

**CROSS-LINGUISTIC INFLUENCES ON FIRST LANGUAGE
ACQUISITION OF OLUTACHONI LEXICON**

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**A THESIS SUBMITTED TO THE SCHOOL OF HUMANITIES AND
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AWARD OF THE DEGREE OF DOCTOR
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JUNE, 2016

DECLARATION

This is my original work and has not been presented for a degree in any other University or any other award.

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DEDICATION

I dedicate this work to my beloved husband Dan, beloved sons Darrel, Barrel, and Leadny for their understanding, their patience with an absentee mother and for giving me the motivation to move on with this work and their unwavering support while pursuing my studies. May this work be an inspiration for you to seek for more knowledge in the world. To my beloved dad Ellam Mandillah who laid the foundation of my educational endeavours. To my late dear mom Leah Khayumbi: you fought a heart complication boldly for years, you instilled the spirit of hard work and determination in me, memories of your sweet love, care and concern to your children, steered me to this end. May the good Lord rest your soul in eternal peace. Amen.

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TABLE OF CONTENTS

DECLARATION	ii
DEDICATION	iii
ACKNOWLEDGEMENT	iv
LIST OF FIGURES.....	x
LIST OF TABLES.....	xi
OPERATIONAL DEFINITION OF TERMS	xiii
ABBREVIATIONS AND SYMBOLS USED IN THE STUDY	xiv
ABSTRACT	xvi
CHAPTER ONE.....	1
Introduction to the Study.....	1
1.1 Background to the Study	1
1.2 Statement of the Problem.....	7
1.3 The Objectives of the Study	8
1.4 Research Questions.....	9
1.5 Assumptions of the Study	9
1.6 The Study Hypothesis	10
1.7 The Rationale of the Study	10
1.8 Scope and Limitations.....	12
1.9 Summary of Chapter One.....	16
CHAPTER TWO.....	17
LITERATURE REVIEW AND THEORETICALFRAMEWORK.....	17
2.1 Introduction.....	17
2.2 Literature Review	17
2.2.1 Olubukusu and Olutachoni in the Context of the Language Situation in Kenya....	18

2.2.2 First Language Acquisition	23
2.2.3 Cross-linguistic Influences in First Language Acquisition.....	29
2.2.4. Lexical Borrowing.....	34
2.2.5 Phonetics and Phonological Acquisition.....	51
2.2.6 Lexical Acquisition	55
2.2.7 Morphological Acquisition	58
2.2.7.1 Olutachoni and Olubukusu Morphology	59
2.2.8 Socio-Demographic Variables and Acquisition.....	61
2.2.8.1. Gender and Acquisition.....	62
2.2.8.2. Age and Acquisition.....	65
2.2.9 Linguistic environment and acquisition	67
2.3. Theoretical Framework.....	71
2.3.1 The Usage-Based Language Acquisition Theory	72
2.3.2. Levelt's Theory of Speech Production.....	74
2.3.3. The Unitary Language System Hypothesis	76
2.3.4 The Interaction of the Theories.....	78
2.4. Summary of Chapter Two.....	79
CHAPTER THREE.....	80
RESEARCH METHODOLOGY	80
3.1 Introduction	80
3.2 Research Design.....	80
3.3 Area of Study.....	81
3.4 The Sample and the Sampling Procedure.....	82
3.5 Data Collection Instruments.....	87
3.6 Pilot Study	89
3.7 Data Presentation and Analysis.....	91
3.8. Ethical Considerations	93
3.9. Summary of Chapter Three.....	94
CHAPTER FOUR	95
LEXICAL BORROWING IN FIRST LANGUAGEACQUISITION	95
4.1 Introduction.....	95
4.2 Lexical Importation in a Mixed Language Family Set up.....	98
4.2.1 Loan words in a Mixed Language Family Set up.....	99
4.2.2 Loan words and the Source Language	101
4.2.3 Loan adaptation in a Mixed Language Family Set up.....	103

4.2.3.1. Epenthesis.....	104
4.2.3.2. Aphaeresis and Syncope.....	106
4.2.3.3. Devoicing	109
4.2.3.4 Tonal adaptation	111
4.2.3.5 Olubukusu Loan words with Olutachoni Tone.....	112
4.2.3.6. Olutachoni word with Olubukusu Tone	114
4.2.3.7. Kiswahili Loan words with Olutachoni Tone.....	115
4.2.3.8 A cross tabulation of the Types of Loan adaptation.....	118
4.2.3.9 Types of Loan adaptation and Source Language	120
4.2.4 A Cross Tabulation of Loan Words and Loan Adaptation	123
4.2.5. Lexical importation and the Source Language.....	124
4.3 Lexical importation in a Single Language Family Set up.....	126
4.3.1. Loan words in a Single Language Family Set up.....	126
4.3.2. Loan words and the Source Language.....	128
4.3.3. Loan adaptation in a Single Language Family Set up.....	130
4.3.3.1. Epenthesis.....	131
4.3.3.2. Aphaeresis and Syncope.....	133
4.3.3.3. Devoicing	135
4.3.3.4. Tonal adaptation	136
4.3.3.5 Olubukusu Loan words with Olutachoni Tone.....	137
4.3.3.6 Kiswahili Loan words with Olutachoni Tone	138
4.3.4. A Cross Tabulation of the Types of Loan Adaptation	140
4.3.5. Types of Loan Adaptations and the Source Language.	142
4.3.6. A Cross tabulation of Loan words and Loan adaptation	145
4.3.7. Lexical Importation and the Source Language.....	146
4.3.8 A Cross tabulation of Lexical importation and the Language Family Set up	148
4.3.9. Sources of Lexical Importation in the Single and Mixed Language Family Set ups	150
4.4. Summary of Findings.....	153
CHAPTER FIVE	156
Lexical Invention in the Acquisition of Olutachoni as a First Language	156
5.1 Introduction.....	156
5.2 Lexical Invention in a Mixed Language Family Set up	163
5.2.1. Olubukusu Base and Olutachoni Prefix	163
5.2.2. Olubukusu Prefix with Olutachoni Base.....	165
5.2.3. Olutachoni Prefix and Kiswahili/English Base.....	166
5.2.4. A Cross tabulation of the Types of Lexical Invention	168
5.2.5. Source Language and Lexical Invention.....	171
5.3. Lexical Inventions in a Single Language family set up	173
5.3.1. Olutachoni Base with Olubukusu Prefix.....	174
5.3.2. Olutachoni Prefix with Kiswahili/English Base	175

5.3.3 A Cross tabulation of the Types of Lexical Invention	179
5.3.4 The Source Language and Lexical Invention	180
5.3.5. Lexical Invention in a Single and Mixed language Family Set ups.....	182
5.3.6. Types of Lexical Invention in a Single and Mixed Language Family Set ups	183
5.4. Lexical Borrowing in a Mixed and Single Language Family Set ups.	186
5.5 Lexical Borrowing and Language Family Set up.	189
5.6. Summary of Findings.....	191
CHAPTER SIX.....	194
THE INFLUENCE OF AGE, GENDER AND LINGUISTIC ENVIRONMENT ON LEXICAL BORROWING.....	194
6.1 Introduction.....	194
6.2 Age.....	195
6.2.1 Age and Lexical Importation.....	196
6.2.2 Age and Lexical Invention	202
6.3 Gender.....	207
6.3.1 Gender and Lexical Importation.....	209
6.3.2 Gender and Lexical Invention	213
6.4 Linguistic Environment	216
6.4.1 Input.....	222
6.4.1.1 Quantity of Input	223
6.4.1.2 Input and Lexical Importation	224
6.4.1.3 Input and Lexical Invention.....	228
6.4.1.4 Quality of Input.....	233
6.4.2 Output.....	237
6.4.3 Feedback.....	239
6.4.3.1 Quantity of Feedback	240
6.4.3.2 Quality of Feedback.....	242
6.4.3.3 Repetitions.....	244
6.4.3.4 Clarification Questions	245
6.4.4 The Social Environment.....	246
6.4.5 The Physical Environment	248
6.5 Chapter Summary and Conclusion.....	251
CHAPTER SEVEN	254
SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS... 254	
7.1 Introduction.....	254
7.2 Summary of Findings	254

7.3. Recommendations Based on Findings.....	260
7.4. Suggestions for Further Research.....	262
7.5 Conclusion.....	264
REFERENCES	266
APPENDICES.....	284
Appendix 1 A: Introductory letter.....	284
Appendix IB: Questionnaire for Parents.....	284
Appendix II: Interview Schedule for Children.....	287
Appendix III: Data elicitation pictures	292
Appendix IV: Observation check list.....	299
Appendix V: Parent Consent Form	300
Appendix VI: Research Authorization Permit.....	302
Appendix VII: A Map of Bungoma County	304
Appendix VIII : Luhyia Dialect Map.....	305

LIST OF FIGURES

Figure 4.1: Source language of loan words	102
Figure 4.2: Tonal adaptation.....	117
Figure 4.3: Types of loan adaptation	119
Figure 4.4: Type of loan adaptations and source language	121
Figure 4.5: Source language and loan adaptation.....	122
Figure4.6: Lexical importation	124
Figure 4.7: Source language and lexical importation	125
Figure 4.8 : Source language of loan words	129
Figure 4.9: Tonal adaptation.....	139
Figure 4.10: Types of loan adaptation	141
Figure 4.11: Types of loan adaptations and source language.....	143
Figure 4.12: Source language and loan adaptation.....	144
Figure 4.13: Lexical importation	146
Figure 4.14: Source of lexical importation.....	147
Figure 4.15: Lexical importation and family set up	149
Figure 4.16: Sources of lexical importation in the two set ups	151
Figure 5.1: Types of lexical invention.....	169
Figure 5.2: Sources of lexical invention.....	172
Figure5.3: Types of lexical inventions	179
Figure 5.4: The source language for lexical invention	181
Figure 5.5: Lexical inventions from single and mixed language set ups	182
Figure 5.6: Types of lexical invention from single and mixed language set ups	184
Figure 5.7: Lexical importation and lexical invention	188
Figure 5.8: Lexical borrowing and the family set up	190
Figure 6.1: The Influence of Age on Lexical Importation	197
Figure 6.2: The Effect of Age on Lexical Invention.	203
Figure 6.3: The Effect of Gender on Lexical Importation.....	210
Figure 6.4: The Effect of Gender on Lexical Invention	213
Figure 6.5: The Role of Input on Lexical Importation	226
Figure 6.6: The Role of Input on Lexical Invention.....	230

LIST OF TABLES

Table 3.0: Age, gender and Mother’s Native Language for each Subject	86
Table 4.0: Loan words in a mixed language family set up.....	100
Table 4.1: Source language of loan words	102
Table 4.2: Epenthesis.....	105
Table 4.3: Aphaeresis and Syncope.....	108
Table 4.4: Devoicing	110
Table 4.5: Olubukusu words and Olutachoni tone	113
Table 4.6: Borrowed Olubukusu tone and retained Olutachoni word.....	114
Table 4.7: Borrowed Kiswahili loan words with Olutachoni tone.....	116
Table 4.8: Tonal adaptation.....	116
Table 4.9: Types of loan adaptation	118
Table 4.10: Type of loan adaptations and source language.....	121
Table 4.11: Source language and loan adaptation	122
Table 4.12: Lexical importation	123
Table 4.13: Source language and lexical importation	125
Table 4.14: Loanwords in an Olutachoni-Olutachoni family set up	127
Table 4.15: Source language of loan words	129
Table 4.16: Epenthesis.....	132
Table 4.17: Aphaeresis and syncope	134
Table4.18: Devoicing	135
Table 4.19: Olubukusu Loan words with Olutachoni tone.....	137
Table 4.20: Borrowed Kiswahili loan words with Olutachoni tone.....	138
Table 4.21: Tonal adaptation.....	139
Table 4.22: Types of loan adaptation	141
Table 4.23: Types of loan adaptations and source language	142
Table 4.24: Source language and loan adaptation	144
Table 4.25: Lexical importation	145
Table 4.26: Source of lexical importation	147
Table 4.27: Lexical importation and family set up.....	148
Table 4.28: Sources of lexical importation in the two set ups.....	150
Table 5.0: Olubukusunoun class morphology	160
Table 5.1: Olutachoni noun class morphology.....	161
Table 5.2: Olubukusu base and Olutachoni prefix.	164
Table 5.3: Olubukusu Prefix with Olutachoni Base.....	165
Table 5.4: Olutachoni prefix and other language(s) lexical base	167
Table 5.5: Types of lexical invention	168

Table 5.6: Sources of lexical invention	171
Table 5.7: Olubukusu base and Olutachoni prefix	175
Table 5.8: Olutachoni prefix and other language(s) lexical base	177
Table 5.9: Types of lexical inventions	179
Table 5.10: The source language for lexical invention	180
Table 5.11: Lexical inventions from single and mixed language set ups.....	182
Table 5.12: Types of lexical invention from single and mixed language set ups	183
Table 5.13: Lexical Borrowing in the corpus of CLIs.....	187
Table 5.14: Lexical importation and lexical invention.....	188
Table 6.0: The Effect of Age on Lexical Importation	197
Table 6.1: Correlation Between Age and Lexical Importation	200
Table 6.2: The Effect of Age on Lexical Invention.....	203
Table 6.3: Correlations Between Age and Lexical Invention	206
Table 6.6: The Effect of Gender on Lexical Invention	213
Table 6.8: The Role of Input on Lexical Importation	226
Table 6.9: The Role of Input on Lexical Invention	229
Table 6.10 Repetitions.....	244
Table 6.11: Clarification Questions.....	245

OPERATIONAL DEFINITION OF TERMS

For the purpose of the current study, the following terms were used as they have been defined here:

- Child** : A person between the age of 2 and 7 years.
- Cross-linguistic influences** : It refers to lexical borrowing and lexical invention.
- Lexi-mor-phonological** : An *Olutachoni* word that comprises of the lexical, Morphological and phonological levels of language.
- Lexical Borrowing** : Lexical importation and lexical inventions
- Lexical inventions** : The adaptation of the morphology or phonology of *Olubukusu* words to the *Olutachoni* words
- Lexical importation** : The use of an entire *Olubukusu* or any other word from another language during child language acquisition.
- Linguistic environment** : Included the input, output, feedback, physical environment and the social environment in child language acquisition.
- Luhya** : Languages spoken by the entire Luhya community.

ABBREVIATIONS AND SYMBOLS USED IN THE STUDY

BFLA	: Bilingual First Language Acquisition
CDS	: Child Directed Speech
CLIs	: Cross Linguistic Influences
CPH	: Critical Period Hypothesis
FLA	: First Language Acquisition
GOK	: Government of Kenya
HELB	: Higher Education Loans Board
IL	: Interlanguage
LA	: Language Acquisition
LAD	: Language Acquisition Device
LI	: Lexical Invention
LB	: Lexical Borrowing
L1	: First Language
L2	: Second Language
L3	: Third language
MFLA	: Monolingual First Language Acquisition
MO E	: Ministry of Education
MOI	: Medium of Instruction
NCST	: National Council of Research and Technology
OLUB	: Olubukusu

OLUT	: Olutachoni
OCW	: Open Class Words
PSA	: Poverty of Stimulus Argument
SLA	: Second Language Acquisition
SL	: Source Language
SLF	: Source Language Form
TF	: Target Form
TL	: Target Language
U G	: Universal Grammar
UNESCO	: United Nations Educational, Scientific and Cultural Organization
L	: Low tone
H	: High tone
/	: High tone
\	: Low tone
[]-	: Phonetic representation
//-	: Phonemic representation

ABSTRACT

The study sought to identify lexical borrowing and describe the nature of lexical borrowing among the 2-7 year old children acquiring *Olutachoni* as their first language. The study also investigated and established the correlations between the age and gender of the children and the degree of lexical borrowing. The role of the linguistic environment to the acquisition of *Olutachoni* as a L1 was also investigated. The Usage-Based Acquisition Theory, Levelt's Theory of Speech Production and the Unitary Language System Hypothesis were used to explain the role of the external and the internal mechanisms behind language acquisition. For a comparative analysis, data was collected from children in the mixed language family set up (*Olutachoni-Olubukusu*) and the single language family set up (*Olutachoni-Olutachoni*). This was meant to establish if cross linguistic influences from the mothers' language (in this case *Olubukusu*) had any influence on the acquisition of *Olutachoni*. The study adopted a time-lag strategy design and a triangulation approach to collect and analyze data. Twelve children were purposively sampled from twelve homes through the social network approach. Unstructured interviews and observation schedules were used to collect and audio-record utterances from the 12 children. A contrastive and comparative analysis of the cases of lexical borrowing from the mixed language family set up and the single language family set up was done. Spearman's Rank Correlation Coefficient was used to measure the relationship between the age and gender of the children and the degree of lexical borrowing. The results were presented in the form of frequency tables and figures which were followed with explanations. The findings of the study revealed that there were cases of cross linguistic influences from *Olubukusu* and Kiswahili among the 2-7 year old children acquiring *Olutachoni* as a First language. The two main strategies of lexical borrowing which were manifested among the children were lexical inventions and lexical importation. The influences occurred among the children from both the mixed and the single language family set ups although at varying degrees. Lexical importation was manifested through loan words and loan adaptation strategies whereas prefixation was employed as the main word formation process during lexical invention. Children from the mixed language family set up recorded a higher percentage of lexical borrowing compared to those from the single language family set up. There was a strong negative correlation between the age and gender of the children and the degree of lexical borrowing. Also, the linguistic environment had an effect on the production of lexical borrowing during child language acquisition. It was recommended that other cross linguistic influence studies in other African languages be conducted in order to promote the development and use of indigenous languages as per Chapter 2 section 7(3b) of the 2010 Kenyan Constitution. Furthermore, parents, teachers and psychologists should view lexical borrowing arising from CLIs as a strategy towards language learning but not as forms of interference.

CHAPTER ONE

INTRODUCTION TO THE STUDY

This chapter describes the background to the study, the statement of the problem and the objectives of the study. In addition, it outlines the research questions, the research assumptions, and the rationale of the study. Finally, it describes the scope and the limitations of the study.

1.1 Background to the Study

Kenya is one of the countries in Africa with an extensive linguistic diversity. Of Africa's estimated 2,000 plus languages, Kenya has more than 42 indigenous languages adding to English and Kiswahili as state-recognized official languages (The Constitution of Kenya Chapter 2 section 7). According to Ogechi (2003), Kenya is pervasively multilingual both at societal and individual levels. Kenyan people speak at least two or three languages. This stems from the different ethno linguistic groups that are found in the country and their daily need to communicate with different people in different contexts. The languages spoken by multilinguals and bilinguals influence each other in various ways. This occurs during the increased social interactions such as through marriages, business, ceremonies, education among others (Odlin, 2003; Mesthrie, 2000 and Paradis 2005). Mesthrie (2000) posits that, in such circumstances, some communities are able to maintain

their languages, others might experience language shift, language mixing, language borrowing and there might even be emergence of new languages.

The above mentioned social interactions have encouraged linguistic exogamy (marriage outside the linguistic community), and as a consequence, children grow up in mixed language families. This is not unique to Kenya alone because all over the world, there are children who successfully acquire two languages simultaneously from birth (Grosjean 2008). This lends credence to the theory that the human mind is as prepared to acquire two first languages as it is to acquire one (Grosjean 2008). Such an experience of acquiring two languages in a mixed-language family set-up may influence the lexical, morphological, phonological, semantic and syntactic acquisition. This could occur through borrowing, language mixing, language shift and even language attrition as a result of Cross Linguistic Influences (CLIs, hereafter).

According to Odlin and Jarvis (2004), language acquisition is the process by which a child develops proficiency in a language by merely being exposed to it without any formal instruction. Chomsky (2007) argues that language universality and the developmental similarities across children are as a result of an innate language-acquisition mechanism called the Language Acquisition Device (LAD). On the other hand, Painter (2006) and Tomasello (2003) have argued that Sociolinguistics has close connections with language acquisition in society. According to them, the child derives input primarily from adult utterances within

his or her linguistic environment. Therefore, the process and the product of language acquisition are controlled by both external and internal mechanisms. Levelt's speech production theory (Dawaele, 2001; 1998) is used in this study to test if the internal mechanism is behind the process of language acquisition and the use of lexical borrowing. On the other hand, the usage based theory by Tomasello (2012) is used to test if the external mechanisms are responsible for language acquisition and lexical borrowing.

Lewis (2009:26) has reclassified *Luhya* as a “macro language,” the various “dialects” now promoted to the status of “languages.” This reclassification is due to the fact that there is no standard “*Luhya* language” but rather each “*Luhya*” speaker speaks one of its varieties. The estimated 16 *Luyia* languages have varying degrees of mutual intelligibility (Marlo 2011; Lewis 2009). In view of the above argument, *Olutachoni* and *Olubukusu* were regarded as languages, and not dialects of the same language in the context of this study.

Olutachoni and *Olubukusu* are *Luhya* languages spoken in Bungoma County in the Western region of Kenya. Available studies differ on the exact number of dialects that make-up the *Luhya* language (Angogo 1980; Kebeya 1997; Kabaji 2005; Onyango 2006; Marlo 2011). However, it is estimated that there are sixteen languages among the *Luhya* group of speakers. These are *Olulogooli*, *Olubukusu*, *Olwitakho*, *Olutachoni*, *Olumarama*, *Olukisa*, *Olutsotso*, *Olunyole*, *Olunyala*, *Olukhayo*, *Olukabras*, *Olumarachi*, *Oluwanga*, *Olwisukha*, *Olusaamia* and

Olutiriki (Onyango, 2006). Data for the current study is drawn from two out of the sixteen groups of speakers of the *Luhya* language.

A majority of studies on language acquisition seem to focus primarily on the acquisition of a second language after the first one is established (Ecke, 2001; De Angelis and Selinker, 2001; Möhle, 1989), simultaneous bilingualism (Bongartz and Schneider 2003; Cook 2000; Liu 1991) and the issue of cross-linguistic influence during second language acquisition (De Angelis and Selinker 2001; Dewaele 2001; Fuller, 1999; Ringbom, 2001). The above studies focus on Second Language Acquisition (SLA) where English, French, German and other foreign languages are given prominence. These studies fail to address the issue of cross linguistic influences from a first language to another first language an aspect that this study captures. To understand the particulars of lexical borrowing and to provide the information necessary for comprehensive, generalize able theories of language acquisition, research on cross linguistic influences in a mixed language family set up in comparison to the single language family set up was essential.

A mixed language family set up comprised of families in which the mother to the subjects was a native speaker of *Olubukusu* and their fathers were native speakers of *Olutachoni*. On the contrary, in a single language family set up, both parents were native speakers of *Olutachoni*. A major question in studies of monolingual first language acquisition, and a focus of this study, is whether the process and the product of language acquisition in a single language family set up is the same as

that of children acquiring language in a mixed language family set up. Underlying this question is the theoretical issue of whether the children's ability to learn language is challenged in any way by the acquisition of two languages at the same time formed the basis of this study.

An additional issue was whether age and gender of the children had a correlation with the pattern of acquisition. Evidence that the patterns are different or the same could give insights as to how the processes and products that underlie language acquisition cope with dual language input. According to De Houwer (1995), the brain is monolingual, and therefore, children mix their languages when they speak in a mixed language family set up meaning that the acquisition of language is important to a child's development. Understanding how children the world over are able to master the complexities of human language in the space of a few short years has become one of the major goals of contemporary linguistic research.

The study used words from the class of nouns as units of data analysis for lexical borrowing. This was based on the fact that children acquire concrete aspects earlier than abstract ones; for this case, nouns are concrete. According to O'Grady (2001:62), children are situated in a *concrete operational stage* meaning that they acquire concrete aspects earlier than abstract ones. Consequently, they can easily name words whose referents are concrete such as table, dog and tree. Philips (1993) is in support of the above argument when he says that the actual presence of objects activates the mental lexicon more easily and therefore vocabulary

related to the child's environment is important during the acquisition process. In addition, it is important to remember the relevance given to personal experiences by children who are acquiring a first language. This explains why objects in the form of nouns within the child's environment were used as units of analysis

According to Alleton (2001) borrowing is the process by which a new loan word becomes established in a speech community, involving both the adaptation of the loan word by one or more L1 speakers, and the subsequent transmission of the loan word from those initial borrowers to the other members of the speech community. Mwihaki (1998) notes that lexical inventory in the borrowing language is expanded by adapting new words from the source language through language contact. The loan word in the long run will fit into the system of the borrowing language through various adaptation strategies. The current study investigated how children used lexical borrowing to acquire *Olutachoni* lexicon.

Lexical borrowing in this study was considered as a result of cross linguistic influence. Cross linguistic influence is a term which was proposed in the eighties to include such phenomena as transfer, interference, borrowing, code-mixing, code-switching and language attrition (Kellerman, 2001). This study viewed cross linguistic influence as the main factor leading to the phenomena of lexical borrowing in mixed and single language family set ups. The term CLI was also used interchangeably with the term transfer. Cross linguistic influence is found at all levels of linguistic structure: phonology (sound systems), morphology (word

structure), syntax (sentence structure), and lexical semantics (Booij 2000 and Dijkstra 2003). Dijkstra (2003) views language as an assemblage of sub-systems, each closely interrelated with each other. The various linguistic sub-systems include phonology, vocabulary, morphology, syntax, and semantics. The use of the lexicon interacts with and influences the internal organization of the other sub-systems hence the lexicon was conceived in this study as an important aspect to be investigated with regard to the interaction between it, morphology, and phonology during language acquisition.

The question of the acquisition of a sound segment, single-word tokens and the internal structure of single word-tokens was discussed through a lexi-morphological study of words. The criterion which was applied in the current study was an attempt to identify individual cases of lexical borrowing from the words under investigation. This study presented a case in which surface lexical form was determined by an interaction of phonological and morphological information and processes (hence Lexi-mor-phonological development).

1.2 Statement of the Problem

A lot of research exists on language acquisition (Nyamasyo 1985; Wangeci 1991; Burton 2007; De Angelis 2007; Orwenjo 2009; Makeni 2007) and cross linguistic influences (Lanza 2004; Volterra and Taeschner 2007; De Houwer 2009a). However, none of these studies have looked at CLIs from a L1 in reference to lexical borrowing on the acquisition of *Olutachoni* as a first language, another L1.

None of the African studies on child language acquisition like Blount (1969), Nyamasyo (1985), Wangeci (1991), Makeni (2007) and Orwenjo (2009) concerns the communities under investigation in this study an aspect that makes the study crucial. Studies outside Kenya like that of Grosjean (2008); (2000), De Houwer, (2009a), Volterra and Taeschner, (2007) have looked at CLIs on First Language Acquisition (FLA) but have failed to tackle CLIs in an African context and Kenya in particular, a gap that is captured in the present study. Therefore, this study is timely in that it contributes to the study of African languages in contact and how they influence each other during first language acquisition.

1.3 The Objectives of the Study

The following objectives guided the study:

- a. To identify lexical borrowing and describe the nature lexical borrowing in an *Olutachoni-Olubukusu* family set up on LI acquisition.
- b. To identify lexical borrowing and describe the nature lexical borrowing in an *Olutachoni-Olutachoni* family set up on LI acquisition.
- c. To establish the correlation between age and gender of the child and the degree of lexical borrowing on LI acquisition.
- d. To determine the role of the linguistic environment of the child to the degree of lexical borrowing on LI acquisition.

1.4 Research Questions

The study had the following questions:

- a. What is the nature of lexical borrowing in an *Olutachoni-Olubukusu* family set up on LI acquisition?
- b. What is the nature of lexical borrowing in an *Olutachoni-Olutachoni* family set up on LI acquisition?
- c. What is the correlation between the age and gender of the child and the use of lexical borrowing on LI acquisition?
- d. Does the linguistic environment influence the production of lexical borrowing on LI acquisition?

1.5 Assumptions of the Study

The study was based on the assumptions that:

- a. First language acquisition in an *Olutachoni-Olubukusu* family set up involves the use of lexical borrowing.
- b. First language acquisition in an *Olutachoni-Olutachoni* family set up does not involve the use of lexical borrowing.
- c. The linguistic environment has an influence on the use of lexical borrowing on LI acquisition.

1.6 The Study Hypothesis

The study was based on the hypotheses that:

- a. There is a significant relationship between the age of the child and the degree of lexical borrowing on LI acquisition.
- b. There is a significant relationship between the gender of the child and the degree of lexical borrowing on LI acquisition.

1.7 The Rationale of the Study

The study not only explored sociolinguistic aspects in the acquisition process of *Olutachoni* as a first language, but also explored the linguistic study of the lexical, morphological and phonological aspects of acquisition. The findings of this study will therefore help advance scholarship in the field of Applied Linguistics and Sociolinguistics.

First language acquisition (FLA) is important to the acquisition of the second and third languages (Benson 2002). A lot of studies have investigated the issue of CLIs with regard to second and third language acquisition in a bilingual environment (Cenoz 2001; Dawaele 2001; Ecke 2003; Selinker 2001). Moreover, nearly all these works have focused on the acquisition of foreign languages like English, German, French, Spanish among others. Studies in language acquisition have continued to ignore the role of FLA in the learning of other African languages in Kenya. This study is therefore important in view of the fact that it has attempted to

fill the gap in the existing body of knowledge with regard to how the children use lexical borrowing as a strategy to acquire *Olutachoni* as a first language.

Cross linguistic influence is very important to language learning and many African languages have not been well studied and described in reference to it. The need for studying these languages has been noted by different linguists and researchers (Mose 2012, Trask 2001 and Barasa 2014). Therefore, by identifying and describing aspects of lexical borrowing in the acquisition of *Olutachoni* as a first language, it is hoped that it will fill the gap in linguistic literature especially with regard to Bantu languages in general and *Olutachoni* and *Olubukusu* in particular. This is in view of UNESCO's (2008e) support for the maintenance of linguistic and cultural diversity and the promotion of children's right to learn in their mother tongue.

Furthermore, Kenya is a multilingual country most Kenyans have an option of three languages at their disposal: the official languages English and Kiswahili, National Language, Kiswahili and the different indigenous mother tongues of Kenya. Adams (2012:99) notes:

... in Kenya, as in other African countries, indigenous languages suffer the disadvantage of existing alongside English, Kiswahili or a mixture of both (known as Sheng in Kenya) which may be attributed to the difficult choices based on the politics of policy in a multilingual set-up.

Mugambi (2002) concurs that English and Kiswahili dominate because they are given official recognition while indigenous languages are not. With

modernization, globalization, emergence and adoption of technology and appreciation of international trade, many people are shifting from indigenous languages to using English and other languages like French and Portuguese that are considered as international languages of commerce and technology. Therefore, many indigenous languages are being threatened, are shrinking, are being displaced and others are undergoing attrition. Therefore, this study is important in that the data on lexical borrowing in *Olutachoni and Olubukusu* that was collected and analyzed is hoped to help in the process of documentation and preservation of the two languages. This is per the Kenyan constitution (2010) chapter 2 section 7(3b) which stipulates that the state shall promote the development and use of indigenous languages.

Most literature on *Olubukusu* concentrates on the historical and structural concerns of the language (Mutonyi 2000; Barasa 2014). On the other hand, *Olutachoni* is a language that has missed the eyes of researchers for a long time and even been thought to be a dialect of *Olubukusu*, Wekesa (2014). This study is a move away from the historical and structural concerns of *Olubukusu* and also puts *Olutachoni* in the limelight of researchers.

1.8 Scope and Limitations

The study identified and described lexical items in the forms of lexical borrowing employed by children during the acquisition of *Olutachoni* as a L1. A full range of language contact effects can be realized during cross linguistic influences (Odlin,

1989). For example, effects such as overproduction and underproduction of particular structures, production errors such as calques, language loss, avoidance, lexical inventions, phonological substitution and lexical borrowing among others. The scope of the present study was limited to lexical borrowing due to time constraints and massive data handling problems. Probably, if a massive study of all the consequences of CLI would be investigated, it could probably yield different results.

The words that made up the unit of analysis were nouns although there are other seven word classes including verbs, adjectives, adverbs, prepositions, pronouns among others. Nouns were picked on because children begin learning the vocabulary related to objects (nouns) within their linguistic environment first before other words. This is supported by Poplack (1998:127) who points out that “major-class content words such as nouns, verbs, and adjectives are the most likely to be borrowed.” Further, Galeote (2002) points out the importance of using nouns rather than verbs in studies that relate to the acquisition of vocabulary. He remarks that children start learning vocabulary related to objects (nouns) within their linguistic environment or people related to their everyday life and later start learning verbs to explain what they can do with objects whose names they already know.

Linguistics comprises of different levels: phonological, lexical, morphological, semantics, pragmatics, and discourse. The scope of the present study is limited to

lexical, phonological and morphological acquisition (lexi-mor-phonological). According to Mutaka (2000), Bantu languages are agglutinative in nature meaning that a single lexicon comprises of the phonological and morphological information. This is the reason why the present study was limited to the aforementioned levels. Again, the choice of the three levels of language was based on the assumption that although all linguistic levels are vulnerable to lexical borrowing, there is evidence for the lexicon to be more vulnerable than morpho-syntax (Schmitt 2000; Kopke and Nespoulous 2001).

Many social variables such as sibling position, ethnicity, and class, among others are important in any acquisition process (Thomas 1991). A study that explores all of them would most likely give a different scenario from what this study has done. Due to time constraints, the present study was limited to the linguistic environment, age and gender as the main factors influencing lexical borrowing in FLA. These variables are central to the analysis of the results due to the primacy they hold into the whole acquisition process (Cenoz 2003). The sample size comprised of twelve children from the mixed and the single language family set ups. According to Makuto (2009), linguistic usage is homogenous and that small samples yield better analytical returns than big samples. Perhaps an intensive case study of one child or more than 12 children in diverse linguistic environments would have a different bearing on the study.

Luhya as a linguistic group comprises of 16 different groups of speakers located within and outside the Western region of Kenya (Marlo 2009). However, the scope of the study was limited to *Olutachoni* and *Olubukusu* speakers within Bungoma County. An investigation of the two languages had an advantage to a researcher who was studying her own language (*Olutachoni*) and the language she understood and spoke (*Olubukusu*). This was based on Blount's (1969) demonstration of the difficulties of studying a language that one is not very familiar with. Blount reported that his study of *Luo* speaking children was hampered by his inability to understand the language. However, it is believed that a comprehensive study of all the *Luhya* speakers from other regions who also intermarry and bring up children in such a set up would yield different or similar results.

There are many theories behind first language acquisition (FLA) and lexical borrowing. However, the study was limited to three theories: The Usage-based language acquisition theory by Tomasello (2012), Levelt's theory of speech production by (Dawaele 2001) and the unitary language system hypothesis by Paradis (1995). The three theories were used to take into account the interaction between the environmental (external) and the cognitive (internal) approaches to language acquisition. These theories were the most appropriate, in view of this study to describe the mechanisms that are behind the process of lexical borrowing among children acquiring *Olutachoni* as a L1.

The study settled for purposive sampling and the social network approach in selecting both the target and the sample populations. This helped the researcher to save time by focusing on the actual respondents who gave the required data. The ethnographic approach was used to collect and record utterances from the respondents. Such an approach advocates for the use of a variety of data collection approaches which are suitable in studies that involve children. In the case of this study, such an approach was timely since the researcher was able to engage the subjects in a number of data-elicitation techniques like asking them questions, and even asking them to name objects and body parts from the photographs and within the home environment.

1.9 Summary of Chapter One

This chapter has given a brief introduction to the current study by providing a brief background to the language situation in Kenya. It has focused on lexical borrowing and CLIs during FLA. The chapter has also introduced *Olutachoni* and *Olubukusu*, the languages of interest for the present study, with a brief background on the general language situation among the *Luhya* group of speakers. The interaction between the lexical, morphological and phonological levels of language (lexi-mor-phonological) is also briefly highlighted. In the next chapter a review of literature basing on the study objectives is done and the theoretical framework underpinning the study is discussed.

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Introduction

This chapter reviews selected literature alongside the objectives of the study and the theoretical framework that underpins the study. Related studies and variables are reviewed followed by the theories of first language acquisition. Finally, a brief summary of the chapter is given. By reviewing the work of selected theorists and practitioners in the mentioned fields, the study clarifies the premises and methods upon which it is set.

2.2 Literature Review

First, the chapter reviews literature on *Olutachoni* and *Olubukusu* in the view of language versus dialect debate. This debate explains why *Olutachoni* and *Olubukusu* are considered as languages and not dialects in this study. This is followed by a review of literature in the fields of first language acquisition, cross linguistic influence, lexical borrowing and the lexi-mor-phonological levels of language to explain objectives one and two of the study. The sociolinguistic variables of age, gender and the linguistic environment have been reviewed with reference to objectives three and four of the study.

2.2.1 *Olubukusu* and *Olutachoni* in the Context of the Language Situation in Kenya

According to Ethnologue, there are a total of 42 languages spoken in Kenya (Marlo, 2009). Most of these languages belong to two broad language families: Niger-Congo (Bantu branch) and Nilo-Saharan (Nilotic branch), spoken by the country's Bantu and Nilotic populations, respectively. The Cushitic and Arab ethnic minorities speak languages belonging to the separate Afro-Asiatic family, with the Indian and European residents speaking languages from the Indo-European family. This has brought about a linguistic diversity in the country whereby most Kenyans can speak one or more native languages, Kiswahili (the national and official language) and English (the official language). Some Kenyans can also speak French, German, Arabic or Chinese.

According to the Kenyan education language policy since independence, indigenous languages are used as the medium of instruction in early school years (lower primary) and the home language in most rural areas. Kiswahili is also used as a home language and a language of instruction in lower primary in urban areas. English and Kiswahili being official languages, they are reserved for official business and administrative functions in government and private enterprises. The Constitution of Kenya (2010) Chapter 2, section 7(3b) also recognizes the development and use of indigenous languages.

Out of the 42 languages spoken in Kenya, there are instances when what are typically dialects have been considered languages and what are typically languages are considered dialects (Ogechi, 2003). This has made it difficult for researchers who have attempted to draw linguistic boundaries between a dialect and a language. This is a consequence of the fact that the distinction between language and dialect is geographically based but not structurally based (Kanana, 2011; Ogechi, 2003). According to Kanana (2011), *Sabaot* (in Kenya) and *Sebei* (in Uganda) are mutually intelligible yet they are considered as separate languages. According to other linguists like Abdulaziz and Osinde (1997); King'ei and Kobia (2007); Kebeya (2007), the various *Luhya* group of speakers are said to be dialects; however, this study considers *Olutachoni* and *Olubukusu* as languages. This is based on Kanana's (2011) argument that the linguistic features like phonological, morphological and lexical systems of the dialects are largely responsible for reduced degrees of intelligibility.

Dialect clusters within a given geographical area exhibit some common phonological characteristics for that particular cluster. Besides this sharing of phonological characteristics, there exist features that are peculiar to individual dialects. This means that there are idiosyncratic features inherent in a given dialect that set it off from the other dialects in the same cluster. The existence of these peculiar features enables linguists to draw dialect boundaries basing on the phonological, lexical and morphological differences. In her study of six dialects of the Meru group, Kanana seeks to describe some linguistic features of six dialects

of the Meru group (*Imenti, Tharaka, Igoji, Mwimbi, Muthambi and Chuka, Muthambi and Mwimbi*). All the six are found on a geographical continuum and they are mutually intelligible but they exhibit phonological, lexical and morphological differences that set them apart. However, unlike Kanana's study which maintains the use of the term "dialects" for the different Meru group of speakers, the present study calls the two speech communities under study languages making the two studies different. Also, Kanana's study simply describes the linguistic features of the six Meru group of speakers in Eastern Kenya. This is contrary to the present study which goes further to do a cross linguistic influence analysis in relation to lexical borrowing in the acquisition of *Olutachoni* as a L1 in the Western region of Kenya.

The two languages under investigation; *Olutachoni* and *Olubukusu*, are Bantu languages under the *Luhya* group of speakers (Marlo 2009). *Luhya* speaking cgroup fall within the Bantu of the Niger-Congo family. The *Luyia* group is the second largest after the *Gikuyu* in Kenya with a population of five million and thirty three (G. O. K, 2009). It is made up of sixteen languages currently living in the western region of Kenya (Marlo 2009). They are neighbours to some Nilotic communities including the *Luo, Kalenjin* and *Iteso*. For this reason, they exhibit a characteristic affinity in their phonology, lexicon, morphology and syntax. Even though considered as one linguistic community, each group speaks a different "language" of the *Luhya* (Abdulaziz and Osinde 1997; King'ei and Kobia 2007).

The mutual unintelligibility of the *Luhya* languages is manifested in the observation that many speakers within Luhya language have a problem reading any of the three translations of the bible that is said to be written in “Standard *Luhya*.” Furthermore, according to Ogechi (2003; 2005), there is mutual intelligibility between some of the *Luhya* languages and the languages spoken in other neighbouring countries. For example, there is a lot of mutual intelligibility between *Olubukusu* of Kenya and the *Olugishu* of Uganda, yet the two are referred to as “languages” not “dialects.” From the above examples, it should be appreciated that the interpretation of the term “language” at times overlaps with the term “dialect” within the *Luhya* speech community.

Olutachoni and *Olubukusu* belong in the same geographical location although they display some differences in terms of lexical, morphological and phonological features as mentioned above. *Olubukusu* (native name ‘*Lubukusu*’) is spoken by the *Babukusu* people of Western Kenya. The *Babukusu* live in Bungoma County which borders Uganda to the West and Kakamega County on the East. *Olubukusu* is spoken by 565,000 people in the *Luhya* cluster. Apart from *Oluloogoli* whose speakers have multiplied greatly in the last fifty years, *Olubukusu* might be the only other *Luhya* language that boasts of more than five hundred and sixty five thousand (565000) speakers according to Marlo (2011). *Olubukusu* is spoken roughly by eighty percent (80%) of the population of Bungoma County. Today, it is hard to determine who the actual native speakers of *Olubukusu* are because the *Ateso*, *Sabaot* and the *Abatachoni* who border *Bukusuland* have adopted the

language (Lewis 2009).

The *Abatachoni* who speak the language of *Olutachoni* emerged mainly from Kalenjin ethnic communities' interaction with various groups of the Bantu. Wekesa (2014) attests that one third of *Olutachoni* has Kalenjin vocabulary such as *chono*, *lotwa*, *layon*, *sergoit* among others while the rest of the vocabulary stems from the rest of the *Luhya* language especially *Olusamia*, *Olunyore*, *Olumarachi* and *Olukabras*. *Olutachoni* comprises of thirty-six clans namely: *Avachimulungu*, *Avachivino*, *Avaengele*, *Avakafusi*, *Avakamkong*, *Avakemtevi*, *Aavakisiai*, *Avakubwai*, *Avakuusi*, *Avalukulu*, *Avaluu*, *Avamakhanga*, *Avamakhuli*, *Avamalicha*, *Avamarakalu*, *Avameywa*, *Avamua* *Avamurundi*, *Avameywa*, *Avangachi*, *Avanyangali*, *Avarefu*, *Avasamba*, *Avasamo*, *Avasang'alo*, *Avasaniaka*, *Avasioya*, *Avasonge* *Avatulu*, *Avavichua* *Avaviya*, *Avawande*, *Avayumbu*, *Avaavicha*, *Avachewa* and *Avachikha*.

It is among these thirty-six clans that the present study was based. *Olutachoni* is mainly spoken in Bungoma County and Lugari sub-county within Kakamega County. In Bungoma, speakers of *Olutachoni* occupy most of Ndivisi, (Bungoma East Sub-county) and Tongaren Sub-county. In Lugari, *Avatachoni* occupy North Kabras and Chekalini Locations of Lugari Sub-County. The *Avatachoni* of Ndivisi Division are separated from those of Lugari by River Nzoia. Those who live among other communities speak the languages of those communities. This is especially so with the *Avatachoni* living among the *Babukusu* in Bungoma West

and Bungoma South respectively and those who live among the *Avakabras* in Lugari Sub-County, Kakamega County. The children that form the sample of the current study were drawn from *Olutachoni*-speaking families in Bungoma East Sub-County, Ndivisi Division, Lukusi Location where *Olutachoni* is the dominant language. *Olutachoni* is spoken roughly by forty seven thousand (47000) of the population of Bungoma County and Kakamega County (Marlo 2011).

2.2.2 First Language Acquisition

Language acquisition is the process by which humans get the capacity to perceive, produce and use words to understand and communicate (Crawford 1995). This process entails mastery of the full range of grammatical and communicative competence and is influenced by both biology and socialization (Saunders 2000). Research into child language acquisition has mainly been influenced by linguistic theories and descriptive frameworks (Celaya and Torras 2001). Such studies started in the 18th century with diary studies (Ingram, 1989). These works came to be known as baby ‘biographies,’ an approach which was criticized for being biased since the parent observer could record only what she/he saw to be important development. This kind of research was also criticized for the lack of reliability. Singleton (2003) for example, points out the problem of observational errors or selectivity which is ever present. William and Hammarberg (1998) were the first scholars to show interest in the scientific study of child language acquisition. William, for instance kept a diary of his child’s linguistic progress from early cries

to the appearance of first words. However, the current study did not use diary records as a method of data collection but instead used the written notes. The written notes from observation were used to supplement the tape-recorded data in order to overcome the problems of the diary method. This helped to capture the verbal and the non-verbal behaviour which was relevant in making inferences about the child's speech production.

The period of large sample studies began in 1926. This was as a result of the emerging form of psychology known as behaviourism. The behaviourists developed a theory of learning where the child's changes in behaviour were traced back to observable conditions of the child's environment (Littlewood 1989). The emphasis was on observable events in the interaction of the child and its surrounding linguistic environment. Within this view, the child was seen as being passively controlled by the environment. The usage-based acquisition theory by Tomasello (2012) has been used in the present study with an assumption that a child acquires language or verbal behaviour when parents provide modeling and reinforcement and, as a result, establish the child's repertoire of sounds and vocabulary.

Chomsky (2007) emphasizes that in acquiring a first language, one does not simply acquire a repertoire of sentences, but a rule system that makes it possible to generate an infinite variety of utterances, most of them novel; a process which Chomsky views as a creative one. Chomsky argues that, the problem that children

face when acquiring a language stems from the nature of language itself: its being rule governed and creative. With this perspective, Orwenjo (2009) observes that in acquiring a first language, the child has to be both creative and at the same time able to take into account the rules governing the language being acquired. Chomsky also views language acquisition as being brought about by an innate capacity in the child. This innate capacity is in the child's Language Acquisition Device (LAD), which every human being is endowed with. The child in the Chomskyan paradigm acquires language by listening to the surrounding language (input), hearing its patterns, and by using the LAD, the child fixes a parameter setting by deciding that the language operates one way rather than the other.

