories. In their study, it was found that early vocabularies tend to be heavily populated by labels for basic-level kinds or categories, that is, categories that are highly similar to one another but are also distinct from the members of other categories (Kako, 2005). The category DOG, for example, is the basic-level, but it is distinct from its members like collie, terrier and poodle (Kako, 2005). Following Rosch

et al.'s (1976) study, in 1991, Paivio and Clark (1991) conducted a study on acquisition of concrete nouns and abstract nouns. Their study results provide evidence that concrete nouns are acquired earlier than abstract nouns. Paivio and Clark (1991) attributed the early acquisition of concrete nouns to the system of the human brain. Further, Gentner (1982) predicts that animate beings are strongly represented in early vocabulary within the concrete noun class.

One interesting thing about all these studies on acquisition of concrete nouns is that they have been conducted in English language (Rosch et al., 1976; Gentner, 1982; Paivio & Clark, 1991), whose noun morphological structure is different from that of Bantu languages including Chichewa. On the one hand, according to the existing analyses, Bantu nouns are assumed to be made up of the so-called noun class prefix and a noun stem (Downing & Mtenje, 2017). On the other hand, English language is an analytic or isolating language where most words consist of a free morpheme (O'Grady et al., 1984). As such, the noun structure in English language is completely different from the noun structure in Bantu languages. English nouns may consist of a single morpheme, for example, 'boy.'

Despite having many studies on acquisition of concrete nouns in English language, there are few studies on acquisition of nouns in Bantu languages. The few studies provide evidence on the development of noun class prefixes in children. For instance, a study by Kadenge (2011) on the development of noun class prefixes in Shona speaking children provide evidence that Shona speaking children produced three different word categories. The first category consists of words characterised by omission of the noun class prefix. The second category shows the beginning of the emergence of noun prefixes. The third category words are produced without any errors and resembles the morphological and phonological structure of the adult form.

On the few studies that document the acquisition of Bantu nouns, there is no study as far as it can be ascertained that document the acquisition of different categories of concrete nouns in Chichewa. Therefore, it is important to investigate how concrete nouns are acquired by 2-5 year old Chichewa L1 speaking preschool children. The study adopts categorisation model to establish how Chichewa L1 speaking preschool children acquire concrete nouns.

1.2 The Chichewa language

Chichewa is a language spoken in Malawi, some parts of Zambia, Mozambique, and Zimbabwe (Matiki, 2016). Chichewa is referred to as Chinyanja in other countries, and that it is possibly the main language with various dialects, Chichewa being one of them (Mchombo, 2001). Chichewa language was commonly known as Chinyanja in Malawi prior to the 1968 Malawi Congress Party (MCP) annual convention where it was changed to Chichewa in the interest of national unity and to reflect Malawi's demographically dominant tribe, the Chewa (Matiki, 2016). Chichewa language belongs to the largest subgroup in the Niger-Congo language family, spoken across much of sub-Saharan Africa called Bantu languages (Kiso, 2012). Languages in the stated Niger-Congo family are classified according to zones and groups (see, Guthrie, 1948, 1971). Chichewa belongs to zone N of the 16 zones (Guthrie, 1948, 1971). It belongs to group N31 in the classification of Bantu languages (Guthrie, 1948, 1971; Kiso, 2012). However, there has been no widely agreed genealogical classification of the Bantu languages (Kiso, 2012).

1.2.1 Morphological structure of Chichewa nouns

Chichewa language has agglutinating property (Kiso, 2012). The ability that the affixes are appended to noun stem or verb stem (Watkins, 1937). However, Chichewa nouns are less complicated or agglutinated as opposed to Chichewa verbal structure (see, Matiki, 2000; Kiso 2012). The stem of Chichewa nouns can be inflected with, for example, noun class prefixes (Mchombo, 2001). As such, Chichewa noun classification traditionally displays a bi-morphemic structure (Matiki, 2000; Miti, 2006; Downing & Mtenje, 2017).

The first is the noun class prefix, and the second is the noun stem (Matiki, 2000; Mchombo, 2001; Miti, 2006; Downing & Mtenje, 2017). Consider the following:

(1) The noun *munthu* 'person.' *Mu-* is a noun class prefix, *-nthu* is the noun stem.

On the one hand, the noun class prefix indicates the class to which a given noun belongs (Matiki, 2000; Mchombo, 2001; Miti, 2006; Downing & Mtenje, 2017). Consider the following:

(2) Noun *chi-tseko* 'door' the noun class prefix *Chi-* indicates the class to which noun *chi-tseko* belongs which is noun class 7.

In some noun classes (class 1a, and some nouns in classes 5 and 9/10), (see examples in Table 1) there is nothing which appears on the prefix. In this case, the noun class prefix is realised by zero (Ø-) (Scotton & Orr, 1980). The noun class prefixes also indicate number (Watkins, 1937; Matiki, 2016). The noun classes in Chichewa are grouped into singular (SG) and plural (PL) (Mchombo, 2001; Miti, 2006; Downing & Mtenje, 2017). Chichewa has eighteen noun classes as summarised in the Table 1:

Table 1: Noun classes in Chichewa

Classes		**Prefixes**		**Examples**	
SG	PL	SG	PL	SG	PL
1	2	M(U)-	A-	*Munthu* ' person'	*Anthu* 'people'
1A	2	ø-	A-	*Galu* 'dog'	*Agalu* 'dogs'
3	4	M(U)-	MI-	*Munda* 'field'	*Minda* 'fields'
5	6	ø-	MA-	*Buku* 'book'	*Mabuku* 'books'
7	8	CHI-	ZI-	*Chitseko* 'door'	*Zitseko* 'doors'
9	10	N-	N-	*Nyumba* 'house'	*Nyumba* 'houses'
12	13	KA-	TI-	*Kanthu* 'a small thing'	*Tinthu* 'small things'
14	6	U-	MA-	*Ukonde* 'net'	*Maukonde* ' nets'
15		KU-(infinitive prefix)		*Kufuna* 'to want'	
16		PA-		*Patebulo* 'on the table'	
17		KU- (Locative prefix)		*Kumudzi* ' at the village'	
18		M(U)-		*Mudengu* 'in the basket'	

(Adapted from Scotton & Orr, 1980; Mchombo, 2001).

On the other hand, the stem of the noun is that portion of the noun to which the affixes, that is, the noun class prefixes are appended (Watkins, 1937). The noun stem is a constant element although subject to tonal variations, and various alterations due to phonetic influence (Watkins, 1937). The description of Chichewa nouns morphological structure is important because it may influence how nouns are acquired by children.

1.3 Statement of the problem

Although there are studies on acquisition of different categories of concrete nouns, it is difficult to fully understand how children acquire different categories of concrete nouns in Bantu languages. Most of the studies that have been conducted on how children acquire concrete nouns have concentrated on English language (see, Gentner, 1982; Maxilom, 2013). There are very few studies in Bantu languages on acquisition of nouns (see, Kunene, 1979; Tsonope, 1987; Ziesler & Demuth, 1995; Kadenge, 2011). These studies address the acquisition of Bantu noun class morphology. Considering that the noun structure in English language is different from the noun structure in Bantu languages, the findings on noun acquisition in English language might not be applicable to the acquisition of Bantu nouns. Bantu nouns have an obligatory noun prefix and stem configuration (Miti, 2006), but most nouns in the English language do not have this morphological structure. Furthermore, the findings from English language studies on how concrete nouns are acquired are conflicting. Some scholars propose that children learn basic level nouns more readily than superordinate or subordinate nouns (Rosch et al., 1976; Anglin, 1977; Horton & Markman, 1980; Rescorla, 1981; Graham, Baker & Poulin Dubois, 1998) while scholars like Mandler (2004, 2007) propose that infants learn superordinate nouns before anything else. These conflicting views indicate that there is need for further research on acquisition of nouns by children. Therefore, the current study investigated how Chichewa L1 speaking preschool children acquire concrete nouns in Chichewa, one of the Bantu languages. It is hoped that the findings of this study would provide insights on how children acquire concrete nouns and shed light on how different categories of concrete nouns are acquired by children in Chichewa.

1.4 The aim of the study

The aim of the study was to investigate how concrete nouns are acquired by 2-5 year old Chichewa L1 speaking preschool children.

1.4.1 Specific objectives

In order to achieve the aim of the study, the following specific research objectives were set:

a. To find out how different categories of concrete nouns are acquired by Chichewa L1 speaking preschool children.
b. To find out which category of concrete nouns is acquired early by Chichewa L1 speaking preschool children.
c. To establish the relationship between age and acquisition of concrete nouns.

1.5 Research questions

The study was guided by the following main and subsidiary research questions:

1.5.1 Main research question

How do 2-5 year old Chichewa L1 speaking preschool children acquire concrete nouns in Chichewa?

1.5.2 Subsidiary research questions

The study specifically answers the following questions:

a. How are different categories of concrete nouns acquired by Chichewa L1 speaking preschool children?
b. Which category of concrete nouns is acquired early by Chichewa L1 speaking preschool children?
c. What is the relationship between age and acquisition of concrete nouns?

1.6 Significance of the study

The findings of the study provide acquisition pattern of concrete nouns by Chichewa L1 speaking preschool children. It provides an insight on how concrete nouns are acquired and which hierarchical categories of concrete nouns are acquired early. In addition, the study gives some light on which category of concrete nouns is acquired early.

The findings of the study also add new knowledge to the existing literature on acquisition of concrete nouns. Most of the previous studies on acquisition of concrete nouns have been done in English language. No study as far as it can be ascertained has been conducted on the acquisition of concrete nouns in Chichewa.

1.7 Organisation of the thesis

The thesis is organised into five chapters. Chapter one introduces the study. Chapter two reviews literature on the acquisition of nouns in different languages. It also discusses the conceptual framework adopted for the study. Chapter three presents research methodology used in the study and ethical issues considered in the study. Chapter four presents and discusses the findings of the study. Finally, chapter five presents summary of findings, and conclusions drawn from the findings. It also presents areas for further study.

The next chapter, reviews literature on the acquisition of nouns by children. It also discusses the conceptual framework adopted for this study.

CHAPTER TWO

LITERATURE REVIEW

2.0 Chapter overview

This chapter reviews relevant literature on the acquisition of nouns. Section 2.1 defines a noun and discusses types of nouns. Section 2.2 discusses characteristics of nouns. Section 2.3 discusses functions of nouns. Section 2.4 discusses general acquisition of nouns. Section 2.5 discusses acquisition of Bantu nouns. Section 2.6 discusses the conceptual framework for the study. It describes the Categorisation Model (CM) (Murphy, 2019) and explains how the model has informed the study. Section 2.7 summarises the chapter.

2.1 Definition of a noun and its types

A noun is a part of speech that names a person, a place, a thing, or an idea (Clanin, 2013; Banda, 2014). A noun is often preceded by an article (a, an, and the) in languages like English (Clanin, 2013). There are different types of nouns namely: (a) Proper nouns- these are given specific to a person, a place, or a thing (Maillart & Parisse, 2017; Brian, 2018). Consider the following:

(3) I study English in Oxford.

(b) Abstract nouns- these name things one cannot see, smell, hear, taste, or touch (Banda, 2014). Abstract nouns refer to emotions, ideas, and concepts (Brian, 2018). Consider the following:

(4) I feel sorry for your loss.

(c) Concrete nouns- these are naming words that name objects that have some kind of actual physical form including a person, an animal, a place, material or collection of

concrete things that one can perceive through the senses, that is, sight, smell, hearing, taste, and touch (Maillart & Parisse, 2017; Brian, 2018). Depending on context, concrete nouns may be categorised as countable, for example, birds or uncountable, for example, water (Brian, 2018).

2.2 Characteristics of nouns

Nouns are described by three important grammatical characteristics: gender, number, and case (Banda, 2014; Brian, 2018). In English, these grammatical characteristics are reflected in the choice of pronouns, the choice of number endings on the noun (singular or plural), and the choice of subject-verb agreement endings when the noun is a subject (Banda, 2014; Brian, 2018). However, these grammatical characteristics are portrayed differently in Bantu languages, that is, number and gender is marked by a prefix of the noun which is at the beginning of a noun (Van de Velde, 2006). Bantu nouns typically consist of a stem and an obligatory prefix (Creissels, 2019). Consider the following:

(5) Chichewa language (Scotton & Orr, 1980)

The noun *mu-nthu* ‘person’ has *mu-* as the prefix and *-nthu* as the stem.

However, some Bantu nouns like Mande nouns (see, Nurse & Philippson, 2003), and Xhosa nouns have a pre-prefix as an additional (Gxilishe, 2008). Consider the following:

(6) Xhosa noun *imithetho* ‘laws,’ *i-* is a pre-prefix and *-mi-* is the basic prefix.

Each Bantu noun is assigned to a particular class (Crisma et al., 2011; Salzmann, 2011). Consider the following:

(7) Chichewa language (Scotton & Orr, 1980)

The noun *mu-nthu* ‘person, noun class (NC) 1’

2.2.1 Gender

In English and many other languages, nouns that refer to male human beings or animals are masculine (Banda, 2014; Brian, 2018). Consider the following:

(8) Boy, father, and bull.

Nouns that refer to female human beings or animals are feminine (Ranjan, 2013). Consider the following:

(9) Girl, mother, and hen.

Nouns that refer to inanimate objects or abstract concepts are neuter (Javoreek, 2014). Consider the following:

(10) The device, and desk

Sex (biological gender) is a powerful predicator of gender categorisation in English (Javoreek, 2014). Javoreek (2014) calls this kind of gender categorisation as natural gender. There are also languages like French, whose grammatical gender is marked on the article, for example, the article *la* is feminine as in *la porte* 'the door' and the article *le* is masculine as in *le livre* 'the book' (Garbo, 2013).

Apart from marking gender using sex-based systems like the way English does, or arbitrary system where gender is determined on determiners and modifiers like in French and Spanish, there is also another way of marking gender (Kihm, 2012; Fuchs & Vander, 2018). In Bantu languages, gender is marked by a prefix on nouns (the controller) and on nominal modifiers, pronouns and finite verbs (targets) (Van de Velde, 2006). Bantu nouns minimally consists of a stem, which is usually preceded by a class prefix (Van de Velde, 2019). Bantuists define gender as systems of nominal classification that are reflected by agreement (Guldemann & Fiedler, 2019). Bantuists use numbers rather than labels such as masculine, feminine or neuter to refer to individual noun classes (Van de Velde, 2019). Noun classes are defined as sets of nouns that trigger the same agreement pattern (Van de Velde, 2019). Numbers are assigned to classes in individual languages on the basis of cognacy (Van de Velde, 2019). Odd numbers are used for classes that contain singular nouns and even numbers for plural classes, with some exceptions, most notably class 12 (SG) and 13 (PL) (Van de Velde, 2019). It is this singular-plural class pairings

that is usually called genders (Van de Velde, 2019). Swahili language illustrate the noun class prefixes and agreement prefixes of the noun *–kapu* 'basket' in the singular (class 7) and plural (class 8).

(11) Swahili (Van de Velde, 2019)

a. *Ki-kapu* *ki-kubwa* *ki-moja* *ki-li- anguk-a*

7-basket NP7-big NP7-one SP7-PST-fall-FV

'One large basket fell.'

b. *Vi-kapu* *vi-kubwa* *vi-tatu* *vi-li-anguk-a*

8-basket NP8-big NP8-three SP8-PST-fall-FV

'Three large baskets fell.'

There is a widespread agreement among Bantuists that the gender assignment of a noun cannot be predicted on the basis of its meaning but that the noun class systems of Bantu languages are not completely lacking of semantic regularities either (Van de Velde, 2019). Disagreement exists about whether or not the gender assignment of all or most nouns can be shown to be semantically motivated, if not in contemporary languages, then at least in a proto-stage (Van de Velde, 2019). Gender assignment on semantic grounds is relatively exceptional and mostly restricted to language names and some nouns for human beings-NC 1 and 2 (Van de Velde, 2019).

(12) Chichewa language

Mwana 'child, NC 1' and *ana* 'children, NC 2'

One distinguishing feature of Bantu languages and Romance languages is that the former has no relations to masculine, feminine, or neuter system (McCormack, 2007). Secondly, Bantu languages have a greater number of genders than the three genders found in Romance languages (McCormack, 2007). The latter has each noun assigned to the feminine, or masculine, or neuter gender (McCormack, 2007). Therefore, it is preferable to refer to the Bantu system as being of noun classes rather than genders (McCormack,

2007). It is important to understand gender marking system in Bantu languages because this may influence how nouns are acquired by children.

2.2.2 Number

Number refers to the singular or plural form of the noun (Banda, 2014; Brian, 2018). In English, when a noun is used in the plural form, -s or –es are added as plural endings (Brian, 2018). Consider the following:

(13) ‘Election’ is singular and ‘elections’ is plural.

However, in English, some nouns have irregular plural forms (Banda, 2014). Consider the following:

(14) ‘Foot’ is singular and ‘feet’ is plural.

Furthermore, certain nouns have the same form in the singular and plural form (Banda, 2014). Consider the following:

(15) The singular and plural form of ‘deer’ is ‘deer.’