The child derives input primarily from adult utterances within his or her linguistic environment, and that based on such input, the child formulates hypotheses about how the target language operates and uses further input to test and accept or reject the hypotheses. This is the premise upon which the present study is based. In a cognitive approach, interest is drawn more towards the child's internal processes of activation and inhibition of the source language and the target language. This is explained using Levelt's speech production theory by Dawaele (1998; 2001) in the current study. Nonetheless, it is the linguistic environment which stimulates these processes and provides the material on which they operate. The parents' speech seems particularly well suited to helping the child learn rules, meanings, words, sounds and structure of the target language (Tomasello 2012). This kind of input is, indeed, an important factor in the language learning process.

A number of studies on language acquisition have focused on Indo-European languages such as English, German and Latin. Notable examples include De Angelis and Selinker (2001); Cenoz, (2001); Williams and Hammarberg (1998); Dewaele (2001); Ringbom (2001); Tremblay (2006); Celaya and Torras (2001) and Navés (2005). Studies on the acquisition of African languages are few. Notable ones include those of Wangeci, (1991); Nyamasyo, (1985); Makeni; (2007) and Orwenjo, (2009). Nyamasyo (1985) for example, studied the syntactic structures in the grammar of a four year old child. Her subject had a multilingual background (Luo, Kikamba, English and Kiswahili). Nyamasyo's study confirmed that a child acquiring language in a multilingual environment ends up mixing the languages involved.

Nyamasyo reported that the child acquired Kiswahili syntax since it was the predominant language at home, while in *Dholuo* and *Kikamba* only lexical items were observed. Nyamasyo also tested the assumption that by the age of five, children had mastered the syntax of their first language which was found to be true. Nyamasyo's study is informative to the current study in terms of the relationship between FLA and the age variable. Furthermore, Nyamasyo's study was based in a multilingual background just as the present study which was also conducted in a multilingual background (*Olutachoni*, *Olubukusu*, *Kiswahili*, English) although the languages under investigation are different. On the contrary, her investigation was based on the acquisition of syntax by one child unlike the

present study which investigated the acquisition of vocabulary among 12 children from a mixed-language family and the single language family set up.

Another relevant study to this work is Orwenjo's (2009) study on language acquisition by children acquiring *Dholuo* as a first language. Orwenjo observes that, as children acquire their native language, they use unconventional lexical forms which hardly go unnoticed. Such children engage in the production of lexical innovations in an effort to bridge the lexical gaps in their mental lexicons, resulting from their failure to retrieve or learn the conventional forms. The lexical innovations are created through the manipulation of word-formation strategies of the language, related to derivational morphology. The study employed transcripts of spontaneously generated utterances by 10 children aged between 3 and 6 years, recorded over a period of 9 weeks. The results were correlated with the linguistic environment in which the children operated and the socio-demographic characteristics of age and gender of the children. The study reveals that *Luo* children between the ages of 3-6 years, just like other children, actively produce lexical innovations in their day to day speech in order to come to terms with their target language. Linguistic environment and the age of the child were also reported to be significant in the process of lexical innovations produced by the children. On the other hand, gender seemed not to play any role at all.

The current study has benefited from Orwenjo's study in terms of the socio-demographic variables under investigation and methodology. First, the two studies

are both dealing with child language acquisition of an African language and in an African context. Second, the current study has benefitted from the derivational and the inflectional word formation strategies referred to in the current study as lexical inventions and in Orwenjo's work as lexical innovations. Unlike Orwenjo's study which looks at the use of lexical innovations among the 3-6 year olds as a strategy of filling the lexical gap in the children's mental lexicon, the present study, apart from looking at lexical borrowing as a strategy of filling the lexical gap in the children's mental lexicon, it views such a strategy as a result of CLIs. The current study is also different in that, it has dealt with the acquisition of *Olutachoni*, one of the *Bantu* languages unlike the previous one that dealt with the acquisition of *Dholuo*, which is *Nilotic*.

Apart from the sample size which is different, the study has informed the present study a lot in terms of data collection instruments, the sampling techniques and data analysis techniques. The two studies recorded instances of utterances by the children, analyzed them and coded for instances of lexical innovations for the previous study and lexical inventions for the current study. Unlike the previous study which focuses only on lexical innovations, the current study also identifies incidents of lexical importation as a result of CLIs. The previous study focuses on the acquisition of the lexicon alone, unlike the present study which investigated the acquisition of lexi-mor-phonological levels, an interaction between the lexical, the morphological and the phonological linguistic levels. Last but not least, the two studies also explore the correlation between the demographic characteristics of

age and gender and the production of lexical borrowing. Also, the role of the linguistic environment on lexical borrowing is also explored. All these examples provide insights into previous attempts to understand child language acquisition and reveal the interest in child language being as old as mankind.

2.2.3 Cross-linguistic Influences in First Language Acquisition

Trudgill (2003) and Scotton (2000) observe that codes that are in contact influence each other. During such contact, there is usually a tendency for speakers to transfer certain linguistic items such as lexical, morphological, syntactic or semantic from one language into the other. Such contact situations may arise into situations that show some kind of language mixing. That is, the merging of characteristics of two or more languages in any verbal communication, language borrowing, the adaptation of lexical material to the morphological and syntactic patterns of the recipient language or code-switching in which there is a systematic interchange of words, phrases, and sentences of two or more languages (Odlin 2004). The current study explores lexical borrowing during L1 acquisition with the view of filling the lexical gap in their mental lexicon. This results from their failure to retrieve the target forms from their mental lexicon.

Odlin's (2004) definition of *transfer* encompasses many different viewpoints. According to Odlin, transfer is the influence resulting from similarities and differences between the target language and any other language that has been previously (and perhaps imperfectly) acquired. Within this definition, Odlin

includes both positive transfer and negative transfer phenomena. Such a phenomenon include underproduction or overproduction of a particular structure, production errors such as substitutions, calques, and alterations of a target language item, misinterpretations during comprehension, and the differences in the amount of time needed to acquire the target language by learners of different native language backgrounds.

Other researchers find the term *transfer* not being appropriate to encompass the full range of language contact effects. Naves and Celaya (2005: 29) for example, prefer to limit *transfer* to “those processes that lead to incorporation of elements from one language to another.” Naves and Celaya (2005) consider the term *cross-linguistic influence* more appropriate to refer to other language contact phenomena such as transfer, language loss, or avoidance. In this study, the two concepts of transfer and CLI are used interchangeably to include the phenomena of lexical borrowing which is as a result of children growing up in a multilingual set up. This is because the two terminologies both deal with the influence resulting from similarities and differences between the target language and the source language.

Studies on cross linguistic influence in language acquisition have had a remarkably long history and significance (Genesee 2006). Cross linguistic influence has been of interest among linguists in questions of language contact and language change. Odlin (2004) presents a comprehensive account of the nature of cross linguistic influence and its role in language acquisition. He documents the

historical development of the concept of CLI and explores its role in discourse, semantics, syntax, phonology, and writing systems. Odlin also examines the way cross linguistic influence interacts with cultural, social, and personal factors in language learning and use. He accounts that the detection of foreign accents in a given language is just one example of the awareness of cross linguistic influence. For example, Russian does not have present tense copula forms such as the English “*am*” or articles such as *a*, and so omissions of the copula and indefinite article in “*I very good fellow*” may seem to be clearly due to cross linguistic influence in the grammatical systems of Russian and English. The comparison of such differences is known technically as contrastive analysis. Contrastive analysis according to Hawkins (2004) investigates differences between pairs of languages against the background of similarities and with the purpose of providing in-put to applied disciplines.

Odlin uses contrastive analysis in his discussions of language research in cross linguistic influence. Odlin reports that the study of one language, for example Latin, will make easier the study of a closely related language like French. His literature, especially on the role of cross linguistic influence in the acquisition of phonology and how cross linguistic influence interacts with social factors informed the present study on the role of lexical borrowing on the acquisition of the vocabulary and the role of the social demographic variables of age, gender and the linguistic environment on acquisition. However, Odlin focused on cross

linguistic influence in second language acquisition (SLA), unlike this study which focuses on cross linguistic influences on First Language Acquisition (FLA).

Genesee (2006) observes that language acquisition occurs among children in two ways, *simultaneously* or *sequentially*. Young children acquire L1 and L2 languages without any effort through a process that is called *simultaneous* second or first language learning. According to her, *simultaneous* learners are children under the age of three who are exposed to their mother tongue at home and another language in an early educational context such as kindergarten or other early program. However, those learners can also be children from a multi-language home where the child is exposed to two different languages at home, for example Spanish from the mother and English from the father (Halgunseth 2009).

Halgunseth points out that by being exposed to two different languages at home; children learn both languages the same way without favouring one or the other. As their brain mechanism allows them to learn more than one language, they construct two separate language systems in their brains for each language. Similarly, this language system is almost identical to the process that children develop through exposure to one language (Halgunseth 2009). When the child reaches the age of 6 years, they are able to distinguish between the two languages and at this point they may begin to favour one language over the other. If parents expose their child to one language more than the other, the child might focus more on the language that it receives more exposure from (Kuhl, 2006; Tabors, 2008).

In *sequential* language learning environment, the child speaks its native language but is also introduced to a second language. Contrary to *simultaneous* language learning, *sequential* learning is not related to any age factor, but it can be influenced by elements like motivation. Genesee (2006) focuses on the simultaneous acquisition of two languages from birth, or what is generally referred to as bilingual first language acquisition (BFLA). The focus of her study was whether the developmental path and time course of language development in BFL learners is the same as that of children learning only one language. Underlying this question was the theoretical issue of whether the children's ability to learn language is challenged in any way by the acquisition of two languages at the same time. The question was whether exposure to two languages simultaneously influences the pattern of development so that it differs from that observed in monolingual learners. It was revealed that the ability that all children have to learn language is compromised by the challenge of learning more than one language at the same time.

The current study is a case of *simultaneous* language learning whereby children acquiring *Olutachoni* as a first language are exposed to two or even three languages namely *Olutachoni* (from the father), *Olubukusu* (from the mother) and Kiswahili (the National language). Although children are exposed to the mentioned languages at the same time at an early age, it does not mean that they confuse the languages easily. As mentioned, children become bilingual sometimes when one parent converses in one language while the other converses in the

second language. Additionally, parents might converse to each other in both languages so the children are exposed to both languages (Helgunseth 2009).

2.2.4. Lexical Borrowing

Lexical borrowing has occupied researchers for a long time, and its “negative” effects: lexical errors have generated much interest. However, this study has not considered lexical borrowing as an “error” but as a communicative strategy among children who are acquiring a first language. Researchers such as Celaya and Torras (2001); Williams and Hammarberg (1998) pointed out that lexical borrowings are characteristic of learners at early stages of acquisition, and that they tend to decrease in the production of learners with higher levels of language competence. The extent of lexical borrowing largely depends on the psycho-typological relation between the foreign language and the source language (Hammarberg and Williams 1993), but in this case, between the source language and the target language.

Alleton (2001) identifies four types of lexical borrowing: phonemic loans, words adapted by means of phonemic transcription, semantic loans, words borrowed by meaning translation, lexical importation, words introduced into the borrowing language with the original graphic form and hybrids, words adapted through a combination of morphemes from the donor language and the receiving language. Muysken (1997) and Haugen (2003) distinguish further between loan words, loan shifts and loan blends. According to them, in loan words both the form and meaning are copied completely, loan blends/hybrids as words consisting of a

copied part and a native part, and loan shifts, where only the meaning is copied. The current study has adopted Alleton's as well as Haugen's and Muysken's classification of lexical borrowing. According to this study, lexical borrowing has been classified into lexical importation and lexical invention as the main strategies that a child adopts in order to bridge the lexical gap in their mental lexicon due to their failure to learn the target word.

According to Alleton (2001), lexical importation is defined as the importation or as the direct transference of a lexeme, that is, both meaning and form from the source language to the target language. James (1998) on the other hand defines importations as words that are not tailored to the target language. According to Ecke (2001) lexical importation is a category of cross linguistic influence which is a non-prefixed one. This means that the borrowed lexical items do not show evidence of any affixation process. According to this study, lexical importation refers to those words introduced into *Olutachoni* from *Olubukusu* or any other language with or without any adaptation.

Lexical invention on the other hand, according to Muysken (1997) involves hybrid blends between the source language and the target language free and bound morphemes. Dewaele (1998) considers lexical inventions as lexemes which are morpho-phonologically adapted to the target language but do not exist in the target language. The current study adopts Dewaele's definition in the identification and description of lexical inventions where by learners create non-existing words in

the target language (*Olutachoni*) by adopting either the target language root or attaching the source language affix to it or vice versa.

From a procedural perspective, Ringbom (2006) distinguishes two main types of lexical transfer: transfer of form and transfer of meaning. Transfer of form consists the use of first language words, either adapted to target language norms or not, when producing in the target language. These are occurrences of code-switching. Meaning-based lexical transfer errors are derived from the transfer of semantic patterns of the L1 into target language words, in the form of calques and semantic extensions. The current study adopts the transfer of form which adopts the use of source language words, either adapted (lexical invention) or adopted (lexical importation) to target language norms when producing the target language. Transfer of form constitutes linguistic levels that constitute a linguistic inter-influence: the phonetic/phonological level, the morphological level and the lexical level that are manifested in the inflectional morphology of *Olutachoni*. Inflectional morphology is the corridor which, in the view of this study, constitutes the major gateways to lexical invention as a strategy of language acquisition due to cross linguistic influences.

Celaya (2001) analyzed lexical borrowing in a cross linguistic inter language (CLIL) cohort (N = 48) at grade 5 and another (N = 22) at grade 7 to describe first language influence in English as a foreign language (EFL) in the area of lexis. This was measured through the use of borrowings and lexical inventions. The

results were compared to those obtained from two cohorts of learners in “regular” classes at the same grades (N = 48 for grade 5 and N = 20 for grade 7) so as to establish possible differences between the two types of foreign language learning programmes in relation to lexical transfer.

Results from the written composition used to gather data showed a lower percentage of borrowings in the CLIL group than in the regular group both at grades 5 and 7 and a clear decrease in both CLIL and regular groups from grade 5 to 7. On the contrary, lexical inventions presented very similar percentages of use in both types of programmes at each grade and a slight increase from grade 5 to grade 7 in both cases. The study concluded that low proficiency learners tend to transfer more elements from their first language than more advanced learners.

Celaya (2001) presents her results of lexical borrowing and lexical inventions in raw numbers and in percentages against the total number of open class words for both groups of learners. The results reveal that CLIL learners at grade 5 produce more borrowings (3.4%) than those at grade 7 (2%); the difference is very narrow. As for lexical inventions, CLIL learners at grade 5 produce fewer lexical inventions (0.7%) than learners at grade 7 (2.1%). When CLIL and regular groups are compared, the percentage of borrowings in the regular group, both at grades 5 (6.7%) and 7 (3.8%), is higher than in the CLIL groups, with a greater difference in the case of grade 5. Interestingly, such differences almost disappear in the case of lexical inventions; the same percentage appears for both CLIL and regular

groups at grade 5 (0.7%) and a very similar one (2.1% and 2.2%) shows at grade 7. Both the CLIL and regular groups present the same pattern of decrease in the percentage of borrowings and increase in LI from grade 5 to grade 7, that is, as grade increases and, consequently, so does proficiency in the L2.

Celaya's study has informed the present study in terms of the strategies of language acquisition being investigated and the methodology. Both studies use lexical borrowing and lexical invention as strategies employed by children during FLA. However, Celaya adds other strategies such as calques, circumlocution and approximation whereas the current study only focuses on lexical importation and lexical invention as communication strategies. The current study has also borrowed the sampling procedure from Celaya's study whereby the study compares the use of lexical invention and lexical importation by children from the single and the mixed language family set ups. Both single lexical items and longer strings – have been the focus of attention in the previous study unlike the current study which only focuses on single lexical items. The unit of analysis (lexis) of the above study is similar to the present study. Unlike the current study which analyzes aspects of lexical importation and lexical invention of oral production in a home set-up, Celaya's study analyzes aspects of written composition used to gather data in a school-set up. This study has put the study of lexical importation and lexical invention on a sound methodological and theoretical footing.

Navés (2005) study informs the current study in terms of the units of analysis, theory and methodology. Navés (2005) analyzed lexical importation and lexical invention produced by learners from grade 5 to grade 12. Results showed that learners at higher grades use fewer borrowings and lexical inventions, with statistically significant differences only in the case of borrowings. According to the author, this suggests that school grade has an influence on transfer as far as the use of borrowings is concerned, but that its effect on the use of lexical invention is less powerful. Navés (2005) also found out that borrowing decreased over time (from 200 hours of instruction to 726 hours) in different groups of regular learners in each study; contrary to Celaya (2001) where lexical invention increased.

Similarly, the current study has also identified and described the nature of lexical importation and lexical invention, although not from two classroom set-ups but from two family set-ups (mixed and single). Naves analyzes her data by counting the total number of open class words (OCW), the total number of borrowings and the total number of lexical inventions in each composition. The current study also employs the same criteria of identifying and counting incidents of lexical importation and lexical invention from the recorded data. Both studies are in line with the unitary language system hypothesis which postulates that learners differentiate their linguistic systems as they advance in age. The point of departure arises when the current study analyzes only nouns in oral production unlike Naves' study which analyzes aspects of lexical borrowing and lexical invention for all open class words in written compositions. Dewaele (1998) investigates the

phenomenon of CLI in the context of non-target-like lexemes ('lexical inventions') in the advanced oral French interlanguage of 39 Dutch LI speakers, 32 of whom had French as an L2 and English as an L3. The remaining 7 speakers had English as an L2 and French as an L3. The lexemes which were analyzed in the oral French interlanguage (IL) were morpho-phonologically adapted to the target language (TL) but were never used by native speakers. In his study the non-target lexemes are called lexical inventions.

Dawaele's study employed Levelt's speech production model and the speech activation model (Dawaele 1998; 2001) as a means of describing the mechanisms that are behind the creation of non-target lexemes in the interlanguage (IL). A qualitative analysis was conducted to categorize the different types of lexical invention according to their intralingual and/or interlingual origin and their source-language(s). This kind of classification was also a preparation to the second part of analysis which was quantitative in which two groups of speakers, Dutch LI speakers who had French as an L2 and Dutch LI speakers who had French as an L3, were distinguished in terms of the frequency of certain types of lexical invention. The findings of the quantitative analysis were then interpreted in the framework of the spreading activation model.

The findings reveal that the usual source of CLI in the interlanguage of a person learning a first foreign language (L2) is his/her L1. A higher proportion of L1 produced by the French L2 speakers derive from creative (non-standard) use of

target language rules compared to the French L3 speakers. Cross linguistic influence was visible in the lexical inventions of both groups, but the French L2 speakers seemed to rely more on information attached to their Dutch LI lemmas, whereas the French L3 speakers drew more on their English L2 lemmas. This reveals the blocking of LI transfer in L3 learners in terms of spreading activation (Green 1986, Pouhsse and Bongaerts 1994).

Dawaele's study was similar and relevant to the current study in terms of theory, methodology and data analysis. In theory, the current study analyzed the phenomena of lexical borrowing using Levelt's speech production theory which was also adopted in the analysis of data. A qualitative analysis was conducted to categorize the different incidents of lexical borrowing according to their source-language(s). This classification was a preparation to the quantitative analysis in which the oral production of lexical forms from children in a mixed language family set up and those from a single language family set up were compared in relation to lexical invention and distinguished in terms of the frequency and percentages. Unlike Dewaele's study which was conducted among indo-european languages and concentrated only on lexical invention, the current study was conducted in an African context among African languages. Apart from lexical invention, the current study also explored on aspects of lexical importation.

Saunders (2000) carried out a study in establishing infant bilingualism in the family. He looks closely at two Australian born boys' acquisition of English and

German. From birth, the children were addressed by their mother and most other people in English, whilst their father has always spoken to them in German. Saunders reports that the two boys were inclined to employ a number of German words, sounds and sentence structure (i.e. lexical, phonological and syntactic items respectively) in their English when addressing their mother. Their mother not only accepted the use of these words but at times employed them herself when speaking to the boys. On the contrary, when addressing their father, the boys used German but still with some borrowed linguistic items (lexical, phonological, semantic and syntactic) from English. In Saunder's study, most switches from one language to the other were attributable to the fairly clear-cut patterns of communication which had developed within the family. That is, the pattern is predominantly dependent on who the person being addressed is and which language has been established as being appropriate to speak to that person in. However, in either case, there were cases of lexical, syntactic, semantic and phonological borrowing.

The current study is closely related to the above study. Both studies explored the issue of FLA in a family where parents are speakers of two different languages. Both studies explore the role of the linguistic environment, to the language acquisition process. Contrary to the previous study that looks at two Indo-European languages (English and German), the current study explores two African languages (*Olutachoni and Olubukusu*) in an African context. The two studies also differ in terms of the sample size whereby the present study focuses on 6 children from an exogamous marriage and 6 other children from a non-exogamous

marriage. Saunders focuses on 2 Australian-born boys. Gender and age being one of the critical demographic variables in the language acquisition process have been ignored in Saunder's study, a factor that the current study captures. In terms of methodology, the current study has borrowed tape-recording of speech as one of the methods of data collection. This study was relevant in that it guided our analysis of lexical importation and lexical invention in the acquisition of *Olutachoni* as a first language.

Swain and Wesche's (1975) study sets out to take into account the specific set of psychological, sociological, and linguistic variables which characterize the situation of the acquisition of two native languages. The focus of their study is on what they refer to as 'linguistic interaction' meaning the mutual influence of two or more systems on each other. This implies that the two systems are separate from a linguistic perspective. Their study supports the notion that the infant in a bilingual environment passes from an undifferentiated language system to a gradual separation of the two linguistic systems. Swain and Wesche's investigation comes from a 3-year old boy, Micheal, in a bilingual French and English speaking home, in Quebec City, Canada. Micheal's mother was a native speaker of English, also fluent in French, while his father was a native speaker of French who spoke English 'hesitantly' and with strong French accent.

The parents spoke French to each other whereas Micheal was addressed in French by his father and in English by his mother, except when other French speakers

were present. Micheal played with his older bilingual brother who preferred French. The boys generally communicated in French as they did with their playmates who were monolingual French. At the onset of the study, Micheal's linguistic milieu was estimated by his mother to be about 60 per cent French. The units of analysis in Swain and Wesche's investigation were *lexical mixing*, that is, utterances in which words from both languages were used, as well as the points at which *language switching* from French to English or English to French occurred. Two interlocutors (one French-speaking and one English-speaking) interacted simultaneously with Micheal in recordings made at regular intervals from when the boy was 3; 1 to 3; 10.

Micheal was supposedly led to believe that each interlocutor was monolingual in her language and that he was to serve as a "communication link." At the onset of the study, the child's use of English was very limited, according to the researchers. However, he did exhibit comprehension of what was said to him in English through his semantically contingent responses in French and his non-verbal behaviour. As far as his active use of English is concerned, they noted that when Micheal was 3; 1, approximately 10 percent of all his recorded utterances (excluding *yes*, *no*, and *oui*, *non*) were completely English. At 3; 8, 40 per cent of all his utterances were completely English. When only the English speaking researcher was present, the percentage of fully English utterances rose from 50 per cent at age 3; 3 to 80 per cent at age 3; 4 and 95 per cent at age 3; 7. These data indicate an increasing competence in English. As far as lexical mixing is

concerned, Micheal is said to show remarkably little lexical mixing. Swain and Wesche point out that these substitutions can often be attributed to the fact that the child only knows the word or the phrase in the one language.

However, there were cases in which Micheal knew a word in both languages but the immediate conversational context appeared to make the word or the phrase more available in the one language rather than the other language. An example is given in which the English-speaking researcher said to Micheal, who was pretending to feed a carrot to his toy clown, “*put it in his mouth. That’s where he eats from*”. Micheal consequently proceeded to do so explaining to the French researcher, “*moi vais mettre dans sa mouth*”. Micheal knew the French equivalent *bouche*; however, the fact that *mouth* was the stressed word in the first interlocutor’s utterance and also the focus of attention presumably made in English word more available to the child and would hence circumvent normal lexical retrieval.

Swain and Wesche’s study was useful to the present study in terms of the unit of analysis, context, theory and methodology. Both studies take into account a word as a unit of analysis and the acquisition of language in a mixed language family set-up. The above study focuses on the linguistic interaction between French (father’s native language) and English (mother’s native language) in a 3 year old child that resulted into language shift and lexical mixing. The present study equally investigates the linguistic interaction of *Olutachoni* (father’s native

language) and *Olubukusu* mother's native language) among 2-7 year old boys and girls that results into lexical borrowings. Like the previous study which discusses the role of the linguistic environment with acquisition, the current study, apart from the linguistic environment, it also correlates the demographic characteristics of age and gender and acquisition.

The current study was done in an *Olutachoni* and *Olubukusu* speaking home in villages in Kenya unlike the previous study which was conducted in a French and English speaking home in Quebec city, Canada. Both studies recorded spontaneous utterances of the child during data collection. A combination of written notes and audio recordings formed the basis of data collection for the two studies. The results reveal that children pass from undifferentiated language system to a gradual separation of the two linguistic systems. This is shown through an increasing competence in the target languages as the children advance in age. Few cases of lexical mixing, language shift and lexical inventions are reported as children advance in age.

Redlinger and Park (1980) in their study focused on the issue of a systematic analysis of the relationship between language mixing, (defined as 'the combining of elements from two languages in a single utterance'), and linguistic development. The informants in their study were four 2-year-old children who were growing up bilingually in a German-speaking community. The fathers of these children were German while the mothers were native speakers of another

language. All the four children were first borns with no siblings. Redlinger and Park provide important information furnished by the mother regarding language usage in the homes: which language(s) the parents used in speaking to each other and an estimated percentage of each language spoken to the child by the respective parent.

The audio taped data that form the basis of analysis consisted of thirty to forty five minutes of spontaneous speech recorded in the children's homes every three weeks over periods varying between five and nine months. The children's interaction with their mothers in other languages was also regularly recorded in all cases. The percentages of mixing for each child over time were calculated on the basis of an assortment of interactions. Their findings revealed that with increased language development, the child decreased the use of language mixing, regardless of context. Redlinger and Park interpret the high mixing rates during the earliest stages of language development as evidence for the child's general inability to differentiate between the two languages, and the progressive decrease in language mixing as evidence for the child's ability to control the languages separately as linguistic competence increased.

The above study gives useful insights into the present study. The four children sampled in the previous study were first borns an aspect that the current study has borrowed in order to avoid language interference from older siblings. Also, Redlinger and Park provide important information to the present study regarding

language usage in the homes by mothers and fathers which results into lexical borrowing (lexical mixing). In general, the discussions for the two studies focused on lexical mixing due to linguistic interaction between the different languages of the parents among children.

The previous study informed the present study on methodology. The audio taped data formed the basis for analysis in both studies although the periods and number for recording varied in the two studies. The present study had two recordings for each child. Apart from the researcher, the children's interaction with their mothers and fathers was also regularly recorded in all cases. The percentages of mixing for each child over time were calculated on the basis of an assortment of interactions. The high mixing rates during the earliest stages of language development was interpreted according to Redlinger and Park as evidence for the child's general inability to differentiate between the two languages, and the progressive decrease in language mixing as evidence for the child's ability to control the languages separately as the linguistic competence increased. Their study supports the notion that the infant in a bilingual environment passes from an undifferentiated language system to a gradual separation of the two linguistic systems like Swain and Wesche's (1975) study.

Stanford (2007) investigated dialect contact and identity by examining the systematic patterns of clan contact and immigration found among the exogamous clans of the Sui people, an ethnic minority concentrated in rural parts of Guizhou,

China. Sui women, men, and children maintain the dialect features of their home clans to a high degree throughout their lives, regardless of any later migration and long-term immersion in other clan dialects. In this study, the exogamous marriage system of the Sui people served as a laboratory for investigation of dialect contact and identity. Sui wives and husbands must originate in different clans, and the wife migrates to the husband's clan upon marriage. Since subtle dialect difference exists between clans, the wife often has dialect features that differ from the husband's clan. For example, a woman may use a different 1st Person Singular pronoun than her own husband and children, and subtle clan markers are observed in other words and phonetic features (tones and diphthongs). This study involved a detailed analysis of dialect features of such immigrant married Sui women, non-immigrant speakers in their original home clans, and children of immigrant women. The speech of the children of such immigrant women was examined to determine their dialect features and related identity issues as well. The results show that the women maintain their original home dialects to a very high degree. This dialect maintenance is attributed to clan identity; specifically, clan-level linguistic *acts of identity* performed by the use of particular dialect features.

The study reveals that clan identity has a strong influence on the behavior of all members of the speech community, with each member of the community identifying with his or her father's clan. The immigrant women maintain their home clan dialects to a very high degree rather than acquiring features of the husband's clan. For the children of such women, a transition to the exclusive use

of the dialect of the father's clan begins at a young age as they develop their linguistic identities through them at a linguistic influence of the community, and as they are directly exposed to the local clan dialect features in daily village interactions. Children are found to primarily use the dialect features of the father's clan, but some features of the mother's dialect are observed in their speech as well, especially among younger children. Older children and teenagers adhere more closely to the father's clan dialect, fully acquiring that dialect as they reach adulthood. Ethnographic interviews investigating community views on dialect and clan identity were employed.

The above study was useful to the present study although Stanford (2007) investigated dialect contact and identity and the current study investigated language contact and CLIs with regard to lexical borrowing in FLA. In Stanford's study, exogamous marriage system of the Sui people served as a laboratory for investigation of dialect contact and identity. The current study borrowed a similar view but investigated exogamous marriage system of the *Abatachoni* and *Ababukusu* as a laboratory for investigation of CLIs and acquisition. It is revealed in both studies that children primarily use the dialect/ language features of the father's clan, but some features of the mother's dialect/language are observed in their speech as well, especially among younger children. Stanford's study also informs the current study on the relationship that exists between language acquisition and gender.

2.2.5 Phonetics and Phonological Acquisition

There is little doubt that the neighbouring language's phonetics and phonology are powerful influences on L1 pronunciation. Odlin (2004) points out that a cross-linguistic comparison of sounds in two languages should include descriptions of the phonetics as well as the phonology of the target language and that of the adjoining language(s). A phonetic description is necessary since sounds in two languages often show different physical characteristics, including both acoustic characteristics (e.g., the pitch of a sound) and articulation characteristics (e.g. how widely the mouth is open in producing a sound). Two languages frequently have sounds which may seem identical but which in fact are acoustically different. For example, Odlin (2004) compares an American English /d/ with a Saudi Arabian Arabic /d/ which shows several differences. Among the differences, the duration of an English /d/ at the end of a word (e.g., in *bad*) tends to be longer than the target language norm but is shorter than a normal Arabic /d/ when the Arabic learners produce its Arabic counterpart.

A contrastive analysis shows, Saudi learners' pronunciation of the /d/ tends to show duration similar to the English norm. Nevertheless, Odlin's (2004) analysis shows that learners are capable of modifying their production of sounds so that their pronunciation comes closer to the target language norms. The modification however does not result in the attainment of target language norms, but rather in approximations that are neither fully native-like. Odlin's work has given the

current study an insight with respect to phonetics and phonological transfer especially on loan adaptations. The study was based on the premise that the neighbouring language's phonetics and phonology (*Olubukusu and Kiswahili*) are powerful influences on L1 pronunciation of the target language (*Olutachoni*). However, the current study focused on *Olutachoni* and *Olubukusu* unlike Odlin's.

Distributional patterns of sounds in closely related languages could bring about CLIs. According to Lado's (1957) study, for example, German has a phoneme /ts/ which is acoustically similar to the consonant cluster found at the end of English words such as *its* and *bits*. While speakers of English have no difficulty in pronouncing the German phoneme when it occurs at the end of words, as in *sitz* (seat), they do often have difficulty in pronouncing it at the beginning of words, as in *zu* (/tsu/, 'to'). Thus, the position of a sound within a word or a syllable can affect how easy a sound is to pronounce.

When there are distributional differences in the sounds of two or more related languages, cross linguistic errors may occur. The developments of such compromise forms show the influence of the adjoining language(s) in the acquisition process. The present study investigated the effect of such phonetic sensitivity to be as a result of CLIs in acquisition. This study is relevant to the current study in that it deals with the position of a sound within a word or a syllable and how it can affect pronunciation. When there are distributional differences in the sounds of two or more related languages, cross linguistic errors

may occur. The development of such compromise forms show the influence of the adjoining language(s) in the acquisition process. This study therefore, informs the current study especially on the development of compromise forms which show the influence of the adjoining language(s) in the acquisition process. However, it differs with the current study in that it deals with South East Asian languages whereas the current study dealt with *Olutachoni* and *Olubukusu*, Kenyan Bantu language hence these languages belong to different languages families. Also, the current study, apart from phonology, it also focused on morphology which is also manifested within the lexicon.

According to Odlin (1989), although CLIs on pronunciation frequently involve segmental contrasts, the influences are also frequently evident in supra-segmental contrasts involving stress, intonation, rhythm, and other factors. Research reviewed by Cutler (1984) indicates that stress patterns play a crucial role in the listeners' recognition of words. When non-native speakers do not use a stress pattern that is a norm in the target language, vowels and consonants may also vary from the target pattern, and this may result in a total misperception by listeners. Bansal (1976) argues that CLIs in stress are the most important cause of unintelligibility in Indians' pronunciation of English, and gives examples of misidentifications by listeners. For instance, **divisions** were sometimes pronounced **divisions** and were consequently misperceived by British listeners as **regions**. Unlike the above study that indicates that stress patterns play a crucial role in the

listeners' recognition of words, the current study explored the transfer of tone as a consequence of CLI in borrowing.

Hammarberg (2001) noted that one of the most important typological distinctions between languages involves tone and intonation. In tone languages, pitch levels have phonemic significance. A common example of the phonemic status of tone in certain languages involve the Mandarin Chinese syllable *ma*, which, among other denotations, represents 'mother' when it is used with a high level tone (H), and 'horse' with a low rising tone (L). Such a system uses pitch levels quite differently from what is encountered in most European languages. The ease of acquisition of the phonology of tonal languages may depend very much on the typological similarity between the target and the neighboring languages. The present study is also based on the same premise by exploring tone as one of the loan adaptation processes that the child engages in during language acquisition.

Mutonyi (2000) reveals that *Olubukusu* is a tone language. His study shows that *Olubukusu* has lexically significant, contrastive, but relative pitch on each syllable. Mutonyi quotes Austin (1974) that there exists two types of tone: a register or level tone system where the distinguishing feature is the relative difference between the pitches, such as high, mid or low, rather than their shapes and a contour tone system where the distinguishing feature of the tones are their shifts in pitch such as rising, falling, dipping, or level. Mutonyi categorizes the *Olubukusu* system as the register type with two tones, high (↗) and low (↘). The two tones

seem to merge into each other in speech. There is a phonetic high-low glide (↗↘) that apparently occurs on a single syllable, and is extended over a sequence of two contiguous vowels. When the high-low glide occurs, there is an audibly perceptible transition from one vowel to the next in the contiguous set. Otherwise, where there is no contiguity, the high and low tones remain separate. For example, tone can be used in *Olubukusu* to determine word meaning as in [li: ↘ru] meaning ear and [li: ↗ru] meaning banana leaf. Mutonyi's study is quite informative on the current study when it comes to tonal patterns of *Olubukusu* on the acquisition of *Olutachoni*. Although the current study has not looked at the functions of tone like Mutonyi's, but based on his work, an investigation on CLIs on the acquisition of tone in an *Olubukusu-Olutachoni* family set up has been explored. According to Marlo (2009) tone plays an important role in many African languages. Tone in African languages, for example has a markedly high functional load of distinguishing the meaning of two identical words like the example given above. However, in the current study, not much attention was paid on tone in the analysis except in circumstances where it was felt that tone was part of lexical borrowing.

2.2.6 Lexical Acquisition

Language transfer is not equal to all areas of language in that some areas are more permeable to transfer than others. Lexis is especially sensitive to cross-linguistic influence than other levels of linguistics (Arabski, 2006; Bouvy, 2000). In discussing lexical aspects of languages in contact, it is clear that the major process

involved is borrowing. In the majority of contact situations, borrowing occurs most extensively on lexical items. The lexicon contains not only information about the meanings of words but also morphological and phonological information. This information is shown through bound morphemes such as prefixes and suffixes, and other forms that are incapable of standing alone (William, 2005). Furthermore, the lexicon is the most readily borrowable element, and borrowing lexicon can lead to structural changes at every level of linguistic structure (Muysken 1999). It was based on the above arguments that the present study focused on the words (nouns) as basic units of identifying and describing the nature of lexical borrowing in FLA.

Smith (1994) argues that CLI is easier to determine at the lexical than at the syntactic level. According to Pruden (2006) there are two competing perspectives on word acquisition in the field of FLA. One perspective considers that word learning takes place through associative mapping of words onto referents from the child's point of view. This means developing associations between the linguistic form and a referent following repeated object-label pairing in the child's input. The opposing perspective suggests that word learning takes place through the exchange of social information and social cues that allow a child to interpret social intent of her interlocutors and thus map words onto referents from the speakers' point of view. However, Pruden found that both mechanisms appear to be employed in word learning. Similar mechanisms have been employed in the present study with regard to the acquisition of vocabulary in relation to lexical borrowing.

According to O'Grady (2001) by age eighteen months, the average child has a vocabulary of fifty words or more. Common items include words that refer to people, food, animals, clothes, actions, properties (as in hot, dirty, cold) and personal-social (bye, please, thank you). O' Grady reports that noun-like words make up the single largest class in the child's early vocabulary, with verb-and adjective-like words being the next most frequent category types. Among the most frequent individual words are expressions for displeasure or rejection (such as no and yes) and various types of social interaction (such as please and bye). Over the following months, this vocabulary grows rapidly, sometimes by as much as ten or twelve words a day. By age six, most children have mastered about thirteen thousand words. O'Grady's study has given insights to the present study especially in the adoption of the data elicitation strategy. In this study, respondents were asked to name common items (nouns) within their environment. This was based on O'Grady's argument that noun-like words make up the largest class in the child's early vocabulary.

Orwenjo (2009) investigated how Luo children acquiring their native language, *Dholuo*, engage in the production of lexical innovations in an effort to bridge the lexical gaps in their mental lexicons, resulting from their failure to retrieve or learn the conventional forms. The study revealed that *Luo* children between the age of 3-6 years, just like other children actively produce lexical innovations in their day to day speech. The above study was similar to the present study in terms of the linguistic level being investigated. Both studies focus on the acquisition of the

lexis among children. Unlike Orwenjo's study which focused on Lexical innovations among *Dholuo* children acquiring *Dholuo* as their FL, this study has explored lexical borrowings as resultant feature of CLI during language acquisition.

2.2.7 Morphological Acquisition

This study proposes that the lexical representation of words have phonetic and morphological substances that make up a word. The formation of such words can be accounted for by the way particular items are used in inflectional and derivational morphology. Morphology refers to the ability to distinguish and manipulate the structure of morphemes, the smallest meaning-bearing units in language (e.g., *un-* and *happy* in *unhappy*), and includes knowledge of inflectional and derivational morphemes (O' Grady 2001). Inflectional morphemes usually serve a grammatical function such as marking tense (walk → walked) or number (cat → cats). Adding an inflectional suffix to a word stem does not alter the word's overall syntactic category (Katamba, 1993). Derivational morphemes form words differently either by altering the syntactic category (i.e., class-changing morphemes e.g., *happy-happiness*) or by changing the meaning of the base without changing the syntactic category (i.e., class-maintaining morphemes) (e.g. *happy-unhappy*) (Kobia, 2000). According to Kobia (2000), inflectional and derivational morphology account on how phonological information is stored and processed at the morphological and lexical level an aspect that the current study borrows.

As it is the case with the sound pattern of language and with vocabulary, the details of morphological structure emerge during language development (Barbra 2006). Many common words have irregular inflection in English (*went* as the past tense form of *go*, *ran* as the past form of *run*, *men* as the plural form of *man*). Children sometimes begin by simply memorizing inflected words on a case-by-case basis without regard for general patterns or rules (over regularizations). Occasional mixed forms such as *felled*, a blend of *fell* and *falled*, may occur during this period. One of the best indications that children have mastered an inflectional rule comes from their ability to apply it to forms they have not heard before. According to Clark (2002) the first derivational suffixes to show up in children's speech are the ones that are most common in the adult language.

The current study investigates the nature of lexical borrowing within a word during FLA. As previously mentioned, the languages under study are Bantu and therefore the lexicon contains information about the morphological and phonological information. With this in mind, the acquisition of morphology is investigated within the lexicon. The study therefore, carries out a lexi-morphological analysis of the child's vocabulary in relation to lexical borrowing.

2.2.7.1 Olutachoni and Olubukusu Morphology

Olutachoni and *Olubukusu* languages are characterized by rich inflectional systems. Both languages mark tense, number, gender, and person and require

verbal agreement between the verbs and the subjects. However, there are differences in the marking of their nominal systems that are likely to bring about CLIs (Mutaka 2000). *Olubukusu* and *Olutachoni* display the same noun class system as attested across Bantu languages, where every noun belongs to a specific noun class, equivalent to grammatical gender (Mutonyi 2000). Agreement forms that are triggered on other syntactic elements such as verbs, auxiliaries, adjectives, demonstratives, and complementizers therefore inflect for noun class as well.

Olubukusu and *Olutachoni*, like most Bantu languages assign every noun to one class in a gender system where each class is identified by a unique prefix structure. As a distinguisher of grammatical class, the prefix is an obligatory component of every noun in *Olutachoni* and *Olubukusu*. For instance, Class 1 nouns are identified by the prefix structure /*o-mu-*/, as in *omukeeni* ‘visitor’. The prefix structure not only marks the class affiliation of a noun but also indicates number, that is, it says that there is either a single or multiple occurrence of the referent. Both the *Olubukusu* noun and the *Olutachoni* noun consist of two principal parts: the prefix component and the stem. The prefix component further breaks down into a pre-prefix (pref. 1) and a prefix (pref. 2). The stem is a simple root in the case of lexical nouns or the root plus a derivational suffix in the case of derived nouns.

Basic Noun Structure: $\left[\text{[pref. 1 + pref. 2] + [STEM] Noun} \right]$

However, many noun classes in *Olubukusu* exhibit “full double prefixes,” which means that their prefix structure comprises two CV-syllables (CVCV). For instance, in the Class 2 noun *vavandu* “people”, the prefix unit /*va-va-*/ comprises two identical syllables (CVCV). By contrast, the *Olutachoni* language exhibits a prefix structure that comprise of V-CV. Thus, in the Class 2 noun *avandu* “people”, the prefix unit /*a-va-*/ (VCV) does not comprise of two identical syllables like for the case of *Olubukusu*. This is an incidence that arises into cases of CLIs in an exogamous family where children from such families are likely to take up the *Olubukusu* structure of CVCV in their attempt to communicate in *Olutachoni* language that employs the structure of VCV or simply borrow an entire source language word. This information is important in understanding CLIs from *Olubukusu* to *Olutachoni* in the following chapters.

2.2.8 Socio-Demographic Variables and Acquisition

There are a number of factors that are associated with transfer and many possible interactions. The main areas of investigation have focused on the effects of factors such as typological distance (Kellerman, 1983; De Angelis and Selinker, 2001; Cenoz, 2001), L2 status (Williams and Hammarberg, 1998; Hammarberg, 2001), context (Dewaele, 2001), proficiency (Ringbom, 2001; Williams and Hammarberg, 1998; Tremblay, 2006), age and grade (Celaya and Torras, 2001; Navés, 2005), order of acquisition of the languages (Dewaele, 1998) and constraints on verbal memory (Williams and Hammarberg, 1998). Other areas

such as the acquisition of additional languages (L4, L5) or the effect of the L3 on the L2 and L1 (Ringbom, 2001) have recently been receiving more attention. Many researchers (Cenoz, Hammarberg, De Angelis and Selinker, 2001) consider the roles of typology, recency, L2 status and proficiency as the main factors affecting preference for either the L1 or the L2 as the source language of CLI in L3 production. In this particular study, age, gender, and the linguistic environment will be central to the analysis of the findings.

2.2.8.1. Gender and Acquisition

Apart from the role of age on language acquisition, studies in language acquisition have emphasized on the role of gender on FLA. The term 'gender' refers to the socially constructed roles, behaviours, and attributes that particular social and cultural groups consider appropriate for women and men and 'sex' refers to biological and physiological characteristics that define women and men (Sanchez 2003). According to Cameron (2009), gender is frequently used interchangeably with sex as a term to differentiate between women and men based on attributes that are presumed to be innate or learned. In scholarship on language acquisition and learning, both biological and social factors have been hypothesized to create differences in women and men's use of language, their language learning abilities, and preferences for particular learning strategies (Cameron (2009); a phenomenon that the current study borrows.

Gender is an important subject variable which may influence analysis and interpretation of results in a child language acquisition research (Sanchez 2003). Many studies on language acquisition show that there are linguistic variations in pronunciation, grammar and vocabulary attributed to gender differences among children (Crawford 1995). Studies conducted by Dressler (2007) and Gleason (1994) indicate that girls are usually more advanced in language development than boys. Girls begin to talk earlier; they articulate better and acquire a more extensive vocabulary than boys of the same age. Studies of verbal ability by Karmiloff-Smith (2002) have shown that girls and women surpass boys and men in verbal fluency, correct language usage, sentence complexity, grammatical structure, spelling, and articulation. Coates (1989) claims that female children are usually quicker than male children to obtain language. Everything from babbling to the timing of first words and speed of vocabulary growth, girls seem to be more ahead than boys. Another study by Ellis (1994) proves girls' superiority in vocabulary growth. She studied the acquisition of vocabulary by eighteen children between the ages of one and two. Her study showed that all the boys fell in the group with the slower acquisition rate. The girls would have a vocabulary of fifty words at eighteen months old but the boys at twenty-two months.

A study conducted by Fontecha (2010) found out that boys and girls differ in elicited production of vocabula. From these results, it was believed that gender differences are determined by two main aspects: type of task and social nurture. Concerning the type of task, it was argued that different tasks require different

mental processes. Research conducted by (Halpern and Wright, 1996) on mental processes underlying cognitive tasks revealed that girls are superior to boys in performing several mental processes. In this sense, it was concluded that only when learners have to face different cognitive tasks do gender differences appear. The second aspect refers to social rather than biological differences between boys and girls.

It has been demonstrated in other researches that differences between the genders are not significant in language development. Notable ones include, Orwenjo, (2009) and Llach (2009a). Orwenjo (2009) for example, reports that gender does not seem to play any role in the child's process of lexical innovations. Orwenjo's results revealed that there was a weak (negative) correlation between the two variables; the gender of the child and the production of lexical innovations. A study conducted by Llach (2009a) revealed that there are no gender differences in lexical transfer across grades. This result supports those studies that found no gender differences in foreign language use in other vocabulary-related areas: receptive vocabulary size (Llach and Gallego, 2008), lexical inventions (Llach, 2010) and controlled productive vocabulary size (Espinosa, 2010). Whatever the case, studies on language acquisition are in unanimous agreement that language development in children is differentiated along gender lines. The current study seeks to find out if there is a relationship between the gender of the child and the production of lexical borrowing in the acquisition of *Olutachoni* as a first language.

2.2.8.2. Age and Acquisition

Age has been considered as an important factor in the whole acquisition process by researchers in child language acquisition. Age in reference to language acquisition is viewed from two points of view: age of acquisition and age at acquisition. “Age of acquisition” refers to a period beyond which effects of increasing age are not manifested in the acquisition profile. “Age at acquisition” on the other hand, is used to refer to the age at which a child or a group of children acquire specific linguistic units and structures. However, in the current study, reference to age does not include any of these two notions. This is because what is being investigated in the present study is the process of lexical borrowing as by-products of the acquisition process. Therefore, the term “age” in the current study is used to mean the age at which the child employs the strategies of lexical borrowing during the acquisition of *Olutachoni* as a first language.

Researches in child language acquisition have considered age as an important factor in the whole acquisition process. Such researches include those of Cenoz (2009); Paradis (2004), Makeni, (2007), Nyamasyo (1985), Pinker, (1994), and Orwenjo (2009). This interest in the age of the child is traced back to Lenneberg (1967) Critical Period Hypothesis (CPH). Lenneberg’s argument was that the child’s ability and propensity to acquire linguistic structures is inherently biologically linked to the age of the child. The aim of the above studies on age and child language acquisition was to test Lenneberg’s claim about the correlation

between the age of a child and the language acquisition process. For example, Nyamasyo (1985) proves the assumption that by the age of five, children will have mastered the syntax of their L1. Nyamasyo's study acts as a basis of the current study which also investigates the relationship between the age of the child and the acquisition of a first language. The current study focuses on the acquisition the lexicon, whereas Nyamasyo's study looked at the acquisition of syntax.

Makeni, (2007) also reports that the age of the child affects the acquisition of concordial morphemes among the children acquiring *Lukhayo* as their L1. Similarly, Orwenjo's study reveals that there is a strong positive correlation between the age of the child and the production of lexical innovations. The trends for deverbal nouns for example, indicate a steady rise in the rate of innovations such that the 3 and 4 year olds, declining for the five year olds and again shooting up for the 6 year olds. None of these studies, however, considered the effect of the age of a child in relation to the production of lexical borrowing in mixed and single language family set-ups. Since lexical borrowing is realized among children during the process of language acquisition, an investigation on the correlation between the age of the child and the production of lexical borrowing is timely.

2.2.9 Linguistic environment and acquisition

Many studies focus on the linguistic environment as a crucial factor that shapes the development of language in the early stages of life (Goodz 1989; Lanza 2004). Parents and other primary caregivers have an influence on children's FLA in the early years (Patterson 1992; Roberts 1994; 1997; Smith 2007; De Houwer's, 1999; Lao 2004. De Houwer (1999) indicates that maternal variants have more chance of being transmitted, due to the mother's central role in the education of children. The parents' attitudes, goals, and behaviours influence children's developing language skills, language socialization, perceptions of the value of L1, and maintenance of L1. This would mean that adult language usage is transmitted to children within the family environment that provides the requisite material for linguistic development. Grosjean (1998:33) suggests that:

It is necessary to record not only the language environment of the child under study, but also the language background of the people from whom the child receives the most language input. The language background of a parent is a factor that influences a child's language acquisition.

The social differences observed in uses of sociolinguistic variables are constructed on the basis of children's linguistic environment (Gallaway and Richards, 1994). This would mean that adult sociolectal usage of language is transmitted to children within the family environment that provides the requisite material for linguistic development. Different studies have also shown that from an early age, the social

background of the family influences the development of certain verbal aptitudes. For example, studies by Bernstein (1998) and Hoff (2003) indicate that the family background influences phonological and lexical development from as early as 2 years of age. In this way, the environment becomes a crucial variable in the acquisition process.

Input patterns shape the children's use of language (Hoff, 2003). The variety of language parents choose, give children important cues on accepted and preferred language choice. This study investigated two language presentation patterns to a child in a mixed language family (*Olutachoni-Olubukusu*) and a single language family (*Olutachoni-Olutachoni*). In this way, social differences in usage can be seen as constitutive of the first stages of language learning. It therefore seems essential to confirm and explore in more detail the increase in social differences as development progresses, bringing out the factors that influence these differences, such as the accumulation of input.

The current study has borrowed the above views that it is necessary to record not only the language environment of the child under study, but also the language background of the people from whom the child receives the most language input. It is from this observation that the current study found it necessary to investigate the correlation between the linguistic environment through its components such as the linguistic input, output, feedback, the physical environment and the social environment on the acquisition of *Olutachoni* as a L1. Ervin-Tripp and Reyes

(2005) differentiate contexts of child bilingualism depending on whether parents are speakers of both languages or whether there is a bilingual and a monolingual parent in a family. The language acquisition context examined in this case is a situation in which both parents speak both languages (one parent a native language and the other a second language or one of the languages is not a native language of neither of the parents, but at least one of the parents is fluent in a second language).

The current study borrowed from Ervin-Tripp and Reyes the concept of the role of the physical environment to language acquisition. Such an environment gives different linguistic presentations to a child acquiring one of the parent's languages as a L1. The above case studies collected data in naturalistic interactions sourced in the subjects' homes. Linguistic development was assessed from two data sources-diary and audio/video-recordings. The current study also collected data from natural setting of a home environment, audio and video recorded the children's utterances but unlike the above study which kept diary records, the researcher in the current study simply took written notes to supplant the audio/video-recordings.

According to Lanza (2004), when considering the role of in-put in the study of LA, three aspects need to be considered: The linguistic forms used by native speakers with the child; The manner of presentation of the in-put- how are the forms made available to the child; and Metalinguistic in-put-feedback on the child's

production. Lanza argues that in a bilingual family, the effect of the forms of language is even stronger, in particular, in cases where a minority language is associated with a limited number of people. Few people have a greater opportunity to have an effect on language development than a wider socialization network of language speakers.

In the current study, the home set up is considered because of the major role that parents have on FLA of the young ones. Social interaction is an important factor in language acquisition Vygotsky (2005). According to Vygotsky the social interaction plays a fundamental role in the development of cognition. Only when children interact with others in the social environment, their inner development will start. Moreover, Gleason's (2005) and (Huang 2004) observe that the children's social interaction occur first in the family whereby the children's language acquisition will take place with their parents. Parents become children's first teachers. For example, from birth, mothers and children have the most familiar relationship where children learn language from their mothers.

Brown (2000) agrees that language acquisition is a process of interaction between mother and child from birth. Also, Brown stresses the importance of learning environment. According to him, mothers will give children numerous inputs so that children can learn the languages quickly. Therefore the input of mothers' speech will affect children's output. Input and interaction are crucial in children's language development, especially the input from the mother. These views by

Olson (1986), Brown (2000), Gleason's (2005) and (Huang 2004) are relevant to the current study in investigating the role of the linguistic environment on language acquisition among children.

2.3. Theoretical Framework

This study adopts an eclectic approach of three theories used to account for the external and internal factors behind first language acquisition by use of lexical borrowing as a strategy. The usage-based language acquisition theory by Tomasello (2012) considers the production of lexical borrowing as a result of the linguistic environment in which a child lives. This theory accounts for the external factors such as the parents' language that lead to first language acquisition. Levelt's theory of speech production by Dawaele (2001; 1998) accounts for the notions of activation and inhibition of speech in acquisition, forming the basis for the internal factors that lead to language acquisition. The unitary language system hypothesis by Paradis (1995) postulates that in a mixed language environment, children treat the two languages as if they belong to a single underlying language system to a gradual separation of the two linguistic systems as the children advance in age. The next section discusses in detail the usage-based language acquisition theory by Tomasello (2012).

2.3.1 The Usage-Based Language Acquisition Theory

The usage-based language acquisition theory was developed by Tomasello (2012). The main tenet of this theory is that the linguistic environment plays a crucial role in language acquisition in early childhood. The family provides the socializing environment and introduces the child not only to the language-in-acquisition, but to preferred language use patterns in the family and in the wider community. Other proponents of this theory include Littlewood (1989) and Lust and Foley (2005). According to Littlewood (1989) and Lust and Foley (2005), language is not a mental phenomenon but it is a subset of learned behaviours by a process of habit-formation.

Language is conditioned through association between a stimulus and the following response. The child *imitates* the sounds and patterns which he hears around him. People recognize the child's attempts as being similar to the adult's models and *reinforce* (reward) the sounds through feedback, by approval or some other desirable reaction. In order to obtain more of these rewards, the child *repeats* the sounds and patterns until they become habits. In this way, the child's verbal behaviour is *conditioned* (or shaped) until the habits coincide with the adult models. The habit formation process is essentially the same as when a pigeon's behaviour is shaped, so that it pecks at the correct discs in order to obtain food.

This theory provides the current study with useful insights on the nature and use of lexical borrowing. Lexical borrowing could be as a result of the children imitating the language behavior of their parents within the linguistic environment. This is meant to enable the child to effectively and meaningfully communicate as she/he moves towards the target language. In this case, language learning is based on modeling, imitation, practice, and reinforcement and as such, language is modified by the environment. Most young children like repetition and imitation (Littlewood (1989). Imitation gives them a sense of assurance and achievement. Therefore, cases of lexical borrowing that children employ when acquiring language provide us with vital insight into the child's level of linguistic knowledge. They are landmarks in the process of vocabulary acquisition and as such they reveal the sources and main characteristics of the acquisition process pinpointing how it develops.

This theory was also appropriate in analyzing data for objective four in the present study which is meant to determine the role of the linguistic environment on the nature of lexical borrowing in language acquisition. The linguistic environment in the current study comprises of the linguistic input, linguistic output, feedback, the physical and the social environments which serve as models for the child acquiring *Olutachoni* as a first language. This framework provides available tools for an analysis of the sources of the production of lexical borrowing. The usage-based language acquisition theory over emphasizes the role of the external factors (environment) in the process of language acquisition and gives little importance to

internal (innate) learner strategies. The next section discusses Levelt's theory of speech production and Green's spreading activation model by (Dawaele 1998; 2001).

2.3.2. Levelt's Theory of Speech Production

Levelt's theory of speech production (Dawaele 1998 ; 2001) is another theory that attempts to explain the nature and use lexical borrowing by children during first language acquisition. This is a nativist theory that views a child as having innate abilities to acquire language. Nativist theories are based on Chomsky's hypotheses (1965, 1968, and 1975) which assume that the child is equipped with an inborn linguistic knowledge and has an innate understanding of grammar at his or her disposal. In contrast to empirical theories, this approach does not fully regard language acquisition as being stimulus-controlled or external to the child. According to this theory, the child in a bilingual or a multilingual set-up uses different levels of mental activation to determine internal processes that give rise to speech output. The highest level of activation occurs when a language is 'selected' and controls the speech output, a claim being tested in the current study.

According to this theory, the learner makes a calculated guess based on his/her innate knowledge of the grammar of the target language rules and produces an approximate lexeme. This is because the learner is confronted with an information gap for a particular word in his/her interlanguage and therefore he/she

intentionally or unintentionally, retrieves the necessary lexi-mor-phonological information corresponding to the conceptual information but attached to a root which belongs to another language. Whether the borrowed word carries traces of interlingual influence or not, it is plausible that the target language and the source language words can be activated by the same conceptual plan, the result being forms that could share lexical, morphological and phonological characteristics from all the languages known to the speaker.

According to this theory, the child becomes a main player in the acquisition process, but the complementary role of the linguistic environment is not also downplayed. Levelt's theory of speech production is useful to the present study since is used to account for the different levels of activation that explain incidents of lexical borrowing. During language acquisition, children do not switch a particular language on or off but their languages have different levels of activation. When an *Olubukusu* word is selected instead of an *Olutachoni* word during lexical importation, it means that *Olubukusu* language has the highest level of activation and *Olutachoni*, the lowest level of activation and vice versa. The two languages can also be activated at the same time, resulting into cases of lexical invention. In such cases, the language with the highest level of activation produces the base, and the lowest level language produces the prefix.

2.3.3. The Unitary Language System Hypothesis

Paradis (1995) is the proponent behind the unitary language system hypothesis. The hypothesis postulates that a child exposed to more than two languages is apparently unable to separate his or her two languages in linguistic situations. This is based on a long and intensive debate in the literature on the simultaneous acquisition of two languages concerning whether the mind of the young bilingual child contains one language system (Volterra and Taeschner 1978; Redlinger and Park 1980; Vihman 1985) or two different language systems (Genesee 1989; De Houwer 1990; Genesee, Nicoladis and Paradis 1995; Köppe and Meisel 1995).

According to MacSwan (2000), the grammatical processes and operations in both bilingual and monolingual speech must be accounted for in the same terms. He proposes a structure for the bilingual language faculty whereby the bilingual child may be thought to possess two lexicons and a single computational system for language acquisition. This gives rise to child bilingual code-mixing that is often interpreted as a sign of linguistic “confusion.”

According to the current study, lexical borrowing is a communicative strategy of consciously drawing from the available linguistic resources. In addition, lexical borrowing as interpreted within the framework of the unitary language system hypothesis is evidence that children exposed to two languages from birth go through an initial stage when they treat input from two languages as if it belonged

to a single underlying system. The most explicit formulation of this theory was presented by Volterra and Taeschner (1978:312):

In the first stage the child has one lexical system which includes words from both languages. (...) in this stage the language development of the bilingual child seems to be like the language development of the monolingual child. (...)

In the second stage, the child distinguishes two different lexicons, but applies the same syntactic rules to both languages. In the third stage the child speaks two languages differentiated both in lexicon and syntax. (...)

The initial state of the developing bilingual child is essentially monolingual. Viewed from a neuro-cognitive point of view, this assumption can be interpreted to reflect a belief that infants' brains are essentially monolingual and therefore they treat early input in two languages as if it were a single language (Genesee, Nicoladis and Paradis 1995). This hypothesis explains why cases of lexical borrowing reduce in number as the children advance in age. In the context of this theory, the presence of lexical borrowing and their subsequent reduction in number is explained in terms of the children being able to differentiate between the two input languages as they advance in age. They are now learning not to treat early input in two languages as if it were a single language. With regard to the 'one-system-or-two' debate, the advantage to the current study is that the debate provides the study with a theoretical framework in which the bilingual and monolingual language faculties are defined in the same terms. Thus, cases of, lexical borrowing are attributed to the child's inability to differentiate between the two languages.

2.3.4 The Interaction of the Theories

There are two theoretically opposing explanations for the acquisition of language: the behaviourist (or empirical) theories, which are based on Skinner's theoretical ideas (Skinner 1957), and the nativist theories, which are founded on the work of Chomsky (1965, 1968, 1975). In the last few decades, however, these two contrary positions have been brought increasingly in line with each other, an aspect which the current study borrows. Recently developed interactionist explanatory approaches take into account both a biological basis as the precondition for language acquisition and other factors such as social environment, socialization and the general learning mechanisms and capacities of the child.

The three theories discussed, the usage-based language acquisition theory by Tomasello (2012), Levelt's theory of speech production (Dawaele 1998 ; 2001) and the Unitary Language System Hypothesis (Paradis 1995) interact in the present study in the sense that the language of the parents and other people within the linguistic environment exert a major influence on lexical borrowing during the acquisition of language. Nonetheless, it is the linguistic environment which stimulates the cognitive processes of acquisition and provides the material on which they operate. The parent's speech seems particularly well suited to help the child learn the rules, meanings, words, sounds and structure of the target language (Tomasello, 2012). If this kind of input is, indeed, an important factor in the learning process, it may provide reasons for the production of lexical borrowing

among children. The above theories have made it clear that learning a language is dependent on both social and psychological factors.

2.4. Summary of Chapter Two

Chapter two has looked at two broad areas: literature review and theoretical framework that guided the study. Under literature review, various important issues that relate to the objectives of study have been reviewed. It emerges that interest in child language acquisition and lexical borrowing has attracted the interest of linguists over the years. However, little work has been done on cross linguistic influences on the acquisition of the lexicon of *Olutachoni* through lexical borrowing among the children; the focus of the current study. Three theories that guided the study have been outlined and how they were used in the study. The following section looks at the methodology used in the study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter discusses the methodology used to collect the linguistic samples from the children acquiring *Olutachoni* as their L1. The section looks at the research design, area of study, the sample and the sampling procedure, data collection instruments, data analysis, and data presentation methods that the study applied in a bid to meet its objectives. The study methodology was linked to the objectives, the type of data expected to meet these objectives, the availability of this data, and the type of study being carried out.

3.2 Research Design

The study adopted a “time-lag strategy” research design (Bennet-Kastor 1988) as quoted in Orwenjo (2009). This is a research design which combines both the longitudinal and the cross-sectional designs. The design put subjects in two cohorts according to their respective levels of development and the physical environment, assumed on the basis of age, gender and family set up. The two cohorts represented the longitudinal growth of one child at each stage because they

were studied at the same time. This enabled the researcher to investigate the production of lexical borrowing from a developmental perspective.

This study has used concurrent triangulation strategy in which qualitative and quantitative designs are combined to overcome the limitations involved in using either method separately (Kothari 2003). While identification and description of the nature of lexical borrowing are interpreted using qualitative methods, correlations are often based on quantitative measures. Quantitatively, data is subjected to statistical analysis that involves the computation of frequencies and percentages in summary tables followed by an in-depth discussion of the data. The descriptive approach determines and reports the way things are and helps to generate hypotheses as opposed to testing them (Mugenda and Mugenda 1999). Qualitative and quantitative methods are both important to determine L1 acquisition achievement. As noted by Kothari (2004: 217), a study that follows the concurrent triangulation strategy is “advantageous because it can result in well-validated and substantiated findings.”

3.3 Area of Study

The study was conducted in Ndivisi Division of Bungoma East Sub-County within Bungoma County. This area was suitable for the study since the dominant language for the inhabitants is *Olutachoni*. Ndivisi Division has four locations: Lukusi, Ndivisi, Namarambi, and Chetambe locations. Out of the four locations

the study was conducted in Lukusi location. (See App A 5). The other three locations were left out due to their proximity to Webuye, Misikhu and Lugulu urban centres respectively. The centres are cosmopolitan; therefore, children are likely to be influenced by other languages apart from *Olubukusu* and *Olutachoni* which are under investigation. The researcher concentrated in Misimo and Lutacho sub-locations within Lukusi location. These areas are remote and the majority of the people in the area are native speakers of *Olutachoni*. Furthermore, the researcher is quite familiar with the area; hence it was easy to establish networks that facilitated data collection during the research.

3.4 The Sample and the Sampling Procedure

The sample population comprised of twelve children aged between 2-7 years, all living in Misimo and Lutacho sub-locations at the time of data collection. The twelve children acquiring *Olutachoni* as their first language were purposively sampled from twelve homes basing on the particular linguistic, social and economic backgrounds of the parents. There were six boys and six girls. At each age, two children were purposively sampled. One was from a mixed language family set-up and the other was from a single language family set-up. The mixed language family set-up represented families where the native language of the father was *Olutachoni* and the native language of the mother *Olubukusu*. The single language family set-up represented families where the native language of both parents was *Olutachoni*. The subjects under study were assumed to have had

little exposure to other languages apart from *Olutachoni* (father's native language), *Olubukusu* (mother's native language for six children). The children were identified through the social network approach. The researcher was introduced to the families of the subjects by two relatives who were full-time residents of the sampled sub locations.

Subjects 1(S1) to Subject 6 (S6) were not school-going. They had natural exposure to *Olutachoni* from their fathers and the large environment comprising of peers and relatives and *Olubukusu* for S2, S4 & S6 from their mothers. Subjects 7 (S7) to Subject 12 (S12) were school going and it was established that even at school, children were exposed more to *Olutachoni* in class and playgrounds. They also received formal instruction in *Olutachoni*. According to the Kenya's language in education policy, the language of instruction in pre-primary and the lower primary levels should be the language of the catchment area, in this case *Olutachoni*).

The researcher also ensured that all the children selected for the study had more or less similar characteristics in terms of their home background and sibling position. The home background was determined by the parents' level of education, occupation and income. The researcher purposively sampled parents who had a low level of education (standard eight and below), had unstable employment or were not employed at all and therefore had a relatively low income status were purposively sampled. This was based on the findings by Chambers (1995) that educational degree, income and career of speakers bring about variations in terms

of language use. It was not possible to entirely ignore the influence of other languages such as English, Kiswahili and Sheng because this being the 21st Century, there are many forms of interaction such families are believed to have with the outside world. Therefore, it was assumed that the children were also likely to be influenced by other languages either directly from their parents or from the wider linguistic community.

The researcher purposively sampled objects, people and the parts of the body to be named from the class of nouns in five semantic fields: domestic animals (dog, cow, hen, goat, sheep, cock, fish, cat, chick and calf), household appliances and utensils (cooking stick, water pot, cup, spoon, sufuria, knife, plate, chair, door and house), people and body parts (grandmother, mouth, hands, hair, tongue, stomach, ears, head, nose and chest), foodstuff (maize, flour, bananas, potatoes, beans, water, egg, vegetables, millet and milk), Environment and clothing (walking stick, bird dress, shoes, rope, snake, short-trouser, bicycle, tree and basket). A total corpus of 600 words were gathered from the 12 children from the five semantic fields. O' Grady (2001) reports that noun-like words make up the single largest class in the child's early vocabulary, with verb-and adjective-like words being the next most frequent category types.

As aforementioned, Children seem to focus most on words within their linguistic environment in the early stages of language acquisition. This is reflected in the

number of nouns in early vocabulary where by children have a relatively high proportion of such words (75 percent or more) by age two (Philips 1993).

Sibling position has been identified as an important variable in FLA research. In this study, only first born children were investigated. Becky (1942) for instance, reports that children with delayed speech tend to be the youngest since older children introduce factors into the child's linguistic environment to which a first born or only child is not exposed to such an environment. The sampling of the first born children was meant to minimize other linguistic influences especially from English, Kiswahili and Sheng from other older siblings who are likely to have more interactions from other linguistic environments such as Secondary schools and colleges.

According to Lanza (2004), the process of CLI is one of the activities that characterize a child's linguistic development; it was timely to study how a child acquires language through lexical borrowing during these early ages. To ensure equal representation in terms of gender, there were six male subjects, and six female subjects. Gender differentiation has been noted to occur even in the speech of children. Chambers and Trudgill (1980) note a pattern of differentiation even among six-year olds where it is observed that boys favour the less prestigious variants while girls approximate to the standard. The age bracket of 2 to 7 years was suitable for the study because the critical period for language acquisition is normally the ages between 2 years and 11 years (Brandenburg, 1979). According

to Orwenjo (2009), ages between 2 years and puberty characterize the child's linguistic development. The children were divided into two cohorts composed of 6 children each, differentiated in terms of gender, age and the language family set up as presented in table 3.1 below:

Table 3.0: Age, gender and Mother's Native Language for each Subject

Subjects	Age (Years and Month)	Gender	Mother's Native Language
S1	02 Yrs 5 months	M	Olubukusu
S2	02 Yrs, 8 months	F	Olutachoni
S3	3 Yrs, 8 months	M	Olubukusu
S4	3 Yrs, 7 months	F	Olutachoni
S5	4 Yrs, 3 months	M	Olubukusu
S6	4 Yrs, 4months	F	Olutachoni
S7	5 Yrs, 8 months	M	Olubukusu
S8	5 Yrs, 6 months	F	Olutachoni
S9	6 Yrs, 0 months	M	Olubukusu
S10	6 Yrs, 4 months	F	Olutachoni
S11	7 Yrs, 4 months	M	Olubukusu
S12	7 Yrs, 5 months	F	Olutachoni

From table 3.0, subjects 1(S1) to Subject 12 (S12) are acquiring *Olutachoni* as their first language (their father's native language). Subjects 2 (S2), 4 (S4), 6 (S6), 8 (S 8), 10 (S10) and 12 (S12) have had natural exposure to *Olutachoni* from their fathers, mothers, school and the rest of the linguistic environment. Thus, *Olutachoni* is equally the native language of their mothers. On the contrary, subjects 1 (S1), 3 (S3), 5 (S5), 7 (S7), 9 (S9) and 11 (S 11) have been exposed to *Olutachoni* (father's native language) and the language of the environment and *Olubukusu* (mother's native language). It was established that those who are school going are exposed mostly to *Olutachoni* in class and playground. They

received formal instruction in *Olutachoni* as per the Kenya's language policy. Although *Olutachoni* is the language of their environment, the study did not rule out other languages like English and Kiswahili and the loan word adaptations of the borrowed concepts from either English or Kiswahili.

3.5 Data Collection Instruments

There were two instruments of data collection: unstructured interview and observation schedule. Data from unstructured interviews was audio-video recorded and written notes were kept by the researcher for the observation schedules. Lanvers (2001) points out that the two data collection instruments complement each other and give room for an ethnographic approach of data collection. An ethnographic approach advocates for the use of a variety of data collection instruments like observation and unstructured interviews. Orwenjo (2009) acknowledges that the ethnographic approach yields different and complementary types of data across a wide variety of contexts enabling the different types of data to be contextualized, an aspect which the current study borrows.

The approach suited the present study due to its flexibility and responsiveness to the unexpected situations that could emerge in the course of data collection. Utterances in response to the unstructured interview from the children were recorded with the consent of the subjects. It has been observed that as much as

people are conscious of their language when being tape-recorded, this consciousness eventually disappears and language is used normally (Milroy 1987).

The audio-taped data that formed the basis for analysis consisted of 10-15 minutes of speech recorded in the children's homes every three days over a period of two months. By the end of two months, the researcher had recorded at least two sessions for each child. A total of 50 utterances per child were sampled for analysis giving a total of 600 utterances to be analyzed for cases of lexical borrowing. At each session, either of the parents, or both parents were present. The researcher tried to minimize the involvement of other people during the sessions in order to capture the contributions which were only beneficial to the study. Orwenjo, (2009) reports that the absence of other people makes the child talk freely.

For the cases of school going subjects (pre-primary), all recordings were done at home. The study relied heavily on the questioning technique of elicitation from unstructured interviews. Owens (2008) says that children aged 2-6 years are able to produce and respond effectively to questions from adults and peers. In different homes, the researcher pointed at objects, people and parts of the body within the home and asked (in *Olutachoni*) the respondents to name the objects in *Olutachoni*.

The items that were not present in some homes were elicited mainly under the conditions of a visual elicitation design (Levinger 2006). This technique included visual stimuli which were devised in order to encourage the child to perform a picture naming task in order to identify cases of lexical borrowing. The decision to use visual stimuli was based on previous findings suggesting this to be the preferable procedure to elicit speech productions among the young subjects who cannot engage in a coherent conversation (Levi 1980). In this task, every test word was matched to a compatible picture that visually described it (App III).

3.6 Pilot Study

The researcher visited homes of the subjects prior to data collection period. During the pilot study, parents were interviewed using a structured questionnaire about the demographic and linguistic information of the family and the child's health history among other relevant information to the study (App.II). According to Orwenjo, (2009), gathering the health history of the child is crucial in determining whether the child has any illness that could influence his or her speech patterns. The pilot study also allowed the parents and the child to become familiar with the researcher and accept her as part of the family during the research period. The interview schedule and the observation check list were also tested and re-tested to ensure consistency in the actual study. Data elicitation strategy was also tested and it emerged that it was difficult to engage the sample under study in a coherent

conversation and for this reason the researcher resorted to the questioning technique using objects within a child's home environment.

The validity and the reliability of the research instruments were also tested during the pilot study. According to Borg and Gall (1989) validity is the degree to which an instrument measures well what it purports to measure. To test for content validity, the researcher conducted a pilot study of the interview guide and observation check list which were carried out in six homes that were not involved in the main research. The six homes shared the same characteristics with the sampled homes in that in three of the homes both parents were native speakers of *Olutachoni* (single language family set up) and the remaining three, fathers are native speakers of *Olutachoni* and the mothers native speakers of *Olubukusu* (mixed language family set up).

The researcher found out that most items in the interview guide were clear and familiar with the subjects and therefore, yielded relevant data apart from a modern house and a television which were not familiar with the children and were discarded and replaced with the familiar ones within the main study. Kothari (2004) observed that for data to be reliable it must have the ability to consistently field the same results when repeated measurements are taken under the same conditions to test reliability of the instruments. During piloting, additional items in the interview schedule were included to capture information that would help give comprehensive data. This ensured that the instruments were comprehensive and

detailed enough to collect the required information. This supported the view of Best and Khan (1989) who stressed that the longer a test is the more internal consistency it has.

3.7 Data Presentation and Analysis.

The main unit of analysis was an utterance. Lanza (2004:123) defines an utterance as “a single word or combination of words with a single intonation contour.” The study presented and analyzed cases of lexical borrowing in a one-word utterance. Since it was not practical to use all the 100 lexically borrowed words in the analysis, the researcher purposefully sampled 50 words; 10 words from each of the five semantic fields. Data were presented and analyzed in the context of the research objectives and research questions presented in chapter one. The study employed a mixed approach of both qualitative and quantitative data presentation and analysis.

The qualitative analysis for objectives one and two involved the identification of lexical borrowing and the description of the nature of lexical borrowing in both the single and the mixed language family set ups. The researcher with the help of two research assistants marked and identified such incidents from the tape-recorded utterances which were compared with the written notes for accuracy. The data was transcribed, translated into English and categorized into cases of lexical importation and lexical invention. Data for the sampled words was presented as

percentages in frequency tables, graphs and pie charts. To compute the percentages, the formula below was been used.

$$P=N/T+100$$

Where: P = percentage

N = number of times the strategy is used

T = total number of all strategies used.

Sociolinguistic descriptions were used to explain phenomenal features of the words produced by the children under study.

Quantitatively, Spearman's Rank Correlation Coefficient was used to analyze and present data on the relationship between the age and gender of the children and the degree of lexical borrowing. Spearman's Rank Correlation Coefficient was the appropriate statistical test to be used to analyze data for objective three because the test is used to compare the relationship between two variables. The quantitative analysis was followed by the conducting a comparative analysis of lexical importation and lexical invention with reference to the mixed and the single language family set ups. The findings were presented in the form of frequency tables, percentages and figures. A brief explanation accompanied each table and figure to make the analysis more user-friendly and easy to understand. Any changes that were not relevant to CLI paradigm were disregarded in the analysis since they had no significance to the purpose of this study. The findings of both

the qualitative and the quantitative analysis were interpreted in the framework of the usage-based language acquisition theory (Tomasello 2012), Levelt's speech production theory (Dawaele 1998; 2001) and the unitary language system hypothesis (Paradis 1995).

3.8. Ethical Considerations

Children are persons who have not attained the legal age for consent to treatments or procedures involved in research (Greig and Taylor 1999). In Kenya, anyone under the age of 18 is considered to be a child and therefore, this study was conducted among children aged between 2-7 years. When children are involved in a research activity, it is necessary to obtain their assent and the permission of their parents (Alderson (1995). For this reason, the researcher obtained parental permission. This helped to give a parent the opportunity to learn about the study, ask questions, and agree or decline their child's participation in the research. The informed consent was obtained in writing for future reference (App. V).

The researcher ensured that the the home setting was safe in terms of guarding against any physical injury to the child. Furthermore, the researcher committed herself to the fact that any child who declined to respond to the questions was not cohearsed to respond. All these was meant to ensure the physical and emotional safety of the child. The extent of the anonymity and any potential areas where the confidentiality of the interview would be broken was explained to the parents at

the outset of the interview. The researcher also obtained a research permission letter from the Graduate School; Kenyatta University. Using the letter, the researcher obtained a field research permit from the National Council of Research and Technology (NCST) which was also counter-signed by the Bungoma County Director of Education (App VI).

3.9. Summary of Chapter Three.

This chapter has discussed the methodology used to collect the linguistic samples from the children acquiring *Olutachoni* as their L1. The chapter has discussed the research design, area of study, the study population, the sampling strategy, the sample size, data collection, data analysis, and data presentation methods that the study applied in a bid to meet its objectives. The study methodology has been linked to the objectives, the type of data expected to meet these objectives, the availability of this data and the type of study being carried out. In the next chapter, data is presented, analyzed and the findings discussed.

CHAPTER FOUR

LEXICAL BORROWING IN FIRST LANGUAGE ACQUISITION

4.1 Introduction

Intercultural contact, communication and globalization have led to interlanguage borrowings among almost all languages (Winford 2003). Borrowing has been defined variously by different scholars of language contact. According to Winford (2003), the term borrowing is used to refer to structural, semantic, as well as lexical changes due to language contact. Hoffer (2005) sees it as the process of importing linguistic items from one linguistic system into another. Crystal (1997) on the other hand, terms borrowing as the introduction of words or other linguistic features from one language to another. Thomason (2001) defines borrowing as the transfer of lexical materials across language boundaries. The current study considers borrowing as the transfer of lexical items from a source language into a target language. A particularly prominent group of borrowing is lexical borrowing, which the current study focuses on. Lexical borrowing is by far the most common type of transference between languages. In fact, "borrowing" has been traditionally identified with "lexical borrowing," (Thomason 2001:93).

Borrowing may take place among the different linguistic levels (phonology, morphology, syntax, etc). Lexical items are relatively freely borrowed since the lexicon is simply a list of independent elements. Lexical borrowing being the largest group of all the other types of borrowing among children, a further division became essential for this study. From the very beginning of interlinguistic studies, some authors have attempted to come up with a classification of lexical borrowing. The various proposals of the classification are based on various factors, including the degree of integration into native structure, the frequency of use in the speech community, and the sociolinguistic context of borrowing among others (Bloomfield 1993). According to Bloomfield (1993) and Haugen (2003), the classification can be reduced to four basic types:

- a) Classifications according to the kind of relationship between the affected languages: "Cultural borrowing" versus "intimate borrowing."
- b) Classifications according to the kind of hierarchy between the varieties of speech affected: "national borrowing versus "dialect borrowing"
- c) Formal classifications based upon the degree of modification of lexical units of the source or model language. This leads to the classical distinction between "loan words" and "loan blends."
- d) Classifications according to the level or sub-system of the target/receiving language affected by a given fact of interference.

The current study adopted the third classification system which is based on a sociolinguistic perspective. The classification considers the formal classification of lexical borrowing according to the degree of modification of the borrowed words.

This was based on the fact that this kind of classification is quite comprehensive and allows for the explanation of many particular instances of lexical borrowing among children. The classification is called "formal" because it only affects the form ("signifier") and not the meaning ("signified") (Haugen 2003; Alleton 2001).

Alleton (2001) identifies four types of lexical borrowing according to the above approach: phonemic loans which are words adapted by means of phonemic transcription, semantic loans which entail words borrowed by meaning translation, lexical importation referring to words introduced into the borrowing language with the original graphic form and hybrids which are words adapted through a combination of morphemes from the donor language and the receiving language. Muysken (1997) and Haugen (2003) distinguish further between loan words, loan shifts and loan blends. According to them, in loan words, both the form and meaning are copied completely; loan blends/hybrids are words consisting of a copied part and a native part and in loan shift only the meaning is copied. The current study adopted lexical importation and lexical invention as classifications of lexical borrowing for data presentation and analysis as manifested by children. The two are the main strategies employed by children during the acquisition of *Olutachoni* as a first language.

This chapter deals with data analysis, presentation and interpretation of results of lexical importation. In line with the first two objectives of this study, the current chapter identifies lexical borrowing and describes its nature in an *Olutachoni*-

Olubukusu family set up and in an *Olutachoni-Olutachoni* family set-up. Lexical borrowing was discussed within the framework of the usage-based theory by Tomasello (2012), Levelt's speech production theory (Dawaele 1998; 2001) and the unitary language system hypothesis (Paradis 1995). The analysis involves the description of the interaction between the internal and the external factors behind lexical importation.

4.2 Lexical Importation in a Mixed Language Family Set up

According to Lanstyák's (2006), "Importation" (called lexical importation in the current study) is defined as the direct transference of a lexeme, that is, both meaning and form. Cenoz (2000) defines lexical importation as the transfer of a word from a donor language to a recipient language as a result of contact between the speakers of the two languages. According to this study, lexical importation means introducing source-language (SL) lexical items when using the target language (TL) among children acquiring *Olutachoni* as a first language. Since this was the largest category of lexical borrowing a further division was useful based on Lanstyák (2006) division.

Lanstyák (2006) divides lexical importation into two categories: loan words and loan adaptation. This section identifies and describes instances of loanwords and loan adaptation in the acquisition of *Olutachoni* as a first language in a mixed language family set up for S1, S3, S5, S7, S9 and S11. The mothers to subjects S1,

S3, S5, S7, S9 and S11 are native speakers of *Olubukusu* whereas their fathers are native speakers of *Olutachoni*. The section concludes by giving a cross tabulation between loan words and loan adaptation with reference to the acquisition of *Olutachoni* as a first language.

4.2.1 Loan words in a Mixed Language Family Set up

One of the most easily observable results of cross linguistic influence during the acquisition of *Olutachoni* as a first language is the set of loan words that are imported into the vocabulary of the target language. According to Thomason (2000) and Robbins (2000), a loan word is a word borrowed from a donor language and incorporated into a recipient language without adaptation. Crystal, (1997) observes that loan words are lexical items borrowed from one language and incorporated into another. Hoffer (2005) on the other hand defines loan words as words adopted by speakers of one language from a different language (the source language).

According to the current study, loan words are lexical items borrowed from *Olubukusu* or any other language (source language) and adopted by children who are acquiring *Olutachoni* as their first language without any modification on the lexical items. Some of the loan words in the children's utterances and their phonetic transcriptions are exemplified below:

Table 4.0: Loan words in a mixed language family set up

Loan word	Target word	Source language	Gloss
Eenda /ɛ:nda/	Iinda /ɪ:nda/	Olubukusu	Stomach
kumukango /kʊmʊkæŋɔ/	oomuikho /ɔ:mʊɪχɔ/	Olubukusu	Cooking stick
vuufu /βʊ:fʊ/	ovusie /ɒβʊsɪɛ/	Olubukusu	flour
siifuva /sɪ:fʊβɑ/	esilifu /ɛsɪlɪfʊ/	Olubukusu	chest
Kiti /kɪtɪ/	esifumbi/ɛsɪfʊmbɪ /	Kiswahili	chair
maindi /mæɪndɪ/	amatuma /æmætʊmæ/	Kiswahili	maize
kukhu/kʊχʊ/	koko /kɔkɔ/	Olubukusu	grandmother
endemu /ɛndɛmʊ/	injukha /ɪnjʊχɔ/	Olubukusu	snake
liiki /lɪ:kɪ/	livuuyu /lɪvʊjʊ/	Olubukusu	egg
liichune /lɪ:tʃʊnɛ/	liiswi /lɪsʊɪ/	Olubukusu	hair
esiimbo /ɛsɪmbɔ̃/	eindavusi /ɛɪndɑβʊsɪ/	Olubukusu	walking stick
kumurongoro /kʊmʊɾɔ̃ŋɔ̃ɾɔ̃/	omusaala /ɔ̃mʊsɑ:lɑ/	Olubukusu	tree

The results in table 4.0 reveal that children use loan words to name concepts during the acquisition of *Olutachoni* as a first language. Children have employed loan words such as *eenju* (house) *kumurongoro* (tree), *kumukoye* (rope) *kumukaango* (cooking stick) *liiki* (egg) to mention just a few from *Olubukusu*. There are also cases of loan words from Kiswahili such as *mwiko* (cooking stick), *maindi* (maize), *sufuria* (sufuria) and *nguo* (dress). Loan words, a form of lexical borrowing, are evidently a component of language growth that is a continuous process. No language whose speakers have had contact with other languages is completely free of loan words. *Olutachoni* has had a long contact with Kiswahili and *Olubukusu* and as a result, loan words are evident among children who are born from such families.

Bynon (1977) argues that nouns are the most borrowed class because a majority of borrowed words are names of new objects and materials. Contrary to this study, the loan words are not necessarily names of new objects and materials in the target language. In fact, most of the loan words from *Olubukusu* have their equivalents in *Olutachoni*. For example, the *Olubukusu* word for vegetables *chiinyenyi* has an *Olutachoni* counterpart word *chifwa*. Therefore, the use of loan words by children is motivated by lexical need where by a lexical gap arises and a word that is readily available from the child's mental lexicon is activated to fill the lexical gap. This arises due to incomplete word knowledge of *Olutachoni* among some of the children. According to the Unitary language system hypothesis (Paradis 1995), children are unable to differentiate the language systems from two or even more languages that they are exposed to. Children exposed to two languages from birth may have to go through an initial stage when they treat input from two languages as if it belonged to a single underlying system and therefore employ either of the words.

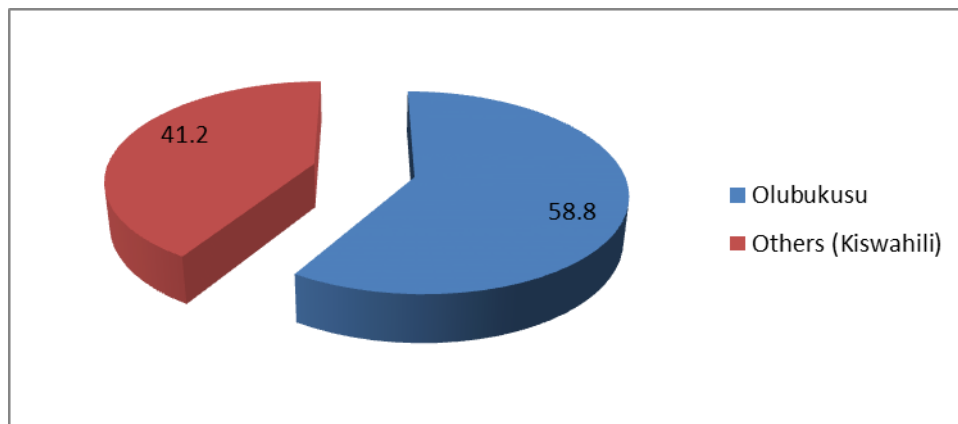
4.2.2 Loan words and the Source Language

It is important to investigate the source language to account for objective four of the current study. Source languages and the respective frequencies of occurrence are presented in table 4.1 and figure 4.1 below respectively:

Table 4.1: Source language of loan words

Source language	N	%
Olubukusu	20	58.82
Others (Kiswahili)	14	41.17
Total	34	100

The information in table 4.1 is also presented in figure 4.1 below:

**Figure 4.1: Source language of loan words**

The source language for the 20 (58.82%) loan words such as *vikeele* (legs), *siifuva* (chest), *kamaremwa* (bananas), *vuulo* (millet), *chinyenyi* (vegetables), *siimosi* (calf), *kamarwi* (ears), *kumurwe* (head), *amakanda* (beans), *omuvaano* (knife) among others is *Olubukusu*. *Olubukusu* is the native language of the mothers to the six children (S1, S3, S5, S7, S9 and S12). This explains why the percentage of loan words is high from *Olubukusu* than from Kiswahili. This implies that maternal language has a major role to play on child language acquisition if it is part of the linguistic environment. Hoff (2004) reports that there is an increased appreciation of the multiple interacting factors which contribute to language

acquisition between mothers and their young children and the way in which the interaction contributes to language development .

Apart from *Olubukusu*, there are loan words 14 (41.17%) from Kiswahili for words such as *sufuria* (sufuria), *nguo* (dress), *maindi* (maize), *mbwa* (dog) and so on. The different *Luhya* speakers do not understand one another due to the mutual unintelligibility that exists among the 16 *Luhya* languages. For this reason, different speakers resort to Kiswahili as a common language for communication in different set ups like funerals, weddings, church and marriages. This has provided an opportunity for children growing up within the *Luhya* community to have Kiswahili as one of the languages that contribute to their linguistic input during FLA. The next section explores cases of loan adaptations in a mixed language family set up.

4.2.3 Loan adaptation in a Mixed Language Family Set up

When imported from a source to a target language, some loan words among the children contain structures that violate phonological well-formedness constraints of the target language. This means that children typically modified the new items in keeping with the pre-existing structure of the target language. The most critical aspect of modification involved the adaptation of loan words. Massamba (1991) observes that although languages share some basic sound characteristics, no

language has exactly the same sound patterns as the other. The phonemic inventories and syllable structures of languages vary considerably.

Loan adaptation may involve phonological structures at various levels, ranging from segmental features to phonotactic rules and prosodic patterns (Hock and Joseph 1996; Campbell 1998). On segmental and suprasegmental levels, loan adaptation functions through phonological processes. Phonological processes are systematic sound changes that affect a class of sounds or a sound sequence (Edwards and Shriberg, 1983). From a child's perspective, Shinohara (2000:102) define phonological processes as "regularly occurring deviation from standard adult speech patterns which may occur across a class of sounds, a syllable shape, or syllable sequence." In this study, loan adaptations are phonological processes observed in children's speech in order to simplify adult targets. From the data, five loan adaptation processes emerged, three affecting vowels, one related consonants and one affecting tone. All of them were manifestations of the three macro-processes of addition, subtraction/deletion and substitution.

4.2.3.1. Epenthesis

Batibo (1996) defines epenthesis as a process of inserting a vowel between two consonants or after a consonant in a syllable final position. Vowel epenthesis is one of the phonological processes used in the adaptation of loan words among children in the present study. Languages with restrictions on syllable structure

permit vowel epenthesis in order to satisfy these restrictions when dealing with borrowing words from other languages (Uffmann, 2006). Epenthesis involves a violation of faithfulness because the epenthetic segment has no counterpart in the input. Batibo reports that this is by far the most common method of consonant cluster nativization in Kiswahili among children and adults. According to Mutua (2013), epenthesis is a process that involves the insertion of one or more sounds in the middle or final position of a word.