However, singular and plural are not the only numbers attested (de Melo, 2007). Some languages have a dual for two items, a trial for three, or a paucal for a few, for example, Yimas, a Papuan language, has singular, plural, dual, and paucal (de Melo, 2007). This means that if a language has two numbers, it will be singular and plural (de Melo, 2007). If it has three numbers, it will be singular and plural and dual (de Melo, 2007).

The number system in Bantu languages, Chichewa language inclusive, is different from that of English. In Bantu languages, apart from the noun classes indicating gender, they also indicate number (Maho, 1999). The plural form of a noun is normally classified in a different noun class from the singular form (Maho, 1999). That is, in Kiswahili, the plural of *kitabu* ‘book’ is *vitabu* which bears a different noun prefix, namely, *vi-*. Another noun belonging to different noun classes would take different prefixes, that is, *mti* ‘tree’ and *miti* ‘trees,’ which bear the prefixes *m-* and *mi-* respectively. In Kiswahili, the above exemplified noun classes are usually referred to as classes 7 (*ki-*), 8 (*vi-*), 3(*m-*), and 4(*mi*)

(Maho, 1999). In Chichewa information relating to number is encoded in the prefix of the noun (Mchombo, 2001). Consider the following:

(16) *M-nyamata* 'boy' is singular and *a-nyamata* 'boys' is plural.

The singular forms constitute classes 1, 3, 5, 7, 9, 12, 14 and the plural forms constitute classes 2, 4, 6, 8, 10, 13 (Mchombo, 2001). The understanding of number system in Bantu languages is significant to this study because this may influence how some nouns are acquired.

2.2.3 Possession

In English, a noun that possesses another noun is placed before the noun it possesses and is followed by the possessive ending (Banda, 2014). Consider the following:

(17) Boole's book, 'An investigation into the laws of thought.'

In Bantu languages, nominal possessors are introduced by a relator that typically consists of a pronominal and a stem -a, the tone of which is identical to that of the prefix (Van de Velde, 2019). Bantuists call this relator the connective or connexive or associative marker (Van de Velde, 2019).

(18) Nyamwezi language

M-zuna	*w-aa-m-kuma*
1-younger_sistser	PP1-CON-1-woman

'The younger sister of the woman.'

Possession in Chichewa language is expressed by linking two nouns (the possessor and the thing possessed) with an association form, for example, *ya*, *wa,* and *la* 'which generally means 'of'' (Scotton & Orr, 1980). The association form is always in a free standing position when used to express the possessive aspect (Scotton & Orr, 1980). Consider the following:

(19) Chichewa language

Ng'ombe ya Chifundo yadwala.

'Chifundo's cattle is sick.'

2.3 Functions of nouns

The work that a noun performs in a sentence is referred to as its grammatical function (Brian, 2018). In English, a noun may function as a subject of the verb, an object of the verb, a complement of the verb, an object of the preposition, and be in apposition to another noun (Banda, 2014; Brian, 2018). Firstly, a noun functions as the subject of the verb when it is the subject of the sentence and comes before the main verb of the sentence. Consider the following:

(20) a. John teaches English in China.

b. Chichewa language

Chifundo anapha nkhosa.

'Chifundo killed a sheep.'

Secondly, a noun functions as the object of the verb when it comes after an action verb or receives the action of the verb. Consider the following:

(21) a. I kicked the ball.

b. Chichewa language

Tikufuna tidzale mitengo.

'We want to plant trees.'

Thirdly, a noun functions as the complement of the verb when it comes after a linking verb or a state of being verb and receives no action from the verb. Consider the following:

(22) a. John is a liar.

b. Chichewa language

Ife ndi <u>alimi</u> a fodya.

'We are tobacco <u>farmers</u>.'

Fourthly, a noun functions as the object of the preposition when it comes after a preposition in a sentence. Consider the following:

(23) a. I gave the book to <u>John</u>.

b. Chichewa language

Timutengere kwa <u>mfumu</u>.

'Let's take him/her to the <u>chief</u>.'

Lastly, noun being in apposition to another noun is placed next to another noun. One noun is said to be in apposition to another when it refers to the same person or thing and is mentioned immediately after the first noun. Consider the following:

(24) a. The footballer, <u>Suarez</u> has been suspended.

b. Chichewa language (Ngoma & Chauma, 2011)

A Banda, a <u>busa</u> a mpingo wanu, alowa m'sitolo iyo.

'Mr. Banda, the <u>pastor</u> of your church, has entered that store.'

Apart from English language demonstrating the stated grammatical functions of nouns, in Bantu languages, the system of agreement is one of the outstanding features. One of such agreement is concordial agreement. Concordial agreement is the similarity and agreement which takes place between prefixes and other prefixes in a phrase (Matambirofa, 2013). In most cases, concordial agreement derives from the class of the noun which is the subject of discussion and agreement also touches on the singular-plural issue (Matambirofa, 2013).

(25) Chichewa language (Matambirofa, 2013)

Chi*tsiru* ***chi****-na-gul-ir-a* *atsikana mphatso*

7-fool 7s-PST-buy-APP-FV 2-girls 9-gift

‘The fool bought a gift for the girls.’

(26) Kiswahili language

Nyimbo hizi ndefu zi-ta-faa

10 song **10** these **10** long **10** AGR-FUT-suffice

‘These long songs will do.’

From the examples (25 and 26) in terms of basic structure, the noun alone contributes more than two-thirds of the entire burden of the Subject Verb Object (SVO) syntactic hub (Matambirofa, 2013). That is, in terms of the form of participatory components alone, the basic SVO structure can be rewritten as Noun Phrase (NP): Verb Phrase (VP): Noun Phrase (NP) (Matambirofa, 2013).

As regards to concordial agreement, the subject grammatical relation, owing to its sentence-initial position is typically forward concordancing (Matambirofa, 2013). Forward concordancing is the system by which the noun copies its prefixal marker to other parts of speech (Matambirofa, 2013). Every morphosyntactic element that participates subsequent to the head noun will be concordially marked by the same and will agree with it (Matambirofa, 2013). In (26) the subject NP *nyimbo hizi ndefu* has the head *nyimbo* class 10 which in turn influence the qualifying demonstrative phrase *ndefu*. Therefore, the NP influences the concordial agreement of other elements that participate with it in syntax (Matambirofa, 2013).

Object marker is a concordial agreement marker, and that it provides both a function of pronominalisation and an illustration of backward concordancing (Matambirofa, 2013). Backward concordancing is the extent that a post-verbal noun phrase deposits or copies its prefixal agreement marker within the verbal complex before it is encountered in the linear order of the sentence (Matambirofa, 2013). In order to illustrate the ability of the object to exhibit backward concordance below are Chichewa and Kichaga examples.

(27) Chichewa language

a. *Chitsiru chi-na-gul-ir-a atsikana mphatso.*

7-fool 7s-PST-buy- AP-FV 2-girls 9-gift

'The fool bought gift for the girls.'

b. *Chitsiru chi-na-**wa**-gul-ir-a mphatso (atsikana).*

7-fool 7s-PST- O-buy- AP-FV 9-gift 2-girls

(28) Kichaga language

a. *N-a-i-lyi-i-a m-ka k-elya.*

FOC-1s-PR-eat-AP-FV 1-wife 7-food

'He is eating food for /on his wife.'

b. *N-a-i- m- lyi-i-a k-elya (m-ka).*

FOC-1s-PR-1O-eat-AP-FV 7-food 1-wife

' He/she is eating food for /on him /her.'

In the Kichaga illustrations, it is apparent that in 28 (b) the direct object *mka* of class 1 cataphorically marks its presence in the sentence by means of an incorporated pronominal marker –*m*- which agrees in class with the class 1 noun (Matambirofa, 2013). From the discussion above, it could be suggested that Bantu noun phrases in the subject position have forward concordancing function whilst the noun phrases in the object position have backward concordancing. The understanding of functions of Bantu nouns is significant to this study because this may influence how nouns are acquired since some of the data collected were in a phrase or sentence form showing concordial agreement.

2.4 General acquisition of nouns

Language acquisition is regarded as the transition from the state of the mind at birth (the initial cognitive state) to the stable state that corresponds to native and mother-tongue knowledge of a natural language (Khan, 2013). However, this language acquisition should be understood within the conceptual framework of generative grammar. Basically, acquisition aims at achieving native or native-like command of a language or a linguistic rule or element. The initial cognitive state is called Universal Grammar (Khan, 2013). Acquiring a language amounts to fixing the parameters of Universal Grammar on the basis of experience. The child interprets the incoming linguistic data through the analytic devices provided by Universal Grammar, and fixes the parameters of the system on the basis of his analysis of incoming data drawn from his linguistic experience (Khan, 2013).

2.4.1 Debates on acquisition of nouns

Studies on acquisition of nouns centre on a number of key issues. The first debate centres on which hierarchical category-the superordinate level, basic level, and subordinate level is acquired earlier than the other. There are two schools of thought regarding the acquisition of hierarchical categories. The first one argues that basic level categories are acquired earlier (Rosch et al., 1976; Anglin, 1977; Horton & Markman, 1980; Rescorla, 1981; Graham et al., 1998). The other camp argues that superordinate level categories are acquired earlier (Mandler, 2004, 2007). This suggests that there is no agreement regarding which hierarchical category is acquired early by children.

Secondly, there is a debate on the reasons why concrete nouns are acquired earlier than abstract nouns. Some scholars argue that concrete nouns are acquired earlier than abstract nouns because of the system of human brain (see, Paivio & Clark, 1991; Kounios & Holcomb, 1994). Other scholars such as Schwanenflugel and Knapp (2015) have attributed the disparities in acquisition of abstract nouns and concrete nouns to differences in referents of the two.

2.4.1.1 Acquisition of hierarchical categories-superordinate, basic, and subordinate levels

The debate on acquisition of hierarchical categories centres on which hierarchical category-the superordinate, basic, or subordinate is acquired earlier. The superordinate level displays a low degree of class inclusion and a high degree of generality, for example, furniture. The basic level displays a high degree of class inclusion and medium degree of generality, for example, chair. The subordinate level is highly specific in that it provides identifiable and detailed gestalts with highly detailed configurations of individuating properties, for example, kitchen chair (Peters & Shapiro, 1987; Shylaja & Manjula, 2016; Murphy, 2019). Earlier researchers on acquisition of superordinate, basic, and subordinate levels suggest that children's early vocabulary consists of basic level nouns (Rosch et al., 1976; Anglin, 1977; Horton & Markman, 1980; Rescorla, 1981; Graham et al., 1998).

Results on acquisition of nouns have shown that basic level noun categories are often learnt earlier and more easily than other types of categories, for example, superordinate and subordinate (Rosch et al., 1976; Anglin, 1977; Horton & Markman, 1980; Rescorla, 1981; Graham et al., 1998). Many studies of vocabulary development have suggested that early vocabularies tend to be heavily populated by labels for basic-level kinds or categories (Kako, 2005; Hajibayova, 2013). Basic-level categories occupy the middle level of the hierarchies in which they are embedded, because the members of those categories are highly similar to one another but are also distinct from the members of other categories (Kako, 2005; Murphy, 2016). The category 'dog,' for example, is the basic level of a hierarchy that includes animal as its superordinate and collie, terrier, poodle, and so on, as its subordinates (Kako, 2005). This suggests that since the basic level category shares many characteristics with one another then that facilitates the advantage on acquisition.

The first evidence of children's early acquisition of basic-level category comes from Rosch et al. (1976) pioneering article on the nature of the basic level. Rosch et al. (1976) analysed the words produced by the child named Sarah, who was among the three whose

language development was studied by Brown (1973). Rosch et al. found that many of the words that Sarah produced in Brown's Stage I (early in development, when utterances are quite short and simple; see Brown, 1973, for details) were labels for basic-level kinds. This suggests that early vocabulary of the child was dominated with basic-level nouns, suggesting that basic-level category is acquired earlier.

Using naming of pictures in sets of photographs containing examples from the subordinate, basic, and superordinate levels, Anglin (1977) found that children ranging from 2-5 years old were much more likely to use basic-level labels to name sets of photographs, both at the basic level (for example, different kinds of dogs, or different kinds of flowers) and at the subordinate level (for example, different collies, or different roses). Using a combination of measures, diaries kept by six mothers, interviews with those mothers, and comprehension tasks, Rescorla (1981) found that children between the ages of 12 and 18 months experienced rapid growth in the stock of labels for basic-level kinds than in the superordinate categories of vehicles, animals, and fruit.

The other evidence that children acquire basic-level category early comes from studies that attempted to teach new words. Horton and Markman (1980) taught children from preschool through kindergarten names for artificial animal categories. When the word was taught with simple ostension, children interpreted the novel label as referring to the basic level. Using a preferential-looking paradigm, Graham et al. (1998) presented infants between 16 and 19 months of age with an object, followed by a basic-level match or superordinate-level match; this target was either labeled or unlabeled. When the target was labelled, infants looked longer at the basic-level match than at the superordinate-level match. This suggests that labelling of the target helped children to pay attention to basic level match.

The results of the above studies suggest that basic level noun category has an advantage in early acquisition over superordinate and subordinate level noun categories. This means that children acquire basic level noun category first before they acquire superordinate and subordinate levels. Kako (2005) argues that such is the case because the members of basic level noun categories are readily available from perception. The basic level noun

category has the highest cue validity (Kako, 2005). A category with high cue validity is more differentiated from other categories than one of lower total cue validity (Kako, 2005). This means that the members of a given category share many more attributes in common with one another than the category to which they belong shares with other categories. For example, chair is a basic level noun because the various types of chair (kitchen chair, living room chair) have more attributes in common than do different types of superordinate category furniture (table, chair) (Kako, 2005). Kako (2005) further argues that basic level noun category has an advantage because basic level noun categories have a privileged psychological status. Non-basic level noun categories, that is, subordinate and superordinate level noun categories can be learnt much more readily once the child has access to additional, non-perceptual cues about the meanings of words, in particular, the linguistic contexts in which they appear (Kako, 2005).

Although using different research designs and variation of participants' age, all the studies reviewed above suggested that basic-level noun categories have a privileged status in early vocabularies as opposed to superordinate or subordinate-level noun. Mandler (2004, 2007) found that infants learn superordinates before anything else. Mandler (2007) expanded an object-examination task in which infants manipulate little models instead of looking at slides. With this techniques, which is very engaging for infants, study results showed that even 7-months olds showed categorisation of animals versus vehicles versus furniture. Little subcategorisation was found within the animal domain: infants from 7-11-months did not differentiate dogs from rabbits or fish, although at 9-months they differentiated dogs from birds, and by 11-months they differentiated dogs and cats, animals with which they were likely to have had the most experience. No subcategorisation was found in this age range (7-11 months) for furniture; tables, chairs, and beds were not differentiated, nor until 11-months was a distinction made between furniture and kitchen utensils. These findings do not support the earlier findings that basic level concepts are the first to be formed and that superordinate concepts like animals and vehicles are late acquisition.

The results suggest that infants failed to subcategorise in most contexts. The only basic level categorisation found was for vehicles; even 7-month olds distinguished cars and

airplanes. Cars, were also distinguished from motorcycles by 9 and 11-months old. The areas where the infants managed to subcategorise are the ones they had experience, suggesting that experience facilitated the subcategorisation of concepts. Therefore, it could be suggested that experience plays a role in acquisition of hierarchical categories.

2.4.1.2 Acquisition of abstract and concrete nouns

The debate on acquisition of abstract and concrete nouns centres on the reasons why concrete nouns are acquired earlier than abstract nouns. In the literature, scholars agree that concrete nouns are acquired earlier than abstract nouns (Paivio & Clark, 1991; Kounios & Holcomb, 1994; Wiemer-Hastings et al., 2003; Caramelli, Setti, & Maurizzi, 2004; Schwanenflugel & Knapp, 2015; Koleva, 2018). However, there is no agreement on why this is the case. Some scholars argue that concrete nouns are acquired earlier than abstract nouns because of the system of human brain (see, Paivio & Clark, 1991; Kounios & Holcomb, 1994). On the one hand, according to Paivio and Clark's (1991), there are two systems in the human brain: (a) verbal (the logogen) and (b) imaginal (the imagen) that are involved in the processing of a word. The logogen system is involved when both concrete and abstract words are processed. However, only concrete words are represented in the imagen system. Therefore, concrete words are remembered better than abstract words because the image provides an additional means through which the concrete words can be stored and retrieved. On the other hand, Kounios and Holcomb (1994) argue that concrete and abstract words are processed by the left hemisphere, while only concrete words are processed by the right hemisphere that is responsible for imagination. Hence differences in their acquisition. Other scholars such as Schwanenflugel and Knapp (2015) have attributed the disparities in acquisition of abstract nouns and concrete nouns to differences in referents of the two. Schwanenflugel and Knapp (2015) argue that abstract words are words that evoke less imagery and have fewer sensory referents than concrete words. That is why children acquire abstract vocabulary later than concrete vocabulary. Considering that concrete nouns have advantage both in the system of human brain and on the referents, the current study sought to investigate on the acquisition of different

categories of concrete nouns to determine whether different categories of concrete nouns have the same acquisition status.

In their study, Caramelli et al. (2004) focused on comparing the pattern of information elicited by concrete and abstract concepts in school age children. The participants were 120 Italian speaking children of ages 8, 10, and 12 years. The participants were involved in a list-filling exercise. The results showed that concrete nouns elicited more productions than abstract concepts. The results further show that already at the age of 8-years, on the one hand, concrete concepts were characterised mainly by attributive and thematic relations and to a lesser degree, by taxonomic relations. On the other hand, abstract concepts were characterised by thematic relations and to a lesser degree by stereotypes and examples. The study results indicated that concrete and abstract concepts elicited a different pattern of relations already at the age of 8-years. Overall, concrete nouns were mastered and acquired before abstract nouns (Caramelli et al., 2004). The results of the study suggest that concrete nouns are easier to master or acquire than abstract nouns. It is based on this assumption that the current study studies the acquisition of concrete nouns.

2.4.1.3. Acquisition of categories of concrete nouns

Studies on acquisition of categories of concrete nouns focus on which category of concrete noun is acquired earlier. Studies on acquisition of different categories of concrete nouns were pioneered by Gentner (1982) who predicted that animate beings should be strongly represented in early vocabulary within the concrete noun class. This suggests that categories within concrete nouns are acquired differently. However, the prediction of Gentner (1982) begs a question, is animal category also acquired early in Bantu languages? Following Gentner's (1982) prediction, Maxilom (2013) conducted a study on which noun category is acquired early. The study used noun categories in classifying the words uttered by the children as they interacted with their caregivers whilst watching television (Maxilom, 2013). In the study, data was drawn from ten children who spoke English, Cebuano, and Filipino with age range of 1; 5–3 years. The interactions of children with their caregivers were audio-recorded as they were watching television. The noun categories that were examined were: human, food, animal, body

parts, toys, and social words categories. The results showed that the most acquired nouns were names of animals (Maxilom, 2013).

The study by Maxilom (2013) was conducted in English, Cebuano, and Filipino languages which are morphologically different from Bantu languages, for example, Chichewa. As such, differences in morphological structure of the languages might influence which category of concrete noun is acquired earlier. Therefore, it was important to conduct a study on acquisition of different categories of concrete nouns in Chichewa language to determine if there are differences in their acquisition by children.

2.5 Acquisition of Bantu nouns

Most studies on the acquisition of Bantu nouns address the acquisition of Bantu noun class morphology (Kunene, 1979; Ziesler & Demuth, 1995; Kadenge, 2011). For example, Kunene's (1979) study focused on examination of acquisition of nominal morphology of Swati, focusing on noun prefixes and nominal agreement such as possessives and demonstratives. The data for the study were drawn from 2-months-5; 11year olds SiSwati speaking children. The data was collected through tape recordings and experimental interviews. The study results show that 26-months old child only produced the stems of the nouns. For example, *-lumbi (Whiteman) while adult form is um-lumbi.* From the data Kunene (1979) suggests that the child acquired nouns not as a unit, but that she acquired each morpheme that makes up the noun separately and at a different time. Kunene (1979) concluded that the nominal stems are acquired before nominal prefixes.

Kadenge's (2011) study focused on determining the acquisition stages of noun class prefixes. Kadenge (2011) examined the development of noun class prefixes in 2-3 year old Shona speaking children. The data was collected through the speech produced by 3 children aged 2; 4, 2; 6, and 2; 9. The study results show that children produced three different word categories. The first category consists of words characterised by the omission of the noun class prefix. The words did not have noun class prefixes in context where they are required to have them in line with the requirements of Shona grammar.

However, the children's words were made up of lexical morphemes only-only stems of the words were appearing in the children's speech, for example, *–koro* (school) while the adult form is *chikoro.* In the child form, the prefix *Chi-* (class 7) has been omitted (Kadenge, 2011).

The second category shows the beginning of the emergence of noun prefixes. Part of the targeted prefix begins to emerge in the form of an onsetless vowel. In this category, children omitted the consonant of the target noun class prefix in their speech, suggesting that the prefixes that are produced at this stage do not have sufficient phonemic content, for example, *–ipunu (spoon)* while the adult form is *sipunu.* In child form, the consonant's' has been omitted (Kadenge, 2011).

The third category is the one in which a word is produced without any errors and resembles the morphological and phonological structure of the adult form. The words consist of both the noun class prefix and the content or lexical morpheme (prefix and stem), for example, *Chi+ngwa* (bread) while the adult form is *chingwa* (Kadenge, 2011).

Based on these findings, Kadenge (2011) concluded that noun class prefixes occur in three overlapping stages: Stage 1, marked by the absence of prefixes; stage 2, characterised by the partial appearance of noun class prefixes in the form of an onsetless vowel; stage 3, shows complete mastery of their production and appropriate assignment to lexical morphemes. The results suggest that children have some knowledge of the shape of specific noun class prefixes from an early age.

Tsonope (1987) conducted a longitudinal study of two Tswana speaking children aged 1; 11-2; 6 and 2; 5-3 years, focusing on the noun class system and nominal agreement with possessives and demonstratives with some discussion of tone and disyllabic word templates. The study results showed that children learning Tswana as a first language reveal three stages of development. The first stage children acquired noun stems without prefixes. For example, *-togo (soft porridge) while adult form mo-togo*. Second stage children acquired place holder vowel. For example, *e-togo (soft porridge)*. The third stage, children acquired the prefix and the stem. For example, *mo-togo (soft porridge).*

Studies on acquisition of Bantu nouns have further investigated if the acquisition of noun class prefixes is related to input (Ziesler & Demuth, 1995). Ziesler and Demuth (1995) explored the possibility that there are features in the input which influence the general trend of gradual development from an initial state where few prefixes are used, to the use of a shadow vowel, and finally to the correct use of full prefix forms, without errors of regularisation. Data was drawn from two Sesotho speaking children aged 2; 1. The children were recorded outside their homes in a small mountain village where relatives and friends frequently engaged the children in conversation (Ziesler & Demuth, 1995). The study showed that both children and the relatives used dropped prefix forms, for example, *eta* instead of a full prefix form *se-eta* 'shoe' indicating that even children have knowledge of and use a caregiver speech register in interactions with younger children (Ziesler & Demuth, 1995). The results further show that overtime children show gradual increase in use of prefixed class nouns.

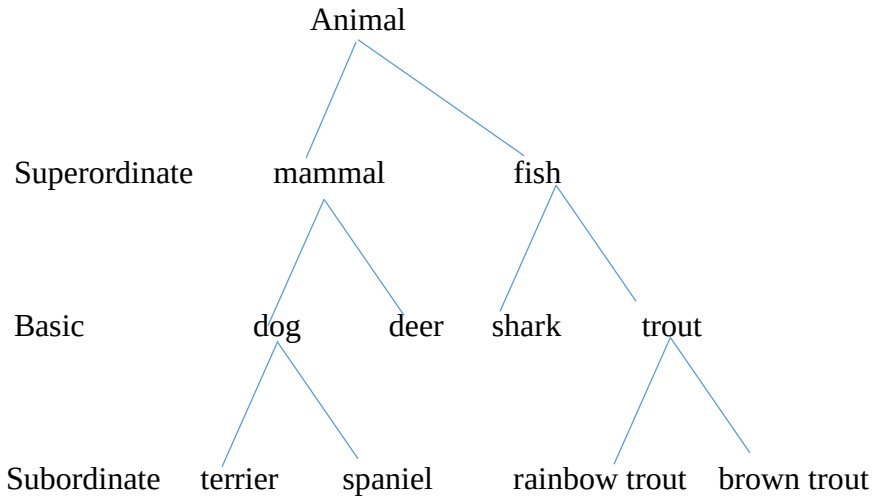
As per literature reviewed, there has been a systematic study of acquisition of Bantu nouns, that is, acquisition of Bantu noun class morphology. However, the researcher did not come across literature that documents how children acquire different categories of concrete nouns. Therefore, the current study sought to investigate how Chichewa L1 speaking preschool children acquire different categories of concrete nouns.

2.6 Conceptual framework

In an attempt to explain how Chichewa L1 preschool children acquire different categories of concrete nouns, the study adopted categorisation model (CM) as a guiding theoretical framework. Categorisation is the process by which things are placed into groups called categories (Kruschke, 2008). Categorisation originates from Aristotelian theory also known as classical view until the mid-70, when Eleanor Rosch's experiment results demonstrated the inadequacy of classical view for ordinary concepts (Lieto et al., 2015). Proponents of categorisation seek to have a theory of knowledge representation that better characterises how people represent knowledge (Rosch, 1978). A theory which gives a better account of categories (Lieto et al., 2015). Categories are the basic elements

of human cognition; they are the glue that hold our mental world together (Murphy, 2016). Categories are organised in a hierarchy (Murphy, 2016). These hierarchies are commonly based on the principle of class inclusion (Murphy, 2016; Murphy, 2019). That is, categories at higher level include all categories at a lower level. According to Murphy (2019), there are three levels of categorisation: (i) The superordinate level displays a low degree of class inclusion and a high degree of generality, for example, furniture; (ii) The basic level displays a high degree of class inclusion and medium degree of generality, for example, chair; (iii) The subordinate level is highly specific. It provides identifiable and detailed gestalts with highly detailed configurations of individuating properties, for example, kitchen chair (Peters & Shapiro, 1987; Murphy, 2019). A diagram below illustrates the hierarchically organised categories with the superordinate, basic, and subordinate levels.

Hierarchically organised categories with the superordinate, basic, and subordinate levels



(Adapted from Murphy, 2019)

The acquisition of superordinate, basic, and subordinate levels are different for each person depending on factors such as expertise, environment, and culture (Rosch, 1975; 1978; Tanaka & Taylor, 1991). The individual differences in domain-specific knowledge affect the extent of acquisition of the three levels of categorisation (Tanaka & Taylor,

1991). On the one hand, experts pay more attention to specific features (subordinate features) of objects in their area than non-experts would do. The individual differences in domain-specific knowledge affect the way individuals acquire stimuli. Those with expertise are able to differentiate the subordinate level categories from basic and superordinate level categories (Tanaka & Taylor, 1991). For example, after presenting some pictures of birds, experts of birds tend to say the subordinate name, for example, black bird, or sparrow, while non-experts say it's a bird. On the other hand, culture of an individual influences how attributes will be defined by humans. That is, one's segmentation of a bird's body such that there is an attribute called 'wings' may be influenced not only by perceptual factors such as the gestalt laws[1] of form that would lead one to consider the wings as a separate part, but also by the fact that at present that person already has a cultural and linguistic category called birds (Rosch, 1978). Cultural factor entails that people living close to a particular object have greater knowledge about it than others. As such, it is easy to identify the specific features of the object and acquire it easily.

2.6.1 Approaches to categorisation

There are a number of approaches to categorisation. The first approach is the classical categorisation. In classical categorisation, categories are defined by necessary and sufficient features (Lieto et al., 2015). A perceived stimulus is mapped onto an internal representation if and only if the stimulus contains a number of necessary and jointly sufficient features (Klapper, et al., 2017). For example, a stimulus may be categorised as a pen if and only if it is long and thin and can write (Klapper et al., 2017). The model implies that only two cognitive outcomes are possible, a stimulus is seen as X or not X (Klapper et al., 2017). This suggests that either a representation is not mapped onto the stimulus because it does not have all necessary features or it is mapped onto the stimulus

[1] Gestalt laws refer to set of principles in psychology, first proposed by Gestalt psychologists, that account for the observation that humans naturally perceive objects as organised patterns and objects, as a principle known as pragnanz (Pelli, Majaj, Raizman, Christian, Kim, Palomares, 2009).

because it has a jointly sufficient set of features (Klapper et al., 2017). The second approach is prototype categorisation. In prototype categorisation, categorisation is seen as a graded similarity judgement between an external stimulus and an internal representation (Klapper et al., 2017). The stimulus could be categorised as a better or worse example of X (Klapper et al., 2017). The third approach is exemplar categorisation. In exemplar categorisation, categories are represented by memories of instances (exemplars) that are labelled with their category name (Murphy, 2016). To classify a stimulus, the model determines the similarity of the stimulus to all known exemplars, aggregates the similarities, and then decides the categorisation of the stimulus (Rouder & Ratcliff, 2006; Kruschke, 2008). The more frequently an item is encountered, the more stored representative (exemplars) of it will be held in memory (Reisberg, 1997; Rouder & Ratcliff, 2006). Items which are most frequently represented in memory are more likely to be recalled due to faster identification and categorisation as a result of requiring less memory (Rohrer, 2002).

Considering that classical view has its own weakness, that is, it did not give a complete account of categories (Lieto et al., 2015). For example, some specific examples of a category such as bird seem to be better examples than others, as a case of a robin versus an ostrich (Lieto et al., 2015). The emergence of prototype rectified the weakness of classical view that human brain makes a binary decision during categorisation (Klapper et al., 2017). Prototype model brings the assumption that mapping of stimuli onto internal representation is graded (Klapper et al., 2017). The exemplar view in turn also rectified some weaknesses of prototype view, for example, some psychologists argue that instead of using a single abstract prototype for categorising a concept, multiple, and specific exemplars are used (Lieto et al., 2015). Prototype model emphasises that human beings construct a summary representations of concrete experience. On the contrary, exemplar model emphasise that categories are grounded in our experience and that we store individual encounters with concrete tokens. As such, the exemplar view is a better improved model amongst the three because not only does it emphasise on importance of similarity for categorisation, but it also emphasise on experience in categorisation. Secondly, the exemplar model seems to succeed in explaining different classes of

cognitive phenomena, such as the fact that human subjects use different representations to categorise concepts: some use exemplars, a few rely on prototype (Lieto et al., 2015). Thirdly, exemplar model fits in a wide variety of empirical data (Kruschke, 2008). Exemplar model has successfully provided good quantitative fits to accuracy data from a wide variety of experiments (Ashby & Rosedahl, 2017). As a model, it has been the most prominent cognitive theory of categorisation for more than 30 years (Ashby & Rosedahl, 2017).

For the purpose of this thesis, exemplar model has been adopted because it gives a fair account of acquisition of categories amongst the three models. As a model, it assumes that children begin with learning the features of the entities and then learn which features are important for the concept. However, the exemplar model has its shortfalls as well. Some theorists contend that there are not enough resources within the mind to store all the exemplars one would need to typify membership in a category (Lieto et al., 2015).

The forth approach is folk categorisation. Folk categorisation seems to depend upon the interest and purpose of that object or noun being categorised by L1 speakers. It demonstrates L1 speaker's response to his or her environment (Allan, 1977). Folk categorisation is not a matter of identifying essences, but simply a reflection of social convenience and necessities (Hayakawa, 1984). Different necessities produce different categorisation. For example, if hides are used for making shoes, then the manufacturer of shoes would categorise cattle differently from a butcher.

For the purpose of this thesis, the study combines hierarchical approach, exemplar model and folk categorisation in discussing the results so that the three should complement each other in discussing the results.

Hierarchical approach, exemplar categorisation and folk categorisation are used in explaining acquisition patterns of different categories of concrete nouns in Chichewa. These three models help to explain why some noun stimuli are acquired with ease or quickly than others.

2.7 Chapter summary

The chapter has reviewed literature on acquisition of nouns. The chapter has also described the categorisation model and explained how the model has informed the present study. The next chapter discusses research methodology adopted for the study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Chapter Overview

The chapter discusses research methodology adopted by the study. Section 3.0 presents an overview of the chapter. Section 3.1 presents research design of the study. Section 3.2 discusses sampling of participants for the study. Section 3.3 presents how the researcher accessed the participants. Section 3.4 presents material used for the study. Section 3.5 explains the procedure of the experiment. Section 3.6 presents how data was analysed. Section 3.7 presents how data was managed. Section 3.8 discusses limitation of the study. Section 3.9 discusses ethical issues considered in the study. Lastly, section 3.10 summarises the chapter.

3.1 Research design

The research adopted experimental design where there was a systematic and deliberate manipulation of age as a variable by the researcher (Rasinger, 2013). There was a deliberate variation of age of the participants, in order to determine the developmental aspect of acquisition of concrete nouns, through observation of the effects of age on the acquisition of the stimulus (Balnaves & Caputi, 2001). Also, the research intended to relate its results with other experiments conducted in the same way in the past (see, Bijeikiene & Tamosiunaite, 2013). Although the study was quantitative in nature, qualitative approach was also used to clarify, and interpret quantitative data (Denzin & Lincoln, 2000).

3.2 Sampling

This section discusses how the local preschool, and participants were sampled. The present study focused on 2-5 year old Chichewa L1 speaking preschool children because the age intervals would help to determine the developmental aspect of acquisition of concrete nouns. The beginning age for the research was 2-years because at this age children are able to name and answer questions about most common objects ('Developmental Milestone, birth to 8 years,' 2009). This aspect was important because respondents were expected to respond to a question; *ichi ndi chani?* 'What is this?' with an answer of what the stimulus was. Furthermore, at the age two years, children are able to understand questions like where? and what is that ('Developmental Milestone, birth to 8 years,' 2009)? Their ability to understand questions was critical as they were expected to respond to some questions during the research.