In the current study, vowel epenthesis is a phonological process whereby children add one or more sounds in the middle or final position of the word. An additional vowel is inserted between a consonant and another vowel to form a diphthong in words such as *muliano* (door), *fwimbo* (walking stick), and *kifwaranga* (chick). Other examples of epenthesis are presented in table 4.2 below:

Table 4.2: Epenthesis

Target language form	Source language form	Epenthesis	Diphthong	Source language	Gloss
<i>muliano</i> /mulIa ngo/	<i>mulango</i> /mula ngo/	[I]	[Ia]	<i>Kiswahili</i>	<i>door</i>
<i>fwimbo</i> /fUImbo/	<i>fimbo</i> /fImbõ/	[U]	[UI]	<i>Kiswahili</i>	<i>walking stick</i>
<i>kifwaranga</i> /kifUara na /	<i>kifaranga</i> /kifarana/	[U]	[Ua]	<i>Kiswahili</i>	<i>Chick</i>
<i>endiem</i> /EndIEmU/	<i>endemu</i> /EndEmU/	[I]	[IÉ]	<i>Olubukusu</i>	<i>snake</i>

In table 4.2 above, the vowel sounds [I] and [U] are inserted in the middle of the second syllable in words such as /mulIango/ (door), /EndIEmU/ (snake) /fUImbõ/

(walking stick) and /kIfUaraŋa/ (chick) respectively. The insertion of one vowel sound resulted into the formation of the diphthongs [Ia], [UI], [Ua] and [Iɛ].

According to Watson (2011), vowel insertion is introduced in order to break consonant clusters in languages that do not permit consonant clusters in a syllable or even in words. Also, vowel insertion is introduced to prevent consonants at the end of words. For example, Yorùbá does not allow consonants to end words just like Bantu languages under which the languages under investigation fall. However, the reason why the children use epenthesis in this particular study is different from the above reasons. The use of epenthesis is meant to ensure that the articulation of the words acquired from either Kiswahili or *Olubukusu* is simple during language acquisition. The process is also utilized by children to achieve a smooth transition from a consonant to a vowel within a word. This is in agreement with Salami (2004) who argues in his study that the use of diphthongs is a pattern of simplification of speech among children.

4.2.3.2. Aphaeresis and Syncope

Deletion according to Mutua (2013) is the omission of a sound segment or segments from a word. Mutua identifies three types of elision – apocope, aphaeresis and syncope. Apocope refers to the loss of one or more sounds from the end of the word while aphaeresis is the loss of the initial sound(s) in a word. Syncope is the loss of one or more sounds from the interior of a word. Aphaeresis

and Syncope are examples of the macro process of deletion. According to Okombo (1982:21) deletion involves the non-high vowels /e, ε, a, o/ which are deleted when followed by a vowel in a light syllable. Adhiambo (1981) asserts that vowels are lost in unstressed word-final and unstressed word internal positions. It takes place when they are adjacent to stressed vowels in order to avoid complex onsets and codas.

In the current study, Aphaeresis and Syncope are phonological processes attested among the children acquiring *Olutachoni* as a first language. Aphaeresis and Syncope involved the children deleting the initial and the interior sounds of a word during the process of acquisition. The two processes were manifested in words such as *mukano* instead of *(ku)mukan(g)o* (cooking stick), *mukoe* instead of *(ku)muko(y)e* (rope), *marema* instead of *(ka)marem(w)a* (bananas), *limi* instead of *(u)limi* (tongue) among others. The two were discussed together because from the data, they occur simultaneously on the same word. Other examples of aphaeresis and syncope are presented in table 4.3 below:

Table 4.3: Aphaeresis and Syncope

Olubukusu form	Olutachoni form	Aphaeresis	syncope	Source language	Gloss
<i>Kumurwe</i> /kUmurUε /	<i>mure</i> /mɔrɛ/	[k] [ɔ]	[ɔ]	<i>Olubukusu</i>	Head
<i>endeve</i> /ɛndɛβɛ /	<i>Neve</i> /nɛβɛ/	[ɛ]	[d]	<i>Olubukusu</i>	Chair
<i>chinyenyi</i> /tʃɪnɛni/	<i>Ineni</i> /inɛni/	[tʃ]	[n]	<i>Olubukusu</i>	vegetables
<i>Kumukango</i> /kumɔkɑŋɔ̃ /	<i>Mukano</i> /mɔkɑŋɔ /	[k] [ɔ]	[ŋ]	<i>Olubukusu</i>	cooking stick
<i>Kumukoye</i> /kɔmukɔjɛ/	/mɔkɔ̃ɛ/	[k] [ɔ]	[j]	<i>Olubukusu</i>	rope
<i>Kamaremwa</i> /kamareɱɔa/	<i>Marema</i> /marema/	[k] [a]	[ɔ]	<i>Olubukusu</i>	bananas
<i>ulimi</i> /ɔlɪmɪ/	<i>limi</i> /lɪmi/	[ɔ]	-	<i>Kiswahili</i>	tongue
<i>kikombe</i> /kɪkɔ̃mbɛ/	<i>Kome</i> /komɛ/	[k] [ɪ]	[b]	<i>Kiswahili</i>	cup

From table 4.3 both aphaeresis and syncope are evident mostly on the same word.

For example, sounds [k], [ɔ] and [j] have been ellipted in the word /kɔmukɔjɛ/ (rope), sounds [k], [w] and [a] in the word /kamareɱɔa/ (bananas) and sound [u] in the word /ɔlɪmɪ/ (tongue) among others. Children employed this strategy in order to make the pronunciation of the new words easier and smoother. This is in agreement with Adhiambo (1981) that deletion as a phonological process is a pattern of sound “errors” that typically developing children use to simplify speech as they are learning to talk.

Children in the current study employ aphaeresis and syncope because they do not have the ability to coordinate the lips, tongue, teeth, palate and jaw for clear speech. As a result, they simplify complex words in predictable ways of omitting some sounds and syllables until they develop the coordination required to

articulate clearly. For example, they may reduce prenasalized stops to a single consonant sound like, /nɛβɛ/ for /ndɛβɛ / “chair” or delete the syllable in a word saying, /kɔ̃jɛ/ for /komokɔ̃jɛ/ “rope.” Bantu languages have an open syllable structure, that is, there are no codas. The nucleus is an obligatory element while the onset is optional (Oluoch 2014). For this reason, there were no cases of apocope; the lose of the final consonant sound (s) in a word since the languages under study are Bantu. Also, children would try to avoid complex onsets and codas which seem difficult for them to pronounce through deletion.

4.2.3.3. Devoicing

According to Oluoch (2014), devoicing is a form of substitution where sound segments are interchanged between the source language and the target language. Mutua (2003) defines devoicing as a feature change strategy where some voiced segments that are not found in the sound inventory of the recipient language are devoiced. Apart from *Olubukusu*, the phonemic inventories of *Olutachoni* and Kiswahili/English are different. There are some phonemes that are found in English/Kiswahili but not in the *Olutachoni* phonemic inventory and vice versa. If a loan word has such a phoneme, then it is substituted to the nearest equivalent in the recipient language. During the adaptation process into *Olutachoni* among children acquiring *Olutachoni*, data indicated that sound change mainly involved the devoicing of the voiced Kiswahili consonants into the voiceless *Olutachoni* counterparts. For example, words such as *maji* were pronounced as *machi* (water),

mbusi for *mbuzi* (goat), *chokoo* for *jogoo* (cock), *tirisia* for *dirisha* (window)

among others. From these examples,

Sound [dʒ] > [tʃ]

[z] > [s]

[g] > [k]

[d] > [t]

[z] > [s]

Table 4.4 presents other examples of words that have been devoiced by children acquiring *Olutachoni* as a first language:

Table 4.4: Devoicing

Kiswahili language form	Olutachoni form	devoicing	Source language	Gloss
<i>maji</i> /madʒi/	<i>machi</i> /matʃi/	[dʒ] > [tʃ]	<i>Kiswahili</i>	<i>water</i>
<i>mbuzi</i> /mbUzɪ/	<i>mbusi</i> /mbUsɪ/	[z] > [s]	<i>Kiswahili</i>	<i>goat</i>
<i>jogoo</i> /dʒɔŋgɔ:/	<i>chokoo</i> /tʃɔkɔ:/	[dʒ] > [tʃ] [g] > [k]	<i>Kiswahili</i>	<i>cock</i>
<i>dirisha</i> /dɪrɪʃa/	<i>tirisa</i> /tɪrɪʃa/	[d] > [t] [ʃ] > [s]	<i>Kiswahili</i>	<i>window</i>
<i>kijiko</i> /kɪdʒɪkɔ:/	<i>kichiko</i> /kɪtʃɪkɔ/	[dʒ] > [tʃ]	<i>Kiswahili</i>	<i>spoon</i>
<i>ugali</i> /ugali/	<i>ukali</i> /ukali/	[g] > [k]	<i>Kiswahili</i>	<i>ugali</i>
<i>ndizi</i> /ndizi/	<i>ndisi</i> /ndɪsɪ/	[z] > [s]	<i>Kiswahili</i>	<i>bananas</i>
<i>maziwa</i> /maziuə/	<i>Masiwa</i> /masɪuə/	[z] > [s]	<i>Kiswahili</i>	<i>milk</i>
<i>mboga</i> /mbɔga/	<i>mboka</i> /mbɔka/	[g] > [k]	<i>Kiswahili</i>	<i>vegetables</i>

Data in table 4.4 indicate that all the devoiced sounds are from words borrowed from Kiswahili. For example, the voiced alveolar fricative /z/ is realized as the voiceless alveolar fricative [s] as in /masɪuə/ for /maziuə/, the voiced velar stop [g] is realized as the voiceless velar stop [k] in words like /mbɔka/ for /mbɔga/, the

voiced alveolar stop [d] is realized as the voiceless alveolar stop [t] in words such as /tɪɾɪfɑ / for /dɪɾɪfɑ/ and the voiced palato affricate [dʒ] is realized as the voiceless palato affricate [tʃ] as in /matʃɪ/ for /madʒɪ/. This was attributed to the fact that the phonemic inventories of *Olutachoni* and Kiswahili are different in terms of the phonation type. Whereas all consonant sounds in *Olutachoni* are voiceless, Kiswahili has both the voiced and the voiceless consonant sounds. Therefore, the loan words with voiced sounds from Kiswahili were devoiced by the children in order to make the pronunciation of such words easier and smoother. This claim has been supported by evidence reported in several other studies on loan adaptation otherwise called phonological adaptation such as Owino (2003), Mutua (2003) and Oduma (2011).

4.2.3.4 Tonal adaptation

Tone is the use of pitch in language to distinguish lexical or grammatical meaning (Marlo 2011). Languages that do have this feature are called tonal languages. Tonal languages are extremely common in Africa. In many tonal African languages, such as most Bantu languages, tones are distinguished by their pitch level relative to each other. For example, in multi-syllable words, a single tone may be carried by the entire word, rather than a different tone on each syllable. This study examined tonal adaptation of *Olubukusu* and Kiswahili loan words among children acquiring *Olutachoni*. *Olubukusu* and *Olutachoni* are tone

languages and tone plays an important role in showing lexical differentiation in minimal pairs and word class. Marlo (2011) identifies three basic tone patterns:

Low (L) [↘]

High (H) [↗]

Down stepped []

This study settled on the low (L) [↘] and High (H) [↗] tone as the basic tones in *Olutachoni*, *Olubukusu* and Kiswahili. According to Marlo (2011), *Olubukusu* and Kiswahili nouns are characterized by a rising tone whereas *Olutachoni* nouns are characterized by a falling tone. From the results of the study, *Olutachoni* tone was mapped onto *Olubukusu* and Kiswahili tones and vice versa. For instance, some words from *Olutachoni* received a rising [↗] tone expected of *Olubukusu* and Kiswahili words and some *Olubukusu* loan words retained a falling tone [↘] which is characteristic of *Olutachoni* for purposes of tonal adaptation. Some examples of tonal adaptation are presented below:

4.2.3.5 Olubukusu Loan words with Olutachoni Tone

These are loan words from *Olubukusu* which did not carry over the tones in the current study. Tone and pitch accent languages have a relatively free distribution of prominence and in principle could preserve the tone of the input language without contradicting native restrictions. While many languages exhibit the faithful preservation of input tone as expected, a number of tone and pitch accent languages ignore the input language tone partially, or even completely, and instead

assign tones or pitch accents based on default assignment mechanisms. Table 4.5 below gives examples of *Olubukusu* loan words which have retained *Olutachoni* falling tone.

Table 4.5: Olubukusu words and Olutachoni tone

<i>Olubukusu form</i>	<i>Olutachoni form</i>	<i>Tonal adaptation</i>	<i>Source language of tone</i>	<i>Source language of loan word</i>	<i>Gloss</i>
kaamarwi /ka:ʔmarɔɪ/	amarwi /aʔmarɔɪ/	kamarwi /ka:ʔmarɔɪ/	<i>Olutachoni</i>	<i>Olubukusu</i>	ears
kaamoolu /ka:ʔmɔ̃lɔ/	amolu /aʔmɔ̃lɔ/	kaamoolu /ka:ʔmɔ̃lɔ/	<i>Olutachoni</i>	<i>Olubukusu</i>	nose
eengokho /ɛ:ʔŋɔ̃xɔ̃/	ingookho /ɪʔŋɔxɔ/	eengokho /ɛ: ʔŋɔ̃xɔ̃/	<i>Olutachoni</i>	<i>Olubukusu</i>	hen
viikele /vik ɛ:ʔlɛ /	Evilenje/ ɛvɪlɛʔŋjɛ/	viikele /vik ɛ:ʔlɛ /	<i>Olutachoni</i>	<i>Olubukusu</i>	leg
eenyuni /e:ʔɲɔɪ/	linoni /lɪʔnɔɪ/	eenyuni /e:ʔɲɔɪ/	<i>Olutachoni</i>	<i>Olubukusu</i>	bird
kaamaveele /k a:ʔmaβɛ:lɛ/	amaveele /amaʔβɛ:lɛ/	kamaveele /ka:ʔmaβɛ:lɛ/	<i>Olutachoni</i>	<i>Olubukusu</i>	milk
kuumukango /kɔ:ʔmɔkɑŋɔ̃ /	omwikho /ɔ̃ʔmɔixɔ/	kumukango /kɔ: ʔmɔkɑŋɔ̃	<i>Olutachoni</i>	<i>Olubukusu</i>	cookin g stick
kaamechi /ka:mɛ:ʔtʃɪ/	amachi / aʔma:tʃɪ/	kaamechi /ka:mɛ: ʔtʃɪ/	<i>Olutachoni</i>	<i>Olubukusu</i>	water

The data above reveals that there were cases where by children had imported the *Olubukusu* words expected to have a rising tone but had retained the target language (*Olutachoni*) falling tone. This observation is in line with Wichmann (2005), who observes that loan words undergo tonal adaptation in order to suit into the phonological structure of the target language. The resultant loan form conforms to the native phonology of the recipient language and bears as much similarity to the source form as possible. This indicated that children were still

underway in relation to the acquisition of form. The children's mental lexicon activated the target language tone but inhibited the target language form during language processing.

4.2.3.6. Olutachoni word with Olubukusu Tone

This entailed words acquired form *Olutachoni* by the children but they carried over *Olubukusu* tones. Due to the free distribution of prominence, tone languages could receive the tone of the input language at the expense of the form. Examples in table 4.6 below indicate cases where children acquired target words but not the target tone.

Table 4.6: Borrowed Olubukusu tone and retained Olutachoni word

<i>Olubukusu form and tone</i>	<i>Olutachoni form and tone</i>	<i>Tonal adaptation</i>	<i>Source language of tone</i>	<i>Source of borrowed word form</i>	<i>Gloss</i>
esiimbo /ɛ: ʃsimbuõ/	eindavusi /ɛinda\βusi/	eindavusi /ɛindaʃβusi/	<i>Olubukusu</i>	<i>Olutachoni</i>	walking stick
kumurongoro kuʃ:muɔõŋɔõ/	omusaala /õ\musa:la/	omusaala /õʃmusa:la/	<i>Olubukusu</i>	<i>Olutachoni</i>	tree
kuukhu /kʊ: ʃxʊ /	koko /kõ\kõ/	koko /kõʃkõ/	<i>Olubukusu</i>	<i>Olutachoni</i>	grand mother
eengokho /ɛ: ʃŋõxõ/	ingokho /ɪ: \ŋõxõ/	ingokho /ɪ: ʃŋõxõ/	<i>Olubukusu</i>	<i>Olutachoni</i>	chicken
liiki /li:ʃki/	livuyu /livu:\ju/	livuyu /livu:ʃju/	<i>Olubukusu</i>	<i>Olutachoni</i>	egg
likheese /li:ʃxɛɛ /	licheese /li\ɛɛɛ/	licheese /liʃɛɛɛ/	<i>Olubukusu</i>	<i>Olutachoni</i>	sheep

Examples in table 4.6 above reveal cases where children produced target words but with the *Olubukusu* rising tone. This showed that *Olubukusu* loan phonemes were mapped onto the nearest phonetic forms in *Olutachoni*. This revealed that the

child had acquired the vocabulary of the target language but not the tonal pattern. This is a good indication that the child had already acquired the form of the target language which essentially carries the meaning of the word. These results are in line with Hansford and Hansford (1989) in an article of borrowed words in Chimbung who argues that, foreign phonemes are directly mapped onto corresponding native phonetic forms.

4.2.3.7. Kiswahili Loan words with Olutachoni Tone

These are Kiswahili loan words acquired by the children but they carry over *Olutachoni* tones. The Bantu language with the highest number of speakers is Kiswahili; however, the majority of its speakers know it as a second language. According to Owino (2003), Kiswahili has a marked rise tone. The tone is fixed on the penultimate (second to last) syllables. Table 4.7 below gives some examples of Kiswahili loan words which are meant to have a fixed penultimate tone but due to tonal adaptation, they retain the *Olutachoni* falling tone.

Table 4.7: Borrowed Kiswahili loan words with Olutachoni tone

<i>Kiswahili form and tone</i>	<i>Olutachoni form and tone</i>	<i>Tonal adaptation</i>	<i>Source of tone</i>	<i>Source of Borrowed word form</i>	<i>Gloss</i>
sufuria /sɔfɔria/	esifuria /ɛsɪʋfɔria/	sufuria /sɔfɔʋria/	Olutachoni	Kiswahili	sufuria
nguo /ŋɔɔ̃/	einguvo /ɛɪʋŋɔβɔ̃/	nguo /ŋɔʋɔ̃/	Olutachoni	Kiswahili	dress
ng'ombe ŋɔ̃mbeɛ/	esiayo /ɛsɪaʋjɔ̃/	ng'ombe ŋɔ̃ʋmbeɛ/	Olutachoni	Kiswahili	cow
kuku /kɔkɔ/	eingokho /ɛɪŋɔ̃ʋxɔ̃/	kuku /kɔʋkɔ/	Olutachoni	Kiswahili	chicken
maindi /maɪndɪ/	amatuma /amaʋtɔmɔ/	maindi /maɪʋndɪ/	Olutachoni	Kiswahili	maize

The examples in table 4.7 above show that some children retrieved Kiswahili loan words from their mental lexicon when faced with a lexical gap during communication but retained *Olutachoni* falling tone. This meant that children had acquired the tone of the target word before the target word itself. This implied that there was incomplete knowledge of the *Olutachoni* words among the children. The frequencies of loan words that underwent tonal adaptation are summarized in table 4.8 and figure 4.2 below for clarity:

Table 4.8: Tonal adaptation

Tone of borrowing	N	%
Borrowed Olubukusu word and retain <i>Olutachoni</i> tone	20	43.47
Borrowed Olubukusu tone and retain <i>Olutachoni</i> word	16	34.78
Borrowed from other languages with <i>Olutachoni</i> tone	10	21.73
Total	46	100

The results in table 4.8 above have been presented in figure 4.2 below:

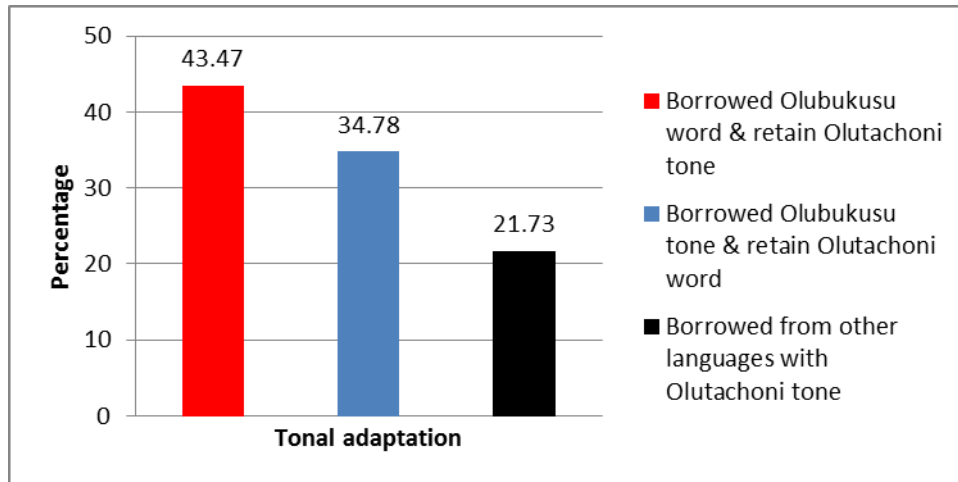


Figure 4.2: Tonal adaptation

Results in table 4.8 and figure 4.2, indicate that tone as a phonological phenomenon is borrowable. There are 16 (34.8%) cases where *Olubukusu* tone is borrowed and *Olutachoni* word retained. Such examples include words such as *aamaveele* (milk), *eviraalo* (shoes), *omuuvano* (knife), *amakaanda* (beans), *iingokho* (hen) and *koko* (grandmother). This shows that there is incomplete knowledge of *Olutachoni* tone among children. From the results, (43.47%) comprises of *Olubukusu* borrowed words that have retained *Olutachoni* tone in words such as *kamarwi* (ears), *kumurwe* (head), *kaamolul* (nose), *engokho* (hen), *likheese* (sheep), *kamaremwa* (bananas), *eenduvi* (basket), *eng'eni* (fish), *chiinyenyi* (vegetables) among other examples. This implies that the process of borrowing is very selective where young learners seem to draw on their target language to pronounce loan words.

There are also (21.73%) of cases where words have been borrowed from Kiswahili but have retained *Olutachoni* tone. Such words include *mwiko* (cooking stick),

maindi (maize) and *nguo* (dress). Some of these words have no equivalent in the target language even among adults. Among children, this could be a strategy that is meant to ease the burden of learning both the pronunciation and the target language word which is heavy for young learners. This is in line with Celaya and Torras (2001) observation.

4.2.3.8 A cross tabulation of the Types of Loan adaptation

In order to come out with a clear picture of how children in a mixed language family set up use different strategies of loan adaptation in the view of acquiring *Olutachoni* as a L1, it is important to come up with a general overview of the frequencies of occurrence of the different types. Table 4.9 and figure 4.3 gives a cross tabulation of the different types:

Table 4.9: Types of loan adaptation

Type of loan adaptation	N	%
Epenthesis	8	9.09
aphaeresis	16	18.18
devoicing	18	20.45
Tonal adaptation	46	52.27
Total	88	100

The results in table 4.9 are also presented in figure 4.3 below:

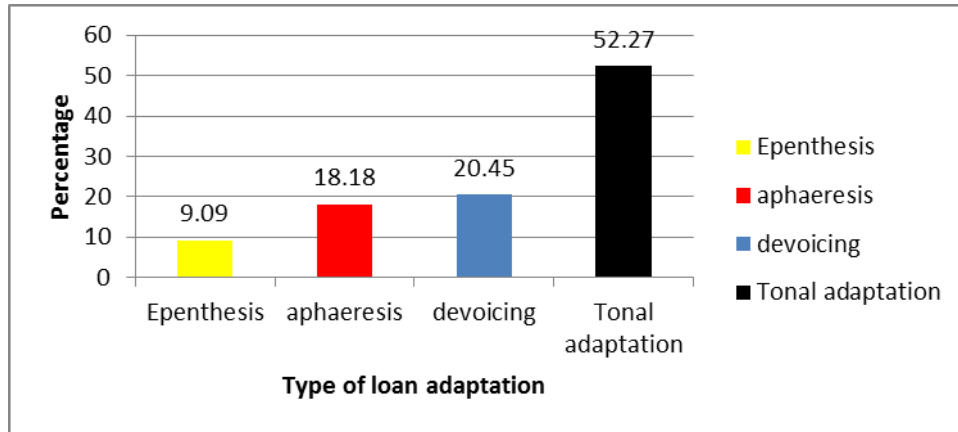


Figure 4.3: Types of loan adaptation

From table 4.9 and figure 4.3, epenthesis occurs 8 times which translates to 9.09% while aphaeresis takes place 16 times which translates to 18.18%, devoicing accounts for 18 cases which translates to 20.45% and tonal adaptation occurs 46 times which translates to 52.27%. The results indicate that tonal adaptation is more productive, followed by devoicing, aphaeresis and then epenthesis during the acquisition of *Olutachoni* as a L1. The highest percentage of tonal adaptation indicates that suprasegmental phonology is key to child language acquisition. When a child is faced with a tonal gap, just as for the case of the lexical gap, the child retrieves the tone of the source language to fill the gap. Also, according to Thomason (2001) suprasegmental features are more easily borrowable than segmental features.

Language is an art, which needs a long time to be mastered. Apart from other things, children acquire the phonological inventory of their L1 during their

development. Jakobson (1968) claims that this phonological acquisition follows an innately determined order and Stampe (1969) suggested that children start the learning process with innate limitations on phonetic capacity and a number of natural phonological processes to deal with those limitations. Over time, these processes are suppressed by the exposure to the surrounding language. They are the typical patterns of how a child simplifies his speech as he learns how to speak. A child is not born being able to produce all the sounds and sound patterns of his/her language. As a child is learning how to speak *Olutachoni*, he/she will simplify sounds and sound patterns as exemplified in the above examples. Loan adaptations, then, are the normal patterns of simplification all children use as they are learning to speak. Just like articulation skills, every child will develop his/her phonology skills differently, but there are ages when a child should stop using different phonological processes.

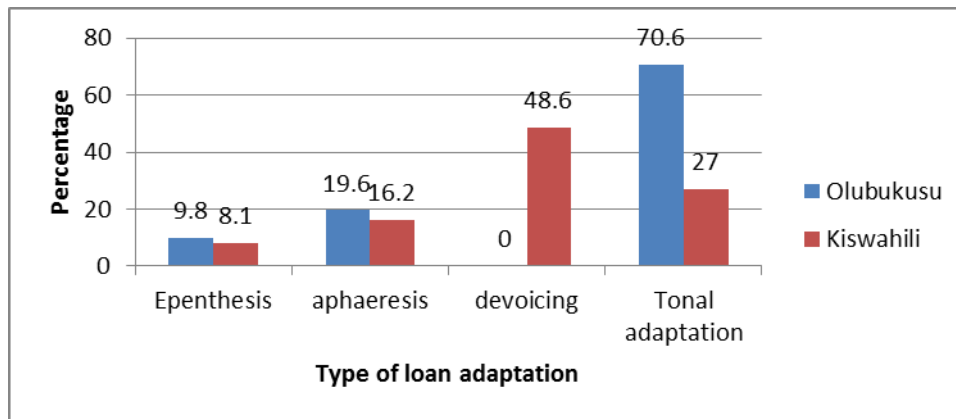
4.2.3.9 Types of Loan adaptation and Source Language

It is important to identify the source language(s) of loan adaptation in order to ascertain the main donor of the adapted words. As mentioned earlier, focusing on the source language with its recipient language under particular linguistic environment, the likely motivations for lexical borrowing can be ascertained. Table 4.10 and figure 4.4 give a summary of the source language for loan adaptation in a mixed language family set up.

Table 4.10: Type of loan adaptations and source language

Source language Type of loan adaptation	Olubukusu		Kiswahili	
	N	%	N	%
Epenthesis	5	9.80	3	8.10
Aphaeresis	10	19.60	6	16.21
Devoicing	0	0.00	18	48.64
Tonal adaptation	36	70.58	10	27.02
Total	51	100	37	100

The information in table 4.10 is also presented in figure 4.4 below for clarity:

**Figure 4.4: Type of loan adaptations and source language**

Results in table 4.10 and figure 4.4 indicate that tonal adaptation arising from *Olubukusu* is more (70.58%), followed by aphaeresis (19.60%) and then epenthesis with (9.80%). Tonal adaptation is more prevalent than other forms of loan adaptation. Since children are still learning language, it is easier for them to acquire the tone of the target language because tone does not involve the articulation of sounds. This argument is supported by Thomason (2001) when he says that suprasegmental features are not easily borrowable than segmental features. There is no case of devoicing from *Olubukusu* because *Olutachoni*

phonemes are similar to those of *Olubukusu*. All the consonant sounds in *Olubukusu* and *Olutachoni* are voiceless (Mutaka 2000). From Kiswahili, devoicing has the highest number (48.64%) because the phonemic inventory of Kiswahili has voiced consonants unlike the *Olutachoni* phonemic inventory which has only voiceless consonants. In order to make the articulation of such sounds smoother and easy, the children end up devoicing them. Table 4.11 and figure 4.5 below give a summary of the source language for the entire loan adaptation process in a mixed language family set up.

Table 4.11: Source language and loan adaptation

Source language	N	%
Olubukusu	51	57.95
Others (Kiswahili)	37	42.04
Total	88	100

The results in table 4.11 are also presented in figure 4.5 below.

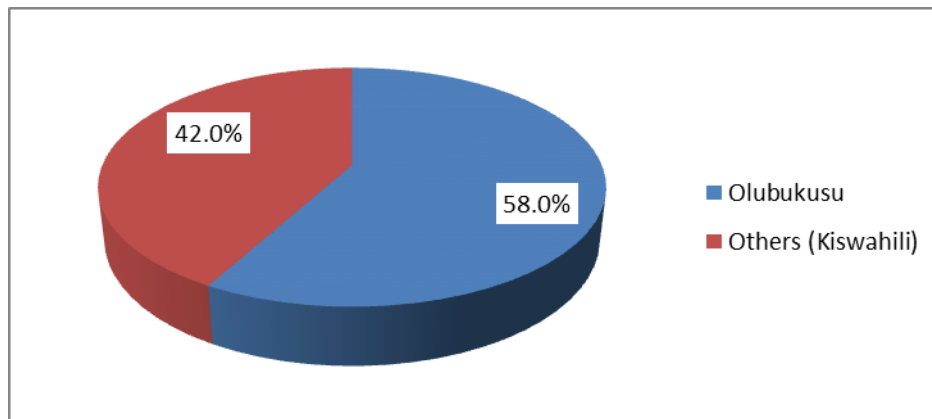


Figure 4.5: Source language and loan adaptation

The results in table 4.11 and figure 4.5 indicate that most of the words (57.95%) have been adapted from *Olubukusu* and 37 (42.04%) from Kiswahili. This is because, apart from Kiswahili, children have input from *Olubukusu*, which is the native language of their mothers. Kiswahili loan adaptations are as a result of established historical loan words from Kiswahili by adults in *Olutachoni*-speaking speech community. As mentioned earlier, *Luhya* group of speakers resort to Kiswahili as their common language of communication due to their mutual unintelligibility.

4.2.4 A Cross Tabulation of Loan Words and Loan Adaptation

As mentioned above, lexical importation involves two major processes: loan words and loan adaptation. This section gives a comparison of the two processes in reference to the acquisition of *Olutachoni* as a first language. This is meant to establish clearly the strategy that is more productive and why it is the most productive during the acquisition process: Table 4.12 and figure 4.6 gives a summary of the frequencies for the two processes:

Table 4.12: Lexical importation

Type of lexical importation	N	%
Loan words	34	27.86
Loan adaptations	88	72.13
Total	122	100

The information in table 4.12 is presented in figure 4.6 below:

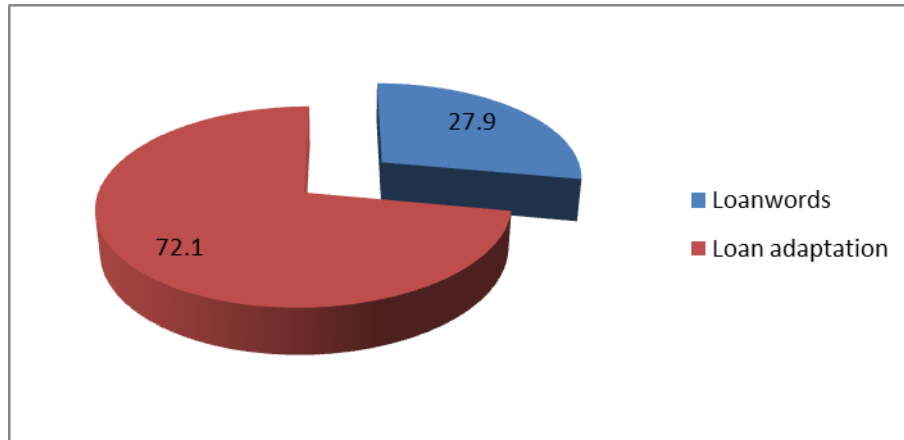


Figure4.6: Lexical importation

The results in table 4.12 and figure 4.6 reveal a total of 122 incidences of lexical importation used by children in a mixed language set up. There are 34 cases which translate to 27.86% of loan words and 88 cases which translate to 72.13% of loan adaptation. This implies that in a mixed language family set up, loan adaptation forms the bulk of the data. This is based on the many adaptation strategies such as epenthesis, devoicing, tonal adaptation and aphaeresis employed by children during the acquisition process. Different phonological shapes imply that children are on the verge of acquiring the target vocabulary unlike in loan words where they import the entire form without any modifications.

4.2.5. Lexical importation and the Source Language

It is important to identify the source language(s) of the two types of lexical importation in order to ascertain the main donor language. This is important in

understanding the direction of language acquisition in a mixed language set up. Table 4.13 and figure 4.7 summarizes the source language for lexical importation in a mixed language family set-up:

Table 4.13: Source language and lexical importation

Source languages	N	%
Olubukusu	71	58.19
Others (Kiswahili)	51	41.80
Total	122	100%

The results in table 4.13 are presented in figure 4.7 below:

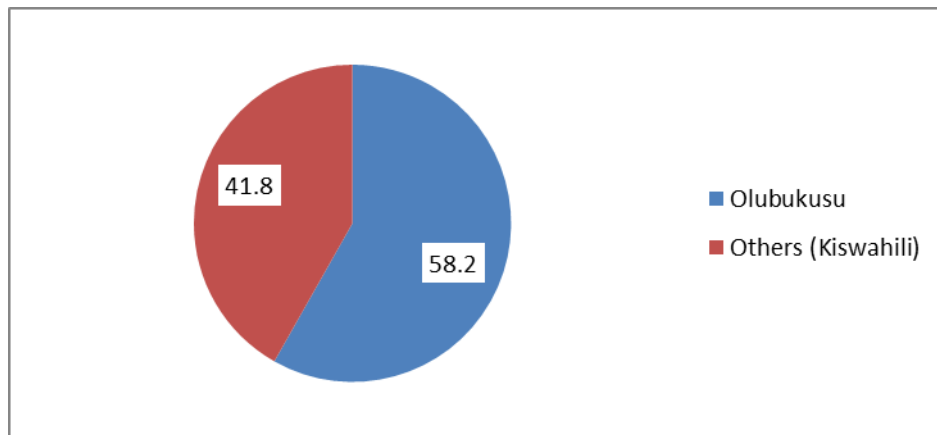


Figure 4.7: Source language and lexical importation

The results from table 4.13 and figure 4.7 show that *Olubukusu* is the source language for 71 cases of lexical importation in a mixed language family set up which translates to 58.19%. The high percentage is as a result of *Olubukusu* being a native language of mothers for the six children (S1, S3, S5, S7, S9 and S12). This means that, apart from Kiswahili, children have another first language to

acquire. This observation is in line with Tomasello's (2012) argument that maternal variants have more chance of being transmitted to the children, due to the mother's central role in the education of children.

4.3 Lexical importation in a Single Language Family Set up

Lexical importation is traced back to Haugen's (1950) and Weinreich's (1953) systematic studies on borrowing (Kang 2013). This broad approach to borrowing as mentioned earlier in section 4.2 entails preserving the original word as it is in the source language or structural adjustments through loan adaptations. This section identifies and describes the nature of lexical importation in an *Olutachoni-Olutachoni* language family set up. In this set up, both fathers and mothers to S2, S4, S6, S8, S10 and S12 are native speakers of *Olutachoni*. Section 4.3.1 discusses the results for loan words in a single language family set up.

4.3.1. Loan words in a Single Language Family Set up

In this study, as aforementioned, a loan word is a word borrowed from a source language and incorporated into a target language (*Olutachoni*) with or without phonological adaptation. Table 4.14 gives examples of loan words produced by children in a single language family set up.

Table 4.14: Loanwords in an Olutachoni-Olutachoni family set up

<i>Loan word</i>	<i>Target word</i>	<i>source language</i>	<i>Gloss</i>
maindi /maɪndɪ/	amatuma /amatomə/	Kiswahili	Maize
sufuria /sʊfʊrɪə/	esifuria /ɛsɪfʊrɪə/	Kiswahili	Sufuria
ng'ombe /ŋɔ̃mbɛ/	eimosoti /ɛsɪajɔ̃/	Kiswahili	Cow
nyumba	einju /ɛɪnjʊ/	Kiswahili	House
Nguo/ŋʊɔ̃/	einguvo /ɛɪŋʊβɔ̃/	Kiswahili	Dress
nyanya/ŋaŋa/	koko /kɔ̃kɔ̃/	Kiswahili	grand mother
kuku /kʊkʊ/	eingokho /ɛɪŋɔ̃xɔ̃/	Kiswahili	grand mother
kukhu /kʊχʊ/	koko /kɔ̃kɔ̃/	<i>Olubukusu</i>	Grandmother

Results from table 4.14 indicate that there were instances of loan words in a single language family set-up. The loan words included words such as *maindi* (maize), *sufuria* (sufuria), *mbwa* (dog), *ng'ombe* (cow), *mwiko* (cooking stick), *nyungu* (cooking pot), *kukhu* (grandmother) *kuku* (chicken), *nguo* (dress) and *kiti* (chair).

In other studies such as Crystal (1987) and Bynon (1977), loan words are usually members of specific semantic fields such as Science and Technology and institutions such as schools, hospitals, the church and the military. In this case, loan words are used to fill a semantic, lexical or a stylistic slot not occupied by a native language word. Contrary to the current study, children have employed loan words from other semantic fields such as foodstuff, environment, and utensils among others. In this case, loan words are viewed as filling a lexical gap where by a child has failed to retrieve a target language word due to incomplete knowledge of the target language. The use of loan words by children indicates a positive

learning strategy that reflects the child's use of all linguistic resources to express himself or herself when the mastery of the target language is incomplete.

Ringbom (2010) postulates that when young subjects are confronted with a particular problem of retrieving a lexical item in the target language, they try to overcome the difficulty by borrowing from the available language within their linguistic environment. In this case, the available language is Kiswahili because Kiswahili is spoken by nearly 100 percent of the Kenyan population (Ogechi 2013). Also, children engage in loan word borrowing when they experience a temporary block in accessing words in one language or when a more appropriate word or expression exists in the other language because of the need to designate words in the target language. The available word is what they can access from their immediate linguistic environment. In this study, Kiswahili and *Olutachoni* words are activated from the mental lexicon of the children when the target word is inhibited as explained through Levelt's Speech Production Theory.

4.3.2. Loan words and the Source Language

As already pointed out, there is need to ascertain the main donor of loan words. Thomason (2001) states that you cannot borrow what you do not know the origin. The source language provides a broader approach to lexical borrowing which pays greater attention to the borrower's language background in order to provide

sociolinguistic explanations to language acquisition. Table 4.15 and figure 4.8 give a summary of loan words and their source language.

Table 4.15: Source language of loan words

Source language	N	%
Olubukusu	3	21.42
Others (Kiswahili)	11	78.57
Total	14	100

The results in table 4.15 are also presented in figure 4.8 below.

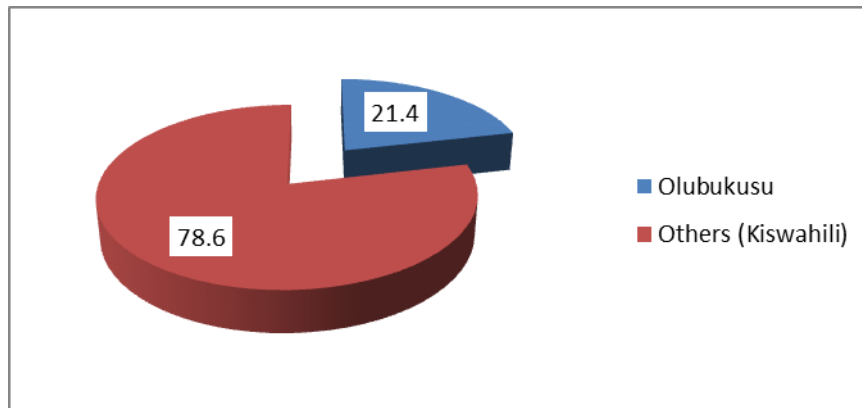


Figure 4.8 : Source language of loan words

Table 4.15 and figure 4.8 reveal that the main source language (78.57%) of loan words in a single language family set up is Kiswahili. The co-existence of English and Kiswahili alongside *Olutachoni* results in various sociolinguistic aspects. One of the sociolinguistic phenomena observed in this co-existence is the influx of Kiswahili loan words in *Olutachoni*, a phenomenon that is also observed among children just as observed among adult speakers of *Olutachoni*. Therefore, the main

language (apart from *Olutachoni*) that the children and their parents are exposed to is Kiswahili. Kiswahili is a second language for most people in the interior areas and especially among the *Luhya* speakers. Kiswahili assumes the significant role of a unifying language of the country between different speakers who have their own language, *Luhya* not being an exception. For this reason, Kiswahili has become a main language for input among the children when they are faced with a lexical gap for a target word during language acquisition.

Children from a single language family set up have also borrowed from *Olubukusu* although at a small percentage (21.42%). Children are receiving their input from their parents who are likely also to have been influenced by other languages within the linguistic set up like *Olubukusu*. As already stated, Kenya is a multilingual society with over 42 vibrant indigenous languages, especially in rural areas where they are used by speakers for their daily needs. This has promoted lexical importation among the different languages, a phenomenon that has an impact on child language development.

4.3.3. Loan adaptation in a Single Language Family Set up

This section looks at loan adaptation strategies a loan word undergoes during the acquisition of *Olutachoni*. Loan adaptation strategies from Kiswahili to *Olutachoni* were considered since it is revealed in section 4.3.3 above that a majority of loan words (78.57%) in a single language family set up are from

Kiswahili. Although the two are both Bantu languages, they have a slightly different phonemic inventory that necessitates loan adaptation for smooth communication among children. Batibo (1994) for example, says that the phonetic structure of Kiswahili is relatively simpler than that of the other Bantu languages. Owino (2003) on the other hand observes that Kiswahili contains some consonants of Arabic origin that are not found in other Bantu languages.

The current study adopts Haugen's (2003) definition of loan adaptation. The term adaptation is employed to designate processes by which a borrowed word is changed from the source language form in order to obtain structures that conform to the target language (Haugen 2003; Thomason 2001). In the current study, children from a single language family set up modify the lexical items they retrieve from their mental lexicon in keeping with the pre-existing structure of the target language by use of phonological processes such as epenthesis, aphaeresis, devoicing and tonal adaptation. The different phonological processes employed by the children during loan adaptation are discussed below:

4.3.3.1. Epenthesis

Mutua (2005) in his study defines epenthesis as a type of insertion referring to the addition of one or more sounds in the middle or final position of a word. Owino (2003) in his study defines epenthesis as a process whereby a sound is added to the borrowed word. From the above definitions, epenthesis, according to the current

study, is a phonological process which refers to cases where a phoneme is inserted into a given environment of a word by children who are acquiring a language. This process bequeaths a word with phonetic features which were initially not there. Although the above studies have explored epenthesis as a phonological process employed among adults in language borrowing, epenthesis in this study is found to operate among children in words such as *muliango* (door), *ulimwi* (tongue), and *samwaki* (fish). Other examples of epenthesis are presented in table 4.16 below:

Table 4.16: Epenthesis

Source language form	Target language form	loan adaptation	Epenthesis	Source language	Gloss
<i>ulimi</i> / <i>ʊlɪmɪ</i> /	<i>olulimi</i> / <i>ɔlʊlɪmɪ</i> /	<i>ulimwi</i> / <i>ʊlɪmɔɪ</i> /	[<i>ʊ</i>]	<i>Kiswahili</i>	<i>tongue</i>
<i>samaki</i> / <i>samakɪ</i> /	<i>eing'eni</i> εɪŋɛɪ/	<i>samaki</i> / <i>samɔakɪ</i> /	[<i>ʊ</i>]	<i>Kiswahili</i>	<i>fish</i>

The consonant sound [w] pronounced as a diphthong was inserted in the middle of the vowels /*ʊlɪmɔɪ*/ and /*samɔakɪ*/whereas the vowel sound [ɪ] was inserted in the middle of the word /*mʊlɪaŋɔ*/ (door). Kiswahili has the syllable structure of CVCV, *Olubukusu* CV, and *Olutachoni* VCV. It therefore follows that, *Olutachoni* does not allow a sequence of VVs syllable structure. Such syllable structures were therefore modified by the insertion of a semi vowel [w] between vowels collapsing two vowels into a single, usually a long vowel or diphthong with an intermediate quality. This new form glides more easily among young learners during speech production making the pronunciation easy.

Diphthongs have a noticeable change in quality during their articulation. Batibo (1996) in an article on loan diphthongs in Kiswahili also suggests that diphthongs glide more easily among young learners. According to Dressler (2002:11), epenthesis constitutes a natural response of a child's vocal and perceptual systems to the difficulties encountered in the production and perception of speech. The process of insertion is performed in order to adapt the speaker's phonological intentions to his / her phonetic capacities in order to ease the articulation of the word.