The study had set 5-years as the bar for Chichewa speaking children because children in all cultures are able to communicate effectively in their L1 language by the age of 5 although they still have a considerable amount to learn (Kelly et al., 2014). This implied that the quest for this thesis could have been addressed within the stated age range, 2-5 years.

The sampled local preschool was chosen using purposive sampling. The preschool is located in Chikanda in Zomba City, Malawi where Chichewa is spoken. The township was chosen for easy accessibility of the participants. This made the research to be conducted without much economic stress. Creswell (2014) stresses that proximity of the research site provides easy access to informants and information at a low cost. The preschool had learners who were L1 speakers (Palys, 2008) of Chichewa language and use the language both at home and at school. In order to detect a significant difference of study factor or treatments, 10 participants were sampled from each of the age group 2, 3, 4, and 5 years old. Firstly, homogenous sampling method was used in the sense that the focus was on the age of the learners, thus being 2, 3, 4, and 5 years old. With homogenous sampling technique, each age group had its own population (Etikan et al.,

2016). Having identified the population of each age group (2, 3, 4, and 5 years old), simple random sampling was used where participants were drawn from a big hat which had the whole population of the age group. The hat was shaken, then a paper containing a name of the participant was picked at a time until 10 participants of the age group population were sampled (Balnaves & Caputi, 2001). Therefore, the research had a total of 40 Chichewa L1 speaking preschool children as participants; 10 participants in each age group (2, 3, 4, and 5 years old). Each participant was assigned an identification, which consisted of a number (which represented the position on the experimental roll), and a letter (which represented the age of the participant) for anonymity of the respondents and confidentiality (De Vaus, 2002). Letter A represented 5-year olds, letter B represented 4-year olds, letter C represented 3-year olds, and letter D represented 2-year olds. The sample size was arrived at for easy management of the participants because the time frame for the research project was short. Table 2 presents age distribution of the participants.

Table 2: Age distribution of the participants

Participant	**Sex**	**Age of the participant at the start of the project**	**Level at the preschool at the start of the project**
1A	Male	5.2	Level two
2A	Male	5.0	Level two
3A	Male	5.7	Level two
4A	Female	5.3	Level two
5A	Male	5.9	Level two
6A	Male	5.1	Level two
7A	Male	5.8	Level two
8A	Male	5.10	Level two
9A	Female	5.11	Level two
10A	Male	5.5	Level two
11B	Female	4.10	Level two
12B	Male	4.7	Level two
13B	Female	4.1	Level two
14B	Male	4.0	Level two
15B	Female	4.3	Level two
16B	Female	4.8	Level two
17B	Female	4.4	Level two
18B	Female	4.6	Level two

19B	Male	4.2	Level two
20B	Female	4.11	Level two
21C	Female	3.5	Level one
22C	Female	3.11	Level one
23C	Male	3.2	Level one
24C	Female	3.1	Level one
25C	Male	3.6	Level one
26C	Male	3.0	Level one
27C	Female	3.7	Level one
28C	Male	3.3	Level one
29C	Female	3.10	Level one
30C	Female	3.9	Level one
31D	Female	2.11	Reception
32D	Female	2.2	Reception
33D	Female	2.0	Reception
34D	Female	2.1	Reception
35D	Female	2.8	Reception
36D	Male	2.5	Reception
37D	Female	2.10	Reception
38D	Female	2.7	Reception
39D	Male	2.9	Reception
40D	Female	2.4	Reception

Table 2 shows that the ages of 5-year old children ranged from 5.0 – 5.11 years with a mean age of 5.4; the ages of 4-year old children ranged from 4.0 - 4.11 years with a mean age of 4.3; the ages of 3-year old children ranged from 3.0 – 3.11 years with a mean age of 3.4; and the age of 2-year old children ranged from 2.0 – 2.11 years with a mean age of 2.4.

The sample had 23 female respondents and 17 male respondents. However, this sex bias had no any implications on the research process since sex was not a variable in the study. In the study, all the children who participated in the research were normal, typically developing Chichewa L1 speakers. Parents revealed that the children had no history of premature birth (< 37 weeks gestation) and low birth weight (< 2500g/ 51bs). Parents and teachers further revealed that all the children had no language disorder; no need for special requirement of educational services; no history of hospitalisation or medical attention for a closed head injury (see, Huber-Okrainee et al., 2005). All these were done in order to minimise the rate of errors (Masterson et al., 2008).

3.3 Access and acceptance

The researcher sought consent from The Preschool Director. Having been permitted to conduct the research at the preschool; The Preschool Director introduced the researcher to the teachers, who in turn granted their consent to conduct the research. The Preschool Director also introduced the researcher to the children, then to their parents who granted the consent to conduct the research with their children.

3.4 Materials used

The materials for the experiment were adapted from Druks and Masterson (2000) 'Object and Action Naming Battery' because their database is particularly suitable for such an inquiry since the items have high levels of name agreement among adult speakers, and the nouns and verbs are closely matched on adult rated age of acquisition (Masterson et al., 2008). However, for the purpose of the research, the focus was on Objects only. The 'battery' was modified in order to suit the Chichewa L1 preschool children, because each culture has its own perspective on things. In that regard, the 'battery' was translated into Chichewa by substituting the English names with Chichewa words, then the researcher analysed each and every stimuli in the Object and Action Naming Battery, and removed Object stimuli from Object and Action Naming Battery which were deemed culturally inappropriate to Chichewa L1 speaking children. Then the researcher introduced Object stimuli which were culturally appropriate to Chichewa L1 speaking children, and befitting the noun categories under study. Furthermore, apart from Object stimuli undergoing the above stated modification process, the researcher further categorised the Object stimuli into the following categories: the category of animals, items used at home, human body parts, and food items with the reason of establishing their acquisition patterns and acquisition rates to determine which category is acquired early. Ultimately, the process of modifying the 'battery' ensured cultural validity of the data (Fleer & Ridgway, 2014).

After the Object Naming Battery was modified, the researcher sought consent from the head teacher of Matiya Primary School through The District Education Manager of Zomba Urban to conduct familiarity test of the 'battery' to Matiya Primary School pupils. Both the District Education Manager and the Head Teacher of Matiya Primary School granted the researcher permission to test the 'battery' (appendix B). Then, the researcher tested the modified version of the Object Naming Battery to 20 purposively sampled pupils of 10-year-old from Matiya Primary School which is located in Chikanda, Zomba. 10-year-old was an ideal age because by 8-years most children have typical articulation and provide a summary after listening to information ('Developmental Milestone, birth to 8 years,' 2009).

Having been oriented on the purpose of the test and how they were supposed to respond, the pupils were presented with 40 concrete noun stimuli (10 stimuli for the category of animals; 10 stimuli for the category of items used at home; 10 stimuli for the category of human body parts; and 10 stimuli for the category of food items). The 40 stimuli were presented to them in a quiet classroom at their school after classes in order to avoid disturbance of lessons. The stimuli were presented through a computer and they were asked to name the stimuli. Participants were asked a question; *ichi ndi chani?* 'What is this?' Their response was supposed to be in a form of a noun class prefix and a noun stem. For example, *chi-tseko* 'door.' Table 3 presents SPSS frequency statistics for the acquisition of four categories of concrete nouns (category of animals, food items, items used at home, and human body parts) among the 10-year-old children.

Table 3: The acquisition of four categories of concrete nouns among the 10-year-old children.

Category and status	Frequency	Percent	Valid percent	Cumulative percent
Animals stimuli Valid acquired	191	95.5	95.5	95.5
Not acquired	9	4.5	4.5	100.0
total	200	100.0	100.0	
Items used at home stimuli Valid acquired	198	99.0	99.0	99.0
Not acquired	2	1.0	1.0	100.0
total	200	100.0	100.0	
Food items stimuli Valid acquired	195	97.5	97.5	97.5
Not acquired	5	2.5	2.5	100.0
total	200	100.0	100.0	
Human body parts stimuli Valid acquired	196	98.0	98.0	98.0
Not acquired	4	2.0	2.0	100.0
total	200	100.0	100.0	

The results show that concrete nouns of the categories of animals were acquired with 95.5%, food items with 97.5%, human body parts with 98.0% and items used at home with 99.0%. An analysis of individual stimulus showed that the animal stimulus *nkhukutembo* ‘turkey, noun class (NC) 9’ had acquisition problems with acquisition rate of 15 (75.0%), as such it was removed and was not replaced because of time factor. The food stimulus *mizimbe* ‘sugarcanes, NC 4’ was removed because it had low acquisition rate, which suggested that it had acquisition problems, and it was not replaced because of time factor. Hence, the actual experiment used 38 stimuli.

SPSS One-Sample T-Test was carried out and there was a significant difference of P < .000 for the acquisition of four categories of concrete nouns. The significant difference of P < .000 gives an indication of confidence towards the results. Therefore, the Object Naming Battery was validated and ready to be used in the actual experiment. So, the total number of concrete nouns stimuli used in the study experiments was 38 (consisting of 9 stimuli for animals, 10 stimuli for human body parts, 10 stimuli for items used at home, and 9 stimuli for food items). All the 38 stimuli were presented to the participants during the experiment sessions.

3.5 Procedure of the experiment

Before the actual research sessions, the researcher visited the sampled participants for three days so that a personal relationship between the researcher and the participants could be established (Dawson, 2007; Hackshaw, 2008; Perderson, 2013). During those three days of rapport visits, a participant was presented, through the computer, with practice stimuli of different categories of concrete nouns, so that the participants could be familiar with the experiments before the actual data collection started (Dawson, 2007; Hackshaw, 2008; Perderson, 2013). However, the practice stimuli were not part of the data collected. A participant was asked; *ichi ndi chani?* 'What is this?' for concrete nouns stimuli.

During the experiment, the participants were tested individually in a quiet room at their school so that all other variables were kept in check. During each experiment session, the participant was informed which stimuli or picture type he or she was to be presented with and how he or she was supposed to respond, then the participant was presented with a practice stimulus to let the participant know what was required of him or her during each experiment session and also to minimise errors (Masterson et al., 2008). Such a practice stimulus was not part of the data collected. After this, the participant was presented with the experimental stimuli. In each case, the participant was asked to name the pictures using a single word.

During the experimental session, participants were shown a stimulus through a computer. Then the participant was asked a question; *ichi ndi chani?* 'What is this?' The presentation of the stimulus was on one by one basis based on the category of the concrete noun until all the stimuli were presented. Recording of findings was at a point when the participant was responding to the question; *ichi ndi chani*? 'What is this?' The findings were recorded in a notebook which were later typed for safety keeping. Each participant was on first day presented with 9 stimuli from the category of animals, then after 10 minutes break, 10 stimuli from the category of items used at home. On a second day of experiment, they were presented first with 9 stimuli from the category of food items, then after 10 minutes break, 10 stimuli from the category of human body parts. The experiments started with animal stimuli because it is argued that animal stimuli are strongly represented in early acquisition of concrete nouns (see, Gentner, 1982; Maxilom, 2013).

Each participant had two consecutive days of experimental sessions with an average of 9 minutes per experimental session as children have too short attention span (see, Rasinger, 2013). Furthermore, each participant had a 10 minutes break before the second experimental session in order to keep the participant engaged and focused (Fargas et al., 2010). In a day, a participant named 19 stimuli for a maximum of 18 minutes on average, with a 10 minutes break in between.

3.6 Data analysis

Statistical Package for Social Sciences version 16.0 (SPSS 16.0) software was used for data analysis. SPSS was used to calculate cross tabulations where acquisition rates of concrete nouns were determined across the age groups. Frequency statistics were used in order to calculate the acquisition percentages of concrete nouns. Pearson product-moment correlation coefficient describes the strength and direction of the relationship between two variables. Pearson product-moment correlation coefficient was used to establish the relationship between acquisition of concrete nouns and age of respondents. Lastly, Analysis of Variance (ANOVA) with Post-hoc Tukey test determine whether there is significant differences in the mean scores on the dependent variable across the groups. It

is used to find out where these differences lie. ANOVA with Post-hoc Tukey test was conducted to determine if there were significant differences in responses between age groups.

The actual responses that the respondents gave were also qualitatively analysed as the figures alone could not give a clear picture of how children acquire nouns.

3.7 Data management

In order to ensure safety of the data collected, collected data was typed, printed and kept in hard copies. Also flash discs, compact discs (CDs), and memory cards were used to store information in form of texts and images, and they were coded accordingly. In addition to that, the typed data were emailed to researcher's personal email address.

3.8. Limitation of the study

One major limitation of the study was that the socioeconomic data of the participants was not collected, which would have influenced the acquisition of the stimuli.

3.9 Ethical considerations

Considering that the participants were children who could not make decision and that they could easily be abused, a number of ethical measures were put in place. Firstly, the researcher introduced himself orally to the Preschool Director, then he presented his introductory letter from Department of African Languages and Linguistics, Chancellor College, University of Malawi (appendix A) and Chancellor College student identification card. The researcher explained orally the aim and objectives of the research, and how the children would be involved in the study. Then the researcher presented the information sheet followed by a consent form to the Preschool Director. Having read both, the Preschool Director orally granted the permission and signed the consent form (appendix C). Then permission was sought from concerned teachers and parents because participants themselves being young could not grant permission. Having

explained orally to them the aim and objectives of the study and having gone through the information sheet and consent form, they both granted consent orally and signed the consent forms (appendix D i and ii). To make sure that all parents understood the information sheet and consent form, the forms were translated to Chichewa.

Secondly, all the children participated in the research after their teachers and parents or guardians voluntarily signed an informed consent form since the participants were children below 18 years old and could not make informed choices (Nicolas & Ahmed, 2016). Thirdly, it was emphasised to the parents that the experiment would be interrupted or ended if a child verbalise a desire to stop, or expressed discomfort by crying or withdrawing (Nicolas & Ahmed, 2016). Furthermore, the researcher highlighted to the teachers of the sampled preschool and parents or guardians of the respondents that there was minimal risk attached to the study-either physical harm or mental harm to the respondents. There was minimal risk because data was collected at their campus in the presence of teachers. The researcher also kindly requested parents or guardians that participants (children) should be given extra food to cater for the few extra minutes which they remained at school for the experiments. All the parents or guardians willingly agreed to the arrangement. The request was made despite noting that most of the children had already taken breakfast when coming to school, and that the school provided porridge for the children during break time.

The researcher also made sure that anonymity of respondents and confidentiality were honoured by using an identification code that consisted of a number and a letter to represent the participant. This was done to protect participant's privacy (De Vaus, 2002). In order to ensure utmost privacy, and that only the researcher had access to the data collected, the collected data was typed and kept in the researcher's personal email account accessed only by him through a password. The hard copies, flash discs, CDs, and memory cards were kept in the researcher's study room drawers accessed only by him using a key. Lastly, teachers as well as parents or guardians were told about the benefit of taking part in the study. That is, the participants would develop an interpretation skill of

different pictures, having participated in the research (Fleer & Ridgway, 2014; Nicolas & Ahmed, 2016).

3.10 Chapter summary

The chapter has highlighted how the research was carried out by pointing out the research design used. The chapter has also pointed out where the research was conducted. Furthermore, the chapter has explained how the participants were recruited and how the participants were accessed. In addition, the chapter has described the materials used for the experiment. The chapter has further explained the experimental procedure for the study, and how data was analysed and managed. Lastly, the chapter has explained ethical considerations for the study. The next chapter presents and discusses research findings.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.0 Chapter overview

This chapter presents and discusses the findings of the study in relation to each specific research objective. The purpose of this study was to investigate the acquisition of concrete nouns by 2-5 year old Chichewa L1 speaking preschool children. Section 4.1 discusses how different categories of concrete nouns are acquired by 2-5 year old Chichewa L1 speaking preschool children. Section 4.2 discusses which category of concrete nouns is acquired early by 2-5 year old Chichewa L1 speaking preschool children. Section 4.3 discusses the relationship between age and acquisition of concrete nouns. Lastly, in section 4. 4 chapter summary is presented.

4.1 Acquisition of different categories of concrete nouns by 2-5 year old Chichewa L1 speaking preschool children

This section discusses how the four categories of concrete nouns were acquired by 2-5 year old Chichewa L1 speaking preschool children. The discussion starts with the category of animals, followed by the category of items used at home, then the category of food items, and lastly, the category of human body parts.

4. 1.1 Category of animals

This section discusses how 2-5 year old Chichewa L1 speaking preschool children acquired concrete nouns of the category of animals. The category of animals had 9 stimuli. SPSS cross tabulations were carried out on the category of animals in order to determine the acquisition of concrete nouns in the category of animals across the four age groups. Table 4 presents the results.