4.3.3.2. Aphaeresis and Syncope

As aforementioned in section 4.2.3.2, aphaeresis and syncope are types of deletion whereby in aphaeresis, the initial sound(s) in a word are lost and in syncope one or more sounds from the interior of a word is deleted. Mukuthuria (2004) defines aphaeresis as the removal of phonological segments at word initial position and syncope as the removal of phonological segments at word medial position. Working with the above definitions, there are cases of aphaeresis produced by children in words such as *chiiko* for *ki-jiko* (spoon), *lango* for *mulango* (door), *fua* for *kifua* (chest) and *kapu* for *ki-kapu* (basket). Cases of syncope are also evident such as *sani* for *sahani* (plate) where sounds [h] and [a] have been ellipted from the middle and *muzi* for *mbuzi* (goat) where the voiced bilabial stop [b] has been ellipted in the medial position. The above examples are presented in table 4.17 below:

Table 4.17: Aphaeresis and syncope

Source language form	Target language form	Loan adapted form	Aphaeresis	Syncope	Source language	Gloss
<i>kijiko</i> /kɪdʒɪkɔ/	<i>esichiko</i> /ɛsɪtʃɪkɔ /	/dʒɪkɔ/	[k] [ɪ]	-	Kiswahili	spoon
<i>mulango</i> /mʊlɑŋɔ/	<i>omuliango</i> /ɔmʊlɪɑŋɔ/	/lɑŋɔ/	[m] [ʊ]	-	Kiswahili	door
<i>kikapu</i> /kɪkɑpʊ/	<i>esikapu</i> /ɛsɪkɑpʊ/	/kɑpʊ/	[k] [ɪ]	-	Kiswahili	basket
<i>kifua</i> /kɪfʊɑ/	<i>esilifu</i> /ɛsɪlɪfʊ/	/fʊɑ/	[k] [ɪ]	-	Kiswahili	chest
<i>Sahani</i> /sahɑnɪ /	<i>esaani</i> /ɛsɑɑnɪ/	/sɑnɪ/	-	[h] [ɑ]	Kiswahili	plate
<i>mbuzi</i> /mbʊzɪ/	/lɪvʊʊsɪ/	/mʊzɪ/	-	[b]	Kiswahili	goat

In table 4.17, sounds [k] and [ɪ] have been ellipped in the word /kɪdʒɪkɔ/ (spoon), /kɪkɑpʊ/ (basket) and /kɪfʊɑ/ (chest); sounds [m] and [ʊ] in the word /mʊlɑŋɔ/ (door) and sound [ʊ] in the word /ʊlɪmɪ/ (tongue). There are also two incidents of syncope in the word /sɑnɪ//sɑnɪ/ for /sahɑnɪ / (plate) where sounds [h] and [ɑ] have been ellipped from the middle and /mʊzɪ/ for /mbʊzɪ/ (goat) where the voiced bilabial stop [b] has been ellipped. One or two elements of the source word is omitted to simplify the spelling or the pronunciation, especially when the original form is hard to pronounce among children.

Children in the current study employ aphaeresis and syncope in order to reduce the number of syllables in the polysyllabic and disyllabic words to make the articulation of the borrowed words easier. This is in line with Oluoch's (2014) argument that it is difficult for children to pronounce disyllabic or polysyllabic words. For this reason, the initial sounds and syllables in the borrowed words are

deleted in order to make the articulation easier for them. Oluoch goes ahead to point out that CV is the only syllable pattern in all languages that is learnt fastest by children. This accounts for the deletion of sound segments in disyllabic and polysyllabic words to come up with a simple open syllable for ease of articulation.

4.3.3.3. Devoicing

According to Owino (2003) and Mutua (2003), devoicing is a feature change where some voiced segments that are not found in the sound inventory of the target language are devoiced. This occurs especially among consonant sounds that are articulated at the same place but have different phonation features between the source language and the target language. Wode (1996:338) argues that all humans apply phonological adjustments needed to comply with dialectical, societal or stylistic changes. Some adjustments in terms of voicing are made in the direction of the target language. Children from the single language family set up engage in the process of devoicing. The examples are given in table 4.18 below:

Table4.18: Devoicing

Source language form	Target language form	devoicing	Source language	Gloss
<i>ndege</i> /ndɛgɛ/	<i>ndeke</i> /ndɛkɛ /	[g] > [k]	<i>Kiswahili</i>	<i>bird</i>
<i>ugali</i> /ugali/	<i>ukali</i> /ukal/	[g] > [k]	<i>Kiswahili</i>	<i>ugali</i>
<i>mudomo</i> /mUdɔ̃mɔ̃/	<i>mutomo</i> /mUtɔ̃mɔ̃/	[d] > [t]	<i>Kiswahili</i>	<i>mouth</i>
<i>maziwa</i> /mazɪuə/	<i>masiwa</i> /masɪuə/	[z] > [s]	<i>Kiswahili</i>	<i>milk</i>
<i>mboga</i> /mbɔ̃gɑ/	<i>mboka</i> /mbɔ̃kɑ/	[g] > [k]	<i>Kiswahili</i>	<i>vegetables</i>

The above results show that children devoiced consonants during the acquisition of vocabulary. Based on the examples above, it means that the devoiced consonants lead to adaptation of loan words from Kiswahili into *Olutachoni*. All the devoiced words from table 4.18 have been borrowed from Kiswahili. This is because all consonant sounds in *Olutachoni* are voiceless and Kiswahili has both the voiced and the voiceless consonants. For example, the voiced alveolar fricative /z/ in /maziuə/ (milk) is realized as the voiceless alveolar fricative [s] as in /masiuə/, the voiced velar stop [g] is realized as the voiceless velar stop [k] in words such as /mbəga/ for /mbəka/, the voiced alveolar stop [d] is realized as the voiceless alveolar stop [t] in words like /mUd̥m̥/ for /mUt̥m̥/. These examples indicate that children acquiring *Olutachoni* as a first language have to devoice the Kiswahili voiced consonant sounds in order to make the pronunciation of such words smoother and easier.

4.3.3.4. Tonal adaptation

Languages are classified under suprasegmental categories such as stress, tone, and pitch-accent (Owino 2003:98). Owino defines a tonal language as having "lexically significant, contrastive but relative pitch on each syllable". That is, tone may be used to distinguish between meanings of words, and every syllable carries at least one significant tone unit. This is not the case for all tonal languages. There are some in which tones are not freely assigned to syllables. Marlo (2008) argues that languages vary in the number and kinds of tones they allow. Considering the

relative similarity of their non-tonal phonological systems, the *Luhya* languages have remarkably different tonal systems. These are among the most typologically diverse tonal systems in all of Bantu languages. In fact, according to Marlo (2008), each *Luhya* language whose tonal system has been studied to date such as *Olumarachi*, *Olutura*, *Olubukusu*, and *Olukhayo* among others has been found to be different. Tonal differences have also been found among other languages Kiswahili not being an exception. In section 4.3.3.5, the results of tonal adaptation among children acquiring *Olutachoni* in a single language family set up are presented.

4.3.3.5 Olubukusu Loan words with Olutachoni Tone

According to Akwala (2008), the resultant loan word could violate the native phonology of the recipient language and bears as much similarity to the source form. This scenario is evident in the results below. Table 4.19 below gives two examples of *Olubukusu* loan words which have retained *Olutachoni* falling tone.

Table 4.19: Olubukusu Loan words with Olutachoni tone

<i>Source language form</i>	<i>Target language form</i>	<i>Tonal adaptation</i>	<i>Source of tone</i>	<i>Source of borrowed word form</i>	<i>Gloss</i>
eenyuni /e:ʒpɔni/	linoni /lɪɳnɔni/	eenyuni /e:ɳpɔni/	<i>Olutachoni</i>	<i>Olubukusu</i>	bird
liiki /lɪ:ʒki/	livuyu /lɪvɪ:ɳju/	liiki /lɪ:ɳki/	<i>Olutachoni</i>	<i>Olubukusu</i>	egg

The examples in table 4.19 reveal that there are cases in a single language family set up where children have imported *Olubukusu* words expected to have a rising tone but have retained the target language (*Olutachoni*) falling tone. This indicates early acquisition of lexical tone prior to the words. This helps children to articulate the loan words easily. These results are in agreement with most recent studies on loan words which have focused on how the segments of the source languages are incorporated into the recipient languages' phonology (Ito 2006; Kang, 2003; Uffmann, 2004).

4.3.3.6 Kiswahili Loan words with Olutachoni Tone

According to Owino (2003), Kiswahili has a marked rising tone which is fixed on the penultimate (second to last) syllables. Marlo (2011) on the other hand observes that *Olutachoni* has a falling tone pattern. Table 4.20 below gives some examples of Kiswahili loan words which are meant to have a rising tone but due to tonal adaptation, have retained the *Olutachoni* falling tone.

Table 4.20: Borrowed Kiswahili loan words with Olutachoni tone

<i>Source language form and tone</i>	<i>Target language form and tone</i>	<i>Tonal adaptation</i>	<i>Source of tone</i>	<i>Source of borrowed word form</i>	<i>Gloss</i>
sufuria /sufuʃria/	esifuria /ɛsɪʎfɔria/	sufuria /sufuʎria/	Olutachoni	Kiswahili	sufuria
nguo /ŋuʃʒ/	einguvo /ɛɪŋuβʒ/	nguo /ŋuʎʒ/	Olutachoni	Kiswahili	dress
ng'ombe ŋʒʃmbe/	esiayo /ɛsiaʎjʒ/	ng'ombe ŋʒʃmbe/	Olutachoni	Kiswahili	cow
kuku /kuʃku/	eingokho /ɛŋʒʎxʒ/	kuku /kuʎku/	Olutachoni	Kiswahili	chicken

The results in table 4.20 above reveal that Kiswahili loan words retain *Olutachoni* falling tone while being adapted into *Olutachoni* for easier articulation among the children. This indicates that children acquiring *Olutachoni* as a first language master the tone of the target language earlier than the words themselves. These results are in line with Katamba and Rottland (1987) who postulates that it is easier for young learners to acquire suprasegmental phonology than the segments themselves. Table 4.21 below summarizes the frequencies of loan words that have undergone tonal adaptation.

Table 4.21: Tonal adaptation

The tone borrowed	N	%
Borrowed Olubukusu word and retain <i>Olutachoni</i> tone	2	14.28
Borrowed Kiswahili word and retain <i>Olutachoni</i> word	12	85.71
Total borrowing	14	100

The results in table 4.21 are also presented in figure 4.9 below:

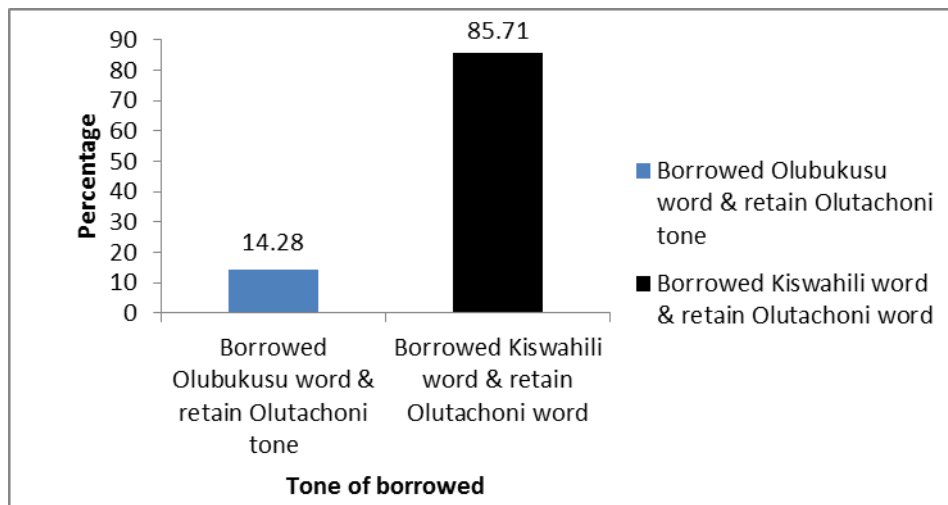


Figure 4.9: Tonal adaptation

Table 4.21 and figure 4.9 indicate that the least cases of tonal adaptation (14.8%) are *Olubukusu* loan words that have retained *Olutachoni* tone and the majority of the cases (85.71%) are Kiswahili loan words that have retained *Olutachoni* tone. This implies that children from a single language family set up have Kiswahili as the main source language within their linguistic environment. The (14.8%) cases from *Olubukusu* could have arisen from the parents' influence on the children or the children's interactions with other *Olubukusu* speakers a fact that cannot be totally ruled out in any multilingual setting. This indicates that young learners are able to acquire the target tone sometimes earlier than the target form during the acquisition of a first language.

Loan adaptations also indicate that the children have a low lexi-mor-phonological competence in their target language and have consequently used loan adaptations as a learning strategy as they acquire *Olutachoni* as a first language. The next section gives a cross tabulation of the types of loan adaptation.

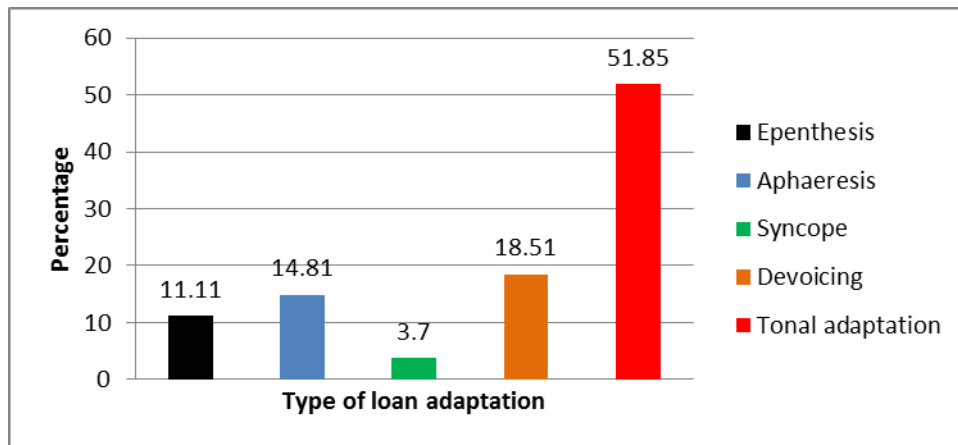
4.3.4. A Cross Tabulation of the Types of Loan Adaptation

There is need to come up with a general over view of the different types of loan adaptations in order to find out how each one of them affects the acquisition of *Olutachoni*. The frequencies of epenthesis, aphaeresis, syncope, devoicing and tonal adaptation are therefore presented in table 4.22 and figure 4.10 below:

Table 4.22: Types of loan adaptation

Type of loan adaptation	N	%
Epenthesis	3	11.11
Aphaeresis	4	14.81
Syncope	1	3.70
Devoicing	5	18.51
Tonal adaptation	14	51.85
Total	27	100

For clarity purpose, the results in table 4.22 are presented in figure 4.10 below:

**Figure 4.10: Types of loan adaptation**

From the examples above, epenthesis occurs 3 times which translates to 11.11%, aphaeresis occurs 4 times which translates to 14.81%, syncope occurs once which translates to 3.70%, devoicing occurs 5 times which translates to 18.51%, while tonal adaptation takes place 14 times which translates to 51.85%. The above figures imply that children make more use of tonal adaptation followed by devoicing, aphaeresis, epenthesis and finally syncope as strategies towards the acquisition of *Olutachoni*. Tonal adaptation is more productive since, as

mentioned earlier, children tend to acquire suprasegmental phonology earlier than the segments. Loan adaptation strategies have been used to ease the burden of articulation and pronunciation which is sometimes difficult among children. This enables language users to communicate in a manner acceptable to their language and age.

4.3.5. Types of Loan Adaptations and the Source Language.

In order to establish the source language for the various types of loan adaptations, a comparative analysis was done between the type of loan adaptation and its respective source language. Table 4.23 and figure 4.11 gives a summary of loan adaptations and their source language.

Table 4.23: Types of loan adaptations and source language

Source language Type of loan adaptation	Olubukusu		Kiswahili	
	N	%	N	%
Epenthesis	0		3	12.0
Aphaeresis	0		4	16.0
Devoicing	0		5	20.0
Syncope	0		1	4.0
Tonal adaptation	2	100	12	48.00
Total	2	100	25	100

The results in table 4.23 are also presented in figure 4.11 below for clarity:

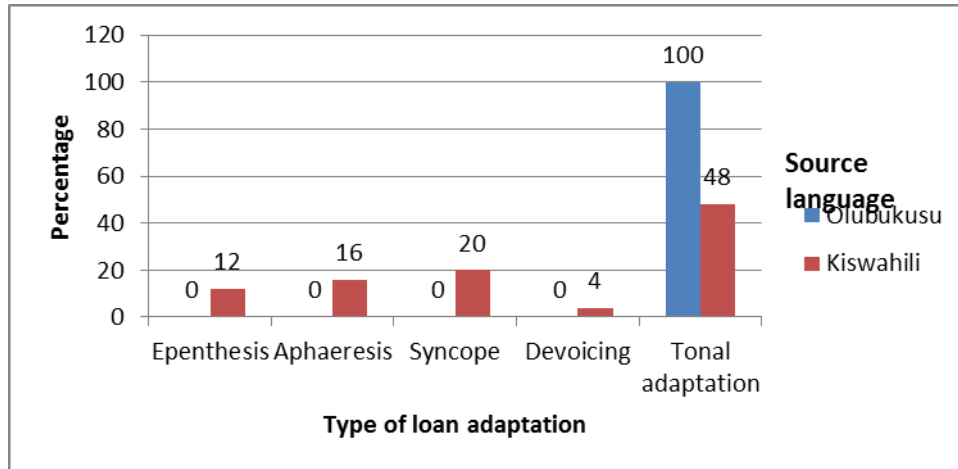


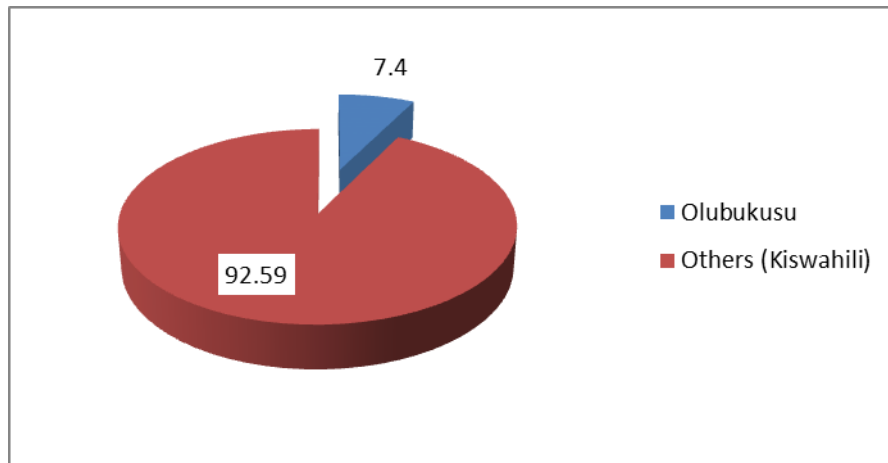
Figure 4.11: Types of loan adaptations and source language

Results in table 4.23 and figure 4.11 indicate that there are only 2 cases of tone adaptation from *Olubukusu*. This is because subjects from the single language family set up have minimal input from *Olubukusu*. From Kiswahili, tonal adaptation has the highest percentage (48%), followed by syncope (20%), aphaeresis (16%), epenthesis (12%) and the least is devoicing with (4%). This implies that tonal adaptation from Kiswahili is the most productive towards the acquisition of *Olutachoni* as a first language followed by syncope, aphaeresis, and epenthesis and devoicing. Table 4.24 and figure 4.12 below give a general summary of the source language and loan adaptation in a single language family set up.

Table 4.24: Source language and loan adaptation

Source language	N	%
Olubukusu	2	7.40
Others (Kiswahili)	25	92.59
Total	27	100

The results in table 4.24 are also presented in figure 4.12 below:

**Figure 4.12: Source language and loan adaptation**

The results in table 4.24 and the figure 4.12 reveal that the main source (92.59%) of loan adaptations in a single language family set up is Kiswahili. This is because children under investigation (S2, S4, S6, S8, and S10 and S12) have both parents as native speakers of *Olutachoni*. Kiswahili is therefore the most available source language to them. Kiswahili provides the most input when children are faced with a lexical gap because it is spoken by nearly 100 percent of the Kenyan population. *Olubukusu* provides only (7.40%) of loan adaptations. As explained earlier, Hoffer (2005:67) attest to the fact that robust interaction between communities of

speakers of different languages is widespread throughout history. Language contact breeds linguistic borrowing—a phenomenon as old as language itself—adoption and nativization of phonemes, morphemes, words, and syntactic constructions from another language. Therefore, the children are likely to have borrowed *Olubukusu* words from such interaction with the family members or peers.

4.3.6. A Cross tabulation of Loan words and Loan adaptation

Lexical importation, just as in the mixed language family set up involves loan words and loan adaptation. This section gives a comparison of the two strategies in reference to the acquisition of *Olutachoni* for clear understanding of how the two processes manifest themselves in a single language family set up. Table 4.25 and figure 4.13 give a summary of the frequencies for the two processes:

Table 4.25: Lexical importation

Type of lexical importation	N	%
Loanwords	14	34.14
Loan adaptation	27	65.85
Total	41	100

The information in table 4.25 is presented in figure 4.13 below for clarity:

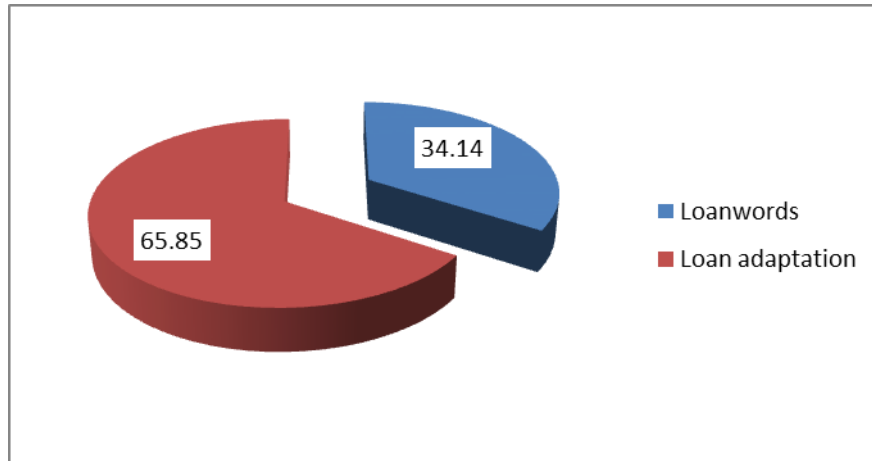


Figure 4.13: Lexical importation

Results from table 4.25 and figure 4.13 indicate 41 instances of lexical importation in a single language set-up. Specifically, the least used strategy is loan words with 14 (34.14%) and the majority of the cases are loan adaptations with 27 (65.85%). These results indicate that children had already partially acquired the target language.

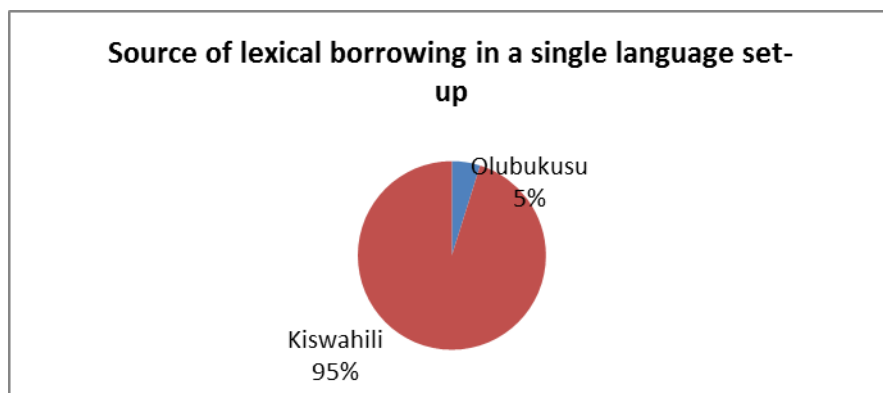
4.3.7. Lexical Importation and the Source Language

As mentioned earlier, it is important to identify the source language(s) of the two types of lexical importation in order to ascertain the main source language during child language acquisition. Table 4.26 and figure 4.14 below summarize the source language for lexical importation:

Table 4.26: Source of lexical importation

Source language	N	%
Olubukusu	2	4.87
Kiswahili	39	95.13
Total	41	100

The information in table 4.26 is also presented in figure 4.14 below:

**Figure 4.14: Source of lexical importation**

The results in table 4.26 and the figure 4.14 reveal that the main source (95.13%) of loan words and loan adaptation in a single language family set up is Kiswahili. Parents of the children under investigation (S2, S4, S6, S8, S10 and S12) are native speakers of *Olutachoni*. When such children are faced with a lexical gap during language acquisition, the most available language they resort to is Kiswahili. An estimated two-thirds of the Kenyan population speak Kiswahili (Githiora 2008:236). Githiora adds that, “Swahili is widely accepted as ...the language of communication among Kenyans of all regional and social backgrounds.” It is considered a unifying language that cuts across ethnic and socio economic barriers, and that perpetuates a feeling of “shared fate” and

“intimacy.” The same results show that (4.87%) of loan words and loan adaptation are from *Olubukusu*. This means that, even in a single language set up, there was a possibility of the children having interacted with speakers of other languages not necessarily Kiswahili and *Olutachoni*.

4.3.8 A Cross tabulation of Lexical importation and the Language Family Set up

In view to objectives one and two of the study, it is paramount to give a broad overview of the cases of lexical importation from the two language set ups. This would help to identify and describe the nature of lexical importation from the two language set ups in a clear manner. Table 4.27 and figure 4.15 give a summary of the frequencies of lexical importation in the mixed and single language family set ups:

Table 4.27: Lexical importation and family set up

Set-up	N	%
Mixed	122	74.84
Single	41	25.15
Total	163	100%

For clarity purposes, the results in table 4.27 are also presented in figure 4.15 below:

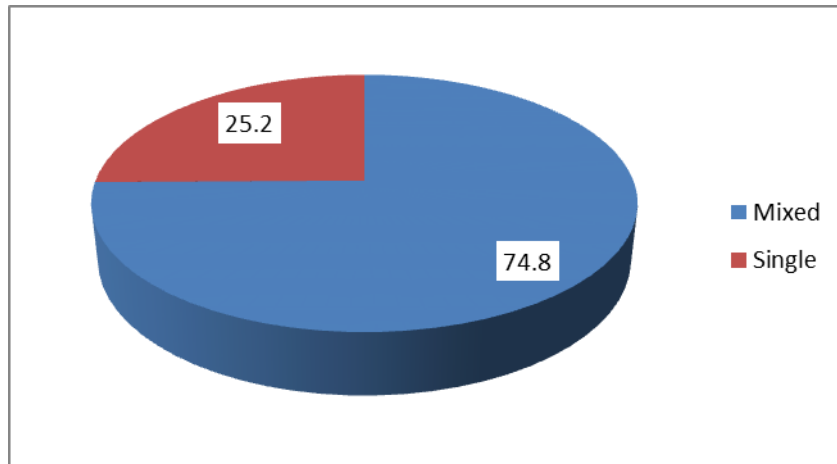


Figure 4.15: Lexical importation and family set up

The results in table 4.27 and figure 4.15 show that there are cases of lexical importation in both single and mixed language family set ups although at varying percentages. From the mixed language set up, there are 122 (74.84%) cases of lexical importation, whereas in the single language set up there are 41 (25.15%) cases of lexical importation. These results imply that children have not acquired the linguistic competence to produce words accurately.

Cases of lexical importation are higher in the mixed language family set up than they are in the single language family set up. This can be attributed to the fact that in the mixed language family set up; children have borrowed extensively from both *Olubukusu* and Kiswahili, unlike in the single language family set up where children have not borrowed extensively from *Olubukusu* apart from Kiswahili. This is in line with Paradis and Lancharite (2008) who maintain that children and adults who are in contact with many languages tend to borrow more than those who are in contact with one language. Also, there are cases of historical loan

words from English and Kiswahili from which adults and children are likely to borrow from. According to Lanza (2004), a high degree of family bilingualism increases the likelihood of adoption (loan words) and adaptation (loan adaptation). This explains why children from a mixed language family set up have more cases of lexical borrowing than those from single language family set up.

4.3.9. Sources of Lexical Importation in the Single and Mixed Language Family Set ups

Source language plays an important role in determining words that undergo lexical importation in phonological development of children in a given language. The aim of using lexical importation strategies among children is to simplify the adult form in order to ease communication. As a child begins to master individual phonemes and suppress the use of various lexical importation processes, speech intelligibility is likely to improve. Speech intelligibility varies from child to child according to the source language and the linguistic environment. Table 4.28 and figure 4.16 below give a comparison of sources of lexical importation in both the single and the mixed language family set ups.

Table 4.28: Sources of lexical importation in the two set ups

Language Set up	Single	mixed
Olubukusu	5 (12.19)	71 (81.60%)
Kiswahili	36 (87.80)	51 (58.62%)
Total	41 (100%)	87 (100)

The results in table 4.27 are also presented in figure 4.16 below for clarity purpose:

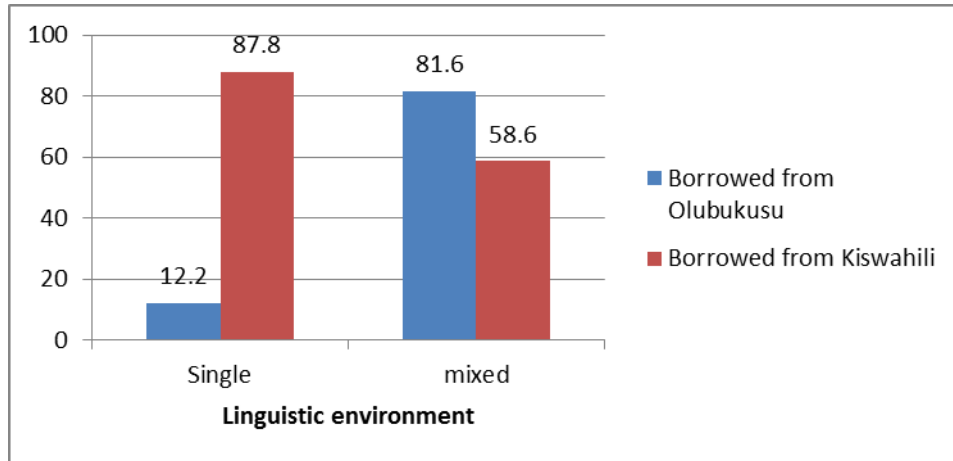


Figure 4.16: Sources of lexical importation in the two set ups

Table 4.28 and figure 4.16 show that in a mixed language family set up, (81.60%) of the words have been borrowed from *Olubukusu* whereas (58.62%) of the words from Kiswahili. On the other hand, in a single language family set up, (12.9%) of the words have been borrowed from *Olubukusu* whereas the majority (87.80%) of the words are from Kiswahili. The extensive lexical importation from *Olubukusu* in a mixed language family set up is due to the influence of the mothers' native language (*Olubukusu*). This is in line with Grosjean's (1998) argument that adult language usage is transmitted to children within the family environment that provides the requisite material for linguistic development.

On the other hand, extensive lexical importation from Kiswahili (87.80%) from a single language family set up and partly in a mixed language family set up (58.62%) imply that children get input from Kiswahili, apart from *Olutachoni*.

Kiswahili is a national language and therefore, it is used as a L2 by a majority of Kenyans. The study could not ignore cases of lexical importation from Kiswahili because they were so conspicuous in the speech of the children. Also, lexical importation from Kiswahili is also initiated by the appearance of new objects and notions within the linguistic environment that culturally have no names in *Olutachoni* even among adults. Therefore, lexical importation progresses for the purpose of identification and naming of new entities in the material world and new concepts which broaden knowledge and awareness of social and natural environment among children just as it does among adults.

There are also a few cases (12.19%) where children from the single language family set up imported words from *Olubukusu*. This could be as a result of *Olubukusu* and *Olutachoni* being geographically close, therefore, promotes cases of CLIs between the two languages. *Olubukusu* and *Olutachoni* are genealogically related since they fall under the 16 *Luhya* languages within the Bantu group of speakers. Geographically, the two languages are related in terms of origin since the majority of *Olutachoni* and *Olubukusu* speakers come from the Western region of Kenya specifically within Bungoma County. McMahnnon (1994:204) argues that related languages are more likely to borrow from each other, especially if they are so closely related that mutual intelligibility is relatively easy to establish.

4.4. Summary of Findings

The chapter has investigated and established that lexical importation is a strategy that children employ during first language acquisition process. The strategy is prevalent in both single and mixed language family set ups although at varying degrees. Lexical importation is manifested through two main strategies: Loan words and loan adaptations. It has arisen out of situations where a child wants to name an object; yet, he/she has not learnt the correct target word to use in naming the object. This forces a child to use cognitive mental process to generate new words by working out their own phonological and morphological rules of the target vocabulary they have been exposed to from their linguistic environment.

In loan adaptations, the target language words (*Olutachoni*) are phonologically integrated with *Olubukusu* and Kiswahili loan words. From the findings of this chapter, children from the mentioned linguistic set ups have employed loan adaptation processes such as tonal adaptation, syncope, aphaeresis, epenthesis and devoicing. These are phonological processes which are patterns of sound and tonal strategies that young children use to simplify speech as they are learning to talk. They do this because they do not have the ability to coordinate the lips, tongue, teeth, palate and jaw for clear speech. As a result, they simplify complex words in predictable ways until they develop the coordination required to articulate clearly.

These processes are considered normal unless they persist beyond the age when most typically developing children have stopped using them. For example, if a 4 year old still uses the phonological process of “reduplication” (saying, “wawa” for “water”) this would be considered delayed speech since most children stop using that process by the time they turn 3 years (Paradis and Lucharite (1997). The excessive use of phonological processes can also indicate a phonological disorder because when multiple phonological processes are exhibited together it usually increases the child’s unintelligibility making their language really difficult to understand. As a result, if you have a highly unintelligible child, the child is likely to have a phonological delay, and the phonological skills should be assessed when considering a treatment plan.

The above argument is in line with Silverman(1992) who observe that speech adaptation processes are a normal and natural part of language development and are to be expected in children just beginning to speak. However, if they persist beyond age five or six, therapy may be necessary. In the words of Jarvis and Pavlenko (2008: 73), the assumption of the mental interconnectedness of words consequently means that the knowledge of words in one language may influence how words in another language are processed and produced. Generally, it is revealed in this section that lexical importation is a learning strategy in the process of acquiring *Olutachoni* as a first language. The process leads to target language proficiency in both single and mixed language family set ups. Lack of vocabulary in the target language, incomplete word knowledge, non-automatized and

therefore not available lexical knowledge, or a cognitively too demanding communicative task are situations that make the learner replace target language words with source language ones. The next chapter discusses cases of lexical inventions in the mixed and the single language family set ups.

CHAPTER FIVE

LEXICAL INVENTION IN THE ACQUISITION OF OLUTACHONI AS A FIRST LANGUAGE

5.1 Introduction

This chapter presents and analyzes data on lexical invention which is another strategy of lexical borrowing employed by children. Data analysis is presented by identifying lexical inventions and describing the nature of lexical invention produced by children. These children are acquiring *Olutachoni* as their first language in an *Olutachoni-Olubukusu* and in *Olutachoni-Olutachoni* family set ups. Many of the outcomes of cross-linguistic influences involve innovations or creations that have no counterparts neither in the source language nor the target language. Some of these innovations may be created out of donor materials; others may be created out of the source language materials, still other creations are blends of the source language and the target language items (Winford 2003). Using Winford's definition of lexical invention, the current study identified blends of the target language (*Olutachoni*) and the source language (*Olubukusu and Kiswahili*) materials hence called them lexical inventions. Lexical invention therefore, is the production of forms in which a free or bound non-target morpheme is affixed on a

different free or bound target morpheme to form an approximated target language word.

This study borrowed Alleton's (2001) classification of lexical inventions (which he calls hybrids) according to the affixation process. Crystal (1991) defines affixation as the morphological process in which grammatical and lexical information is added to a stem. Fromkin and Rodman (1988:131) on the other hand, define affixation as a process in which prefixes, infixes and suffixes are conjoined to other morphemes to form words. When this happens in a language, it makes it easy for language users to communicate naturally, in this case, children. Alleton (2001) categorizes hybrid forms as blended stems and derivational blends. Blended stems comprise of compound blends that form a word out of two or more root morphemes that give rise to compound words. Derivational blends on the other hand involve the addition of one or more affixes to a root, which is either a prefix or a suffix through affixation. From the data of this study, lexical inventions were formed through prefixation process whereby a bound morpheme (prefix) was attached before a stem/root of a word in order to make a derivational blend.

In terms of nominal inflection, *Olutachoni* and *Olubukusu* are characterized by rich inflectional systems. The two languages display the same noun class system as attested across Bantu languages, where every noun belongs to a specific noun class, equivalent to grammatical gender (Mutonyi, 2000). Agreement forms that are triggered by other syntactic elements such as verbs, auxiliaries, adjectives,

demonstratives, and complementizers therefore inflect for noun class as well. Each noun class is defined by the prefixes which appear on nouns.

Like in most Bantu languages, *Olutachoni* and *Olubukusu* assign every noun to one class identified by a unique prefix structure. As a distinguisher of grammatical class, the prefix is an obligatory component of every noun in *Olutachoni* and *Olubukusu*. For instance, Class 1 nouns are identified by the prefix structure {*o-mu-*}, as in *omukeeni* ‘visitor.’ The prefix structure not only marks the class affiliation of a noun but also indicates number, that is, it says that there is either a single or multiple occurrences of the referent. Both *Olubukusu* noun and *Olutachoni* noun consist of two principal parts: the prefix component and the stem (Tables 5.0 and 5.1). The prefix component further breaks down into a pre-prefix (pref. 1) and a prefix (pref. 2). The stem is a simple root in the case of lexical nouns or the root plus a derivational suffix in the case of derived nouns.

Basic Noun Structure: $\left[\text{[pref. 1 + pref. 2] + [STEM] Noun} \right]$

A difference in terms of prefixation between *Olubukusu* and *Olutachoni* noun classes was important in understanding the nature of lexical invention among children between the two languages in the present chapter. The *Olutachoni* noun-class morphology, though significantly different from that of *Olubukusu*, the two are closely related as exemplified in tables 5.0 and 5.1 below on *Olutachoni* and

Olubukusu noun class morphology. Mutonyi (2000:6) gives a summary of

Olubukusu noun classes as follows:

Table 5.0: Olubukusunoun class morphology

Class	Preprefi x	Prefix	Example	Gloss
1	o-	mu-	omusechababa	‘man’
2	ba-	ba-mu-	anakumukhon	‘children’
3	ku-	mi-	okimikhonolil	‘arm/hand’
4	ki-	li-	yaandakamaan	‘arms/hands’
5	li-	ma-	dasisyaangubi	‘ember’
6	ka-	si-	byaangueendu	‘embers’
7	si-	bi-	bichiindubilul	‘sponge’
8	bi-	N-	wiikakhakhaan	‘sponges’
9	e-	N-	a	‘basket’
10	chi-	lu-	bubwiino	‘baskets’
11	lu-	kha-	khukhwanja	‘horn’
12 (Diminutive)	kha-	bu-khu-	amulyaango	‘small child’
14	bu-		syamulyaango	‘ink’
15	khu-		khumulyaango	‘to begin’
16(Locative ‘at’)	a-		mumulyaango	‘at/near the door’
16a (Locative ‘towards’) 17(Locative ‘on’)	sya-		kukwaana	‘towards the door’
18(Locative ‘in’)	khu-	key-	kimyaana	‘on the door’
20(Augmentative)	mu-	mi-	enaarobi	‘in ‘the door’
/4	key-			‘big child’
23(Locative ‘in the Vicinity of’)	ki-			‘big children’
	e-			‘at Nairobi’

Source: Mutonyi (2000:6)

Table 5.0 shows that many noun classes in *Olubukusu* exhibit “full double prefixes,” which means that their prefix structure comprises of two CV-syllables (CVCV). For instance, in the Class 2 noun *vavandu* “people”, the prefix unit {*va-va-*} comprises two identical syllables (CVCV). Table 5.1 gives a summary of *Olutachoni* noun class morphology for comparison.

Table 5.1: Olutachoni noun class morphology

Class	Pre-prefix	Prefix	Example	Gloss
1	o-	mu-	omusacha	'woman'
2	a-	va-	avana	'children'
3	o-	mu-	omukhono	'arm/hand'
4	e-	mi-	emikhono	'arms/hands'
5	e-	li-	elyaanda	'ember'
6	a-	ma-	kamaanda	'embers'
7	e-	si-	esyaangu	'sponge'
8	e-	bi-	ebyaangu	'sponges'
9	e-	N-	eesikono	'basket'
10	e-	N-	eviikono	'baskets'
11	o-	lu-	olwiika	'horn'
12 (Diminutive)	a-	kha-	akhaana	'small child'
14	o-	bu-	obwiino	'ink'
15	khu-		khwanja	'to begin'
16 (Locative 'at')	a-		amulyaango	'at/near the door'
16a (Locative 'towards')	sya-		syamulyaango	
17 (Locative 'on')	khu-		khumulyaango	'towards the door'
18 (Locative 'in')	mu-		mumulyaango	
20 (Augmentative)	o-	ku-	okwaana	'on the door'
/4	e-	mi-	emyaana	'in the door'
23 (Locative 'in the Vicinity of')	e-		enaarobi	'big child' 'big children' 'at Nairobi'

Source: Author

Olutachoni exhibits a prefix structure that comprises of V-CV. Thus, in the Class 2 noun *avandu* "people", the prefix unit {*a-va-*} (VCV) does not comprise of two identical syllables like for the case of *Olubukusu*. In *Olutachoni*, there are 7 types of derivational prefixes, which help in the formation of nouns. Integrated nominal loan words have accepted this process of derivation. To form a noun, you need a nominal prefix showing the singular {*o-*}, {*e-*} or the plural prefix {*a-*} among others. Thus, the structure will be: Nominal Prefix + Nominal Root.

It therefore follows that, the way derivational morphology operates in *Olutachoni* and *Olubukusu*, nominal morphology is entirely based on prefixation. In the two languages, noun classes falling in the lexical category includes classes 1-11 and 14, whereas derived classes include classes 12, 15-18, 20, and 23. The latter category are considered derived because to form them a prefix structure bearing a specific meaning is added to a noun stem belonging to another noun class. The resultant noun designates a “derived meaning” such as diminution, augmentation, or location.

Having reported the basic nominal paradigms in *Olubukusu* and *Olutachoni* respectively, it is noted that most nominal pre-prefixes in *Olutachoni* are single vowels unlike prefixes in *Olubukusu* which combine a consonant and a vowel. It is interesting to note that some of the lexical items from the two languages are totally different (class 9). This is an incidence that arises into cases of lexical invention in a mixed language family set up where children from such families acquire the *Olubukusu* structure of CVCV in their attempt to communicate in *Olutachoni* that employs the structure of VC.

The next section discusses instances of lexical invention from children acquiring *Olutachoni* as their first language in a mixed language family set up.

5.2 Lexical Invention in a Mixed Language Family Set up

This section identifies and describes the nature of lexical inventions in an *Olutachoni-Olubukusu* language family set up for S1, S3, S5, S7, S9 and S11. The mothers to the above subjects are native speakers of *Olubukusu* whereas their fathers are native speakers of *Olutachoni*.

Due to the disparity discussed in section 5.1 above between *Olutachoni* and *Olubukusu* prefixation, lexical invention among the children took various prefixation forms. The prefixation forms included, *Olubukusu* base and *Olutachoni* prefix, *Olubukusu* prefix and *Olutachoni* base and *Olutachoni* prefix and Kiswahili/English base as discussed below:

5.2.1. Olubukusu Base and Olutachoni Prefix

As mentioned earlier, prefixation is the main word formation process among Bantu languages *Olutachoni* being one of them. For this reason, some children borrowed the lexical base from *Olubukusu* and attached the *Olutachoni* prefix during the acquisition process. The resultant word was a hybrid form that was neither acceptable in *Olutachoni* nor *Olubukusu* among adult speakers. However, the word was morphologically plausible. This was observed in words such as *o-murongoro* (tree), *i-khaafu* (cow), *e-sifuva* (chest), *o-vuulo* (millet) among others. Table 5.2 gives a summary of the words with the *Olubukusu* lexical base and *Olutachoni* prefix:

Table 5.2: Olubukusu base and Olutachoni prefix.

Olubukusu lexical base	Olutachoni Prefix	Lexical invention	Target language word	Source language word	Gloss
murongoro	o-	o-murongoro	o-musala	Ku-murongoro	tree
Vuulo	o-	o-vuulo	o-vuule	vuulo	millet
Vuufu	o-	o-vuufu	o-vuusie	vuufu	flour
Khafu	i-	i-khafu	i-siayo	e-khafu	cow
Siimbo	i-	i-siimbo	i-ndavuusi	e-siimbo	Walking stick
Ndemu	e-	i-ndemu	i-njukha	e-ndemu	snake
vikele	e-	e-vikele	e-vilenge	viikele	Legs
sisaala	e-	e-sisaala	e-sifumbi	e-ndeve	Chair
sifuva	e-	e-sifuva	e-silifu	siifuva	Chest
nduvi	e-	e-nduvi	e-sikono	e-nduvi	Traditional basket
viiraro	e-	e-viraaro	e-vilaro	viiraro	Shoes
maremwa	a-	a-maremwa	a-matore	Ka-maremwa	Bananas
meechi	a-	a-meechi	a-maachi	Ka-meechi	Water
nyuuni	li-	li-nyuuni	li-noni	e-nyuuni	Bird

The base is the most important component in a morpheme because it has the highest level of activation compared to the bound morphemes and therefore carries the main meaning of a given morpheme (Grosjean 2001). From table 5.2 the bases from *Olubukusu* reveal that *Olubukusu* is the prominent language within the word. For example, the speaker produces the lexical invented form [*o-murongoro*] for “a tree.” The *Olubukusu* word [*kumurongoro*] provides the first half of the form (the base) and the *Olutachoni* target word [*omusala*] provides the second half (the prefix). There is an influence from the *Olubukusu* base ‘*murongoro*.’ on which the *Olutachoni* prefix {*o-*} is attached. The learner might have been trying to produce the noun ‘*omusala*’ [tree] but did not possess the complete morpho-phonological information for the word. These results prove Levelt’s theory of speech production

that the language or the the morpheme with the highest level of activation in a child's mental lexicon is acquired first.

5.2.2. Olubukusu Prefix with Olutachoni Base

This section presents data where by children are relying on the legitimate *Olutachoni* bases attached to illegitimate *Olubukusu* prefixes. This allows the adapted word to fit in the *Olutachoni* morphological noun classes and hence allow for grammatically correct communication. Table 5.3 summarizes cases of *Olubukusu* prefix and *Olutachoni* lexical base.