Table 4: The acquisition of the category of animals by age

Noun	**Noun class**	**Status**	**Age**				
			2 years	**3 years**	**4 years**	**5 years**	**total**
Pusi	1a (Ø-)	Acquired	5	6	8	9	28
		Not acquired	5	4	2	1	12
Total			**10**	**10**	**10**	**10**	**40**
Mbalame	9 (m-)	Acquired	5	7	8	9	29
		Not acquired	5	3	2	1	11
Total			**10**	**10**	**10**	**10**	**40**
Mbuzi	9 (m-)	Acquired	7	8	10	10	35
		Not acquired	3	2	0	0	5
Total			**10**	**10**	**10**	**10**	**40**
ng'ombe	9 (n-)	Acquired	4	6	7	10	27
		Not acquired	6	4	3	0	13
Total			**10**	**10**	**10**	**10**	**40**
tambala	1a (Ø-)	Acquired	6	9	10	10	35
		Not acquired	4	1	0	0	5
Total			**10**	**10**	**10**	**10**	**40**
nkhumba	9 (n-)	Acquired	2	7	8	9	26
		Not acquired	8	3	2	1	14
Total			**10**	**10**	**10**	**10**	**40**
Galu	1a (Ø-)	Acquired	8	9	10	10	37
		Not acquired	2	1	0	0	3
total			**10**	**10**	**10**	**10**	**40**
bakha	1a (Ø-)	Acquired	4	5	6	8	23
		Not acquired	6	5	4	2	17
total			**10**	**10**	**10**	**10**	**40**
nkhunda	9 (n-)	Acquired	4	6	7	9	26
		Not acquired	6	4	3	1	14
Total			10	10	10	10	40
Overall Total		**Acquired**	**45**	**63**	**74**	**84**	**266**
		Not acquired	**45**	**27**	**16**	**6**	**94**

Table 4 shows that three concrete nouns had highest acquisition rates; *galu* 'dog, noun class (NC) 1a' was acquired with a total of 37 (92.5%), *tambala* 'cock, NC 1a' was acquired with 35 (87.5%), and *mbuzi* 'goat, NC 9' was acquired with 35 (87.5%). The high acquisition rates in these nouns suggest that respondents were much familiar with the concrete nouns in question because they were living close to these stimuli *galu* 'dog,'

mbuzi ‘goat,’ and *tambala* ‘cock.’ As such, they had greater knowledge about them (Rosch, 1978; Murphy, 2016). This suggests that they had knowledge of the best exemplar because they had encountered it several times hence, they were able to correctly identify the stimuli (Rouder & Ratcliff, 2006). It could be suggested that they were able to deduce the subordinate name *mbuzi* ‘goat,’ *tambala* ‘cock,’ and *galu* ‘dog’ because they were paying attention to specific features of the stimulus (Rosch, 1978; Tanaka & Taylor, 1991). The specific features of the stimulus for it to be *mbuzi* ‘goat’ are four-legged animal, with fur, two short horns, and a short tail; for *tambala* ‘cock’ are two-legged, male, domesticated chicken, with feathers, and wings; for *galu* ‘dog’ are four-legged, domesticated animal, that barks, and has fur.

Table 4 also shows that *mbalame* ‘bird, NC 9,’ had the acquisition rate of 29 (72.5%), which suggests that children acquired the stimulus at ease though with few cases finding it hard to acquire. On the one hand, five 2-year olds, seven 3-year olds, eight 4-year olds, and nine 5-year olds had acquired the stimulus name correctly. This suggests that the respondents had frequently encountered the stimulus (Reisberg, 1997; Rouder & Ratcliff, 2006). Therefore, they had stored information of the best exemplar in their memory which facilitated the faster recall and identification of the stimulus (see, Rohrer, 2002). On the other hand, one 5-year old respondent, two 4-year old respondents and two 3-year old respondents said it was *khwangwala* ‘crow, NC 1a’ whilst one 3-year old respondent said it was *nkhunda* ‘dove, NC 9.’ An analysis of these responses suggests that 5-year old, 4-year old, and 3-year old respondents were looking for a subordinate name for the stimulus in question. Responses of five 2-year olds were *icho* ‘that’. This response suggests that the children were aware of the presence of the stimulus but they lacked the name for the stimulus. They used the demonstrative, *icho* ‘that’ to draw an attention to the audience about the existence of the stimulus. This suggests that these 2-year old children lacked vocabulary for naming the stimulus hence, the use of the demonstrative. This might suggest that the stimulus was not commonly encountered by the 2-year olds so they lacked the information about the best exemplar of *mbalame* ‘bird.’ Therefore, it can be suggested that at the age of 2-years, children are aware of the existence of the stimulus although they do not have a name for the same.

The stimulus *pusi* ‘cat, NC 1a’ was acquired with an acquisition rate of 28 (70.0%). The acquisition rate suggests that children had acquired the stimulus with ease though others had problems in acquiring the stimulus. Five 2-year old respondents, six 3-year old respondents, eight 4-year old respondents, and nine 5-year old respondents had acquired the stimulus *pusi* ‘cat’ correctly, suggesting that they had knowledge of the best exemplar that is why they were able to correctly identify the stimulus (Rouder & Ratcliff, 2006). An analysis of respondents’ wrong responses shows a variation of responses. Five respondents of 2-year old said it was *mkango* ‘lion, NC 3.’ Four respondents of 3-year old and two respondents of 4-year old said it was *nyalugwe* ‘leopard, NC 1a.’ One respondent of 5-year old said it was *kambuku* ‘leopard, NC 1a.’ All these wrong responses (*mkango* ‘lion,’ *nyalugwe* ‘leopard’ and *kambuku* ‘leopard’) have one common characteristic, they all belong to the family of cats (four-legged animal, with thick soft fur, and tail). The respondents were able to notice the general features of the cat family (four-legged animal, with thick soft fur, and tail) but failed to narrow it down to a specific type of cat in question (see, Murphy, 2016). This suggests that the children, including the 2-year olds, had acquired the average case of members in the category of cat hence, the use of superordinate features to name the stimulus (see, Murphy, 2016). These wrong responses suggest that the acquisition of the stimulus (*pusi* ‘cat’) starts with the acquisition of superordinate features at around the age of 2-years.

The acquisition rate for *ng’ombe* ‘cattle, NC 9’ was 27 (67.5%). The acquisition rate suggests that respondents did not encounter a lot of challenges in acquiring the stimulus. Four 2-year olds, six 3-year olds, seven 4-year olds, and ten 5-year olds had acquired the stimulus correctly whilst six 2-year old respondents said *icho* ‘that’ suggesting that they had no knowledge of the name for the stimulus. As already indicated above, this suggests the children were aware of the presence of the stimulus but they lacked the name for the stimulus. This could be because they lacked the information about the best exemplar hence, the use of the demonstrative *icho* ‘that.’ This might be the case because the stimulus was not commonly encountered by the 2-year olds (see, Reisberg, 1997; Rouder & Ratcliff, 2006). Four 3-year old and three 4-year old respondents said it was *mbuzi* ‘goat, NC 9.’ The children failed to distinguish *ng’ombe* ‘cattle, NC 9’ from *mbuzi* ‘goat,

NC 9' because they failed to identify the subordinate features of the stimulus *ng'ombe* 'cattle'; four-legged animal, with fur, two curved tall horns, and a long tail. However, the children were able to identify the superordinate features (four-legged animal, with fur, two horns, and a tail) hence, the response *mbuzi* 'goat,' which also shares the same superordinate features. This suggests that children acquire the superordinate features first before acquiring the subordinate features.

Acquisition rate of *nkhumba* 'pig, NC 9' and *nkhunda* 'dove, NC 9' was 26 (65.0%). The acquisition rate suggests that respondents did not encounter a lot of challenges in acquiring the stimuli. Two 2-year olds, seven 3-year olds, eight 4-year olds, and nine 5-year olds acquired the stimulus *nkhumba* 'pig' correctly. However, eight 2-year old respondents said, it was *galu* 'dog, NC 1a.' Such a response suggests that 2-year old respondents had acquired the superordinate features (four-legged domesticated animal, with fur) of the stimulus *nkhumba* 'pig', which are shared by both the stimulus in question and *galu* 'dog.' Three 3-year old respondents said it was *mbuzi* 'goat, NC 9' whilst two responses from 4-year old respondents and one response from 5-year old respondent was *ng'ombe* 'cattle, NC 9.' These responses also suggest that the children had acquired the superordinate features of the stimulus *nkhumba* 'pig', which are shared by both the stimulus in question and *mbuzi* 'goat' and *ng'ombe* 'cattle.' It could be suggested that the children had greater knowledge about *galu* 'dog,' *mbuzi* 'goat' and *ng'ombe* 'cattle,' as opposed to *nkhumba* 'pig' because they lived close to these than to *nkhumba* 'pig', despite all the animals being domesticated animals (Rosch, 1978; Tanaka & Taylor, 1991). As a result, they failed to identify the subordinate features of *nkhumba* 'pig'; four-legged animal, with fur, without two horns and a tail (see, Murphy, 2016).

Acquisition of *nkhunda* 'dove, NC 9' indicates that four 2-year olds, six 3-year olds, seven 4-year olds, and nine 5-year olds had acquired the stimulus correctly. However, six 2-year olds said it was *mbalame* 'bird, NC 9.' The response suggests that 2-year olds had acquired the superordinate features of the category bird; two-legged, domesticated, with feathers and wings hence, the response *mbalame* 'bird.' Four 3-year olds said it was *nkhuku* 'chicken, NC 9'; three 4-year old and one 5-year old respondents said it was *bakha* 'duck, NC 1a.' The responses show that 3-year olds, 4-year olds, and 5-year olds

had acquired the superordinate features of the stimulus. However, the responses indicate they had not yet acquired the subordinate features of *nkhunda* 'dove'; two-legged, domesticated, with feathers, wings, and small in size, possibly because they had no exemplar of *nkhunda* 'dove', which could have necessitated the faster identification of the stimulus (see, Rohrer, 2002).

Lastly, the stimulus *bakha* 'duck, NC 1a' had a total acquisition rate of 23 (57.5%). The acquisition rate suggests that most of the respondents found it difficult to acquire the stimulus. The reason for low acquisition rate could be that the children had few encounters of the stimulus, and consequently, they had not stored enough information about the stimulus in their memory (Reisberg, 1997; Rohrer, 2002; Rouder & Ratcliff, 2006). Six 2-year olds said it was *mbalame* 'bird, NC 9.' This response suggests that they had acquired the superordinate features of the stimulus; two-legged animal, with feathers and wings. Five 3-year olds said it was *nkhuku* 'chicken, NC 9,' four 4-year old and two 5-year old respondents said it was *tambala* 'cock, NC 1a.' These responses indicate that the children were aware of the superordinate features of the stimulus (two-legged animal, with feathers and wings) but possibly, they were looking for subordinate features, that is, two-legged domesticated web-footed broad-billed animal, with feathers and wings. However, due to few encounters with the stimulus, they had no information about the exemplar of the stimulus in their memory (see, Reisberg, 1997; Rohrer, 2002; Rouder & Ratcliff, 2006) to help them identify the subordinate features of the stimulus hence, the wrong responses.

The findings presented above indicate that at around the age of 2 years, children are able to recognise the stimulus, and if they encounter the stimulus more often, they start acquiring its superordinate features. The findings also suggest that at around the age of 3 years, children are still acquiring the superordinate features but they start looking for subordinate features of the most common stimulus. At around the age of 4 and 5 years, children look for subordinate features but when the stimulus is unfamiliar, they resort to superordinate features. The ANOVA Post-hoc Tukey test indicated that there was a significant difference in the acquisition of concrete nouns of the category of animals in the responses between 2-year old respondents and 3-year old respondents ($P < .007$); 2-

year old respondents and 4-year old respondents (P < .000); 2-year old respondents and 5-year old respondents (P < .000); 3-year old respondents and 5-year old respondents (P < .001). However, there was no significant difference in the responses between 3-year old respondents and 4-year old respondents (P > .05); 4-year old respondents and 5-year old respondents (P > .05).

4. 1. 2 Category of items used at home

This section discusses how 2-5-year old Chichewa L1 speaking preschool children acquired concrete nouns of the category of items used at home. The category of items used at home had 10 stimuli. SPSS cross tabulations were carried out on the category of items used at home to determine the acquisition of the category across the four age groups. Table 5 presents the results.

Table 5: The acquisition of the category of items used at home by age

Noun	**Noun class**	**Status**	**Age**				
			2 years	3 years	4 years	5 years	total
tsache	5 (Ø-)	acquired	9	10	10	10	39
		Not acquired	1	0	0	0	1
total			**10**	**10**	**10**	**10**	**40**
khasu	5 (Ø-)	acquired	6	9	10	10	35
		Not acquired	4	1	0	0	5
total			**10**	**10**	**10**	**10**	**40**
machesi	6 (ma-)	acquired	10	10	10	10	40
		Not acquired	0	0	0	0	0
total			**10**	**10**	**10**	**10**	**40**
lichero	5 (Ø-)	acquired	5	7	9	10	31
		Not acquired	5	3	1	0	9
total			**10**	**10**	**10**	**10**	**40**
chipande	7 (chi-)	acquired	5	6	8	9	28
		Not acquired	5	4	2	1	12
total			**10**	**10**	**10**	**10**	**40**
mpeni	3 (m-)	acquired	9	10	10	10	39
		Not acquired	1	0	0	0	1
total			**10**	**10**	**10**	**10**	**40**
mbale	9 (m-)	acquired	9	10	10	10	39
		Not acquired	1	0	0	0	1
total			**10**	**10**	**10**	**10**	**40**
Kapu	5 (Ø-)	acquired	10	10	10	10	40
		Not acquired	0	0	0	0	0
total			**10**	**10**	**10**	**10**	**40**
mpando	3 (m-)	acquired	10	10	10	10	40
		Not acquired	0	0	0	0	0
total			**10**	**10**	**10**	**10**	**40**
mtsuko	3 (m-)	acquired	3	4	7	9	23
		Not acquired	7	6	3	1	17
total			10	10	10	10	40
Overall Total		**acquired**	**76**	**86**	**94**	**98**	**354**
		Not acquired	**24**	**14**	**6**	**2**	**46**

Table 5 shows that *machesi* ‘matches, NC 6,’ *kapu* ‘cup, NC 5,’ and *mpando* ‘chair, NC 3’ were acquired with 40 (100.0%). The acquisition rate suggests that respondents acquired the stimuli with ease. The results suggest that the respondents were very much familiar with the stimuli. Likewise, *tsache* ‘broom, NC 5,’ *mpeni* ‘knife, NC 3,’ and *mbale* ‘plate, NC 9’ had acquisition rate of 39 (97.5%), suggesting that children of all ages had no problems acquiring these nouns. The familiarity of the stimuli entails that respondents had encountered more frequently the stimuli (*machesi, kapu, mpando, tsache, mpeni* and *mbale*), such that they had information about the best exemplar held in their memory which enabled them to recall and identify the stimuli quickly upon being presented to them (Rohrer, 2002). It has to be noted that these items are used on a daily basis at almost every Malawian standard home. Hence, it is not surprising that children are familiar with these items. Therefore, it could be suggested that the environment plays a role in acquisition of these items (see, Rosch, 1978).

The acquisition rate for *khasu* ‘hoe, NC 5’ was 35 (87.5%), *lichero* ‘winnower, NC 5’ was 31 (77.5%) and *chipande* ‘wooden spoon, NC 7’ was 28 (70.0%). The acquisition rates suggest that children acquired the stimuli easily though few cases found it hard to acquire the stimuli. Three respondents of 2-year old responded with a function description as *cholimira* ‘that for hoeing’ for the stimulus *khasu* ‘hoe’ whilst one respondent of 2-year old and one 3-year old respondent responded as *chopangira*… ‘for making...’ it was a function description response but incomplete. For *lichero* ‘winnower,’ five 2-year old and three 3-year old respondents said it was *chopetera* ‘for winnowing.’ Whilst the response for *chipande* ‘wooden spoon’ was *chogawira nsima* ‘used for dishing nsima,’ another function response for five 2-year old and four 3-year old respondents. Such responses suggest that these 2-year olds and 3-year olds had not yet acquired the name for the stimulus, but they had knowledge of it and how it is used (see, Murphy, 2016).

On acquisition of *mtsuko* ‘water pot, NC 3,’ the acquisition rate was 23 (57.5 %). Seven 4-year olds and nine 5-year olds had acquired the stimulus correctly suggesting that they had information about the best exemplar held in their memory which enabled them to recall, and identify the stimuli (Rohrer, 2002). However, 2-year olds and 3-year olds had

problems acquiring the stimulus. Only three 2-year olds and four 3-year olds were able to give a correct response. Seven 2-year old respondents and six 3-year old respondents said it was *chophikira* or *chophitsira madzi* 'used for boiling water,' a function response. This suggests that the children knew the stimulus even though they had not yet acquired its name. It could be said that the children had no information about the best exemplar held in their memory which could enable them to recall, and identify the stimuli (Rohrer, 2002). Furthermore, it could be argued that these children depended upon the purpose and interest of the stimuli in their acquisition (Allan, 1977). Their acquisition pattern was not a matter of identifying essences, but simply a reflection of social convenience and necessities (Hayakawa, 1984). It could, therefore, be concluded that acquisition of items used at home starts with the acquisition of function, before children actually acquire the name of the items. It could be argued that lack of a name for a stimulus does not mean that children are not aware of its existence.

The ANOVA Post-hoc Tukey test indicated that there was no significant difference in the responses between 2-year old respondents and 3-year old respondents in the acquisition of concrete nouns of the category of items used at home ($P > .05$); there was a significant difference in responses between 2-year old respondents and 4-year old respondents ($P < .000$); there was a significant difference in responses between 2-year old respondents and 5-year old respondents ($P < .000$); there was no significant difference in responses between 3-year old respondents and 4-year old respondents ($P > .05$); there was significant difference in responses between 3-year old respondents and 5-year old respondents ($P < .03$); there was no significant difference in responses between 4-year old respondents and 5-year old respondents ($P > .05$). These Post-hoc Tukey results suggest that children were at different levels of language development.

4.1.3 Category of food items

This section discusses how 2-5-year old Chichewa L1 speaking preschool children acquired concrete nouns of the category of food items. The category of food items had 9

stimuli. SPSS cross tabulations were carried out to determine the acquisition of food items across the four age groups. Table 6 presents the results.

Table 6: The acquisition of the category of food items by age

Noun	**Noun class**	**Status**	**Age**				
			2 years	3 years	4 years	5 years	total
chigumu	7 (chi-)	acquired	3	5	7	9	24
		Not acquired	7	5	3	1	16
total			**10**	**10**	**10**	**10**	**40**
papaya	5 (Ø-)	acquired	5	8	9	10	32
		Not acquired	5	2	1	0	8
total			**10**	**10**	**10**	**10**	**40**
mbatata	9 (m-)	acquired	7	8	10	10	35
		Not acquired	3	2	0	0	5
total			**10**	**10**	**10**	**10**	**40**
usipa	10 (Ø-)	acquired	4	5	6	7	22
		Not acquired	6	5	4	3	18
total			**10**	**10**	**10**	**10**	**40**
dzira	5 (Ø-)	acquired	6	8	10	10	34
		Not acquired	4	2	0	0	6
total			**10**	**10**	**10**	**10**	**40**
masamba	6 (ma-)	acquired	4	7	10	10	31
		Not acquired	6	3	0	0	9
total			**10**	**10**	**10**	**10**	**40**
tomato	10 (Ø-)	acquired	6	7	9	10	32
		Not acquired	4	3	1	0	8
total			**10**	**10**	**10**	**10**	**40**
mango	10 (Ø-)	acquired	6	7	8	9	30
		Not acquired	4	3	2	1	10
total			**10**	**10**	**10**	**10**	**40**
nsima	10 (n-)	acquired	8	10	10	10	38
		Not acquired	2	0	0	0	2
total			10	10	10	10	40
Overall Total		**acquired**	**49**	**65**	**79**	**85**	**278**
		Not acquired	**41**	**25**	**11**	**5**	**82**

Table 6 shows that a number of food items had the acquisition rates ranging from 80.0% to 95.0%. *Papaya* ‘pawpaw, NC 5’ had 32 (80.0%), *tomato* ‘tomatoes, NC 10’ had 32 (80.0%), *dzira* ‘egg, NC 5’ had 34 (85.0%), *mbatata* ‘sweet potato, NC 9’ had 35 (87.5%), and *nsima* ‘hard porridge, NC 10’ had 38 (95.0%). The acquisition rates suggest that majority of the respondents had no problems acquiring the stimuli although few had acquisition challenges as discussed below. This suggests that majority of the respondents were familiar with the stimuli possibly because they had encountered them more frequently and that they had information about the best exemplar stored in their memory, which helped them to recall and identify the stimuli upon being presented to them (Reisberg, 1997; Rohrer, 2002). However, some children had problems with the stimuli *dzira* ‘egg, NC 5’ and *mbatata* ‘sweet potato, NC 9.’ On the one hand, for the stimulus *dzira* ‘egg,’ four 2-year old respondents said it was *ndiwo* ‘relish’, and two 3-year old said *ndiwo zokoma* ‘delicious relish,’ a description of the relish. On the other hand, for *mbatata* ‘sweet potato,’ three 2-year old, and two 3-year old respondents said *chomwera tiyi* ‘that accompany tea.’ The responses suggest that the children had knowledge of what the stimuli were, but they had not acquired the name yet. Their responses could also be attributed to the fact that, culturally many people in Malawi use eggs for relish hence the children had acquired the superordinate feature relish, as it represents all types of relish (see, Rosch, 1978). Also many people in Malawi use *mbatata* ‘sweet potato’ to accompany tea. It could be suggested that children’s familiarity to Malawian culture is influencing the acquisition of the stimuli (see, Rosch, 1978).

On the acquisition of *papaya* ‘pawpaw, NC 5,’ five responses from 2-year old children were *chakudya* ‘food.’ The response suggests that the 2-year old respondents had acquired the superordinate feature (food) of the stimulus. A response from two 3-year old respondents was mango, and that of one 4-year old respondent was *masuku* ‘Casmoroa edulis’ suggesting that they knew it as an edible fruit but in their memory they had no information about the exemplar of the stimulus *papaya* ‘pawpaw’ (see, Murphy, 2019). They were relating the colour green and oval-shape of the stimulus to that of unripe *masuku* ‘Casmoroa edulis’ and mango since the stimulus was still green.

Similarly, for tomato, four 2-year olds gave a response that indicated that they had acquired the superordinate feature of the stimulus, *zothira mu ndiwo* 'those which are used when cooking relish.' The response shows that the children had knowledge of how the stimulus was used on daily life basis, but they had not yet acquired its name. Three 3-year old respondents said it was *tsabola* 'pepper'. All these responses suggest that respondents had acquired the superordinate features of the stimulus but had no information about the best exemplar of the stimulus in their memory system (Murphy, 2019) to identify the subordinate features. As such, 3-year olds were relating the colour red of *tsabola* 'pepper' with that of tomato as both are used to add flavour to the relish.

Acquisition of *masamba* 'vegetables, NC 6' was rated 31 (77.5%) and *mango* 'mangoes, NC 10' was rated 30 (75.0%). These acquisition rates suggest that respondents did not find it much difficult to acquire the stimuli. Four 2-year olds, seven 3-year olds, all 4-year olds and 5-year olds had acquired the stimulus *masamba* 'vegetables' correctly. The acquisition of *masamba* 'vegetables' suggests that as early as 2 years old, some children were able to acquire the stimulus because it is talked of in everyday life as most Malawian dishes, for example, lunch or supper are accompanied with vegetables (see, Rosch, 1978). So, it might be argued that 2-year old respondents were able to acquire the stimulus because it was frequently encountered by the respondents. However, six 2–year olds gave a wrong response for *masamba* 'vegetables.' They said it was *maluwa* 'flowers, NC 6.' The response shows that the 2–year olds had acquired the superordinate feature plant for the stimulus. On the one hand, three respondents of 3-year old said it was *nkhwani* 'pumpkin leaves.' The response given by the 3–year olds suggests that these children were looking for subordinate name of the stimulus. However, they lacked knowledge about the exemplar of the stimulus hence inappropriate response. On the other hand, all 4-year old and all 5-year old children said it was rape (a type of vegetable). The response suggests that the 4–year olds and 5–year olds had knowledge of the superordinate features but they were looking for the subordinate features hence, they gave a name of a specific type of vegetables.

On acquisition of *mango* 'mangoes,' four respondents of 2-years old said it was *mapeyala* 'avocado pear, NC 6' and three 3-year old respondents said it was *masuku* 'Casmoroa

edulis.' The responses by 2–year olds and 3-year olds suggest that the children had acquired the superordinate feature (fruit, with oval like shape, and green in colour) of the stimulus but they were looking for the subordinate features of the stimulus which they could not access due to limited knowledge about the exemplar of the stimulus (see, Murphy, 2016). Two 4-year old respondents and one 5-year old respondent said it was *akalisere* 'a type of mango' for the stimulus mango. The response indicates that the 4–year olds and 5–year olds were looking for the subordinate features of the stimulus because they have the expertise and cultural knowledge (see, Rosch, 1978; Tanaka & Taylor, 1991).

Chigumu 'a cake made from unrefined maize flour, NC 7' had the acquisition rate of 24 (60.0%). Three 2-year olds, five 3-year olds, seven 4-year olds, and nine 5-year olds had acquired the stimulus correctly. The acquisition rate suggests that respondents had information about the best exemplar in their memory system (Murphy, 2019). However, seven respondents of 2-year old had problems to name the stimulus. They said it was *chomwera tiyi* 'that which accompanies tea' whilst five responses from 3-year old children were *chakudya* 'food.' Such responses suggest that 2-year old and 3-year old respondents had not yet acquired the name of the stimulus but the superordinate feature (food) of the stimulus.

The results further show that *usipa* 'type of small fish, NC 10' was acquired with a total of 22 (55.0%). The acquisition rate suggests that respondents had challenges acquiring the stimulus. On the one hand, four 2-year olds, five 3-year olds, six 4-year olds, and seven 5-year olds had acquired the stimulus name correctly. On the other hand, six respondents of 2-year old said it was *ndiwo* 'relish,' and five respondents of 3-year old said it was *nsomba* 'fish, NC 9.' These responses by 3–year olds and 2–year olds are superordinate names. *Ndiwo* 'relish' is a superordinate name for all types of relish while *nsomba* 'fish' is a superordinate name for all fishes. The responses suggest that the 2-year old and 3-year old children had acquired the superordinate features, but lacked expertise to pay attention to specific features of the stimulus (see, Tanaka & Taylor, 1991; Murphy, 2016). Four respondents of 4-year old said it was *matemba* 'type of fish, NC 6,' and three respondents of 5-year old said it was *bonya* 'a type of usipa (very small fish), NC 10.'

These responses suggest that these children were looking for a specific name (subordinate) for the stimulus but they had not acquired it yet.

ANOVA Post-hoc Tukey test indicated that there was a significant difference in responses between 2-year old respondents and 3-year old respondents in the acquisition of concrete nouns of the category of food items ($P < .009$); there was a significant difference in responses between 2-year old respondents and 4-year old respondents ($P < .000$); there was a significant difference in responses between 2-year old respondents and 5-year old respondents ($P < .000$); there was a significant difference in responses between 3-year old respondents and 4-year old respondents ($P < .027$); there was a significant difference in responses between 3-year old respondents and 5-year old respondents ($P < .000$); there was no significant difference in responses between 4-year old respondents and 5-year old respondents ($P > .05$).

4.1.4 Category of human body parts

This section discusses how 2-5-year old Chichewa L1 speaking preschool children acquired concrete nouns of the category of human body parts. The category of human body parts had 10 stimuli. Cross tabulations were carried out to determine the acquisition of concrete nouns of the category of human body parts across the four age groups. Table 7 presents the results.

Table 7: The acquisition of the category of human body parts by age

Noun	**Noun class**	**Status**	**Age**				
			2 years	3 years	4 years	5 years	total
dzanja	5 (dz-)	acquired	6	8	10	10	34
		Not acquired	4	2	0	0	6
Total			**10**	**10**	**10**	**10**	**40**
Phazi	5 (Ø-)	acquired	4	6	9	10	29
		Not acquired	6	4	1	0	11
Total			**10**	**10**	**10**	**10**	**40**
mkono	3 (m-)	acquired	7	8	9	10	34
		Not acquired	3	2	1	0	6
Total			**10**	**10**	**10**	**10**	**40**
Mutu	3 (mu-)	acquired	5	6	8	9	28
		Not acquired	5	4	2	1	12
Total			**10**	**10**	**10**	**10**	**40**
Tsitsi	5 (Ø-)	acquired	6	8	10	10	34
		Not acquired	4	2	0	0	6
Total			**10**	**10**	**10**	**10**	**40**
mphuno	9 (m-)	acquired	6	8	9	9	32
		Not acquired	4	2	1	1	8
total			**10**	**10**	**10**	**10**	**40**
Diso	5 (di-)	acquired	8	9	9	9	35
		Not acquired	2	1	1	1	5
total			**10**	**10**	**10**	**10**	**40**
khutu	5 (Ø-)	acquired	7	9	10	10	36
		Not acquired	3	1	0	0	4
total			**10**	**10**	**10**	**10**	**40**
chala	7 (ch-)	acquired	7	8	9	9	33
		Not acquired	3	2	1	1	7
total			**10**	**10**	**10**	**10**	**40**
bondo	5 (Ø-)	acquired	4	7	9	10	30
		Not acquired	6	3	1	0	10
Total			10	10	10	10	40
Overall Total		**acquired**	**60**	**77**	**92**	**96**	**325**
		Not acquired	**40**	**23**	**8**	**4**	**75**

Table 7 above shows that the acquisition rate for *mphuno* 'nose, NC 9' was 32 (80.0 %), *chala* 'finger, NC 7' 33 (82.5%), *dzanja* 'hand, NC 5' 34 (85.0%), *mkono* 'arm, NC 3' and *tsitsi* 'hair, NC 5' 34 (85.0%), *diso* 'eye, NC 5' 35 (87.5%), and *khutu* 'ear, NC 5'

36 (90.0%). These acquisition rates suggest that respondents were very much familiar with the stimuli. This could be due to the stored information about the best exemplar of the stimuli in their memory system (Kruschke, 2008; Murphy, 2019). Even 2-year olds were able to give correct responses. However, there were some 2-year olds, though few, who gave inappropriate responses. For instance, four responses from 2-year old and two responses from 3-year old children were *mkono* 'arm, NC 3' for the stimulus *dzanja* 'hand, NC 5,' three 2-year old gave *dzanja* 'hand, NC 5' for *chala* 'finger, NC 7,' four 2-year old gave *munthu* 'human being, NC 1' for *mphuno* 'nose.' These responses suggest that the 2-year olds and 3-year olds failed to pay attention to the specific features of the stimuli hence using the superordinate name (the whole) instead of subordinate name (part of the whole) (Murphy, 2016). This was due to children's tendency to start acquiring meaning by focusing on the whole and not the parts (Gleitman & Landau, 1994). This tendency is called the whole-object assumption (Gleitman & Landau, 1994). As such, the strategy of acquiring the whole instead of the part of the whole is normal as literature has already proposed this to be one of the strategies that children use to acquire nominal lexical items (Gleitman & Landau, 1994). However, two 3-year old children gave *chikhadabo* 'fingernail' for *chala* 'finger.' This suggests that they were focusing on the specific features of the stimulus *chala* 'finger,' the subordinate features.

The acquisition rates for stimuli *mutu* 'head, NC 3' was 28 (70.0 %), *phazi* 'foot, NC 5' 29 (72.5%), and *bondo* 'knee, NC 5' 30 (75.0%). These rates suggest that respondents were not much familiar with the stimuli. Five 2-year olds, six 3-year olds, eight 4-year olds, and nine 5-year olds had acquired the stimulus *mutu* 'head, NC 3' correctly. However, five 2-year old, four 3-year old, two 4-year old, and one 5-year old children responded that it was *munthu* 'human being, NC 1.' It could be suggested that the children failed to pay attention to specific features of the stimulus (Murphy, 2016) instead they paid attention to general features hence, they provided the superordinate name. This could be attributed to the whole-object assumption as indicated above where children were inferring that items refer to objects as a whole rather than to their parts (Gleitman & Landau, 1994). It could be suggested that these children did not frequently encounter the

stimuli, as such their memory system did not store information about the best exemplar of the stimuli (Kruschke, 2008; Murphy, 2019).

In the acquisition of *phazi* 'foot, NC 5,' four 2-year olds, six 3-year olds, nine 4-year olds, and ten 5-year olds had acquired the stimulus correctly, whilst six responses from 2-year olds and four from 3-year old children were *mwendo* 'leg, NC 3.' In the acquisition of *bondo* 'knee, NC 5,' four 2-year olds, seven 3-year olds, nine 4-year olds, and ten 5-year olds had acquired the name of the stimulus correctly whilst six responses from 2-year olds and three 3-year old children was *mwendo* 'leg, NC 3.' These responses suggest that 2-year and 3-year old children were looking for superordinate features. This could be attributed to the whole-object assumption as indicated above where children were inferring that items refer to objects as a whole rather than to their parts (Gleitman & Landau, 1994).

The ANOVA Post-hoc Tukey test results indicate that there was a significant difference between the responses of 2-year old respondents and 3-year old respondents in the acquisition of concrete nouns of the category of human body parts ($P < .006$); there was a significant difference in responses between 2-year old respondents and 4-year old respondents ($P < .000$); there was a significant difference in responses between 2-year old respondents and 5-year old respondents ($P < .000$); there was a significant difference in responses between 3-year old respondents and 4-year old respondents ($P < .020$); there was a significant difference in responses between 3-year old respondents and 5-year old respondents ($P < .002$); there was no significant difference in responses between 4-year old respondents and 5-year old respondents ($P > .05$).