Table 5.3: Olubukusu Prefix with Olutachoni Base

Olutachoni lexical base	Olubukusu prefix.	Lexical invention	Olutachoni word	Olubukusu word	Gloss
ndavusi	{e-}	e-ndavusi	i-ndavusi	e-siimbo	Walking stick
ningilo	{e-}	e-ningilo	i-ningilo	e-ningilo	Cooking pot
Sioongo	{e-}	e-sioongo	i-sioongo	e-soongo	Water pot
noni	{e-}	e-noni	li-noni	e-nyuuni	Bird
njukha	{e-}	e-njukha	i-njukha	e-ndemu	Snake
mapwooni	{Ka-}	Ka-mapwoni	a-mapwoni	Ka-mapwondi	Sweet potatoes
matoore	{Ka-}	Ka-matoore	a-matoore	Ka-maremwa	Bananas
matuma	{Ka-}	Ka-matuma	a-matuma	Ka-maindi	Maize
musala	{Ku-}	Ku-musaala	o-musaala	Ku-murongoro	Tree
mwikho	{Ku-}	Ku-mwikho	o-mwikho	Ku-mukango	Cooking stick
silotwa	{Ku-}	Ku-silotwa	e-silotwa	Ku-muvaano	Knife
vusie	{o-}	o-ovusie	o-vusie	ovuufu	Flour

From the results in table 5.3 children attached *Olubukusu* prefix on the *Olutachoni* base. This indicated that *Olutachoni* is the most prominent language within the inflectional morpheme. This was evidence that children had in a way acquired the word formation rules of the target language but had not acquired some of the words themselves due to the lack of differentiation between two languages within

the family set up. As already stated in the earlier section, the learner might have been trying to produce the target word like *i-ndavusi* “walking stick” but lacks the complete morpho-phonological information for the word. Therefore, the learner had to find a possible reinforcement from the input to help her acquire the word and therefore produced “*e-ndavusi*.” According to Dewaele (1994), this phenomenon is typical of learners whose interlanguage is not yet very advanced. In support of this possibility, it was found that young bilingual children mix more when they use their less proficient than their more proficient language (Genesee, Nicoladis and Paradis 1995 Lanvers 2001). Evidence for grammatical-gap filling is in line with Lanza (2004) who reports that bilingual children often mix inflectional free morphemes from their more proficient language with inflectional bound morphemes from their less proficient language. In this case, *Olutachoni* is the most proficient language because it provides the free morpheme during language acquisition.

5.2.3. Olutachoni Prefix and Kiswahili/English Base

Like other Bantu languages, Kiswahili has a rich noun class system. Traditionally, there are eighteen (18) noun classes, each class with a particular class prefix attached to the base of the noun. There are 10 classes of singular nouns with their plural counterparts. Again, there is a class for abstract nouns, a class for verbal infinitives used as nouns, and three locative classes (Mohammed 2001). These classes are divided into semantic characteristics such as classes for human beings,

animals, plants, artifacts, abstract concepts and location determined by nominal prefixes. Table 5.4 below summarizes cases of words that comprise of *Olutachoni* prefix and Kiswahili lexical base.

Table 5.4: Olutachoni prefix and other language(s) lexical base

Olutachoi prefix	Other language lexical base.	Lexical invention	Source languages	Kiswahili/English word	Gloss
{i-}	nguvo	inguvo	Olutachoni-Kiswahili	nguvo	dress
{o}	ulimi	olulimi	Olut-Kiswahili	Ulimi	Tongue
{e}	peseni	epeseni	Olut-English	basin	basin
{a}	machi	amachi	Olut-Kiswahili	Maji	Water
{a}	maindi	amaindi	Olut-Kiswahili	maindi	maize
{i-}	mbwa	imbwa	Olut-Kiswahili	mbwa	dog
{e-}	sichiko	esichiko	Olut-Kiswahili	Kijiko	spoon
{e-}	sufuria	esufuria	Olut-Kiswahili	Sufuria	sufuria
{e-}	litirisia	e-litirisia	Olut-Kiswahili	dirisha	window
{e-}	pusi	e-pusi	Olut-English	pussy	pussy cat
{o-}	muliango	omuliango	Olut-Kiswahili	mulango	Door
{olu-}	karaya	olukaraya	Olut-Kiswahili	karayi	Wash basin
{o-}	mukhono	omukhono	Olut-Kiswahili	mukono	hand
{esi-}	kombe	esikombe	Olut-Kiswahili	kikombe	cup

The results in table 5.4 show that children acquiring *Olutachoni* formed hybrid words (lexical inventions) with Kiswahili/English morphemes. Children are relied on the already known and well established prefixes to form lexical inventions such as the *Olutachoni* class prefixes {a}, {e}, {i} and {o} which were correctly attached to the illegitimate stems borrowed from Kiswahili but expressing a legitimate meaning. The bulk of Kiswahili loan words are assigned to noun class 9/10. These classes take the names of animals and miscellaneous objects. The classes are marked by a zero class prefix. In these classes, the singular and plural

forms of a word are marked by a zero morph - { \emptyset } and are therefore not apparent in the surface form. During language acquisition process, children attached *Olutachoni* prefixes on such words to make them suit into the morphological structure of *Olutachoni* for communication purpose.

5.2.4. A Cross tabulation of the Types of Lexical Invention

Lexical invention in a mixed language family set-up occurred in three different forms: *Olubukusu* base and *Olutachoni* prefix, *Olubukusu* prefix and *Olutachoni* base and *Olutachoni* prefix and Kiswahili/English base. In order to have a clear understanding of the various types, the frequencies for the various types are summarized in table 5.5 and fig 5.1 below:

Table 5.5: Types of lexical invention

Types of lexical invention	N	%
Olubukusu base-Olutachoni prefix	25	33
Olutachoni base-Olubukusu prefix	13	17
Other language base-Olutachoni prefix	37	49
Total	75	100

The results in table 5.5 above are presented in figure 5.1 below for clarity:

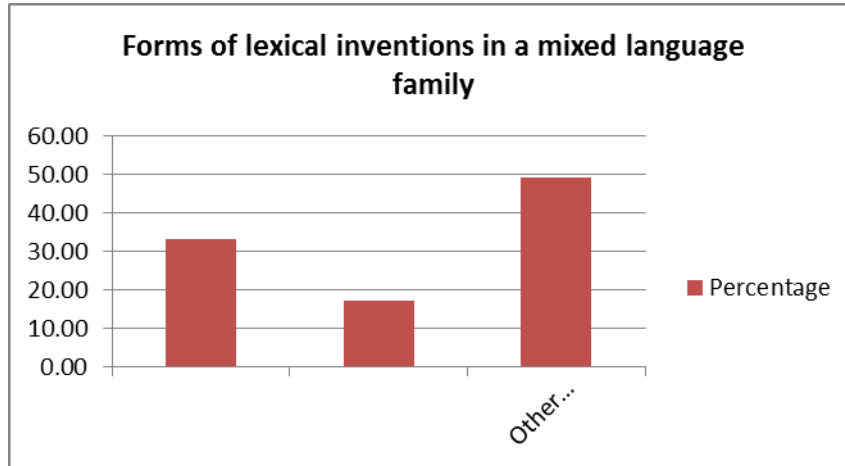


Figure 5.1: Types of lexical invention

From the results in table 5.5 and figure 5.1, the highest form of lexical invention (49%) occurs between the base of other languages and the prefix from *Olutachoni/Olubukusu*. This is followed by 33% of *Olubukusu* base and *Olutachoni* prefix and finally 17% of *Olutachoni* base *Olubukusu* prefix. The 33% of *Olubukusu* base and *Olutachoni* prefix and the 49% of other language base-*Olutachoni* prefix indicate that the child has not yet acquired the target language (*Olutachoni*) fully, whereas 13% of *Olutachoni* base and *Olubukusu* prefix indicate that the child is on the verge of acquiring the target language fully. This is attributed to the fact that the base carries the main meaning of a given morpheme because the base has the highest level of activation (Grosjean 2001).

The above cases of lexical inventions are explained in relation to Levelt's theory of speech production (Dawaele 2001; 1998). It is assumed that, besides the intended word, some words belonging to other languages known to the speaker and similar in meaning are activated. When the subjects are confronted with a

particular problem of retrieving a lexical item in the target language, they try to overcome the difficulty by the creative use of lexical invention. In all these cases, the activation of stems and bound morphemes in one language seems to have spread to target or non-target morphemes of other linguistic systems. For example, the *Olutachoni* lexically invented word “*endavusi*” for walking-stick is created by the *Olubukusu* bound morpheme {*e-*} attached onto the *Olutachoni* stem {*ndavusi*}. The *Olubukusu* bound morpheme {*e_*} is not the target bound morpheme as the *Olutachoni* target word is “*indavusi*.” The activation of the *Olutachoni* free morpheme {*ndavusi*} seems to have spread to the non-target *Olubukusu* bound morpheme {*e-*} which is then retrieved and added to the *Olutachoni* free morpheme {*ndavusi*}.

The use of lexical invention does not appear to be a conscious communication strategy, such as the use of content words borrowed from another language in order to bridge a lexical gap (Faerch and Kasper, 1986; Orwenjo, 2009), but rather, they point to the speaker’s failure to exhibit a previously learnt language adequately. This observation confirms Ringbom (1986) and Singleton and Littlewood (1991:98) findings that lexical invention is assumed to arise out of the acquirers’ need to ease the ‘burden on the language processing mechanism’, which results from ‘the new business of coping with two languages rather than just one’, and thus strive for ‘overall processing simplicity’ by integrating into another language’s morphemes which could be relatively easier to process.

5.2.5. Source Language and Lexical Invention

As noted earlier in chapter four of this study, it is also necessary to ascertain the source languages involved in lexical invention. Knowing the source language provides a broader approach to understanding the borrower's language background in order to provide Sociolinguistic explanations to language acquisition (Kang 2013). Table 5.6 and figure 5.2 below gives a summary of the languages that are involved in the formation of lexical inventions.

Table 5.6: Sources of lexical invention

Source language	<i>N</i>	%
Olubukusu and Olutachoni	38	51%
Olutachoni and Kiswahili/English	37	49%
Total	75	100%

The results in table 5.6 are also presented in figure 5.2 below:

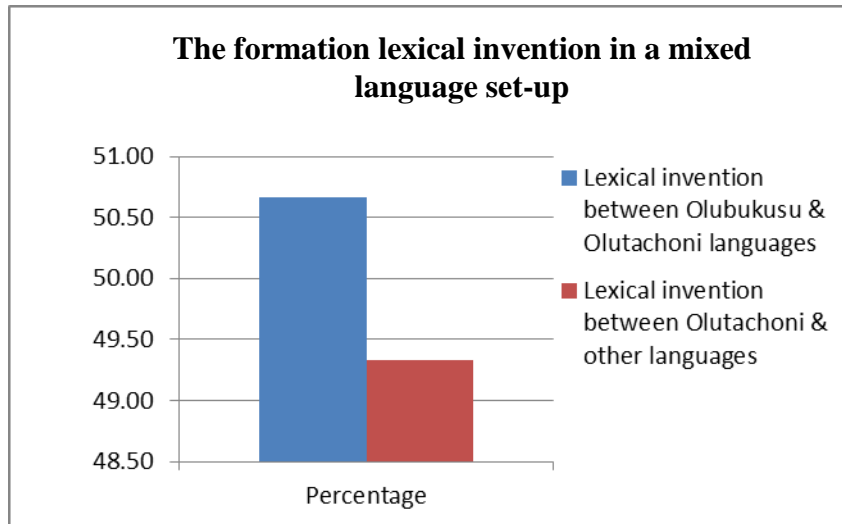


Figure 5.2: Sources of lexical invention

From the results in table 5.6 and figure 5.2, 38 (51%) of lexical inventions are blends between *Olutachoni* and *Olubukusu* whereas 37 (49%) are blends between *Olutachoni* and either Kiswahili or English. Children whose mothers are native speakers of *Olubukusu* and whose fathers are native speakers of *Olutachoni* form hybrid lexical items that consist of morphemes from *Olubukusu* and *Olutachoni*. Such blends include words such as *o-vuufu* (flour), *i-khafu* (cow), *o-murongoro* (tree) *e-indemu* (snake), *e-siongo*, (water pot) *ka-matuma* (maize), *e-ndavuusi* (walking stick) and *e-enoni* (bird). The hybrid lexical forms do not exist in either of the languages. The resultant hybrid words have been adapted to suit the lexi-mor-phonological structures of the target language (*Olutachoni*) in order to ease communication among children.

Similarly, such children are also acquiring *Olutachoni* in an environment where Kiswahili is spoken by a majority of the population because it is a national

language. Also, as mentioned earlier, *Luhyas* speak 16 languages that are mutually unintelligible. For this reason, they resort to using Kiswahili during their interactions, a fact that impact on early language development. The above two observations are likely to have had an implication on the current results. That is why children form hybrid lexical items that consist of morphemes from Kiswahili and *Olutachoni*. Such forms include words such as *ol-ulimi* (tongue), *i-mbwa* (dog), *esi-kombe* (cup), *a-machi* (water) among others. The next section discusses lexical inventions in a single language family set up.

5.3. Lexical Inventions in a Single Language family set up

The study findings revealed that children in a single language family set up morphologically adapted loan words mostly from Kiswahili, *Olubukusu* and English through lexical invention during L1 acquisition. This section identifies and discusses the nature of lexical invention in an *Olutachoni-Olutachoni* language family set up. In this environment, both fathers and mothers to S2, S4, S6, S8, S10 and S12 are native speakers of *Olutachoni*.

Lexical invention, as discussed in section 5.2 occurs through the process of prefixation. Crystal (1991) defines prefixation as a term used in morphology to refer to an affix which is added before a root or stem. Kinuthia (2008) refers to predication as a morphological insertion that involves the addition of a class prefix marker and a nominalizing affix to the root of the derived nouns. Thus, prefixation

in the current study involved the addition of a morpheme at the initial position of a stem or root by children acquiring *Olutachoni* as L1. The singular and plural morphemes were marked only in the prefixes in Kiswahili, *Olutachoni* and *Olubukusu* (Mutaka 2000). As earlier stated, the prefix also indicates the class to which a noun belonged. In his study of Bantu phonology and morphology, Mati (2006) indicated that for most noun classes, there exists a regular association of pairs to show the singular / plural dichotomy. In a single language family set up, there were two types of lexical invention that occurred: *Olubukusu* base and *Olutachoni* prefix and Kiswahili/English base and *Olutachoni* prefix as discussed below:

5.3.1. Olutachoni Base with Olubukusu Prefix

This section explores how *Olubukusu* loan words were adapted morphologically into *Olutachoni* during child language acquisition. The main focus is on examining how *Olutachoni* base is fitted into *Olubukusu* nominal classes through prefixation process in order to enhance communication. Morphologically, *Olutachoni* nouns consist of a class prefix and a stem (and also a terminal vowel in the case of derivatives). The prefix designates the class membership among Bantu languages (Karuru 2013). Table 5.7 gives only one entry where children use the lexical base from *Olubukusu* whereas use the bound morpheme from *Olutachoni*.

Table 5.7: Olubukusu base and Olutachoni prefix

Olutachoni lexical base	Olubukusu Prefix	Lexical invention	Target language word	Source language word	Gloss
musala	ku-	ku-musala	o-musala	Ku-murongoro	tree

From the results in table 5.7 the use of the lexical base from *Olutachoni* reveal that *Olutachoni* is the prominent language with the highest activation level. According to Grosjean (2001), the base is the most important component in a morpheme because it has the highest level of activation compared to the bound morphemes and therefore carries the main meaning of a given morpheme. This implies that the child has acquired the most important morpheme that carries meaning in a word. For example, when a child produces the lexical invented form [ku-musala] “a tree.” The *Olubukusu* word [kumurongoro] provides the first half of the form (the prefix) and the *Olutachoni* target word [omusala] provides the second half (the base). There is an influence from the *Olubukusu* prefix {ku-} on which the *Olutachoni* lemma/base {musala} is attached. The learner might have been trying to produce the noun 'omusala' [tree] but did not possess the complete morpho-phonological information for the word.

5.3.2. Olutachoni Prefix with Kiswahili/English Base

Words borrowed from Kiswahili to *Olutachoni* among the 2-7 year old children had noun prefixes given that both languages had the same Bantu origin. As a result, prefixation did not occur regularly as a process; rather, what happened was

that the prefixes were substituted with the ones that carry *Olutachoni* morphological structure. Substitution is to some extent a morphological adaptation process which is descriptively a replacement of the initial morpheme (of the source word) with a noun class prefix of the recipient language, in this case *Olutachoni*.

Kiswahili has many characteristics of an agglutinating language. Like other Bantu languages, it has a noun class system that marks morphologically the agreement between different constituents of clauses and sentences.

In the nominal noun class system, all Kiswahili nouns are grouped in classes, each marked by a distinctive prefix. Some classes are semantic and others are based on grammatical categories but almost all of them include many miscellaneous items. Kiswahili has eighteen noun classes. Classes 1 to 8 are paired; the first member of the pair is for singular nouns, the second for plural nouns. Classes 9-10 show no singular-plural contrast, classes 11-14 have merged and classes 12-13 have merged with 7-8. The grammatical classes 15 to 18 have no plurals. Just like the case with English loan words, most Kiswahili loan words fall in the classes 9/10 (the zero-prefix group). Table 5.8 below summarizes cases of words that comprised of *Olutachoni* prefix and Kiswahili lexical base.

Table 5.8: Olutachoni prefix and other language(s) lexical base

Olutachoni prefix	Other language lexical base.	Lex. Invented word	Source languages	Source language word	Gloss
{i-}	nguvo	inguvo	Olutachoni-Kiswahili	nguvo	Dress
{ol-}	ulimi	olulimi	Olut-Kiswahili	Ulimi	Tongue
{e-}	pusi	epusi	Olut-English	pussy	pussy cat
{a-}	machi	amachi	Olut-Kiswahili	Maji	Water
{a-}	maindi	amaindi	Olut-Kiswahili	maindi	Maize
{i-}	mbwa	imbwa	Olut-Kiswahili	mbwa	Dog
{e-}	sichiko	esichiko	Olut-Kiswahili	Kijiko	Spoon
{e-}	sufuria	esufuria	Olut-Kiswahili	Sufuria	Sufuria
{e-}	litirisia	e-litirisia	Olut-Kiswahili	dirisha	Window
{o-}	mulango	omuliango	Olut-Kiswahili	mulango	Door
{o-}	mukhono	omukhono	Olut-Kiswahili	mukono	Hand
{esi-}	kombe	esikombe	Olut-Kiswahili	kikombe	Cup

Children acquiring *Olutachoni* in a single language family set up formed hybrid words (lexical inventions) with Kiswahili free morphemes and *Olutachoni* bound morphemes. From the examples in table 5.8 above, Kiswahili singular prefix {ki-} in the word *ki-jiko* (spoon) was replaced by *Olutachoni* singular prefix {esi-} for the same word *esi-chiko* and Kiswahili plural prefix {vi-} is replaced by *Olutachoni* prefix {i-}. The prefixation process gave the borrowed words an *Olutachoni* structure which was accepted in communication among children. Lexical invention occurs due to morphological constraint in particular languages. Oduma (2011) refer to morphological constraint as the distribution of morphemes at various points in language. He also contends that the morphemes must follow from a speaker's internalized grammar. For example, *Olutachoni* would barely

allow certain consonant clusters in its native word forms. Such clusters are broken as seen in the Kiswahili lexically invented loanword below:

Olutachoni	Kiswahili	Gloss
[imbwa]	[mbwa]	“dog”

In the example above, the first process of integration of this loan word (and indeed all loan words) is the morphological conditioning of the loan word with a pronominal affix. In this word, the morpheme {i} has been used word-initially as the prefix before the Kiswahili base {mbwa}. In other loan words, {o-}, {e-} and {a-} would be used. The four prefixes ({o-}, {i-}, {e-} and {a-}) are used in all pronominals in *Olutachoni* to give rise to lexical inventions between Kiswahili/English base and *Olutachoni* prefix. Thus, the invented loan words entering *Olutachoni* were first adapted morphologically by either of the above pronominal affixes.

Furthermore, most Kiswahili loan words fall in the classes 9/10 (the zero-prefix group). In such words, the zero morph, { \emptyset -} represents both the singular and plural morpheme depending on the context. However, when children borrow such words, they add an *Olutachoni* prefix to ensure that the words suit morphologically into the structure of *Olutachoni*. For example, { \emptyset -maji} becomes {a-maji “water.” The use of Kiswahili as a second language is common among Kenyan speakers, particularly among the *Luhya* group of speakers who use

Kiswahili as a common language for interaction among them. Due to this language situation, Kiswahili is readily available for young and even adult language learners draw from when they are faced with a lexical gap.

5.3.3 A Cross tabulation of the Types of Lexical Invention

In order to have a clear understanding of the various types of lexical invention in a single language family set up, the frequencies for the various types are summarized in table 5.9 and fig 5.3 below:

Table 5.9: Types of lexical inventions

Forms of lexical invention	N	%
Olutachoni base-Olubukusu prefix	1	2
Other language base-Olutachoni prefix	39	98
Total	40	100

The information in table 5.9 is also presented in figure 5.3 below:

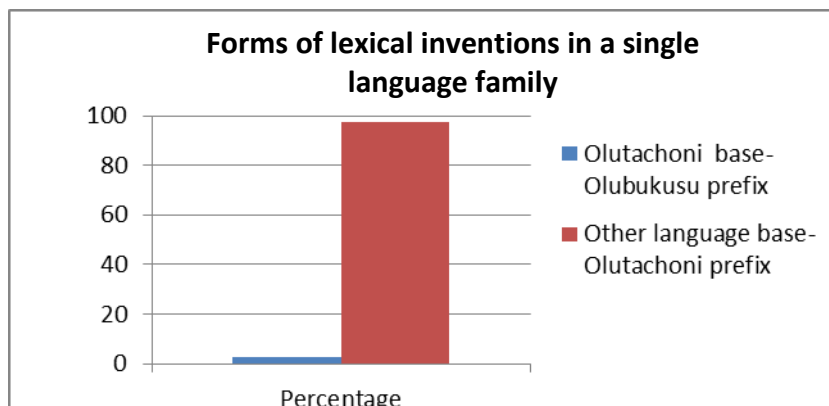


Figure 5.3: Types of lexical inventions

From the results in table 5.9 and figure 5.3, the highest form of lexical invention (98%) occurs between the Kiswahili base and *Olutachoni* prefix. This is shown in words such as *ol-ulimi* (tongue), *esi-chiko* (spoon), *i-mbwa* (dog), *e-sufuria* (sufuria), *e-sikombe* (cup) and *a-machi* (water). This is in contrast to the 2% of *Olutachoni* base and *Olubukusu* prefix in the word *e-ndavusi* (walking stick). The highest number of Kiswahili bases indicates that children in the single language family set up are more accessible to Kiswahili as the input language within their linguistic environment. This is as a result of the massive exposure to Kiswahili through the long-time establishment of Kiswahili as a national language in Kenya and in the *Luhyia* speech community in particular.

5.3.4 The Source Language and Lexical Invention

It is necessary to do a cross tabulation of the languages involved in the formation of lexical inventions. Table 5.10 and figure 5.4 below give a summary of the languages that were involved in the formation of lexical inventions in a single language set up.

Table 5.10: The source language for lexical invention

Forms of lexical invention	<i>N</i>	%
Lexical invention between Olubukusu & Olutachoni languages	1	3%
Lexical invention between other languages & Olutachoni	39	97%
Total	40	100%

The information in table 5.10 is also presented in figure 5.4 below:

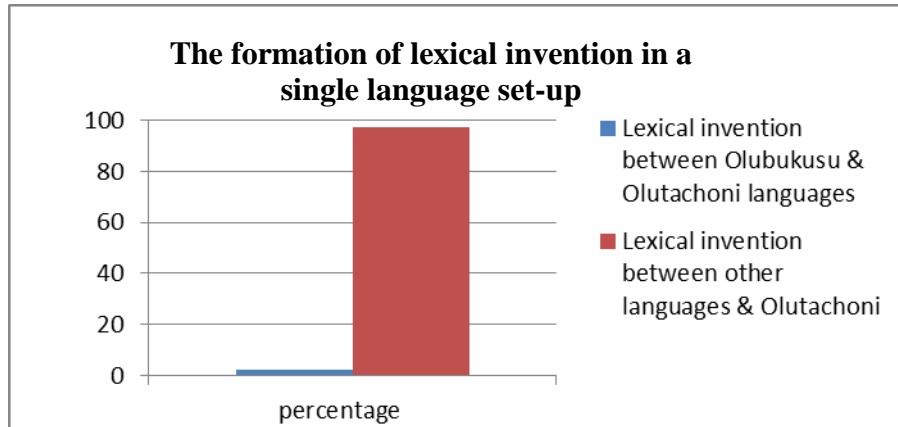


Figure 5.4: The source language for lexical invention

The results in table 5.10 and figure 5.4 show that there are 1 (3%) of lexical invention between *Olutachoni* and *Olubukusu* and 38 (97%) of lexical inventions between English/Kiswahili and *Olutachoni*. The (3%) is as a result of the subjects from a single language family set up having little or no exposure to *Olubukusu* because their mothers, fathers and a majority of other people within their linguistic environment speak *Olutachoni* and Kiswahili. The 97% reported could have been borrowed from the parents who are likely to be influenced at some point with Kiswahili/English or the wider linguistic community. This is due to genealogical relatedness between Kiswahili and *Olutachoni* and the massive exposure to Kiswahili through the long-time establishment of Kiswahili as a national language in Kenya (McMahon (1994).

5.3.5. Lexical Invention in a Single and Mixed language Family Set ups.

It is necessary to perform a cross tabulation of lexical invention of the two language family set ups. This is necessary in order to have a clear understanding of the various manifestations of the cases of lexical invention from the two linguistic set ups. This will help to establish the nature of lexical invention in relation to objective one and two of the study. Table 5.11 and figure 5.5 give the frequencies of lexical inventions from a single and a mixed language family set ups.

Table 5.11: Lexical inventions from single and mixed language set ups

Family set up	N	%
Mixed	75	65
Single	40	35
Total	115	100

Table 5.11 has also been presented in figure 5.5 below:

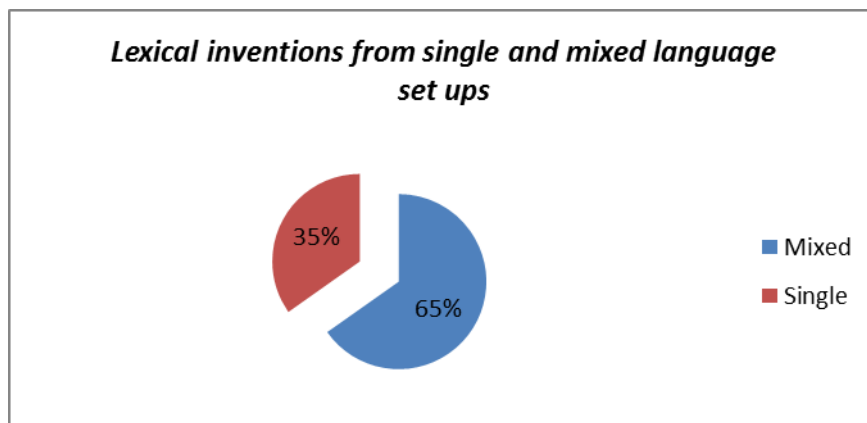


Figure 5.5: Lexical inventions from single and mixed language set ups

The results in table 5.11 and figure 5.5 indicate that there are 115 cases of lexical inventions from both single language and mixed language family set ups. Out of the 115 cases, 75 (65%) are from mixed language set ups and 40 (35%) cases from

single language family set ups. The mixed language family set up show the highest percentage (65%) because the subjects within that set up form hybrid words between *Olutachoni* morphemes and morphemes from two more languages (*Olubukusu* and Kiswahili). This is unlike the single language family set up where a majority of the hybrid forms comprise of morphemes between *Olutachoni* and Kiswahili.

5.3.6. Types of Lexical Invention in a Single and Mixed Language Family Set ups

It was necessary to perform a cross tabulation of the types of lexical invention of the two language family set ups. This was necessary in order to have a clear understanding of how children acquiring *Olutachoni* as a first language employ the prefixation process to form new words for communication purpose. Table 5.12 and figure 5.6 gives a cross tabulation of the types of lexical inventions from single and mixed language set ups.

Table 5.12: Types of lexical invention from single and mixed language set ups

Linguistic environment	Olubukusu base and Olutachoni prefix	Olutachoni base and Olubukusu prefix	Another language base and Olutachoni or Olubukusu prefix
Mixed	25 (33%)	13 (17%)	37 (50%)
Single	0	1 (3%)	38(97%)
Total	25 (%)	14 (%)	76

The information on table 5.12 has also been presented in figure 5.6 below:

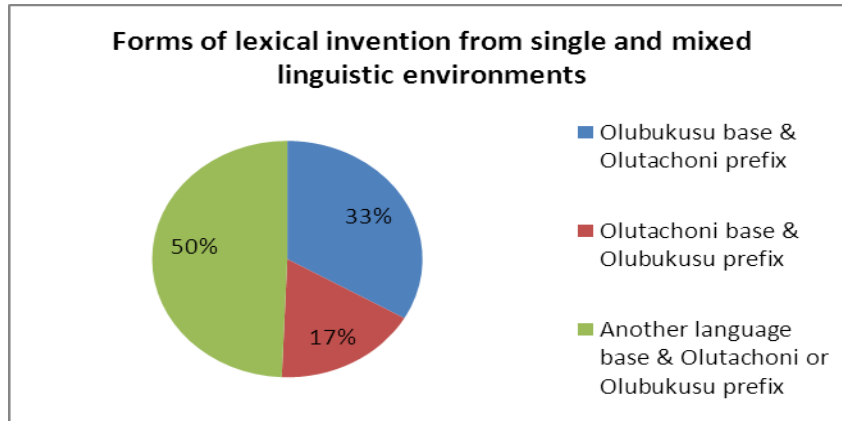


Figure 5.6: Types of lexical invention from single and mixed language set ups

From the results, there are 25 (33%) of *Olubukusu* base and *Olutachoni* inflectional prefix, 13 (17%) cases of *Olutachoni* base and *Olubukusu* inflectional prefix and 37 (50%) cases of Kiswahili/English base and *Olutachoni/Olubukusu* inflectional prefix in a mixed language family set up. On the contrary, there are no cases of *Olubukusu* base and *Olutachoni* inflectional prefix but there are (3%) cases of *Olutachoni* base and *Olubukusu* inflectional prefix and 38 (97%) cases of Kiswahili/English base and *Olutachoni/Olubukusu* inflectional prefix in a single language family set up. For example, words like *e-sisaala* (chair), *e-nduvi* (basket), *i-khaafu* (cow), *e-sifuuva* (chest), *e-vikeele* (legs), *a-maremwa* (bananas), *a-mechi* (water), *o-mukaango* (cooking stick), *o-murongoro* (tree), *o-vuufu* (flour), *e-viraro* (shoes), *o-vuulo* (millet) and *indemu* (snake) exhibit *Olubukusu* lexical bases and *Olutachoni* prefixes. On the other hand, words like *ka-amatore*, *e-noni*, *e-iningiilo*, *ku-silotwa*, *e-sioongo*, *ka-amatuma*, *e-ndavuusi*, *e-njuukha*, *vu-usie*,

ku-mwikho, ku-musaala, vu-ule, Ka-mapwoni, e-njuukha reveal instances of *Olubukusu* prefix and the lexical base from *Olutachoni* language.

It also emerges that there are instances of lexical invention from Kiswahili/English base and the prefix either from *Olutachoni* or *Olubukusu*. Such examples include words such as *ovu-nyaasi, eli-tirisia, o-muliango, e-sufuria, i-nguvo, e-siichiko, ol-ulimi, i-mbwa, a-maindi, e-sikombe, I-ng'ombe and a-machi*. These results reveal the fact that other languages within a child's language set up are very important in language acquisition. First language learners lack the vocabulary to say all what they want to say and in the process they resort to compensatory strategies that allow communication to proceed. One of the most recurrent strategies is recourse to another language within the linguistic environment through lexical inventions as observed in the above examples.

Although lexical invention is very noticeable in young children's speech and can last into the school years, it is a form of positive learning and not interference. This suggests that the lexical inventions observed in early speech reflect lapses in accessing the appropriate target language word from the lexicon rather than the failure to learn rules of inflection. This indicates that children have mastered an inflectional rule by their ability to apply it to forms from other languages they receive input from. For example, when a child calls a tree "*omurongoro*" a word with *Olutachoni* prefix {*omu-*} attached to an *Olubukusu* base {*rongoro*}, it demonstrates that the general rules for *Olutachoni* inflection have been learned by

that time, despite the occurrence of occasional errors. This rule is evident in other cases of lexical inventions.

Therefore, the development of free and bound morphemes take place in an orderly fashion that is quite similar across children. The children's creativity with lexical invention points to a preference for building words from other languages, perhaps because this places less demand on memory than does learning an entirely new word for each concept. These findings are consistent with those of Ringbom (2001) who postulates the view that when young subjects are confronted with a particular problem of retrieving a lexical item in the target language, they try to overcome the difficulty by borrowing from the available language within their linguistic environment. In the above examples, the activation of the source language words (*Olubukusu and Kiswahili*) seems to be as a result of lack of differentiation in the underlying representation of a bilingual child's two developing languages as per the Unitary Language System Hypothesis (Paradis 1995).

5.4. Lexical Borrowing in a Mixed and Single Language Family Set ups.

This section gives a cross tabulation of lexical importation and lexical invention which are the main strategies of lexical borrowing employed by the children. This is necessary in order to give a broad picture of the occurrences of lexical

borrowing in the corpus of cross linguistic influence. These results are presented in table 5.13 below:

Table 5.13: Lexical Borrowing in the corpus of CLIs

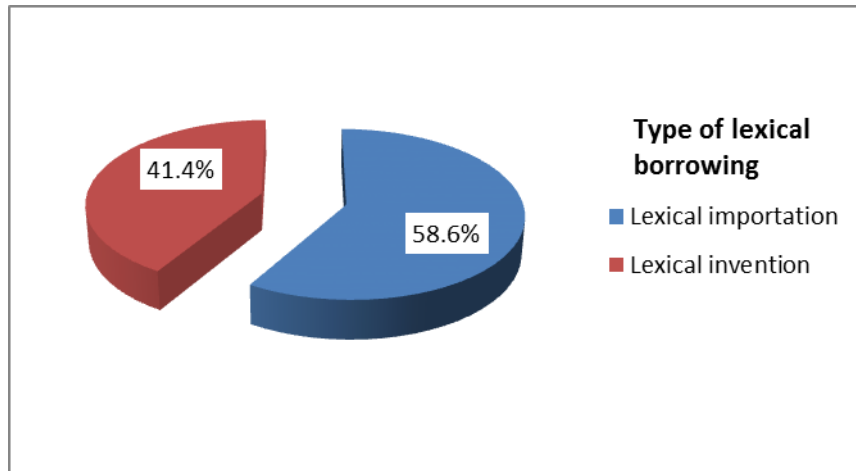
<i>Subject</i>	<i>Cases of lexical importation from other languages</i>	<i>Cases of lexical importation from Olubukusu</i>	<i>Total no. Lexical importation</i>	<i>Cases of lexical invention from other languages</i>	<i>Cases of lexical invention from Olubukusu</i>	<i>Total no. Lexical Invention</i>	<i>Cases of CLIs</i>	<i>Linguistic environment</i>	<i>Gender</i>	<i>Age</i>
<i>S1</i>	4	26	30	7	9	16	46	<i>Mixed</i>	<i>M</i>	2,5
<i>S2</i>	9	0	9	5	0	5	14	<i>Single</i>	<i>M</i>	2,8
<i>S3</i>	3	22	25	6	9	15	40	<i>Mixed</i>	<i>F</i>	3,7
<i>S4</i>	3	0	3	9	0	9	12	<i>Single</i>	<i>F</i>	3,8
<i>S5</i>	5	16	21	6	7	13	34	<i>Mixed</i>	<i>M</i>	4,3
<i>S6</i>	6	0	6	7	0	7	13	<i>Single</i>	<i>M</i>	4,4
<i>S7</i>	5	13	18	6	5	11	29	<i>Mixed</i>	<i>F</i>	5,6
<i>S8</i>	5	0	5	6	0	6	11	<i>Single</i>	<i>F</i>	5,8
<i>S9</i>	4	12	16	6	5	11	27	<i>Mixed</i>	<i>M</i>	6,0
<i>S10</i>	12	0	12	5	1	6	18	<i>Single</i>	<i>M</i>	6,4
<i>S11</i>	5	7	12	6	3	9	21	<i>Mixed</i>	<i>F</i>	7,4
<i>S12</i>	6	0	6	7	0	7	13	<i>Single</i>	<i>F</i>	7,5
Total	67	96	163	76	39	115	278			

The results in table 5.13 are summarized below for clarity:

Table 5.14: Lexical importation and lexical invention

Type of lexical borrowing	N	%
Lexical importation	163	58.63
Lexical invention	115	41.36
Total	278	100

The results in table 5.14 are also presented in figure 5.7 below:

**Figure 5.7: Lexical importation and lexical invention**

From table 5.14 and figure 5.7, lexical importation forms the bulk of the data (58.63%) followed by lexical invention (41.36%). Massive lexical importation compared to lexical invention indicates that it is easier to borrow words instead of creating hybrid forms of the words for new concepts (Haspelmath, 2009:47). Therefore, extensive lexical importation found in the data would indicate that there is a positive attempt among children towards the acquisition of the target language. Earlier studies of the simultaneous acquisition of two languages during primary language development assumed that young children initially have only one

syntactic system for both their languages, which gradually separates itself out into the two target systems. These results are in agreement with studies conducted by Volterra and Taeschner (1978); Redlinger and Park (1980); Taeschner (1983); Vihman (1985). More cases of lexical importation could also indicate that children have not differentiated their linguistic system, they think it is one.

5.5 Lexical Borrowing and Language Family Set up.

It was also necessary to perform a cross tabulation of the occurrence of lexical importation and lexical invention in relation to the family language set up. This was important because, according to Ringworm (2001), when young subjects are confronted with a particular problem of retrieving a lexical item in the target language, they try to overcome the difficulty by borrowing from the available language within their linguistic environment. These results are presented in table 5.15 and figure 5.8 below:

Table 5.15: Lexical borrowing and the family set up

Type of family set up Type of lexical borrowing	Single N %	mixed N %
Lexical importation	41 (50.61)	122 (61.92)
Lexical invention	40 (49.38)	75 (38.07)
Total	81 (100)	197 (100)

The results in table 5.15 are also presented in figure 5.8 below:

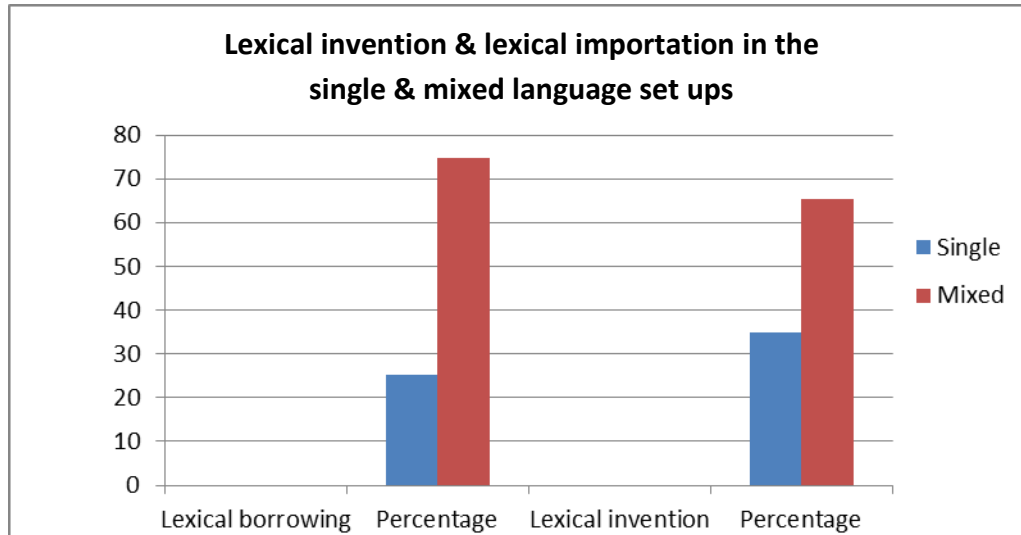


Figure 5.8: Lexical borrowing and the family set up

From the results in table 5.15 and figure 5.8, there were 41(50.61%) cases of lexical importation and 40 (49.38%) cases of lexical invention in a single language family set up. In the mixed language family set up, there were 122 (61.92%) cases of lexical importation and 75 (38.07%) cases of lexical invention. Therefore, it means that lexical borrowing is employed as a language learning strategy by children from both the single and the mixed language family set ups. This is meant to test their hypotheses about the nature of the language they are learning.

It has mainly been argued that bilingual children differentiate between their languages immediately and that the two languages develop totally independently of each other, congruent with their acquisition by monolingual children of the respective languages (Parades and Genesee, 1996; Merisel 1994). Due to the use of lexical importation and lexical invention by children from both the single and

the mixed language family set up, the above assumption does not hold true for the current study. The focus is on the initial-one system hypothesis based on the unitary language system hypothesis by Paradis (1995). Regardless of the disparity in occurrence, both lexical invention and lexical importation are indicators of positive learning strategies that reflect the developing bilingual child's use of all linguistic resources to express himself or herself when the mastery of each language is incomplete.

The differences in the percentages of lexical importation and lexical invention are attributable to differences in terms of the quantity of the input. In a set up where the child gets more input, the incidents become higher because there are more linguistic resources. For this reason, lexical importation and lexical invention are higher in the mixed language family set up than single language family set up.

5.6. Summary of Findings

This chapter has presented the results of the study under lexical invention by examining the morphological adaptation of *Olubukusu*, English and Kiswahili loan words through lexical invention into *Olutachoni*. It has shown that the adaptation processes allow for natural communication among children acquiring *Olutachoni*. Although there are several adaptation processes such as prefixation, suffixation, substitution and zero transmorphemization, prefixation has been identified as the main adaptation process that leads to lexical invention in both single and the

mixed language family set ups. Suffixation process does not apply to Kiswahili and *Olubukusu* loan words because the two are Bantu language just like *Olutachoni* where the words end in vowels. Prefixation process allows for acceptable communication while the children are trying to find an appropriate word for communication during language acquisition.

Findings in this chapter with regard to morphological strategies for the formation of lexical inventions also coincide with the findings of previous studies on lexical borrowing. Odlin's (2004) study shows that learners are capable of modifying their production of words so that their pronunciation comes closer to the target language norms. The modification however does not result in the attainment of target language norms, but rather in approximations that are neither fully native-like. This chapter has also shown that theory can be effectively used to analyze and explain the use of lexical invention among children. The use of lexical invention has been explained with reference to Levelt's theory of speech production, the Usage based language acquisition theory and the unitary language system hypothesis. For example, the current study has found a number of blends in the data which suggests that both the source language and target language lexical items can be simultaneously activated by one and the same conceptual plan.

For example the word *o-murongoro* "tree" has a lexical base {*murongoro*} from *Olubukusu* and the prefix {*o*} from *Olutachoni*. This means that *Olubukusu* has the highest activation level. Similarly, in a word like *ku-mwikho* "cooking stick

“which has a lexical base {*mwikho*} from *Olutachoni* and the prefix {*ku*} from *Olubukusu* indicates that *Olutachoni* language has the highest activation level. The usage based language acquisition theory is used to explain the role of the linguistic environment in the provision of the base form or the prefix during lexical invention. Lexical invention has arisen out of situations where the child wants to name an object, yet, he/she has not learnt the correct target word to use in naming the object. This forces the child to use cognitive mental process to generate new words by working out their own morphological rules of the target vocabulary they are exposed to from their linguistic environment.

The chapter concludes by conducting a cross-tabulation of lexical importation and lexical invention in both single and mixed language family set ups. The general observation is that, during first language acquisition, lexical items are phonologically integrated (loan adaptation) and also morphologically integrated (lexical invention) with *Olubukusu* and Kiswahili. It is also discovered that morphology which deals with word formation and phonology which deals with the sound system of language have been justified as two components of language which depend on one another during language acquisition within the lexicon. The next chapter discusses the correlation between the age and gender of the children and the degree of lexical borrowing. Also, the chapter explores the role of the linguistic environment and lexical borrowing in both single and mixed language family set ups.

CHAPTER SIX

THE INFLUENCE OF AGE, GENDER AND LINGUISTIC ENVIRONMENT ON LEXICAL BORROWING

6.1 Introduction

The previous chapters have presented, interpreted and discussed the findings of the present study by identifying lexical borrowing and describing the nature of lexical borrowing during child language acquisition. In this chapter, lexical importation and lexical inventions are discussed in relation to the demographic factors of age and gender. The role of the linguistic environment and the production of lexical importation and lexical invention is also discussed. This is in line with objectives three and four of the study. Testing the significance of the relationship was also fundamental to statistical testing of the study hypotheses. The age and the gender of the children were subjected to statistical test of Spearman's Rank Correlation Coefficient analysis in order to determine the relationship between the age and the gender of the children and the production of lexical borrowing. The significance level of 0.05 was used for analysis due to its appropriateness in social sciences Kothari (2004).

6.2 Age

In this section, the relationship and the significance between the production of lexical importation and lexical invention and the age of the children is presented. As noted earlier, age in reference to language acquisition is viewed from two points of view: age of acquisition and age at acquisition. “Age of acquisition” refers to a period beyond which effects of increasing age are not manifested in the acquisition profile. “Age at acquisition” on the other hand, is used to refer to the age at which a child or a group of children acquire specific linguistic units and structures. In the current study, reference to age does not include any of these two notions because what is being investigated is the process of lexical borrowing, a strategy employed by children to acquire language. Therefore, the term “age” in the current study is used to mean the age at which the child employs the strategies of lexical importation and lexical invention during the acquisition of *Olutachoni* as a first language.

Age has been considered as an important factor in the whole acquisition process by researchers in child language acquisition. Such researches include that of Cenoz (2009); Paradis (2004); Makeni (2007); Nyamasyo (1985); Pinker (1994) and Orwenjo (2009). Lenneberg (1967) argues that the ability and propensity to acquire linguistic structures is inherently biologically linked to the age of the child. The aim of the above studies on age and child language acquisition was to test Lenneberg’s claim about the correlation between the age of a child and the

language acquisition process. For example, Nyamasyo (1985) studied the syntactic structure in the grammar of a four year old child. Her subject had a multilingual background (Luo, Kikamba, English and Kiswahili). Nyamasyo tested the assumption that by the age of five children had mastered the syntax of their L1, an assumption which was found to be true.

Similarly, Orwenjo's study reveals that there was a strong positive correlation between the age of the child and the production of lexical innovations. The trends for deverbal nouns for example, indicate a steady rise in the rate of innovations such that the 3 and 4 year olds, declining for the five year olds and again shooting up for the 6 year olds. The current study explored the correlation between the age of a child and the production of lexical importation and lexical invention as discussed below.