4.1.5 A summary of the findings on the acquisition of the four categories of concrete nouns

This section summarises the findings on the acquisition of the four categories of concrete nouns by 2-5-year old Chichewa L1 speaking preschool children.

Data on acquisition of different categories of concrete nouns presented in the sections above shows that the acquisition of concrete nouns in Chichewa starts with the recognition of the existence and function of the stimulus. This is followed by the acquisition of the superordinate features. It could be suggested that this starts at around 2-years. The acquisition of the superordinate features is followed by the acquisition of the subordinate features of the concrete nouns. It has been observed that this is most common among 4- and 5-year olds although the behaviour is also present among 3-year olds for the most common concrete nouns. The current results agree with Mandler's (2004, 2007) results where it was found that children acquired superordinate nouns early. However, results of the current study show that acquisition of concrete nouns starts with the recognition of the existence or function of the stimulus. The acquisition of superordinate features is a later development. The results also differ with that of Anglin's (1977) where it was found that children ranging from 2-5 years old were much more likely to use basic-level nouns. In this study, results have shown that superordinate level nouns are acquired earlier than subordinate level nouns and that children are aware of the existence or use of concrete nouns even before they acquire the superordinate level. Therefore, it could be argued that failure to name a concrete noun does not mean children are not aware of its existence or use.

4.2 Category of concrete nouns acquired early by 2-5-year old Chichewa L1 speaking preschool children.

This section discusses which category of concrete nouns is acquired early by 2-5-year old Chichewa L1 speaking preschool children. In order to determine the category of concrete nouns acquired early, acquisition rates of the four categories of concrete nouns were calculated using SPSS. The results are presented in Figure 1 below.

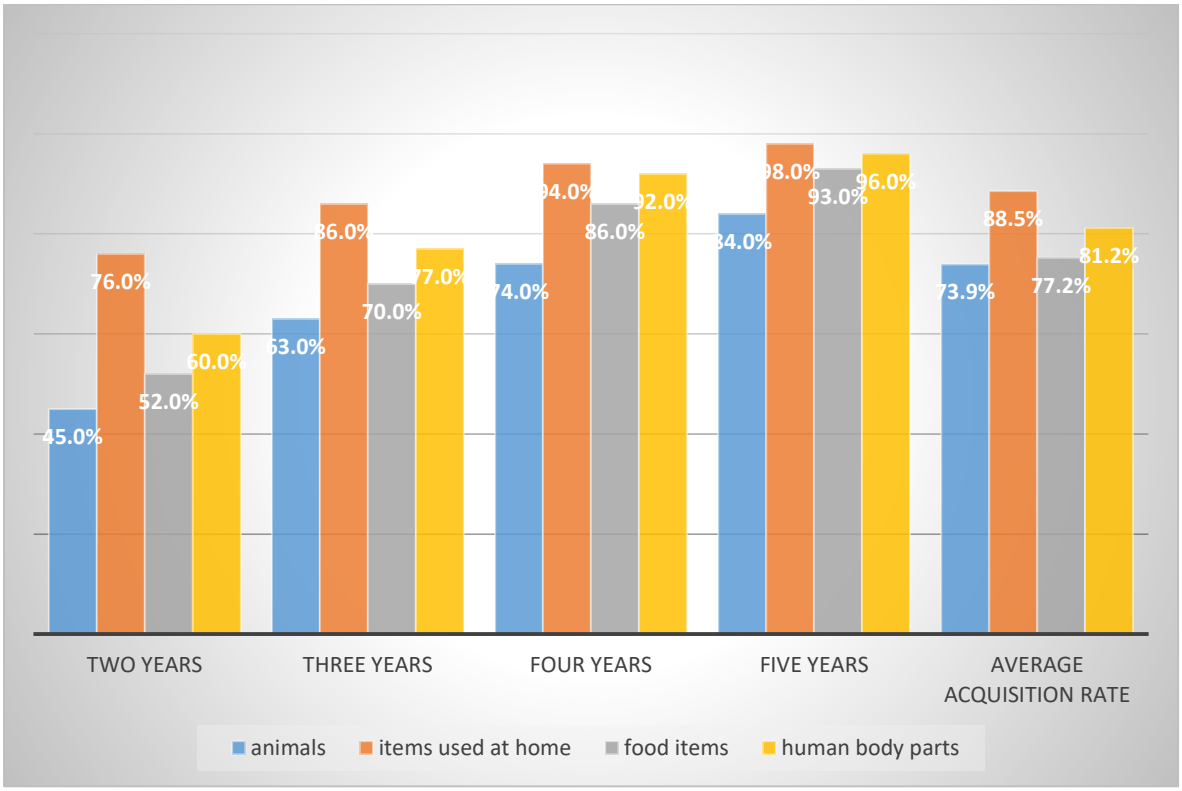


Figure 1: Acquisition of four categories of concrete nouns by age (Researcher).

Figure 1 indicates that the category of items used at home is acquired early followed by the category of human body parts, then the category of food items. The category of animals is acquired last. The items used at home were acquired highly in all age groups. The highest rate of acquisition of items used at home suggests that children had best exemplars of items used at home stored in their memory such that upon being asked to name the stimuli, they recalled and identified the stimuli with ease (Rohrer, 2002). Secondly, the highest rate of acquisition of the category of items used at home suggests that its members are more accessible to the respondents (Piccin & Waxman, 2007) because these are the concrete nouns a child is exposed to on a daily basis. Therefore, it could be suggested that the environment plays a role in the acquisition of concrete nouns. The current results differ with Maxilom (2013) results where it was found that nouns of the category of animals were highly acquired by English, Cebuano, and Filipino speaking children.

The category of items used at home is followed by stimuli of the category of human body parts. The high acquisition rate for the category of human body parts stimuli suggests that Chichewa L1 speaking children had stored in their memory system information about the best exemplar of the human body parts stimuli (see, Kruschke, 2008; Murphy, 2019). This could be attributed to early learning of human body parts both in preschools and at home. The third category acquired highly were the food items. The least acquired category were the stimuli of animals. The reason for animal stimuli's least acquisition in all ages could be that the animals were not easily individuated. Secondly, it could be because of cultural factor (see, Rosch, 1978) since, in most cases, Malawians are not very close to animals. Thirdly, it could be due to lack of familiarity of the stimuli.

4.3 The relationship between age and acquisition of concrete nouns

This section discusses the relationship between age of the children and acquisition of concrete nouns established in all the four categories of concrete nouns.

The relationship between age of respondents and acquisition of concrete nouns was investigated using Pearson product-moment correlation coefficient. The results showed that there is a negative correlation between age of respondents and acquisition of concrete nouns of the category of animals, $r = -.362$, $n = 360$, $p < .05$; age of respondents and acquisition of concrete nouns of the category of items used at home, $r = -.360$, $n = 400$, $p < .05$; age of respondents and acquisition of concrete nouns of the category of food items, $r = -.360$, $n = 360$, $p < .05$; age of respondents and acquisition of concrete nouns of the category of human body parts, $r = -.352$, $n = 400$ $p < .05$. These results suggest that as the age of Chichewa L1 speaking children increases, there is lesser use of superordinate names, or use of function in acquisition of concrete nouns. SPSS frequency statistics showed that 2-year old children had failed to acquire the stimuli of category of animals with 45.0%, 3- year old children with 27.0%, 4-year old children with 16.0%, and 5-year old children with 6.0%. This suggests that as the age of Chichewa L1 speaking preschool children increases, their vocabulary size of concrete nouns of the category of animals increases with 45.0% for 2-year old children, 63.0% for 3-year old children, 74.0% for 4-year old children, and 84.0% for 5-year old children. For the concrete nouns of the

category of items used at home, SPSS frequency statistics showed that 2-year old children had failed to acquire the stimuli with 24.0%, 3-year old children with 14.0%, 4-year old children with 6.0%, and 5-year old children with 2.0% suggesting that the vocabulary size of items used at home increases with 76.0% for 2-year old children, 86.0% for 3-year old children, 94.0% for 4-year old children, and 98.0 % for 5-year old children. For the concrete nouns of the category of food items, SPSS frequency statistics showed that 2-year old children had failed to acquire the stimuli with 41.0%, 3-year old children with 25.0%, 4-year old children with 11.0%, and 5-year old children with 5.0%. These statistics indicate that as the age of Chichewa L1 speaking preschool children increases, the vocabulary size of concrete nouns of the category of food items increases with 49.0% for 2-year old children, 65.0% for 3-year old children, 79.0% for 4-year old children, and 85.0% for 5-year old children. For the concrete nouns of the category of human body parts, SPSS frequency statistics showed that 2-year old children had failed to acquire the stimulus with 40.0%, 3-year old children with 23.0%, 4-year old children with 8.0%, and 5-year old children with 4.0%. These statistics suggest that as the age of the children increases, the vocabulary size of concrete nouns of the category of human body parts increases with 60.0% for 2-year old children, 77.0% for 3-year old children, 92.0% for 4-year old children, and 96.0% for 5-year old children.

Based on these results, it could be concluded that there is a correlation between age and acquisition of concrete nouns. As the age of the Chichewa L1 speaking preschool children increases, the acquisition of the four categories of concrete nouns also increases. Thus, vocabulary on concrete nouns increases as the children grow up. This could be because as Chichewa L1 speaking children are growing up, they start paying attention to subordinate features of the stimulus as opposed to the general features of the stimulus (see, Murphy, 2016). Secondly, it could be argued that as Chichewa L1 speaking children are growing up, they frequently encounter the stimuli, consequently, they start storing information about the best exemplar of the stimuli (see, Kruschke, 2008; Murphy, 2019). The information stored helps them to correctly recall and identify the stimuli upon being presented to them (Reisberg, 1997; Rohrer, 2002). These results concur with Kadenge's

(2011) results in that they both suggest that there is gradual development in the acquisition of nouns as children are growing up.

4.4 Chapter summary

The findings discussed above, show that the acquisition of concrete nouns in Chichewa starts with the recognition of the existence and function of a noun. This is followed by the acquisition of the superordinate features at around 2-years. The acquisition of the superordinate features is followed by the acquisition of the subordinate features of the concrete nouns. It has been observed that this is most common among 4-and 5-year olds although the behaviour is also present among 3-years olds for the most common concrete nouns. It has also been argued that failure to name a concrete noun does not mean children are not aware of its existence or its use.

It has also been established that items used at home are earlier acquired than the other categories of concrete nouns. The findings have also shown that there is a correlation between age and acquisition of concrete nouns. The vocabulary on concrete nouns increases as children grow up. The next chapter presents summary of findings, general conclusions for the study, and suggestions for further studies.

CHAPTER FIVE

SUMMARY AND CONCLUSION

5.0 Chapter overview

The chapter presents the summary and conclusions drawn from the study findings and suggests areas for further study. Section 5.1 presents the summary of findings. Section 5.2 presents general conclusions for the study. Lastly, section 5.3 presents areas for further study.

5.1 Summary of findings

The purpose of the study was to investigate how concrete nouns are acquired by 2-5-year old Chichewa L1 speaking preschool children. The study was guided by three specific research objectives and the findings on each research objective are summarised as follows:

Objective (1): To find out how different categories of concrete nouns are acquired by 2-5- year old Chichewa L1 speaking preschool children

Regarding how Chichewa L1 speaking preschool children acquire different categories of concrete nouns, the findings of the study reported in Chapter Four indicated that the acquisition of concrete nouns in Chichewa starts with the recognition of the existence and function of a noun. This is followed by the acquisition of the superordinate features at around 2 years. The acquisition of the superordinate features is followed by the acquisition of the subordinate features of the concrete nouns. It has been observed that this is most common among 4-and 5-year olds although the behaviour is also present among 3-years olds for the most common concrete nouns.

Objective (2): To find out which category of concrete nouns is acquired early by 2-5-year old Chichewa L1 speaking preschool children.

Regarding which category of concrete nouns is acquired early by Chichewa L1 speaking preschool children, the study has found out that the category of items used at home is acquired early and with ease. This is followed by the category of human body parts, then the category of food items. The category of animals is acquired last.

Objective (3): To establish the relationship between age and acquisition of concrete nouns.

On the relationship between age and acquisition of concrete nouns, the study has established that there is a correlation between age and acquisition of concrete nouns. As the age of the Chichewa L1 speaking preschool children increases, the acquisition of the four categories of concrete nouns also increases. Thus, vocabulary on concrete nouns increases as children grow up.

5.2 Conclusion

In general, the thesis concludes that acquisition of concrete nouns by children starts with the recognition of the existence and function of a noun followed by the acquisition of the superordinate features, and that acquisition of the subordinate features is a later development. The thesis argues that failure to name a concrete noun does not mean children are not aware of its existence or its use. The thesis further concludes that items used at home are easily individuated by children among the other categories of concrete nouns studied in this study. The thesis also concludes that there is a correlation between age and acquisition of concrete nouns, as the age of the child increases, vocabulary on concrete nouns also increases.

The implication of the findings of the study is that language acquisition and learning is a gradual process. As such, teaching and learning of a language should be a gradual process

where young learners should be introduced to new noun vocabulary items gradually, starting with the most common and familiar items.

5.3 Areas for further study

One of the properties of nouns in Bantu and Chichewa specifically, is the class prefix as highlighted in the literature review in Chapter Two. For a full understanding of how Chichewa nouns are acquired, there is need to investigate whether noun prefixes influence the acquisition of nouns in Chichewa.

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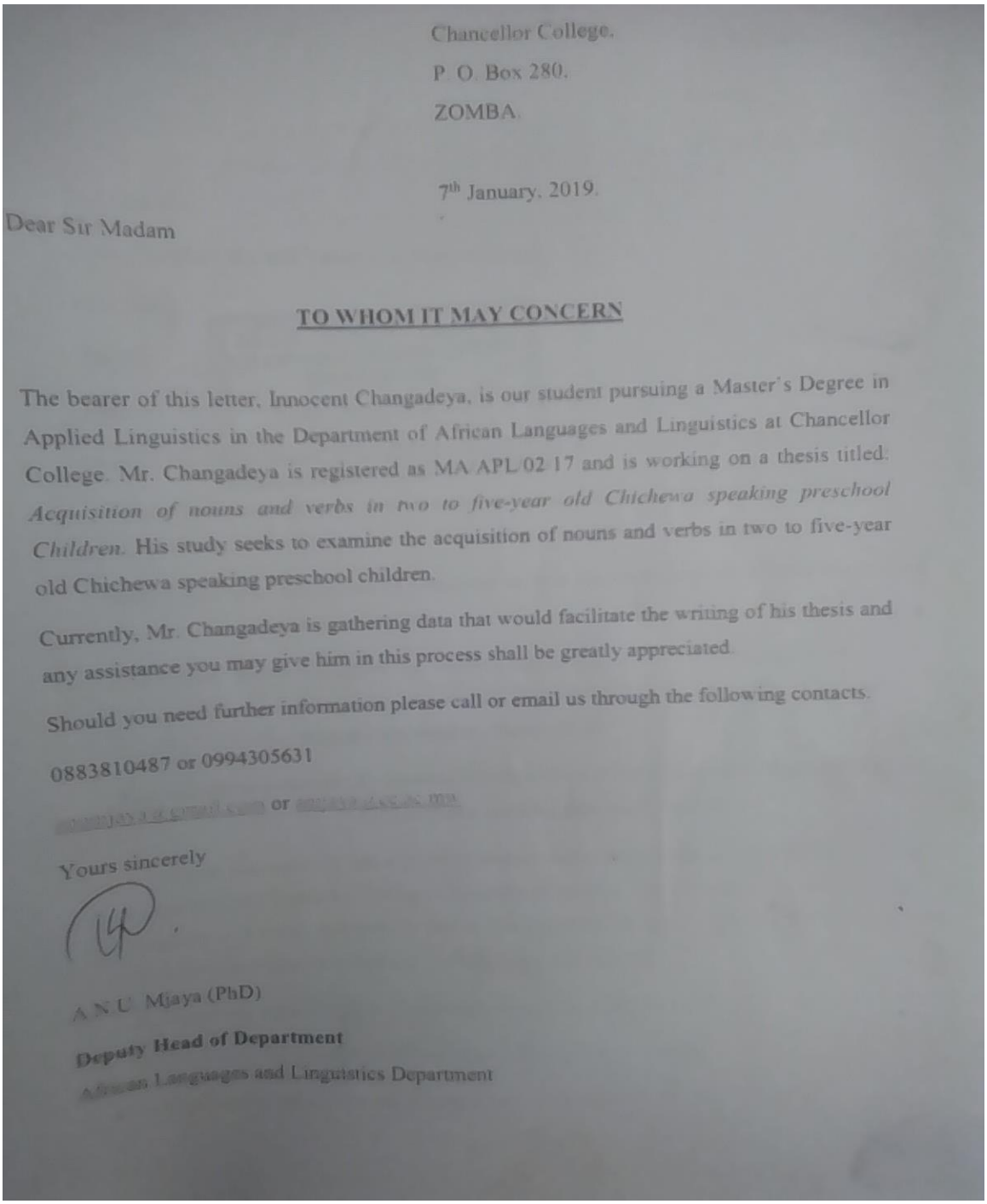
APPENDICES

Appendix A: An introductory letter from Department of African Languages and Linguistics, University of Malawi



Chancellor College,
P. O. Box 280,
ZOMBA.

7th January, 2019.

Dear Sir Madam

TO WHOM IT MAY CONCERN

The bearer of this letter, Innocent Changadeya, is our student pursuing a Master's Degree in Applied Linguistics in the Department of African Languages and Linguistics at Chancellor College. Mr. Changadeya is registered as MA APL/02 17 and is working on a thesis titled: *Acquisition of nouns and verbs in two to five-year old Chichewa speaking preschool Children*. His study seeks to examine the acquisition of nouns and verbs in two to five-year old Chichewa speaking preschool children.

Currently, Mr. Changadeya is gathering data that would facilitate the writing of his thesis and any assistance you may give him in this process shall be greatly appreciated.

Should you need further information please call or email us through the following contacts.

0883810487 or 0994305631

[redacted] or [redacted]

Yours sincerely

A. N. U. Mjaya (PhD)
Deputy Head of Department
African Languages and Linguistics Department

Appendix B: Request and consent letter from The District Education Manager to carry out a familiarity test at Matiya primary school

Innocent Changadeya

Chancellor College

P.O. Box 280

Zomba.

8th January, 2019.

The District Education Manager

Zomba Urban

P.O. Box 50

Zomba

Dear Madam

REQUEST TO CONDUCT A FAMILIARITY TEST OF A MASTERS DEGREE RESEARCH AT MATIYA PRIMARY SCHOOL

I would like to request that I conduct a familiarity test at Matiya primary school for the Masters Degree research to be conducted in Chikanda in one of the preschools within the locality. The following are the details of the thesis research.

Study topic/ title: Acquisition of concrete nouns by 2-5 year old Chichewa L1 speaking preschool children.

Researcher: Innocent Changadeya, Masters degree student, African Languages and Linguistics Department, Chancellor College, University of Malawi.
Registration number: Ma-apl-02-17

Purpose of the research: To investigate how concrete nouns are acquired by 2-5 year old Chichewa L1 speaking preschool children.

.

I, Innocent Changadeya, am a Masters student in the department of African Languages and Linguistics, at Chancellor College, University of Malawi. For this degree, I am investigating how concrete nouns are acquired by 2-5 year old Chichewa L1 speaking preschool children. In order to achieve the stated aim the following will be done:

a. Discussing how different categories of concrete nouns are acquired by Chichewa L1 speaking preschool children.
b. Establishing which category of concrete nouns is acquired early by Chichewa L1 speaking preschool children.
c. Establishing the relationship between age and acquisition of concrete nouns.

My main supervisor is Dr. M. Kamanga of African Languages and Linguistics Department, Chancellor College. Her contacts are: 0888396471 email address: mkamanga@cc.ac.mw

My contact details are as follows: Innocent Changadeya, African Languages and Linguistics Department, cell phone number: 0995462824 email address: innochangadeya@yahoo.com

I would like to request that 20 learners of 10-year-old of Matiya primary school be part of familiarity test of naming the noun pictures, which will later be used in the actual research in the preschool. If this permission is granted, the following will be needed of them:

a. As participants the learners will be required to name the pictures of concrete nouns, having been shown a stimulus from a computer.

b. The familiarity test will be conducted at their school in one of their rooms at break time and after classes.

Voluntary participation

The learners will be recruited on a voluntary basis.

Withdraw from the study

Upon feeling that the child wants to withdraw from the study, he or she will be allowed to do so. This will be upon the child verbalising the desire to stop or expressing discomfort by crying. His or her withdraw shall not affect the way he or she will be treated at school in any way.

Confidentiality and anonymity

All data collected will be treated with confidentiality and anonymity of your learners will be adhered to.

Risk of the study

There is minimal risk attached to the study-either of physical harm or mental harm of the respondents because the familiarity test will be conducted at their school.

Benefit of the study to the participant

Having taken part in the familiarity test research, the participants will be equipped with interpretation skill of pictures, which will be of useful as they progresses with their studies.

Looking forward for your favourable consideration.

Yours sincerely

Innocent Changadeya

Appendix C: Request and consent letter of the Preschool Director

Innocent Changadeya

Chancellor College

P.O. Box 280

Zomba.

9th January, 2019.

The Director

Grace Orphan Care and Vulnerable Support Group

P.O. Box 865

Zomba

Dear Sir

REQUEST TO CONDUCT A MASTERS DEGREE RESEARCH AT YOUR SCHOOL

I would like to request that I conduct a research project at your preschool for my Masters Degree thesis. The following are the details of the research.

Study topic/ title: Acquisition of concrete nouns by 2-5 year old Chichewa L1 speaking preschool children.

Researcher: Innocent Changadeya, Masters degree student, African Languages and Linguistics Department, Chancellor College, University of Malawi.
Registration number: Ma-apl-02-17

Purpose of the research: To investigate how concrete nouns are acquired by 2-5 year old Chichewa L1 speaking preschool children.

I, Innocent Changadeya, am a Masters student in the department of African Languages and Linguistics, at Chancellor College, University of Malawi. For this degree, I am

investigating the acquisition of concrete nouns by 2–5 year old Chichewa L1 speaking preschool children. In order to achieve the stated aim the following will be done:

a. Discussing how different categories of concrete nouns are acquired by Chichewa L1 speaking preschool children.
b. Establishing which category of concrete nouns is acquired early by Chichewa L1 speaking preschool children.
c. Establishing the relationship between age and acquisition of concrete nouns.

My supervisor is Dr. M. Kamanga of African Languages and Linguistics Department, Chancellor College. Her contacts are: 0888396471 email address: mkamanga@cc.ac.mw

My contact details are as follows: Innocent Changadeya, African Languages and Linguistics Department, cell phone number: 0995462824 email address: innochangadeya@yahoo.com

I would like to request that your learners of ages from 2, 3, 4, and 5 years-40 in total be part of my research study. If this permission is granted, the following will be needed of your learners:

a. As participants your learners will be required to name the pictures of concrete nouns.
b. Having been shown a stimulus from a computer, he or she will be asked to name it.
c. Experiment sessions per participant per day will take eighteen minutes. Each participant will have two consecutive days of experimental sessions.
d. The experiment will be conducted at his or her school in one of the rooms.

Voluntary participation

Your learners will be recruited on a voluntary basis.

Withdraw from the study

Upon feeling that the child wants to withdraw from the study, he or she will be allowed to do so. This will be upon the child verbalising the desire to stop or expressing discomfort

by crying. His or her withdraw shall not affect the way he or she will be treated at school in any way.

Confidentiality and anonymity

All data collected will be treated with confidentiality and anonymity of your learners will be adhered to.

Risk of the study

There is minimal risk attached to the study-either of physical harm or mental harm of the respondents because the experiments will be conducted at their school.

Benefit of the study to the participant

Having taken part in the research, the participant will be equipped with interpretation skill of pictures, which will be of useful as he or she progresses with his or her studies.

Looking forward for your favourable consideration.

Yours sincerely

Innocent Changadeya

Appendix D (i): Consent form of teachers in English

PRINCIPAL **CHANCELLOR COLLEGE**
Prof. Richard Tambulasi, B.A (Pub Admin), BPA (Hons), MPA, Ph.D P.O. Box 280, Zomba, Malawi
Telephone: (265) 524 222
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CONSENT FORM FOR TEACHERS

Informed consent form for Masters Degree thesis.

Date: 16th January, 2019.

Study topic/ title: Acquisition of concrete nouns by 2–5 year old Chichewa L1 speaking preschool children.

Researcher: Innocent Changadeya, Masters degree student, African Languages and Linguistics Department, Chancellor College, University of Malawi.

Purpose of the research: To investigate how concrete nouns are acquired by 2-5 year old Chichewa L1 speaking preschool children.

I, Innocent Changadeya, am a Masters student in the department of African Languages and Linguistics, at Chancellor College, University of Malawi. For this degree, I am investigating the acquisition of concrete nouns by 2–5 year old Chichewa L1 speaking preschool children. In order to achieve the stated aim the following will be done:

a. Discussing how different categories of concrete nouns are acquired by Chichewa L1 speaking preschool children.

b. Establishing which category of concrete nouns is acquired early by Chichewa L1

speaking preschool children.

c. Establishing the relationship between age and acquisition of concrete nouns.

My main supervisor is Dr. M. Kamanga of African Languages and Linguistics Department, Chancellor College. Her contacts are: 0888396471 email address: mkamanga@cc.ac.mw

My contact details are as follows: Innocent Changadeya, African Languages and Linguistics Department, cell phone number: 0995462824 email address: innochangadeya@yahoo.com

I would like to request that your learners be part of my research study. If this permission is granted, the following will be needed of your learners:

a. As participants your learners will be required to name the pictures of concrete nouns.

b. Having been shown a stimulus from a computer, he or she will be asked to name it.

c. Experimental sessions per participant per day will take eighteen minutes. Each participant will have two consecutive days of experimental sessions.

d. The experiment will be conducted at his or her school in one of the rooms after classes.

Voluntary participation

Your learners will be recruited on a voluntary basis.

Withdraw from the study

Upon feeling that the child wants to withdraw from the study, he or she will be allowed to do so. This will be upon the child verbalising the desire to stop or expressing discomfort by crying. His or her withdraw shall not affect the way he or she will be treated at school in any way.

Confidentiality and anonymity

All data collected will be treated with confidentiality and anonymity of your learners will be adhered to.

Risk of the study

There is minimal risk attached to the study-either of physical harm or mental harm of the respondents because the experiment will be conducted at their school.

Benefit of the study to the participant

Having taken part in the research, the participant will be equipped with interpretation skill of pictures, which will be of useful as he or she progresses with his or her studies.

Legal rights and signatures

I have read the participation information sheet and I have had the opportunity to ask the researcher any further questions I may have had.

By signing below I am consenting that my learners will participate in an experiment where they will be asked to name concrete noun pictures. I understand that information from my learner will be used for a thesis and I consent for it to be used in this manner.

I_____consent that my learners'

_____

can participate in the study entitled: Acquisition of concrete nouns by 2-5 year old Chichewa L1 speaking preschool children by Innocent Changadeya. I have understood the nature of the research and I wish my learners to participate. My signature below indicates my consent.

Signature_____ date_____

Teacher

Signature_____ date_____

Researcher

Appendix D (ii): Consent form of parents in Chichewa

PRINCIPAL **CHANCELLOR COLLEGE**
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CONSENT FORM FOR PARENTS OR GUARDIANS

Informed consent form for masters degree thesis.

Tsiku: 16 January, 2019.

Mutu wa kafukufuku: Kapezedwe ka mayina a zinthu zokhudzika ndi ana azaka ziwiri mpaka zisanu omwe amayankhula Chichewa akusukulu zamkaka.

Wochita kafukufuku: Innocent Changadeya, wophunzira wa digiri ya ukachenjede ku dipatimenti ya African Languages and Linguistics, Chancellor College, University of Malawi.

Cholinga chakafukufuku: Kufufuza kapezedwe ka mayina a zinthu zokhudzika ndi ana

azaka ziwiri mpaka zisanu omwe amayankhula

Chichewa akusukulu zamkaka.

Ine, Innocent Changadeya, ndine wophunzira wa digiri ya ukachenjede ku dipatimenti ya African Languages and Linguistics, Chancellor College, University of Malawi. Mukafukufuku wa digiriyi, ndikufufuza kapezedwe ka mayina a zinthu zokhudzika ndi ana azaka ziwiri mpaka zisanu omwe amayankhula Chichewa akusukulu zamkaka. Pofuna kukwanilitsa cholinga chakafukufukuyi, zinthu izi zichitika:

a. Kufotokoza m'mene ana omwe amayankhula Chichewa a kusukulu za mkaka amasunthira m'kapezedwe ka mitundu yosiyanasiyana ya mayina a zinthu zokhudzika.
b. Kupeza mtundu wa mayina a zinthu zokhudzika omwe umapezeka koyambilira mwa ana omwe amayankhula Chichewa a kusukulu za mkaka.
c. Kukhazikisa ubale pakati pa zaka za mwana ndi kapezedwe ka mayina a zinthu zokhudzika mwa anawo.

Wondiwunikira wamkulu pakafukufukuyi ndi Dokotala M. Kamanga aku dipatimenti ya African Languages and Linguistics. Atha kupezeka pa 0888396471 kapena pa imelo: mkamanga@ cc.ac.mw

Ine mutha kundipeza pa keyala iyi: Innocent Changadeya, Dipatimenti ya African Languages and Linguistics. Kapena pa: 0995462824. Kapenanso pa imelo: innochangadeya@yahoo.com

Ndati ndikupempheni kuti mwana wanu azatenge nawo gawo pakafukufuku yemwe ndikuchita. Ngati mungalole kuti atenge nawo gawo pakafukufukuyi azafunika kuti achite izi:

a. Ngati mtenga nawo gawo azafunsidwa kutchula zithuzi za mayina azinthu zokhudzika zomwe azaonetsedwe.
b. Azaonetsedwa chithuzi pa kompuyuta ndipo azafunsidwa kuti achitchule.

c. Wotenga nawo gawo aliyense azayesedwa kwa mphindi khumi, mphambu zisanu ndi zitatu pa tsiku. Ndipo adzatenga nawo gawo kwa masiku awiri otsogozana.

d. Kuyesedwaku kuzachitikira ku sukulu kwawo mu imodzi mwa zipinda zophunziliramo akaweluka.

Kutenga gawo mwakufuna

Mwana wanu azatenga nawo gawo mwakufuna kwake.

Kusiya kutenga gawo mukafukufuku

Ngati mwana wafuna kusiya kutenga gawo m'kafukufukuyi azaloledwa kutero. Izi zizachitika pamene mwana wanena yekha kuti akufuna kusiya. Kapena akusonyeza kumangika kulikonse monga kulira. Kusiya kutenga gawo kwa mwana sikupangisa kusintha kuli konse m'momwe amakhalira ku sukuluko.

Kunsunga chinsinsi ndi kusadziwika

Zonse zomwe zizatoleledwe kafukufukuyi zizasungidwa mwa chinsinsi ndipo mayina a ana omwe atenga nawo gawo sazatchulidwa.

Chiwopsezo chakafukufuku

Palibe chiwopsezo chachikulu ngati mwana wanu atenga nawo gawo pakafukufukuyi chifukwa mwanayo adzizayesedwa ku sukulu kwakeko.

Zomwe amtenga nawo gawo amkafukufukuyi apindule

Amtenga gawo am'kafukufukuyi apeza luso lotanthauzira zithuzi zosiyanasiyana. Lusoli lizakhala lofunika maphunziro awo amtsogolo.

Mawufulu ndi masiginecha

Ndawerenga uthengawu ndipo ndinali ndi mwayi wofunsa mafunso omwe ndinali nawo.

Pakusaina m'musimu, ndikuloleza mwana wanga kuti atenge nawo gawo mukafukufuku amene atafunsidwe kutchula zithuzi. Ndikuziwa kuti mayankho omwe mwana wanga

apeleke azagwiritsidwa ntchito polemba nkhani yolembedwa ndipo ndikuloleza kuti zizatero.

Ine_____ndikuloleza mwana wanga_____kutenga gawo mukafukufuku wa mutu oti: Kapezedwe ka mayina a zinthu zokhudzika ndi ana azaka ziwiri mpaka zisanu omwe amayankhula Chichewa akusukulu zamkaka, yemwe akuchititsa Innocent Changadeya. Ndamvetsetsa m'mene kafukufukuyi achitidwire ndipo ndikufuna kuti mwana wanga atenge nawo gawo. Siginecha yanga m'musimu ikusonyeza kuvomereza kwanga.

Siginecha _____ tsiku _____

Kholo kapena Woyang'anira wana

Siginecha _____ tsiku _____

Wofufuza

Appendix E: Concrete noun pictures used in the experiment sessions

a. Category of animals

Pusi ‘cat’

mbalame ‘bird’

mbuzi ‘goat’

ng'ombe 'cattle'

Tambala ‘cock’

nkhumba ‘pig’

Galu ‘dog’

Bakha ‘duck’

nkhunda ‘dove’

b. Category of items used at home

tsache ‘broom’

khasu ‘hoe’

machesi ‘matches’

lichero ‘winnower’

chipande ‘wooden spoon’

mpeni ‘knife’

mbale ‘plate’

kapu ‘cup’

mpando ‘chair’

mtsuko ‘water pot’

c. Category of food items

chigumu ‘a cake made from unrefined maize flour’

papaya ‘pawpaw’

mbatata ‘sweet potato’

usipa ‘type of small fish’

dzira ‘egg’

masamba ‘vegetables’

tomato ‘tomatoes’

mango ‘mangoes’

nsima ‘hard porridge’

d. Category of human body parts

dzanja ‘hand’

phazi ‘foot’

mkono ‘ arm’

Mutu ‘head’

tsitsi ‘hair’

Bondo ‘knee’

mphuno ‘nose’

chala ‘finger’

khutu ‘ ear’

diso ‘ eye’