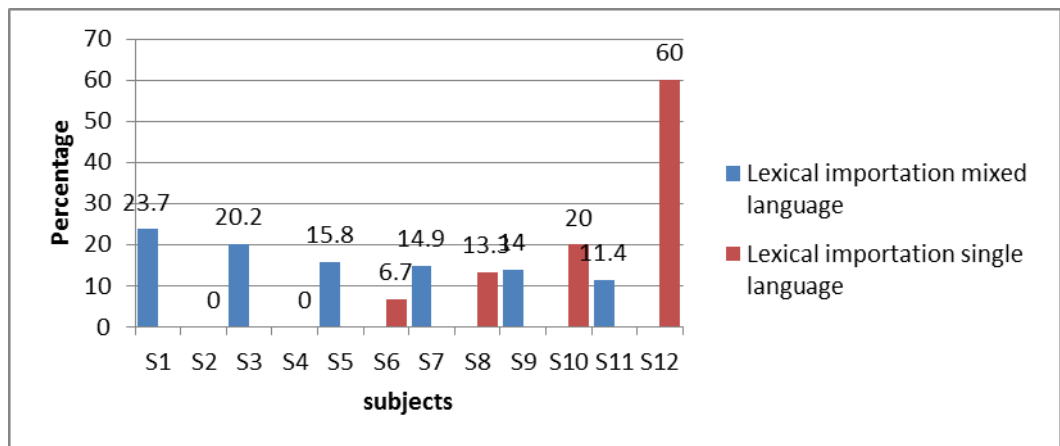
6.2.1 Age and Lexical Importation

This section explores the relationship between the age of the child and the production of lexical importation. As defined earlier, lexical importation means the speakers' introducing source-language (SL) lexical items when using the target language (TL). The results of the effect of the age of the child and the production of lexical importation are presented below:

Table 6.0: The Effect of Age on Lexical Importation

Subject	Age	Cases of Lexical importation in mixed language (N)	%	Cases of Lexical importation in single language (N)	%
S1	2,5	27	23.7	0	0
S2	2,8	0		0	0
S3	3,7	23	20.2	0	0
S4	3,8	0	0	0	0
S5	4,3	18	15.8	0	0
S6	4,4	0		1	6.7
S7	5,6	17	14.9	0	0
S8	5,8	0		2	13.3
S9	6,0	16	14.0	0	0
S10	6,4	0	0	3	20
S11	7,4	13	11.4	0	0
S12	7,5	0	0	9	60
Total		114	100	15	100

For clarity purpose, the results in table 6.0 are also graphically presented in figure 6.1 below:

**Figure 6.1: The Influence of Age on Lexical Importation**

From table 6.0 and figure 6.1, the trend for the degree of lexical importation reduces between the ages of two and seven years in a mixed-language family set

up. S1 who is aged 2,5 years produces 27 (23.7%) lexical importations, S3 aged 3,7 produces 23 (20.2), S5 aged 4,3 produces 18 (15.8%), S7 aged 5,6 produces 17 (14.9%), S9 aged 6,0 produces 16(14.0%) and S11 aged 7,4 produces 13 (11.4%) lexical importations respectively. The trend indicates a steady reduction in the rate of lexical importation with the rise in the age of the children. This trend can be explained within the framework of the unitary language system hypothesis by Paradis (1995) which hypothesizes that those children acquiring more than one language at the same time pass from undifferentiated language system to a gradual separation of two linguistic systems which is shown through an increasing competence in the target languages as the children advance in age.

This means that, as the children advance in age, their brain mechanism allow them to construct two separate language systems for each language and therefore reduce the cases of lexical importation. Halgunseth (2009) also observes that when the children reach the age of 6 years in simultaneous language acquisition, they distinguish between the two languages and at this point, they begin to favour one language over the other. These results are in agreement with Celaya and Torras (2001); Williams and Hammarberg (1998) and Genesee (2006) among others. Genesee (2006), for example, argues in her study that bilingual first language learners from mixed-language families go through an initial monolingual stage where the two languages are not differentiated as observed through cases of lexical borrowing, but eventually the cases reduce as the learner becomes more proficient in the target language. Celaya and Torras (2001); Williams and Hammarberg

(1998) find out that lexical borrowings is a characteristic of learners at early stages of acquisition, and that lexical borrowing tend to decrease among learners with higher levels of language competence, an observation that is also revealed in the current study.

On the contrary, in the single language family set up, the study has found out that the degree of lexical importation continue to increase between the ages of four and seven years. From table 6.0 and figure 6.1 above, S2 and S4 aged 2, 8 and 3, 8 years respectively do not produce any forms of lexical importation. On the contrary, S6 aged 4, 4 produces 1 (6.7%) case, S8 aged 5, 8 produces 2 (13.3%), S10 aged 6, 4 produces 3 (20%), and S12 aged 7, 5 produces the bulk of lexical importation of 9 (60.0%) cases. The trend among the four subjects indicates a steady rise in the rate of lexical importation with the increase in the age of the children. The trend is the same for the first two age groups, then becomes almost constant for the ages of 4,4 ; 5,8 and 6,4 then it shoots up for age 7,5.

This trend can be explained in terms of the kind of input the children from the single language family set up are exposed to. Most of their input is from Kiswahili apart from *Olutachoni*, which is the target language. English and Kiswahili are state-recognized official languages in Kenya (The Constitution of Kenya 2010). Due to this recognition, Kiswahili is acquired as a second language among a majority of Kenyans. Based on this, a majority of Kenyans, even in the rural areas, speak Kiswahili as a national language which implies that as the children advance

in age, they borrow lexical items from the most available language, in this case, Kiswahili, perhaps for social identity.

Further analysis on age and lexical importation involves testing the hypothesis that there is a significant relationship between the age of the child and the production of lexical importation. Spearman's Rank Correlation Coefficient analysis was carried out to establish the relationship and to test if the relationship was significant. The results are presented in table 6.1 below:

Table 6.1: Correlation Between Age and Lexical Importation

		Age of the respondents	Lexical Importation
Age of the respondents	Spearman's Rank Correlation Coefficient	1	-.744
	Sig. (2-tailed)		.022*
	N	12	9
Lexical Importation	Spearman's Rank Correlation Coefficient	1	-.744
	Sig. (2-tailed)	.022*	
	N	9	9

*. Correlation is significant at the 0.05 level (2-tailed).

The results reveal that there is a strong negative (-.774) correlation between the age of the children and the rate of lexical importation. The relationship was found to be significant at 0.05 significance level. The negative correlation (-.774) implies that the rate of lexical importation decreases with an increase in the age of the children. The significance of 0.05 indicates that there exists a significant correlation between age increase and decrease in lexical importation. Therefore,

the study hypothesis that there is a significant relationship between the age of the child and the rate of the production of lexical importation is proved.

In a related study conducted by Orwenjo (2009), it was found out that children resort to lexical innovations as a “stop-gap” measure to cope with lexical gaps that are hindrances to communication. The current study adopts the same interpretation for cases of lexical importation among the children. Lexical importation is a measure that the child uses to cope with lexical gaps that are hindrances to smooth communication. This implies that as soon as such lexical gaps are filled up with the target language lexical entries in the mental lexicon, then cases of lexical importation reduces or simply disappears from the child’s mental lexicon. This scenario explains why there is a decline in the amounts of lexical importation across the age profile. The theoretical predictions of the unitary language system hypothesis by Paradis (1995) are in agreement with the above observation. It is assumed that young learners are unable to distinguish between the two languages and thus they mix their languages because they lack vocabulary in one or both languages to express themselves entirely in each language.

According to Tomasello (2012) such children derive input primarily from adult utterances within their linguistic environment, and that based on such input, the children formulate hypotheses about how the target language operates and uses further input to test and accept or reject the hypotheses. These results are in agreement with those of Nyamasyo (1985). Nyamasyo (1985) studied the syntactic

structure in the grammar of a four year old child. Her subject had a multilingual background (Luo, Kikamba, English and Kiswahili). She tested the hypothesis that there was a relationship between the age of the child and the acquisition of syntax. She found out that by the age of five children had mastered the syntax of their L1 which was found to be true that there was a relationship between the two variables.

The results of the present study with regard to the relationship between the age of the child and the rate of lexical importation are also in agreement with the results of Navés (2005). Navés analyzed lexical importation produced by learners from grade 5 to grade 12. Results showed that learners at higher grades use fewer borrowings and lexical inventions, with statistically significant differences between the variables under study. According to the study, this suggested that school grade had an influence on transfer as far as the use of borrowing was concerned.

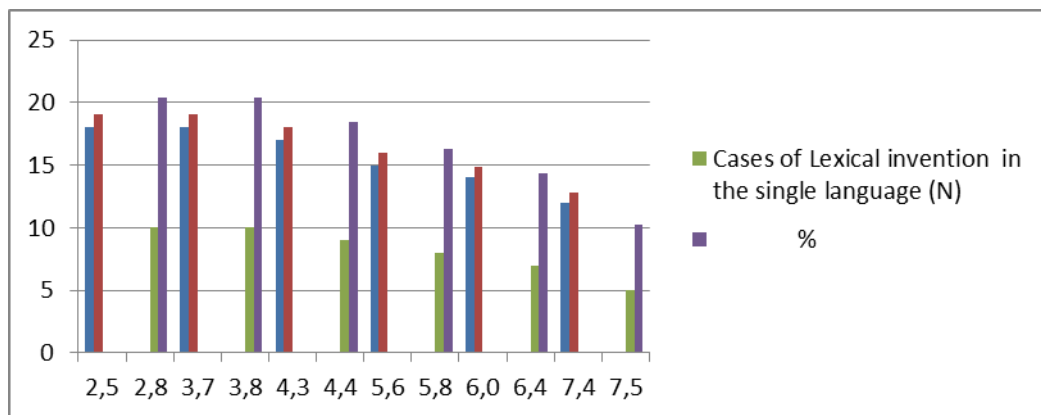
6.2.2 Age and Lexical Invention

This section presents data on the influence of the age of the children and the production of lexical invention in both the mixed and single language family set ups. The findings are presented in table 6.2 and figure 6.2 below:

Table 6.2: The Effect of Age on Lexical Invention.

Subject	Age	Cases of Lexical invention in the mixed language (N)	%	Cases of Lexical invention in the single language (N)	%
S1	2,5	18	19.1	0	0
S2	2,8	0	0	10	20.4
S3	3,7	18	19.1	0	0
S4	3,8	0	0	10	20.4
S5	4,3	17	18.0	0	0
S6	4,4	0	0	9	18.4
S7	5,6	15	16.0	0	0
S8	5,8	0	0	8	16.3
S9	6,0	14	14.9	0	0
S10	6,4	0	0	7	14.3
S11	7,4	12	12.8	0	0
S12	7,5	0	0	5	10.2
Total		94	100	49	100

The results in table 6.2 above are also graphically presented in figure 6.2 below for clarity:

**Figure 6.2: The Effect of Age on Lexical Invention.**

The trend from the above graph indicates that the degree of lexical invention continues to reduce between the ages of two and seven years in both mixed and

single language family set ups. In the mixed language family set up for example, S1 and S3 aged 2,5 and 3,7 respectively both produce 18 (19.1%) lexical inventions, S5 aged 4,3 produces 17 (18.0%), S7 aged 5,6 produces 15 (16.0%), S9 aged 6,0 produces 14(14.9%) and S11 aged 7,4 produces the least 12 (12.8%) cases of lexical invention. From the single language family set up, the data show that S2 and S4 who are aged 2,8 and 3,8 years respectively produce the same number of lexical invention, thus 10 (20.4). On the other hand, S6 aged 4, 4 produces 9 (18.4) cases, S8 aged 5, 8 produces 8 (16.3%), S10 aged 6, 4 produces 7 (14.3%), and S12 aged 7, 5 produce the least of lexical invention of 5 (10.2%). The trend indicates a decrease in the percentage of use of lexical inventions with the rise in the age of the children. This suggests that age has an influence on the production of lexical invention as far as FLA is concerned.

As mentioned in the previous sections, the high mixing rates during the earliest stages of language development is evidence of the child's general inability to differentiate between the two languages, and the progressive decrease in language mixing is evidence for the child's ability to control the languages separately as the linguistic competence increases. This observation could also mean that, as the age increases, the children come closer to adult forms by the amount of lexical invention gradually declining as the children grow up and ultimately disappearing on full acquisition. The above data confirms previous studies conducted by Dewaele (1998) and Naves (2005) where instances of lexical inventions decreased as proficiency in the language increased. Dewaele (1998) investigated the

phenomenon of cross linguistic influence in the context of non target-like lexemes ('lexical inventions'). The study was conducted among the advanced oral French interlanguage of 39 Dutch LI speakers, 32 of whom had French as an L2 and English as an L3. The lexemes which were analyzed in the oral French interlanguage (IL) were morpho-phonologically adapted to the target language (TL) but were never used by native speakers. The use of the non-target lexemes reduced as the learners advanced in age.

The findings are in agreement with some African studies on language acquisition like a study conducted by Makeni (2007). Makeni (2007) reports that the age of the child affects the acquisition of concordial morphemes among the children acquiring *Lukhayo* as their L1. According to his study, the production of concordial morphemes in L1 acquisition reduces as the children advance in age due to their advanced competence in *Lukhayo*. The significance of the relationship between the age of the child and the production of lexical invention was also conducted by use of Spearman's Rank Correlation Coefficient. The results are presented in table 6.3 below:

Table 6.3: Correlations Between Age and Lexical Invention

		Age of the respondents	Lexical Invention
Age of the respondents	Spearman's Rank Correlation Coefficient	1	-.233
	Sig. (2-tailed)		.466
	N	12	12
Lexical Invention	Spearman's Rank Correlation Coefficient	-.233	1
	Sig. (2-tailed)	.466	
	N	12	12

The negative correlation $-.233$ indicates a weak negative or opposing relationship that exists between the age of the respondents and the production of lexical invention. According to Spearman's Rank Correlation Coefficient test that was performed, the weak correlation was not significant at 0.05 significance level because $.466$ is above 0.05. This means that the weak correlation was simply by chance. These results are contrary to the study hypothesis that there is a significant relationship between the age of the children and the production of lexical invention.

However, the findings that there is a relationship between age and the rate of lexical invention are in line with the results of several other studies that have dealt with the relationship between age and language acquisition. Such studies include those of Celaya and Ruiz; (2001), Naves (2005); Ringbom (1987); Redlinger and Park (1980); Williams and Hammarberg (1998) and Jarvis (2000)). The studies have put forward the claim that there is a relation between the age of the child and

the degree of language mixing in acquisition. For instance, Williams and Hammarberg (1998) puts forward in his study that L1 influence decreases as experience with the language and proficiency in terms of age increase. Williams and Hammarberg's findings revealed that the performance of beginner learners showed more instances of lexical invention than those of more advanced learners.

Redlinger and Park (1980) in their study on language mixing report a high mixing rate of languages during the earliest stages of language development. They interpreted this observation as evidence for the child's general inability to differentiate between the two languages, and the progressive decrease in language mixing as evidence for the child's ability to control the languages separately as the linguistic competence increased. Their study supports the notion that the infant in a bilingual environment passes from an undifferentiated language system to a gradual separation of the two linguistic systems just like in the present study. Gender is another variable that has been of much interest to language acquisition studies. In the next section, the findings with regard to the influence of gender and the correlation between gender and the production of lexical borrowing are presented and discussed.

6.3 Gender

Gender is an important subject variable which may influence analysis and interpretation of results in a child language acquisition research (Sanchez

2003). Many studies on language acquisition show that there are linguistic variations in pronunciation, grammar and vocabulary attributed to gender differences among children (Crawford 1995). Studies conducted by; Korecky-Kroll; Dressler (2007) and Gleason (1994) indicate that girls are usually more advanced in language development than boys. Girls begin to talk earlier; they articulate better and acquire a more extensive vocabulary than boys of the same age. Ellis (1994) proves girls' superiority in vocabulary growth. Ellis studied the acquisition of vocabulary by eighteen children between the ages of one and two. The study showed that all the boys fell in the group with the slower acquisition rate.

In a research conducted by Aslan (2009), it was reported that gender influences learning strategies adopted by either gender. This means that females and males are observed to employ various strategies in language acquisition. Aslan (2009), in a study on "The role of gender in L2 interaction" cites that males tend to use linguistic devices such as interruptions, directives, and sentence-initial conjunctions. Females, in contrast, tend to rely more heavily upon questions, justifiers, intensive adverbs, personal pronouns and word-initial adverbs (Llach 2009a). It has been demonstrated in other researches that differences between the genders are not significant in language development. Notable ones include Orwenjo, (2009) and Llach (2009a). Orwenjo (2009) for example, reports that gender does not seem to play any role in the child's process of lexical innovations.

Section 6.3.1 presents results of the correlation between the gender of the children and the production of lexical importation among children acquiring *Olutachoni*.

6.3.1 Gender and Lexical Importation

Lexical importation as already defined is a language acquisition strategy that entails the speakers' introducing source-language (SL) lexical items when using the target language (TL) in order to fill the lexical gap in the mental lexicon during language acquisition. The aim of this section is to examine the relationship of the gender of the children and the production of lexical importation. Special attention in this section is paid to testing the hypothesis that lexical importation has a relationship with both male and female respondents. The results are presented in table 6.4 and figure 6.4 below:

Table 6.4: The Effect of Gender on Lexical Importation

Gender	Cases of Lexical Importation in Mixed Language (N)	%	Cases of Lexical Importation in Single Language (N)	%
M	67	54.9	27	65.9
F	55	45.1	14	34.1
Total	122	100	41	100

The results in table 6.4 above are also graphically presented in figure 6.3 below for clarity:

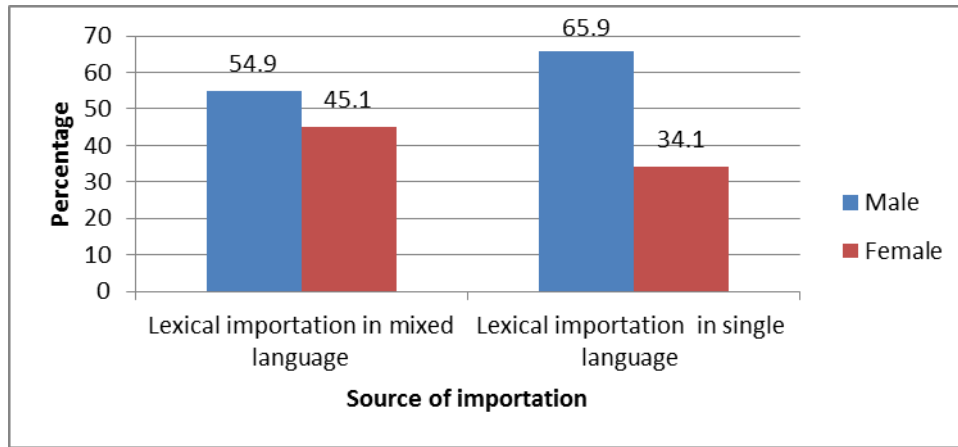


Figure 6.3: The Effect of Gender on Lexical Importation

From the results above, male subjects from both the mixed language and the single language family set ups tend to import more words 67 (54.9%) and 27 (65.9%) respectively than their female counterparts 55(45.1%) and 14(34.1%) respectively. The above gender differences between females and males in terms of the production of lexical importation in acquisition can be explained basing on the children’s linguistic background, cognitive development and the socialization of children in the *Tachoni* community. The *Tachoni* child who is born and brought up in the remote rural area such as the ones studied here is socialized to talk less in the presence of adults, and more so, strangers but to talk freely among peers and grandparents (Wekesa 2014).

The above kind of socialization is also differentiated along gender lines where girls are expected to be more reserved in terms of speech compared to boys. This was one of the reasons, apart from the methodological requirements, that necessitated the researcher to make pre-visits to the various families to have

acquaintance and rapport with the children and their respective parents. The rate of lexical importation for girls was generally much lower than that of boys was also an indication of girls attaining linguistic maturity and growth towards the adult forms faster than boys. These gender differences are also sociologically and culturally significant. For instance, Ellis (1994: 206-207) says “In stable sociolinguistic stratification, men use a higher frequency of non-standard forms than women.” In this study therefore, cases of lexical importation can be said to be the non standard forms.

Further analysis involved testing the hypothesis that there is a significant relationship between the gender of the children and the production of lexical importation. Spearman’s Rank Correlation Coefficient was used to establish the relationship and to test the significance of the relationships as shown in table 6.5 below:

Table 6.5: Correlations Between Gender and Lexical importation

		Gender of the respondents	Lexical Importation
Gender of the respondents	Spearman’s Rank Correlation Coefficient	1	-.771
	Sig. (2-tailed)		.015*
	N	12	9
Lexical Importation	Spearman’s Rank Correlation Coefficient	-.771	1
	Sig. (2-tailed)	.015*	
	N	9	9

*. Correlation is significant at the 0.05 level (2-tailed).

The results revealed that there was a very strong (negative) correlation (-.771) between the two variables; gender of the child and the production of lexical importation. This relationship was found to be significant at 0.05 significance level. Therefore, the study hypothesis that there is a relationship between the gender of the child and the production of lexical importation was accepted. Male respondents had high lexical importation statistics than female respondents.

These results are in line with other studies conducted earlier on gender differences on early language acquisition. Notable ones include those of Dressler (2007); Gleason (1994); Smith (2002); Makeni (2007); Karmiloff-Smith (2002) and Coates (1989). Studies conducted by Dressler (2007) and Gleason (1994) indicate that girls are usually more advanced in language development than boys. Girls begin to talk earlier; they articulate better and acquire a more extensive vocabulary than boys of the same age. Studies of verbal ability by Karmiloff-Smith (2002) have shown that girls and women surpass boys and men in verbal fluency, correct language usage, sentence complexity, grammatical structure, spelling, and articulation. Coates (1989) claims that female children are usually quicker than male children to obtain language. Everything from babbling to the timing of first words and speed of vocabulary growth, girls seem to be more ahead than boys. All these studies prove that there is a significant relationship between the gender of the child and language development, a hypothesis that is also proved in the present study.

6.3.2 Gender and Lexical Invention

The study also sought to establish the correlation between the gender of the children and the production of lexical invention. The findings are presented in table 6.6 and figure 6.4 below:

Table 6.6: The Effect of Gender on Lexical Invention

Gender	Lexical invention in mixed language (N)	%	Lexical invention single language (N)	%
M	40	53.3	18	45.0
F	35	46.7	22	55.0
Total	75	100	40	100

The results in table 6.6 are also presented in figure 6.4 below:

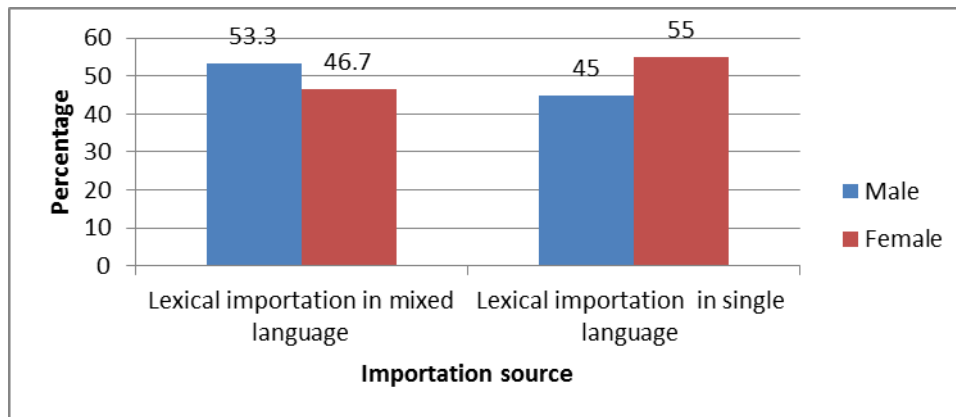


Figure 6.4: The Effect of Gender on Lexical Invention

Table 6.6 and figure 6.4 above indicate clearly that the extent of the production of lexical invention for boys, 40(53.3%) surpasses that of girls 35(46.7%) from the mixed language family set up. This could be attributed to the fact, as mentioned

earlier, that girls in the *Tachoni* culture right from birth are socialized to talk less compared to boys. During data elicitation, it was even observed that girls would remain silent in some cases when asked to name an object. It can also be argued that girls in the mixed language family set up attain linguistic maturity faster than the boys. Girls from the single language family set up on the contrary, produce the majority of lexical invention 22(55.0%) compared to boys who produce 18 (45.0%). The explanation to this could be attributed to females being faster learners than males in terms of cognitive development which has an impact on language learning.

There are several studies on first language acquisition which have shown that girls are better learners than boys because they use more language learning strategies (Douglas 1964; Morris 1966; Oxford and Nyikos 1989; Karmiloff-Smith 2002). This means that by virtue of the girls using more lexical invention, it means that they are successfully progressing faster than the boys towards the acquisition of the target words. For example, Oxford and Nyikos (1989) concluded that females reported greater use of cognitive, metacognitive, and social strategies than their male counterparts. They offered many possible biological and sociocultural reasons for gender differences in language learning. Extensive research in the field allows us to state, however, that even though in some aspects of language acquisition boys might be considered to lag behind or experience more difficulties than girls, they, as a rule, reach the same level of linguistic competence as girls (Karmiloff-Smith 2002).

Further analysis involved testing the hypothesis that there is a significant relationship between the gender of the children and the production of lexical importation. Spearman's Rank Correlation Coefficient was used to establish the relationship and to test the significance of the relationship as presented in table 6.7 below:

Table 6.7: Correlations between Gender and Lexical Invention

		Gender of the respondents	Lexical Invention
Gender of the respondents	Spearman's Rank Correlation Coefficient	1	-.825
	Sig. (2-tailed)		.001**
	N	12	12
Lexical Invention	Spearman's Rank Correlation Coefficient	-.825	1
	Sig. (2-tailed)	.001**	
	N	12	12

** . Correlation is significant at the 0.05 level (2-tailed).

The negative correlation -.825 indicates a strong negative relationship that exists between the gender of the subjects and the production of lexical invention. This was found to be significant at 0.05 significant level. The significance of 0.05 indicates that there exists a significant correlation between the gender of the children and the production of lexical invention. This implied that the declarative hypothesis for the study is accepted. Studies of child language acquisition, as has been mentioned earlier, have given varied degrees of the relationship between the gender of the child and the acquisition of language. The studies are in unanimous

agreement that language development in children is differentiated along gender lines.

For example, a study conducted by Ellis (1994) on the acquisition of vocabulary by eighteen children between the ages of one and two proves girls' superiority in vocabulary growth. Her study showed that all the boys fell in the group with the slower acquisition rate. The girls would have a vocabulary of fifty words at eighteen months old but the boys at twenty-two months.

A study conducted by Fontecha (2010) found out that boys and girls differ in elicited production of vocabulary. From these results, it was believed that gender differences are determined by two main aspects: type of task and social nurture. Concerning the type of task, it was argued that different tasks require different mental processes. Research conducted by (Halpern and Wright, 1996) on mental processes underlying cognitive tasks revealed that girls are superior to boys in performing several mental processes. In this sense, it was concluded that it is only when learners have to face different cognitive tasks do gender differences appear. The next section presents data on the role of the linguistic environment on the acquisition of *Olutachoni* lexicon.

6.4 Linguistic Environment

The ways in which children learn a language is puzzling (Hoff 2006). While learner characteristics such as motivation, extraversion, and language aptitude

contribute to language development, the role of environmental factors has been the focus of consideration in many studies of child language development (Bowers and Vasilyeva, 2011). This section focuses on the role of the linguistic set ups on the acquisition of *Olutachoni* as first language through the process of lexical borrowing among the 2-7 year old children. The children under study were sampled from the mixed and single language family environments.

Linguists often give two theoretically opposed explanations for language acquisition: the behaviourist (or empirical) theories, which are based on Skinner's theoretical ideas (Skinner 1957), and the nativist theories, which are founded on the work of Chomsky (Chomsky 2003). These oppositions are grounded in what linguists describe as nativist and empiricist accounts of language acquisition (MacWhinney, 1999). These accounts are based on whether the human capacity for language is innate and biologically determined or is realized through, and reliant on, environmental input. An extension of these positions and a further critical distinction between them is that, in the nativist tradition, language acquisition is seen as a special cognitive capacity, a specific and unique domain which is part of human biological endowment. The environment of each child was only supposed to trigger the innate knowledge of the Universal Grammar (UG) (Hoff 2006). Chomsky (1993: 519) summarizes his principle of language learning in the following way:

Language learning is not really something that the child does; it is something that happens to the child placed in an appropriate environment, much as the child's body grows and matures in a predetermined way when provided with appropriate nutrition and environmental stimulation.

Linguistic knowledge can thus be regarded as a result of UG in interaction with language experience (Hoff 2006: 13). In this case, according to Chomsky (1993) every child knows far more about language than could possibly be learned from experience. Furthermore, Chomsky states that the input a child receives from his environment is basically impoverished. Supporting Chomsky's argument, Laurence (2001: 221) remarked: "The general idea behind the poverty of Stimulus Argument' (PSA) is that the knowledge acquired in language acquisition far outstrips the information that is available in the environment." Chomsky's PSA includes certain key elements. First, Chomsky argues that what children hear is "fairly degenerate[d] in quality". Secondly, he assumes that children do not receive negative evidence, which means that parents do not correct children's grammatical errors neither do they teach them what exactly is grammatically correct (Saxton 2010: 198). Thirdly, Chomsky introduces a property of grammar, known as structure dependence (Saxton 2010: 199). Structure dependence describes the phenomenon that children seem to have "knowledge of certain aspects of grammar, despite a lack of evidence for them in the input" (Saxton 2010: 198).

Empiricists on the other hand, view language acquisition as purely as a result of the linguistic environment. Tomasello (2003) take the empiricists view that

environmental factors are responsible for children's language acquisition. According to Clark (1993:22), the linguistic environment in which children acquire language is important in the acquisition process. Clark asserts that: "Infants are born into a social world, a world of touch, sound, and effect, a world of communication. They develop and grow up as social beings, immersed in a network of relationships from the start." It is in this social setting that they are first exposed to language. The language of such a social world forms part of the daily communication around them and to them. In the last few decades, however, these two contrary positions have been brought increasingly in line with each other. Recently developed interactionist explanatory approaches have taken into account both a biological basis as the precondition for language acquisition and other factors such as social environment, socialization and the general learning mechanisms and capacities of the child.

The current focus has been described by MacWhinney (1999) as a concern to provide a conceptual framework which can account for interactions between biological and environmental processes. It requires a renewed evaluation of the roles of the child's physiological status, cognitive skills and social precocity in language acquisition and of the interactions between these and family input. Hoff (2004) concludes that there is an increased appreciation of the multiple interacting factors which contribute to language acquisition and of the ways in which the relative importance and contributions of these factors lead to language development. The focus on the interaction between the child's individual

biological endowment and environmental input is most strongly expressed in what is described as an emergentist view of language acquisition and development (Ellis 1998; Hirsh-Pasek and Golinkoff 2000; MacWhinney 1999; Tomasello 2003; 2009). Essentially, the emergentist position seeks to explain language acquisition in terms of the interaction between child learning mechanisms and environmental input (Hoff, 2004). This view draws from both nativist and empiricist positions to present what is posed as a more complete account of language acquisition (MacWhinney, 1999).

Ellis (2008), one of the proponents of emergentism, views language acquisition as being controlled by external factors among which language input which consists of stimuli and feedback is central. He claims that input is needed for language acquisition but because the learners' brains are equipped to learn any language with innate knowledge, language input is merely considered as a trigger that activates the internal mechanism. Thus, Ellis highlights the importance of both input and internal language learning processing. He views language acquisition as the outcome of an interaction at the discourse level between the learners' mental abilities and the linguistic environment and input as the role of affecting or being affected by the nature of internal mechanisms. This study adopts the emergentist view that the child acquires language through their interaction with the linguistic environment which provides a model on which the child can build up assumptions about the grammatical structure of the target language, and that innate capacities play an integral role in this process.

The child is an active learner who brings various capacities to what is a complex task of language acquisition (Ellis 2008). According to this study therefore, both the physical, linguistic and non-linguistic features of a linguistic environment impact on the process of language acquisition. The various components of the linguistic environment that come into play during language acquisition are outlined and discussed below:

- a) Input
- b) Output
- c) Feedback
- d) Physical environment
- e) Social environment

The above components interact with each other to facilitate language acquisition regardless of the aspect of language that the child is acquiring. This study is concerned with the acquisition of the *Olutachoni* lexicon through lexical borrowing. The study explores the role which the linguistic environment plays during the acquisition process. Each of the various components of the linguistic environment is discussed below together with their impact on lexical borrowing on the children under study.

6.4.1 Input

In language acquisition, input is the language data which the learner is exposed to. It is commonly acknowledged that for language acquisition to take place there must be two prerequisites: input available to the learners and a set of internal mechanism to account for how L1 data are processed (Ellis 2008). There are many internal as well as external factors which influence FLA. Among them, the language input that learners receive in FLA is one of the external factors which play a fundamental role. However, while the importance and the role of language input have been advocated by various language learning theories, there has been a controversy in the field of language acquisition between those theories that attribute a small or no role to language input and those attributing it a more important role.

In relation to the current study, input plays a major role to FLA. The child in the present study receives input and uses it as a basis for formulating and testing hypotheses about the nature of the target languages. Such input in the present study emanates from adult utterances from both the mixed and the single language family set ups. Language learning is environmentally controlled by various stimulus and feedback that language learners are exposed to as language input. The innate capacity helps language learners process the information they receive as input. It is also important to note that the quantity and the quality of the input

are important to language acquisition. The next section discusses the quantity of the input in relation to language acquisition.

6.4.1.1 Quantity of Input

Quantity of input refers to the amount of input that a child acquiring a first language is exposed to during the process of acquisition (Hart, B. and Risley, T. 1995). According to a research conducted by Scheele (2010), bilingual children's amount of vocabulary acquisition is strongly influenced by the amount of exposure. It is important to consider amount of input, because not only do the languages of each person affect acquisition; the amount of time each main input carrier spends with the child also has an effect. Research by Place and Hoff (2011:334) has shown that children who are exposed less to a language will have "significantly lower receptive vocabulary scores" for that language. Chambers (1995) following work on early phonological and lexical learning suggest that an increase in the number of different people providing input in a given language may simply increase the amount of lexical items to which the child is exposed, especially if associated with different contexts, and this may be (part of) what contributes to higher vocabulary scores. Bowers and Vasilyeva (2011) on the other hand, found that the overall amount of speech produced by parents was a significant predictor of growth in children's vocabulary scores.

The quantity of input should be viewed from a child's perspective as well as a parent's perspective. This is because, the input offered by the parent must be processed by a child. Corder's (1967) distinction between input, intake and uptake becomes crucial here. Corder defines "input" as what is available to the child, "intake" as what is actually internalized by the child and "uptake" as the input attended to by the child. The amount of uptake that is attended to and processed by the child is what the child responds to and that is what becomes useful during language acquisition. According to Schwartz (1993), first language acquisition will not occur even if with input at the right quantity and quality but without being internalized by the learners and becoming part of their interlanguage system. Thus, uptake is only useful to the child if it is processed into the intake. Intakes are the linguistic features attended to and processed by the child during language acquisition. Cases of lexical importation and lexical invention as discussed in Chapters four and five emerged out of the child's attempts to process the uptake.

6.4.1.2 Input and Lexical Importation

Studies carried out earlier indicate that input as a component of the linguistic environment has a role to play on the child's language acquisition. Saunders (2000) carried out a study in establishing infant bilingualism in the family. Saunders looked closely at two Australian born boys' acquisition of English and German. From birth, the children were addressed by their mother and most other people in English, whilst their father had always spoken to them in German.

Saunders reported that the two boys were inclined to employ a number of German words, sounds and sentence structure (i.e. lexical, phonological and syntactic items respectively) in their English when addressing their mother. Their mother not only accepted the use of these words but at times employed them herself when speaking to the boys.

On the contrary, when addressing their father, the boys used German but still with some borrowed linguistic items (lexical, phonological, semantic and syntactic) from English. In Saunder's study, most switches from one language to the other were attributable to the fairly clear-cut patterns of communication which had developed within the family. According to Halgunseth (2009), Parents and other primary caregivers have an influence on children's FLA in the early years. Other researchers on first language acquisition who agree with Halgunseth include Patterson 1992; Roberts 1994; 1997; Smith 2007; De Houwer's, 1999 and Lao 2004. The parents' attitudes, goals, and behaviours influence children's developing language skills, language socialization, perceptions of the value of L1, and maintenance of L1. This would mean that adult language usage is transmitted to children within the family environment that provides the requisite material for linguistic development.

In the current study, it is also evident that the quantity of input has a role to play in language acquisition. This is shown through the cases of lexical invention that the

children produce in the course of language acquisition. These results are presented in table 6.8 and figure 6.5 below:

Table 6.8: The Role of Input on Lexical Importation

Linguistic environment	Cases of Lexical importation from Kiswahili(N)	%	Cases of Lexical importation from Olubukusu (N)	%
Mixed	26	38.8	96.0	99.0
Single	41	61.2	1	1.0
Total	67	100	96	100

The results in table 6.8 are also presented in figure 6.5 below for clarity:

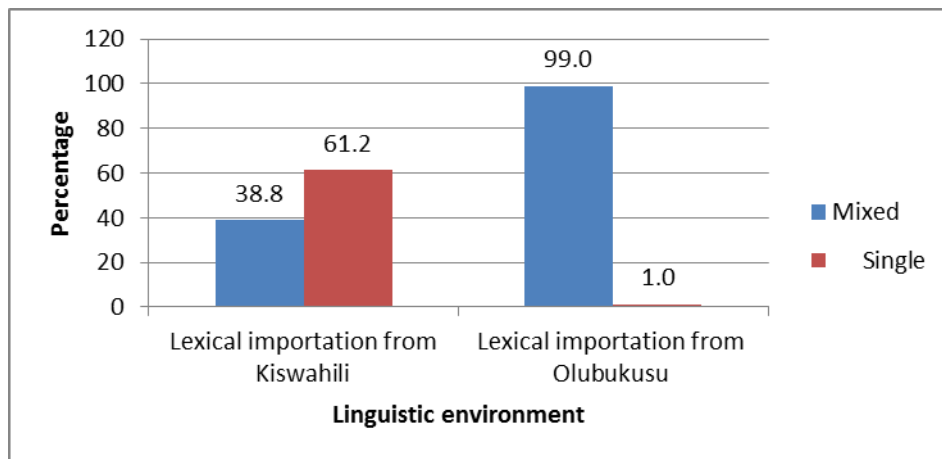


Figure 6.5: The Role of Input on Lexical Importation

From table 6.8 and figure 6.5 above, it is evident that the input, a component of the linguistic environment has an effect on the production of lexical importation by children from the two language set ups although at varying degrees. In a mixed language family set-up, there are more cases (99%) of lexical importation from *Olubukusu* than the single language family environment 1 (1%). This great

variance is due to the role played by the amount of input on children. Children from the mixed language set ups have more exposure to *Olubukusu* and to some extent Kiswahili and to a larger extent, *Olutachoni* which is the language of the wider community. This has led to an increase in the amount of input such children receive. This supports Green's (1998) argument that the frequency with which a given construction is encountered (e.g. vocabulary) will determine the magnitude and speed of language acquisition. Furthermore, since children from the mixed language family set ups are dealing with three languages compared to the children from the single language family set ups, the amount of time that they are exposed to and/or use each of the languages is usually reduced.

Competition between two languages also takes place during language processing among the children acquiring *Olutachoni* in a single language family set up. The accessibility of a given form through recent and frequent use is indicated from the use of lexical importation from Kiswahili. The subjects import more words from Kiswahili 41 (61.2%) than their counterparts in the mixed language family set ups who import less 26 (38.8%) from Kiswahili because they have an alternative source language: *Olubukusu*. This implies that the language that is spoken by the family members (parents) determine the acquisition of the target language. Therefore, the assumption that the linguistic environment has a role to play in the acquisition of the lexicon through lexical borrowing valid. Also, this results show that lexical importation is a universal characteristic among the *Tachoni* children regard less of their linguistic environment.

These results are in agreement with other studies on FLA that have explored the question as to whether the linguistic environment has a role to play on language acquisition. Genesee (2006) for example, focuses on the simultaneous acquisition of two languages from birth, or what is generally referred to as bilingual first language acquisition (BFLA). The focus of her study was whether the developmental path and time course of language development in BFL learners is the same as that of children learning only one language in a single language environment. Underlying this question was the theoretical issue of whether the children's ability to learn language is challenged in any way by the language of the family environment. The results of her study indicated the linguistic environment contributed to the acquisition of vocabulary. Section 6.4.2 presents results on the role of the input on the production of lexical invention.

6.4.1.3 Input and Lexical Invention

This section considers the role of input and the production of lexical invention by the children. The empirist developed a theory of learning where the child's changes in behaviour were traced back to observable conditions of the child's environment (Littlewood 1989). The emphasis was on observable events in the interaction of the child and its surrounding linguistic environment. Within this view, the child was seen as being passively controlled by the environment. Grosjean (1998:33) suggests that the language background of the people from whom the child receives the most language input is important in determining the

process of language acquisition. According to Grosjean, the language background of both parents is a factor that influences a child's language acquisition. Brown (2000) on the other hand, agrees that language acquisition is a process of interaction between the mother and the child from birth. Therefore, based on the above arguments and many others, table 6.9 and figure 6.6 presents the findings on the role of the input on the production of lexical invention on the acquisition of language.

Table 6.9: The Role of Input on Lexical Invention

Linguistic environment	Cases of Lexical Invention from Kiswahili (N)	%	Cases of Lexical Invention from Olubukusu (N)	%
Mixed	37	48.7	38	97.4
Single	39	51.3	1	2.6
Total	76	100	39	100

The information presented in table 6.10 above is also, for more clarity, given a graphic representation in figure 6.6 below:

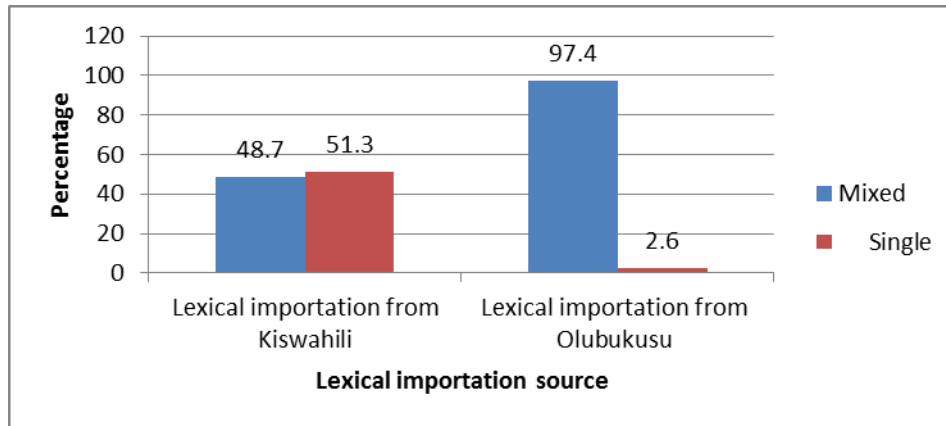


Figure 6.6: The Role of Input on Lexical Invention

With respect to the results in table 6.10 and figure 6.6, the quantity of input varied from one language set up to another. Children from the mixed language family set ups were accessible to more input from *Olubukusu* 38 cases (97.4%) than those from the single language family set ups 1(2.6%). On the contrary, children from the single language family set up were accessible to more input from Kiswahili 39 cases (51.3%) than their children from the mixed language family set up 37 cases (48.7%). These results indicate the importance of the amount of input on a child's language acquisition.

The above results indicate that two or more languages during processing are always simultaneously active and in competition with one another to some extent (Green 1998). However, their relative activation levels and the strength of competing words will vary greatly according to the proficiency level in each language and the amount of input. The many cases (97.4%) of lexical invention from *Olubukusu* could be attributed to the fact that the activation level of

Olubukusu words are higher when a child hears *Olubukusu* quite often while the corresponding activation level of the Kiswahili words will be lower (48.7%). On the contrary, children from the single language family set up receive Kiswahili input quite often compared to *Olubukusu*. Therefore, the activation level of Kiswahili words is higher (51.3%) than the corresponding *Olubukusu* words (2.6%).

The above cases of lexical invention could also be explained to be as a result of the child's attempts to process the uptake. The existence of the lexical gap in a child's mental lexicon could have led to the emergence of lexical invention due to the child's failure to process the input. For instance, when the researcher asked the child to name an object or part of the body whose name the child had not grasped in the target language, the child would keep quiet (a few cases) or think up an appropriate response failure to which the child would invent an appropriate word between the source and the target language in order to communicate.

These results imply that children growing up with more than one language usually obtain their input for each language. They may have relatively balanced exposure or this may be skewed in favor of one language over the other. In comparison with children from the single language environments, Children from the mixed language family set ups are generally assumed to hear comparatively less input per language than their counterparts. As mentioned earlier, the current study considers parents as the main source of input among the children under study. This is based

on the remarks by Gathercole (2014) that the most influential factor in language acquisition is the languages spoken by parents to their children, and the languages spoken by others with whom the child comes into contact. This language exposure is called comprehensible input. In recent years, psychologists have become increasingly aware that children's early social interactions play an important role in development of language skills. (Nelson, 1981). In children's development, parents are children's first teachers and family becomes the first teaching place (Huang, 2004). Gathercole (2014) reports that mothers will give children the most verbal input from which children can acquire the language gradually.

These results are in agreement with other numerous studies conducted on the impact of home language use on children's developing language skills. Ellis (1994) for example, reports that the language behaviour of parents and other family members at home determines the language their children would speak. According to the study, the interaction within the family and the relationships that exist within a home particularly provide a vital role in offering a child with verbal contacts and the opportunity to use language in meaningful ways. The attitudes and multilingual ability of the family members bear on the child's choice and use of language. Lust and Foley (2005) claims that children use language as a result of being trained by their parents. Although this stance is opposed by Chomsky (2007), it emphasizes the critical role played by the caretaker in enhancing language acquisition in children.

The quality of communication between the caretaker and the child has been suggested to influence language acquisition. Baby talk exposes the child to simple language, linguistic structures and operations. It also indicates rules of language use especially rules of conversation. These interactions provide a framework within which utterances can be situated and acquisition of grammar can take place. These observations are in line with the usage –based language acquisition theory by Tomasello (2012). Tomasello observes that the family environment plays a crucial role in language socialization in early childhood. For a child growing up in an environment with more than one language, the family provides the socializing environment and introduces the child not only to the language-in-acquisition, but to preferred language use patterns in the family and in the wider community.

There are however, other few studies where the amount of language input at home or the societal language was not found to relate to children’s language outcomes, most likely because the parents’ proficiency level in that language was so low. Such studies include those of Chondrogianni and Marinis (2011) and Crago (2008). The next section discusses the quality of the input which is also fundamental in language acquisition.

6.4.1.4 Quality of Input

Recent research has demonstrated the importance of input quality as well as quantity (Gathercole 2014). According to Orwenjo’s 2009 definition, the quality of

input refers to the accuracy and correctness of the utterances that the child picks from the surrounding discourse, whether he is one of the interlocutors or not. The accuracy of the lexical items depends on the structures that the child is exposed (input) to which have a bearing on what the children will acquire. Children may hear input from both native and non-native speakers, who in turn may vary in their level of proficiency (Fernald 2006). The language addressed to children is usually different from adult to adult language. One of the interesting observations in such a language is that adults change their speech while talking to children a phenomenon referred to as Child-Directed Speech (CDS). According to O'Grady (2005: 176), child-directed speech can be described as a specific type of speech, uttered by the children's caretakers. Changing one's own speech in conversation with children seems to occur quite intuitively and can be observed in any situation of everyday life in which adults and children are involved. Child-Directed Speech (CDS) is slower, more repetitive, and more likely to exaggerate the pronunciation of vowels. In addition, people using child-directed speech are more likely speak in shorter, simpler utterances. These aspects of Child-Directed Speech (CDS) are relevant in determining the quality of input that the children are exposed to in the process of language acquisition.

The main focus of the current study was the acquisition of the lexicon which was determined by the quality of the input through CDS from parents. In this case, the quality of the input has a role to play on the acquisition of the children's vocabulary. When the input is not lexi-mor-phonologically rich in terms of quality,

then the acquisition of vocabulary is delayed since children might end up with many cases of lexical importation and lexical invention as discussed previously. Child-Directed Speech (CDS) can gain its usefulness and richness in language acquisition through joint attention interactions. Joint attention interactions between adults and children often take place during everyday situations like bathing, feeding or playing (Dominey 2004). During such situations, children get the chance to recognize others' intents and to participate in speech acts. Dominey argues that via eye contact the attention of the children is gained and afterwards maintained with the help of child-directed speech. Indeed, joint attention builds a necessary basis for child-directed speech communication and needs an interactive context in order to establish the basis for language learning (Dominey 2004: 129).

Joint attention has become a communicative function in the process of child language acquisition since it provides them with the opportunity to communicate information about objects (Wagner 2006: 77). Adults follow or direct the child's attention and in doing so; they can use language to change the child's focus of attention to different objects or events. It is quite remarkable that children whose mothers and fathers had an increased tendency to follow their attention were more likely to have larger vocabulary than those whose parents lead their attention to a different object or event (Dominey (2004). Joint attention helps children develop an ability to coordinate their intention with a social partner referring to an object or event.

With regard to the present study, joint attention was considered part of the quality of input that the children were exposed to. The findings of the study reveal that such quality differed considerably depending on the different age groups of the children. Younger children had the highest amount of corrective input from their parents both in the single and mixed language family set ups. The underlying reason is the fact that, at a young age, children have not developed fully their linguistic skills. As the children strive to develop their linguistic skills through corrective input from their parents, they end up making lexical mistakes such as lexical importation and lexical invention towards the target language.

Apart from the children making their own mistakes due to the developing linguistic skills, some cases of lexical importation and lexical invention produced by children are attributed to CLIs from the input. For example, mothers who are native speakers of *Olubukusu* living in an *Olutachoni* speaking community are likely to also produce inappropriate target language words in the forms of lexical importation and lexical invention. It is therefore, reasonable to assume that children whose parents are linguistically influenced may experience input that is inappropriate. Such adulterated input is reflected in the children's language (output) and has an influence on the extent to which children resort to lexical importation and lexical invention when confronted with the problem of retrieving the target language lexical item.

This implies that it was easier for a child to adopt or invent a word from another language apart from the one she is acquiring (*Olutachoni*). Orwenjo (2009) remarks that this is an expected phenomenon because if a child has learnt a word from the source language and not its equivalent in the target language, or has learnt the correct word but fails to retrieve it in a conversation, then the easiest and the quickest way to sustain a conversation is to retrieve the word from the source language. This phenomenon has been illustrated extensively in chapters four and five of this study. Cases of lexical importation and lexical invention generally slow down the acquisition of the target words in the target language. This is because the child has two competing entries for a single word in his/her mental lexicon. If every time a child attempts to use the target word and the source language word is retrieved, then the acquisition of the target word is impeded. In the next section, the output is discussed as another aspect of the linguistic environment.

6.4.2 Output

The term “output” is used in language acquisition to refer to the language a learner produces, in this study, the children’s utterances. Swain (1985) has argued that comprehensible output also plays a part in L1 acquisition. Swain pointed out that learners are obliged to produce comprehensible output otherwise comprehensible input alone is insufficient to L1 learning process. According to her, there is no better way to test the extent of one’s knowledge (linguistic or otherwise) than to

have to use that knowledge in some productive way (output) whether it is explaining a concept to someone or getting a simple idea across, and in doing so, the learner might modify a previous utterance. This modification of output may lead to learning a new aspect of the language which had not been acquired yet. In this regard, Romeo (2000) showed support for Swain's comprehensible output hypothesis when he indicated that output of some kind is considered as a necessary phase in language acquisition. Romeo highlighted the role of output in language acquisition by underlying the point that language learners' output is needed in order to be able to judge their improvement in terms of language learning. Moreover, language learners need the opportunity to use the target language because when faced with communication failure, they are forced to make their output more precise. These arguments suggest that both comprehensible input and comprehensible output are important to be utilized as a source of input in language acquisition process.

A substantial amount of data on children's utterances was generated in the current study. The focus of the study was lexical borrowing, a process through which the vocabulary of *Olutachoni* as a first language is acquired. Lexical borrowing was reflected through two main strategies: lexical importation and lexical invention. The output for the study was, therefore, the data on lexical importation and lexical invention. This data has been presented and discussed in chapter four and chapter five of this study. The next section presents information on feedback as another aspect of the linguistic environment.

6.4.3 Feedback

Feedback as defined by Ellis (1994) is a linguistic mechanism which ensures that a set of basic requirements on communication, such as possibilities for continued contact, for mutual perception and for mutual understanding can be met. Adult behavior, linguistic or not linguistic, is in one way the source of all linguistic evidence. A primary source of evidence in the current study between adults and children is *feedback* from adult behavior relative to an immediately prior child utterance. Such behavior differs depending on whether the child's utterance is grammatical or ungrammatical. Feedback can either be positive or negative: *Positive feedback* is behavior consistent with approval of the grammaticality of a child's utterance and *negative feedback* is behavior consistent with disapproval of the grammaticality of a child's utterance.

Children use a hypothesis-testing mechanism, to transform their interpretations of adult utterances into information about their grammars. This is a rich source of negative evidence that depends only on exposure to the target language. This is a necessary condition for the language being acquired. Thus, all children who are in a position to acquire language are in position to do so by using negative evidence. Positive evidence can also be reconceptualized as a product of the same mechanism: information that confirms the child grammar is positive evidence; information that refutes it is negative evidence.

The present study is concerned with both positive and negative feedback in the perspective of the children and their parents/researcher. The children and parents/researcher are the interlocutors in the utterances that were recorded during the study. The focus is on how parents/ researcher sought to repair such utterances through feedback in order to help children acquire the target vocabulary. This is in line with Hedge (2000:123) argument that the feedback the learners get from their parents drives them to “test their hypotheses and refine the development of the knowledge of the language system hence function as a facilitator of language development.” In this regard, it is important to ascertain the amount and nature of feedback needed to acquire a first language. The present study, therefore, addresses the issue of quantity and quality of feedback.

6.4.3.1 Quantity of Feedback

Quantity of feedback is the amount of adult linguistic behavior relative to an immediately prior child utterance. The quantity of feedback a child receives during language acquisition is very crucial in determining the rate and the route of acquisition (Oriento 2009). Feedback corrects an ungrammatical utterance, or confirms the grammatical one. In both cases, the child is presented with an opportunity to acquire language. With regard to the relationship between lexical borrowing and the amount of feedback, there was both a positive and a negative relationship.

In terms of age, there is a negative relationship between the amount of feedback and the nature of lexical borrowing. The lower ages (2 to 4) are bound to make more linguistic errors in terms of target language acquisition. This is because such children are still at their formative age in terms of language acquisition. Such children have therefore the highest amount of corrective feedback with corresponding high levels of lexical borrowing (Cf section 6.2). Therefore, it follows that the large amount of feedback leads to a high rate of the target language acquisition. This is because feedback is always corrective in nature.

There is a mixed relationship between the quantity of feedback and the degree of lexical borrowing among older children (5 to 7). According to Nelson (1981), children who have acquired some level of proficiency in their language and are of ages above five years will always feel shy when they break the rules of the target language and receive a lot of corrective feedback due to this. This leads to withdrawal symptoms among the children which are characterized by the reduction in the number of utterances the children make. Such a reduction could have led to fewer cases of lexical borrowing among older children in the current study (Cf section 6.2). This has a negative effect on the whole acquisition process because it delays the general linguistic development of the children.

Moreover, the quantity of feedback can negatively impact on the amount of lexical borrowing by making them fewer. This is because of the fact that with more corrective feedback, the child is able to learn the correct target word by correcting

the errors made. This implies that the child will therefore not resort to strategies like lexical importation and lexical invention. The incidents of lexical importation and lexical invention reported in the present study signal to the fact that lexical acquisition is proceeding smoothly. This is explained by the fact that as the children continue to advance in age, cases of lexical importation and lexical invention reduces.

6.4.3.2 Quality of Feedback

It is important for children to know whether the feedback they receive, if any, is reliable. Cowie (1999) identifies three attitudes that children could have towards feedback: they could assume it to be reliable; they could assume it to be unreliable; or they could try to determine its reliability. The first two options are not promising: If a child assumes that the unreliable feedback she is getting is reliable, or that the reliable feedback she is getting is unreliable, then it is difficult to see how that would help. In the former case, the child would be misled into believing that some of her grammatical utterances are ungrammatical and vice versa, while in the latter case the child would just ignore feedback altogether. The third option, that children try to determine the reliability of feedback, require them to have two pieces of information: they must know whether a given reply type is meant to flag grammaticality or ungrammaticality, and they must know the grammaticality of the utterance the reply follows. Even granting that children know the former, the latter is “precisely the knowledge the child is trying to acquire” (Marcus, 1993:72).

In terms of quality of feedback, the reliability of feedback children receive is crucial. For instance, a child can receive positive feedback for an ungrammatical utterance, or negative feedback for an ungrammatical one. In such a case, the child is receiving inaccurate information about the grammaticality of her/his utterance, with potentially devastating consequences for acquisition. The sum of feedback a child receives can be *complete*, in the sense that the child receives accurate feedback for every utterance; or it can be *partial*, in the sense that the child receives accurate feedback for some utterances, but never any inaccurate feedback; or it can be *noisy*, in the sense that the child receives both accurate and inaccurate feedback for at least some utterances but not necessarily all (Marcus 1993). These categories are mutually exclusive for any individual child. For this case, if a child were to receive partial feedback, the child would not be receiving complete feedback, although some other child might.

In the present study, only noisy feedback seems to exist in the form of both explicit and implicit feedback. *Explicit feedback* is outright adult approval or disapproval of a child's utterance and *implicit feedback* is approval or disapproval of child's utterance inferred by the child from adult reactions to that utterance. Accurate feedback will therefore be useful in the language acquisition process since the child will be corrected to learn the target word as he tests his earlier formed hypotheses about the language. Inaccurate feedback on the other hand will impede the process of language acquisition because of the confusion caused by giving inaccurate feedback.

The form that the feedback takes is equally important in determining its quality. The present study identifies two forms in which feedback was presented to some of the children involved in the study.

6.4.3.3 Repetitions

In this case, parents or the researcher repeated slowly with much emphasis on the child's utterance which was either imported or invented with a replacement of the corrected form. As mentioned previously, repetition, emphasis and a slow speech are characteristics of CDS. This was meant to sensitize the child that he had made an error and therefore, should produce the target word in future utterances. Some examples are illustrated in table below:

Table 6.10 Repetitions

Borrowed forms	Corrected forms	Gloss
Kumwikho	Omwikho	cooking stick
Eindemu	Einjukha	snake
Eenyuni	Linoni	bird
Nyanya	Koko	grandmother

Chouinard and Clark (2003) proposes that the immediate juxtaposition of a child error and adult form draws children's attention to any mismatch and thereby provide a basis for rejecting an erroneous form. This kind of feedback in the current study is meant to help the children to acquire the target vocabulary faster.

However, this holds only if the children realize that the two forms in question are intended to express the self-same meaning. If children can infer that the intended word of the adult reply is the same as the word of their own preceding utterance, then the relevant point of contrast between the child and adult utterances is the form those utterances assume. Thus, an adult reply to a child utterance is both an instance of feedback, since the child may treat the adult reply as evidence of the grammaticality of her own utterance, and an instance of input, since the adult's word contains information about the target language.

6.4.3.4 Clarification Questions

Clarification questions involved the children being asked questions in reference to the concept they had named in order to clarify what they intended to say. From the clarification, the children would get to know or remember the correct word they ought to have used. Some examples of clarification questions are provided below:

Table 6.11: Clarification Questions

Borrowed forms	Clarification question	Target form
iikhafu "cow"	unang'ali? "are you sure"	esiayo
eisimbo "walking stick"	Oori? "what?"	snake

The above clarification questions, just like the repeated utterances, were asked slowly with a lot of emphasis. The questions were meant to help a child test the hypotheses he had formulated with regard to how the target language operates.

Repetitions were the most widespread form of feedback followed by clarification questions.

6.4.4 The Social Environment

Social environment according to Gleason (2005) refers to the immediate social setting in which people live or in which something happens or develops. It includes the culture that the individual lives in, and the people and institutions with whom they interact. The interaction may be in person or through communication media, even anonymous or one-way. The interactionist approach to language acquisition mainly focuses on the social environment and largely ignores the innateness hypothesis to be accountable for language learning (Tomasello 2012). From a social-interactionist perspective, the pragmatic use of language and its communicative function is seen as the driving force of language learning for the child, and the motivation for the child's acquisition of the structural components of vocabulary and grammar. Social environment, a component of the linguistic environment comprises of the speaker(s) within the linguistic environment during the recording and the speech situation in this study.

The present study takes account of the social environment in which children acquire language as an important factor in understanding the process of language acquisition. The study adopts the interactive aspect of a social environment among the speakers. The focus is on the role of the social environment and the production

of lexical borrowing during child language acquisition. As aforementioned in section 6.4 of this chapter, the children's interaction with their parents, especially their mothers, promote the acquisition of their vocabulary. Cases of lexical importation and lexical invention are seen as strategies adopted by the children as a result of their interaction with their parents.

The study also considers the speech situation as another aspect of the social environment which has an effect on child language acquisition. The speech situation determines the extent to which children borrow and the various types of lexical borrowing. As has been mentioned in the previous chapters of this study, there were more cases of lexical importation and lexical invention where children were free to respond to the questions. Such opportunities were in a social environment where children were in the presence of their parents, especially the mother within the home set up. Where there was another authority figure alone, the children were withdrawn and sometimes they failed to respond to the questions, hence fewer cases of lexical borrowing.

This implies that the participants of a conversational set up have an impact on the nature and amount of lexical borrowing. In particular, the presence of mothers during the recording session made some children more willing to respond to the questions. As mentioned earlier, parents are children's first teachers of language hence they become more free to communicate in their presence (Huang, 2004). In

such a scenario, children produce more cases of lexical importation and lexical invention since their response to questions is quite high.

In order to optimize opportunities for language acquisition, parents and other child care-givers should provide children with more interactive opportunities with the target language. One way of doing this is to let children play among their peers without parental restriction since as mentioned earlier; *Tachoni* children are socialized to speak less in the presence of adults. Parents should also create more opportunities to let children speak like eliciting a story from them and asking them questions in order to give the children an opportunity for free expression and interaction which eventually promotes the speed and amount of vocabulary acquisition. The next section discusses the physical environment as another component of the linguistic environment with regard to language acquisition.

6.4.5 The Physical Environment

Physical environment, another component of the linguistic environment, is an important factor in child language acquisition. The physical environment, in this study, comprises of the speakers, the addressee, the discourse topic and the physical setting/place where language acquisition takes place. The subject under investigation being child language, the speakers and the addressees were children aged between 2 to 7 years. The discourse topic was the naming of the objects and parts of the body from different semantic fields within the children's home

environment. The physical setting comprised of the place and time within which language acquisition took place.

In terms of place, the current study was conducted in a home environment among the mixed and the single language family set ups. The mixed language family set up comprised of mothers to 6 of the subjects who were native speakers of *Olubukusu* and the father's native speakers of *Olutachoni*. In the single language family set up both parents for the remaining 6 children were native speakers of *Olutachoni*. Incidences of lexical importation and lexical invention have been reported to be high in the mixed language home environment. This has an implication on the acquisition of vocabulary among the children in such a set up. The many incidents of lexical importation and lexical invention are likely to hinder the children's acquisition of the target words as compared to their single language counterparts.

The use of lexical importation and lexical invention could also be interpreted as a positive measure among the children from the mixed language family set ups as compared to those children from the single language family set ups. The high frequency of usage gives the children from the mixed language family set ups more linguistic opportunities to be creative in filling up the lexical gaps they encounter in their bid to communicate unlike their counterparts who sometimes were keeping quiet due to the failure to retrieve an appropriate target word from their mental lexicon. The child in a mixed language set up continually tests his

hypothesis about how the target language operates and approximates to the target language forms. Recordings were conducted after breakfast and after lunch. This time was the most appropriate because the children were still energetic to speak.

The physical environment will more often than not determine the topic of discussion and which language the child acquires from what he sees and hears. For example, in a home environment full of domestic animals like cattle, sheep and goat, as it is common in most African rural settings, the conversation among the children will revolve around such animals, what they produce and what goes around them. This provides a child with an opportunity to acquire vocabulary that is associated with domestic animals. This dictated the choice of vocabulary for data presentation and analysis for the current study.

The vocabulary chosen comprised of objects, people and parts of the body within the physical environment in which the children under study were placed. This was based on the assumption that children begin to learn from their immediate surroundings and daily experiences. The objects, people and the parts of the body were nouns selected from five semantic fields within the physical environment of the home (Cf Chapter 3). In general terms, it can be said that children use vocabulary that is related to their familiar environment and vocabulary related to concrete objects (Philips 1993). It is evident that the presence of objects, features and other materials within a child's physical environment facilitate the acquisition of language. The mere existence, for instance, of a certain type of animal in the

physical environment of a child necessitates that child to learn a linguistic symbol to refer to it as used by the rest of the family members. It is the vocabulary of a language that most clearly reflects the physical and social environment of its speakers. The complete vocabulary of a language may indeed be looked upon as a complex inventory of all the ideas, interests, and occupations that take up the attention of the community. To optimize opportunities for language acquisition, parents and other child care-givers should provide children with a rich environment to provide opportunities of learning quite a number of vocabulary items. Such rich environments will create an opportunity to let children speak about the objects around them in the bid of language acquisition.

6.5 Chapter Summary and Conclusion

In this chapter, the production of lexical importation and lexical invention has been correlated with the age and gender of the children. The role of the linguistic environment of the children on the acquisition of lexical importation and lexical invention has also been discussed. The main conclusion is that the age, gender and the linguistic environment of the children determines the production of lexical importation and lexical invention during child language acquisition. We can interpret the high rates of lexical importation and lexical invention during the earliest stages of language development as evidence for the child's general inability to differentiate between the two languages, and the progressive decrease in language mixing as evidence for the child's ability to control the languages

separately as the linguistic competence increase. Girls are more conservative in terms of speech due to how they are socialized in the *Tachoni* community. They therefore produce fewer cases of lexical importation and lexical invention than boys in the mixed language family set up. However, it is interesting to note that in the single language family set up, girls produced more cases of lexical invention compared to boys. As noted previously, girls are known for learning languages faster than boys. The high use of lexical invention implies that girls are on the verge of acquiring the target vocabulary faster than boys.

The effect of the linguistic environment implies a direct reliance on the mother's native language and other languages in the wider linguistic environment on the production of lexical importation and lexical invention. Language is acquired through the interaction between the predispositions the individual child brings – the individual biological, social and cognitive profile – and his/her linguistic environment (MacWhinney 1999). It has also emerged that the linguistic environment through its components especially input, output, feedback, social and physical environment play an essential role in the acquisition of language among the children.

The social and physical environments exert their influence on the developing and growing person through shared interactions between the person and other people, objects and symbols found in the environment (Lundberg 2009). Children develop language and learn important information about language through active

participation and interaction with other people in and around the home environment. The child is viewed as an active person who not only influences the environment but is also influenced by the environment. This has an effect on the rate and progress of acquiring *Olutachoni* vocabulary by the children under study. The next chapter is a summary of the major findings of the study and the recommendations and suggestions for further research.

CHAPTER SEVEN

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

7.1 Introduction

This chapter presents the summary of the major findings, the conclusions drawn from the study findings and the recommendations for further research. The chapter presents the findings in relation to the research objectives and the research questions. The findings contained in this chapter are general since a detailed discussion of the findings has already been given in chapters four, five and six. The findings are briefly reviewed and summarized in order to find out the extent to which the set objectives of the study are met.

7.2 Summary of Findings

This study was guided by four objectives:

- i) To identify and describe the nature of lexical borrowing in an *Olutachoni-Olubukusu* family set up on LI acquisition.
- ii) To identify and describe the nature of lexical borrowing in an *Olutachoni-Olutachoni* family set up on LI acquisition.

- iii) To establish the correlation between the age and the gender of the child and the degree of lexical borrowing on LI acquisition.
- iv) To determine the role of the linguistic environment of the child and the degree of lexical borrowing on LI acquisition.

The study revealed that children acquiring *Olutachoni* as a first language engaged in two lexical borrowing strategies: lexical importation and lexical invention in striving to fill the lexical gap within their mental lexicon. This occurred when they failed to retrieve the appropriate word during language acquisition. The two strategies were employed by children from both the single and the mixed language family set ups although at varying degrees. Generally, lexical importations had a higher percentage (58.63%) than lexical inventions ((41.36%). As pointed out previously, children engaged in other strategies under lexical importation and lexical invention. Under lexical importation, the children produced loan words and loan adaptations such as epenthesis, aphaeresis, syncope, devoicing and tonal adaptation. With regard to lexical invention, there were three affixation types employed by children from the mixed language family set up namely, *Olubukusu* base and *Olutachoni* prefix, *Olubukusu* prefix and *Olutachoni* base and *Olutachoni* prefix and Kiswahili/English base, and two affixation types from the single language family set up namely, *Olubukusu* base and *Olutachoni* prefix and Kiswahili/English base and *Olutachoni* prefix. There were instances where the words produced by the children could not be classified in any of the two

broad categories of lexical borrowing. Such words were not discussed in this study because they were beyond the scope of the current study.

The findings of the present study are also in convergence with similar studies conducted on the motivations behind lexical borrowing. Children acquiring *Olutachoni* as a first language engage into the production of lexical importation and lexical invention not necessarily due higher dominance of the source language like most other studies have agreed. From the findings of this study, lexical need and lexical efficiency could be one such motivation. The borrowed word may express a cultural reality which has no equivalent in the host language community even among adults. Such examples include cases of established historical loan words from English and Kiswahili by adults. This was particularly with some borrowed words from Kiswahili such as *mbwa* (dog), *nguo* (dress) and, *sufuria* (sufuria).

Lexical importation and lexical invention were used as learning strategies leading to target language acquisition. A child's limited vocabulary in the target language due to incomplete word knowledge was the reason behind lexical importation and lexical invention. These mechanisms have been frequently known as communication or compensatory strategies in other studies. The use of lexical importation and lexical invention was restricted to the nominal class of words. This was because children acquire content words before they acquire function words and nouns are prone to lexical borrowing because they are activated

frequently, especially during first language acquisition. This observation is in line with Odlin's (1989) observation that children acquire content words which carry the main meaning in an utterance before they acquire function words such as prepositions, pronouns and articles.

In the third objective, the study sought to establish the correlation between the age and gender of the children and the degree of lexical borrowing. From the findings, the nature of lexical importation and lexical invention is constrained and determined by the age of the children, which imply that the study hypotheses were proved. From the results, there was a strong negative correlation (-.774) between the age of the children and the production of lexical importation and a weak negative correlation (-.233) between the age of the children and the production of lexical invention from the two language family set ups. The results indicated that younger children from age 2 displayed higher rates of lexical importation and lexical invention as compared to older children. These findings confirm the unitary language system hypothesis by Paradis (1995) which argues that young learners are unable to distinguish between the two language systems. Therefore, they mix their languages because they lack vocabulary in one or both languages to express themselves entirely in each language. This is in agreement with other studies on first language acquisition where age has been considered to have a significant correlation with language acquisition.

There was also a strong negative correlation (-.771) between the gender of the children and the production of lexical importation and a strong negative correlation (-.825) between the gender of the children and the production of lexical invention. This revealed that the ability to acquire language through lexical borrowing was a common phenomenon among children acquiring *Olutachoni* as their L1 regardless of their gender. Such children were capable of modifying the production of sounds and words so that their pronunciation came closer to the target language norms of their respective gender. The modification in the current study however, did not result in the attainment of target language norms, but rather approximations that were not fully native-like. The difference in the production of lexical borrowing between the male and the female genders were found to arise from the different ways in which males and females are socialized within the *Tachoni* community. From the current study, male children from both the mixed and single language family set ups produced a higher percentage (54.9%) and (65.9%) respectively of lexical importation than their female counterparts who produced (45.1%) and (34.1%) respectively. Using the Unitary Language System Hypotheses, it means that girls mature faster with regard to target language competence as compared to the boys.

In the fourth and the last objective, the study sought to determine the role of the linguistic environment of the child and the degree of lexical borrowing. The study revealed that the linguistic environment had a role to play in the production of lexical borrowing. Aspects of a linguistic environment such as the linguistic input

the child is exposed to, feedback, the physical environment and the social environment had a major role to play in the production of lexical importation and lexical invention by the children. The results generally portrayed that there was a higher rate of lexical invention and lexical importation among children from the mixed language family set ups (58.63%) as compared to those from the single language family set ups (41.36%). According to this study, the family exerts its influence on the developing and growing person through shared interactions between the person and other people, objects, and symbols found in the environment.

The findings revealed that children from the mixed language family set up tend to resort more frequently to *Olubukusu* (81.6%) as their source language followed by Kiswahili (18.4%). Children from the single language family set up resorted more to the input from Kiswahili (87.8%) than *Olubukusu* (12.2%). It is worth noting that there were only two cases of lexical invention between an *Olutachoni* base and an *Olubukusu* prefix from the single language family set up. There was also one case in the database of an English word (pussy) used by a child from a single language family set up. Instances of lexical importation and lexical invention from Kiswahili were observed to be more among the lexical items that do not have synonyms in *Olutachoni* such as *sufuria* (sufuria) and *mbwa* (dog) and the cases of loan adaptation.

The study findings were also in agreement with the theoretical predictions of the study. With regard to the usage based language acquisition theory by Tomasello (2012), it was revealed from the study that children derived input primarily from adult utterances within their linguistic environment during the acquisition of *Olutachoni* lexicon. Using Levelt's speech production theory by Dawaele (2001), the children use the input they received from the linguistic environment to formulate hypotheses on how the target language operates and uses further input based on the LAD to accept or reject the hypotheses. In terms of the unitary language system hypothesis by Paradis (2005), the findings proved that children exposed to two languages from birth go through an initial stage when they treat input from the two languages as if it belonged to a single underlying system. This is revealed when the children make use of lexical importations and lexical inventions which reduce as they advance in age.

7.3. Recommendations Based on Findings.

The study made the following recommendations based on the findings of the study:

- (i) The present study found out that cross-linguistic influence exists in the form of lexical borrowing among children acquiring *Olutachoni* as a first language. Therefore, it is recommended that other cross linguistic influence studies in other African languages, *Luhya* specifically to be conducted in order to

promote the development and use of indigenous languages as per Chapter 2 section 7(3b) of the 2010 Kenyan Constitution.

- (ii) The present study also established that children use lexical borrowing as a strategy towards the acquisition of a first language. Therefore, it is recommended that parents, teachers and psychologists should view lexical borrowing as a strategy towards language learning but not as forms of confusion and errors.
- (iii) From the findings, it was revealed that children from both the mixed and the single language family set up had acquired some Kiswahili lexicon. In view of this observation, it is recommended that there is need for African countries and Kenya in particular to streamline and develop guidelines like teaching in mother tongue in order to enhance the maintenance of indigenous languages to avoid language shift and language attrition.
- (iv) The findings of this study revealed that there were variations in terms of gender, age and family set up with regard to the use of lexical borrowing among the children. It is therefore, recommended that during teaching/learning, teachers, language researchers and curriculum developers should design teaching materials and adopt relevant teaching methodology that cuts across the gender, age and the language family set up divide.
- (v) The present study acknowledges that as much as children are responsible for their own language acquisition, their interactions with their family members and broader cultural contexts are quite significant in the process. For this

reason, it is recommended that parents need to encourage children in their attempts at language use. The study also implores parents to embrace interactive activities with their children such as storytelling so as to improve language acquisition.

7.4. Suggestions for Further Research

The following are suggestions for further research based on the findings drawn from the study and the areas that were underscored.

- i) The present study focused on lexical importation and lexical invention as the main strategies employed by children acquiring *Olutachoni* as a first language. There is need for other related studies on children acquiring other African languages, other than *Luhya* in general and *Olutachoni* in particular. This would give room for the results of the present study to be compared with those from other African languages. This would help determine any similarities and, or differences on how children engage in the process of lexical borrowing during FLA.
- ii) The present study dwelt mainly on lexi-morphonological development of acquisition at the expense of other levels of linguistics, yet linguistic development takes place in a homogenous manner. There is need to determine the effect of lexical borrowing produced by children during the acquisition of a L1 on other levels of Linguistics like syntax, pragmatics

and semantics. A similar study on other levels of linguistics is likely to provide a wider perspective on FLA in relation to the different levels.

- iii) The present study concerned itself with lexical borrowing in child language acquisition. There is need for a study of lexical borrowing by adults and, or youths acquiring a second or a third language from a different linguistic environments. A comparison could then be made on how the process of language acquisition manifests itself differently or similarly in L1, L2 and, or L3.
- iv) The current study was conducted in villages in Kenya. A similar study could be conducted in an urban setting in Kenya or any other city in Africa. This would help in conducting a comparative study on how the process of lexical borrowing in FLA unfolds differently or similarly among children in an urban setting as compared to the rural setting in the current study. Such findings would be helpful for further vivid description about the role of the linguistic environment on language acquisition.
- v) A study could be carried out on early speech perception, with larger sample sizes and detailed descriptions of language input that will permit the examination of the role of input more carefully. Ultimately, such a study should answer the questions as to whether sibling position or the socio-economic status of the family has an effect on lexical borrowing in relation to FLA. The current study has only looked at the effect age, gender and the

linguistic environment as the factors that determine lexical borrowing in FLA.

- vi) Research on the effects of biological factors such as language disorders on language acquisition is particularly lacking in African contexts. Such studies ought to be conducted to validate the global applicability of the existing theoretical frameworks to individuals from different linguistic cultures. It would particularly be enriching to see more extensive research work on the acquisition of African ethnic languages. We contend that the phenomenon of language acquisition is complex and expansive and a lot of research is needed to unravel the mystery of language acquisition.
- vii) Lastly, this study only considered the acquisition of vocabulary in the form of nouns. A study on the acquisition of other word classes would shed more light on first language acquisition as a process that applies to other classes of words like verbs, adjectives, adverbs, pronouns among others. Notably, Bantu languages are basically agglutinating while other languages from other language families could be isolating. A study on the behavior of different morphemes in borrowed words from the two or more language families in FLA would be very interesting.

7.5 Conclusion

The current study set out to identify lexical borrowing and describe the nature of lexical borrowing through cross-linguistic influences on the acquisition of

Olutachoni as a first language. The investigation was done among children aged between 2 to 7 years in the mixed and the single language family set ups. It was revealed that children between these ages engage in lexical borrowing strategies such as lexical importation and lexical invention as they endeavour to learn the rules of the target language. It also emerged that age and gender had a significant correlation with the degree of lexical borrowing. The linguistic environment, on the other hand also played a significant role in the production of lexical importation and lexical invention by these children. It has been shown in this study that lexical importation and lexical invention are not only restricted among the mixed language family set up. Children from the single language family set up acquiring a first language produce lexical importation and lexical invention in much the same way as their mixed language counterparts. Therefore, the findings of this study have implications for linguists, psychologists, educators and early child development practitioners.

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APPENDICES

Appendix 1 A: Introductory letter

Dear parent,

I am a PhD student from Kenyatta University from the department of English and Linguistics. I am carrying out a study on “*Cross-linguistic influences on First Language Acquisition of Olutachoni Lexicon*”. I kindly request you to fill this questionnaire concerning yourself and your child. Your response will be strictly confidential.

Thank you.

Appendix IB: Questionnaire for Parents

The purpose of the questionnaire is to get the parents’ views on language use in the home and the health history of the child under study. The information given will be treated with confidentiality and will not be used for any other purpose other than for the success of this research.

A. Geographical Information

i) Location:-----

Sub-location:-----

Village:-----

B. Questions pertaining to children (Tick as appropriate)

- a) What is the name of your child? -----
- b) What is the sex of your child Male Female
- c) How old is your child? 2 3 4 5 6
- d) (i) Has your child had any health problem(s)? Yes No
- ii) If yes in (i) above, was the illness treated and has the child healed?
- e) (i) Does your child go to school? Yes No
- ii) If yes, at what level? Baby-class Pre-unit
- Standard one

C. Questions pertaining to parents

- a) What are the names of the child's parents?
- Mother-----
- Father-----
- b) Which one is the mother's First Language?
- OLUT OLUB Other (Specify).....
-
- c) Which one is the father's First Language?
- OLUT OLUB Other (Specify)
- d) Which language is mostly used in the home?
- OLUT OLUB Other(s) (Specify).....
-
- e) Which language(s) does the child speak?

OLUT OLU B Other(s) (Specify).....

.....

f) Which language is used when addressing the child:

i) By father:

OLUT OLUB Other(s) (Specify).....

ii) By mother?

OLUT OLUB Other(s) (Specify).....

g) Which language(s) is used by the child in his her interactions with his/her

i) Mother?

OLUT OLUB other(s) (Specify).....

ii) Father?

OLUT OLUB Other(s) (Specify).....

h) In what circumstances does the child use the above language (s)

i) What do you do for a living?

i) Father: -----

ii) Mother: -----

Thank you for your feedback.

Appendix II: Interview Schedule for Children

The purpose of the questionnaire is to get how the respondents call the items below within their linguistic environment. The items were ranked according to the likert scale below:

A 4-point likert scale on lexical importation

V. high (Loan words with Olubukusu word and Olubukusu tone)	High (Loan words with Olubukusu word and Olutachoni tone)	Low (Loan adaptation with Kiswahili tone)	V. low (Loan adaptation with Olutachoni tone)
4	3	2	1

Subject

Age 2-3 3-4 4-5 5-6 6-7
7-8

Gender Male Female

Family environment Single Mixed

Rate of lexical importation

Each respondent was asked to name the items below.

Question	V. High	High	Low	V. Low
Asked to name a stomach				
Asked to name ears				
Asked to name a head				
Asked to name nose				
Asked to name legs				
Asked to name a chest				
Asked to name bananas				
Asked to name millet				
Asked to name a sufuria				
Asked to name a knife				
Asked to name a rope				
Asked to name a chair				
Asked to name water				
Asked to name a cow				
Asked to name a chicken				
Asked to name beans				
Asked to name a goat				
Asked to name a sheep				
Asked to name a cooking pot				
Asked to name shoes				
Asked to name an egg				
Asked to name vegetables				
Asked to name a cooking stick				
Asked to name a water pot				
Asked to name a cup				
Asked to name a boy				
Asked to name flour				
Asked to name a dress				
Asked to name a door				
Asked to name a mouth				
Asked to name maize				
Asked to name hands				
Asked to name hair				
Asked to name a spoon				
Asked to name a house				

Asked to name potatoes				
Asked to name a knife				
Asked to name a walking stick				
Asked to name a basket				
Asked to name fish				
Asked to name a window				
Asked to name a tongue				
Asked to name a dog				
Asked to name a bird				
Asked to name a tree				
Asked to name a grandmother				
Asked to name a basin				
Asked to name a snake				
Asked to name milk				
Asked to name a calf				

Rate of lexical invention

The 4-point likert scale below was used for statistical calculations of Spearman's Rank Correlation Coefficient used to establish the correlation between age, and gender and the production of lexical invention:

V-high (Olubukusu base and Olutachoni prefix)	High (Olutachoni base and Olubukusu prefix)	Low(The base from Kiswahili/English and Olutachoni/Olubukusu prefix)	V-low (The base from Olutachoni/Olubukusu and the prefix from Kiswahili)
4	3	2	1

Question	V. High	High	Low	V. low
Asked to name stomach				
Asked to name ears				
Asked to name a head				
Asked to name nose				

Asked to name legs				
Asked to name a chest				
Asked to name bananas				
Asked to name millet				
Asked to name a sufuria				
Asked to name a knife				
Asked to name a rope				
Asked to name a chair				
Asked to name water				
Asked to name a cow				
Asked to name a chicken				
Asked to name beans				
Asked to name a goat				
Asked to name a sheep				
Asked to name a cooking pot				
Asked to name shoes				
Asked to name an egg				
Asked to name vegetables				
Asked to name a cooking stick				
Asked to name a water pot				
Asked to name a cup				
Asked to name a boy				
Asked to name flour				
Asked to name a dress				
Asked to name a door				
Asked to name a mouth				
Asked to name maize				
Asked to name hands				
Asked to name hair				
Asked to name a spoon				
Asked to name a house				
Asked to name potatoes				
Asked to name a knife				
Asked to name a walking stick				
Asked to name a basket				
Asked to name fish				

Asked to name a window				
Asked to name a tongue				
Asked to name a dog				
Asked to name a bird				
Asked to name a tree				
Asked to name a grandmother				
Asked to name a basin				
Asked to name a snake				
Asked to name milk				
Asked to name a calf				











Appendix III: Data elicitation pictures**Household appliances and Utensils**

 <p>Cup</p>	 <p>Plate</p>
 <p>Knife</p>	 <p>Cooking stick</p>
 <p>Pot</p>	 <p>Chair</p>
 <p>Sufuria</p>	 <p>Spoon</p>



Environment and Clothing





 <p>Bicycle</p>	 <p>Dress</p>
 <p>Water</p>	 <p>Tree</p>
 <p>Basket</p>	 <p>Shoes</p>
 <p>Walking stick</p>	 <p>Short trousers</p>
 <p>House</p>	 <p>Door</p>

Domestic animals and Birds







 <p>Cow</p>	 <p>Goat</p>
 <p>Sheep</p>	 <p>Dog</p>
 <p>Hen</p>	 <p>Bird</p>
 <p>Cock</p>	 <p>Chick</p>
 <p>Calf</p>	 <p>Snake</p>




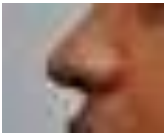




Foodstuff

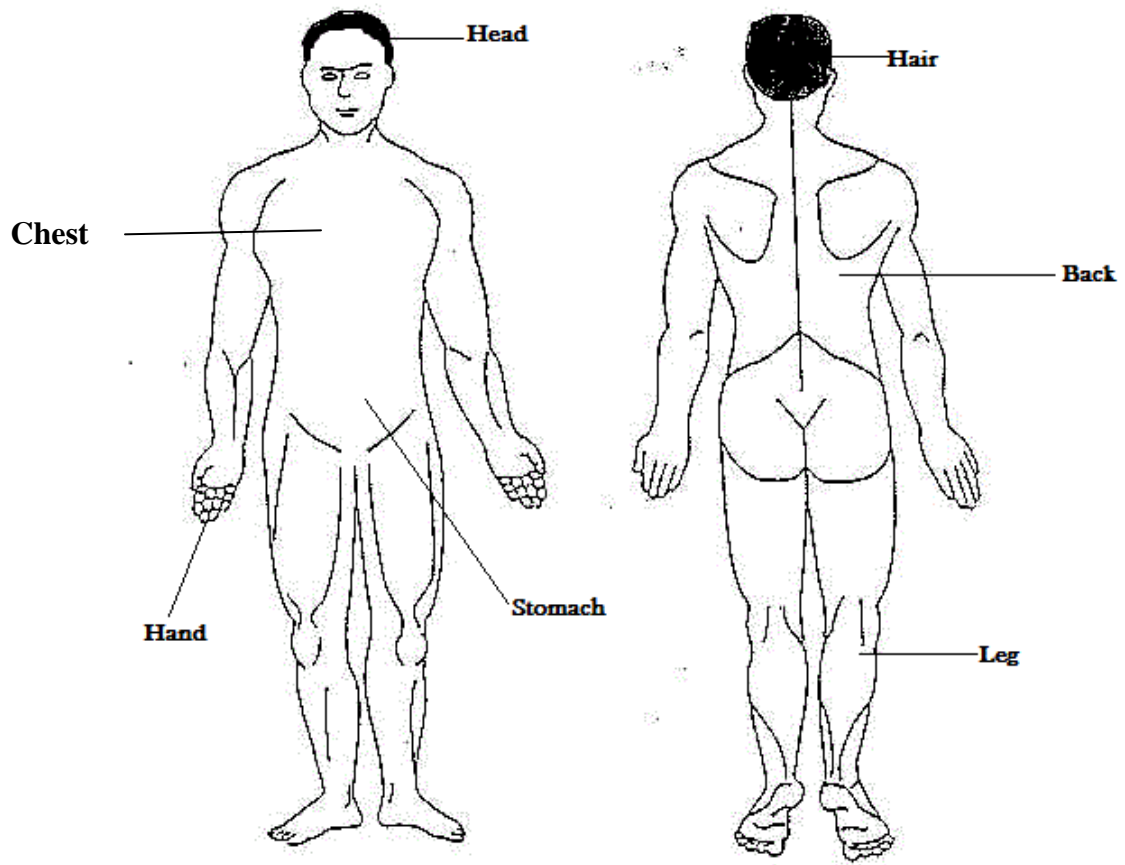
 <p>Ugali</p>	 <p>Bananas</p>
 <p>Maize</p>	 <p>Cabbage</p>
 <p>Beans</p>	 <p>An Egg</p>
 <p>Potatoes</p>	 <p>Vegetables</p>

 <p>Flour</p>	 <p>Millet</p>
 <p>Milk</p>	 <p>Fish</p>

People and Body parts

 <p>Father</p>	 <p>Mother</p>
 <p>Grandfather</p>	 <p>Grandmother</p>
 <p>Boy</p>	 <p>Girl</p>

 <p>Ears</p>	 <p>Tongue</p>
 <p>Stomach</p>	 <p>Nose</p>
 <p>Mouth</p>	 <p>Hands</p>
 <p>Head</p>	 <p>Hair</p>



Appendix IV: Observation check list

1. The approximate age of the child
2. The gender of the child
3. The linguistic environment
4. The language that the mother speaks in the home
5. The language that the father speaks in the home
6. The language that the child speaks in the home
7. The objects within the linguistic environment

Appendix V: Parent Consent Form

Consent Form for Participation in Research

(By interview,)

Title of Thesis:

Cross-linguistic Influences on the Acquisition of Olutachoni as a First Language

Ibeing over the age of 18 years hereby consent to my child..... Participating, as requested, in the for the research project on Cross-linguistic influences on the Acquisition of Olutachoni as a First Language.

1. I have read the information provided.
2. Details of procedures and any risks have been explained to my satisfaction.
3. I agree to audio/video recording of my child's information and participation.
4. I am aware that I should retain a copy of the information sheet and Consent Form for future reference.
5. I understand that:
 - ✓ My child may not directly benefit from taking part in this research.
 - ✓ My child is free to withdraw from the project at any time and is free to decline to answer particular questions.
 - ✓ While the information gained in this study will be published as explained, my child will not be identified, and individual information will remain confidential.
 - ✓ Whether my child participates or not, or withdraws after participating, will have no effect on any treatment or service that is being provided to him/her.
 - ✓ Whether my child participates or not, or withdraws after participating, will have no effect on his/her progress in his/her course of study, or results gained.
 - ✓ My child may ask that the recording/observation be stopped at any time, and he/she may withdraw at any time from the session or the research without disadvantage.
6. I agree/do not agree* to the tape/transcript* being made available to other researchers who
are not members of this research team, but who are judged by the research team to be doing related research, on condition that my identity is not revealed.
* *delete as appropriate*

Participant's
signature.....Date.....

I certify that I have explained the study to the volunteer and consider that she/he understands what is involved and freely consents to participation.

Researcher's name.....

Researcher's signature.....Date.....

NB: Two signed copies should be obtained. The copy retained by the researcher may then be used for authorization of Items 8 and 9, as appropriate.

8. I, the participant whose signature appears below, have read a transcript of my participation and agree to its use by the researcher as explained.

Participant's signature.....Date.....

9. I, the participant whose signature appears below, have read the researcher's report and agree to the publication of my information as reported.

Participant's signature.....
Date.....

Appendix VI: Research Authorization Permit



NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471,
2241349, 310571, 2219420
Fax: +254-20-318245, 318249
Email: secretary@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote

9th Floor, Utalii House
Uhuru Highway
P.O. Box 30623-00100
NAIROBI-KENYA

Ref. No.

Date:

18th November, 2013

NACOSTI/P/13/8672/356

Lucy K.L Mandillah
Kenyatta University
P.O.Box 43844-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on "*School of humanities and social sciences department of English and Linguistics cross-linguistic influences on the acquisition of Olutachoni as a first language,*" I am pleased to inform you that you have been authorized to undertake research in **Bungoma County** for a period ending **31st December, 2014.**

You are advised to report to **the County Commissioner and the County Director of Education, Bungoma County** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.


DR. M. K. RUGUTT, PhD, HSC.
DEPUTY COMMISSION SECRETARY
NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Copy to:

The County Commissioner
The County Director of Education
Bungoma County





**KENYATTA UNIVERSITY
GRADUATE SCHOOL**

E-mail: dean-graduate@ku.ac.ke

Website: www.ku.ac.ke

F.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 8710901 Ext. 57530

DATE: 3rd October, 2011

Our Ref: C82/13577/09

Your Ref:

The Permanent Secretary,
Ministry of Higher Education, Science & Technology,
P.O. Box 30040,
NAIROBI

Dear Sir/Madam,

RE: RESEARCH AUTHORIZATION MS. LUCY K. MANDILLAH – REG. NO. C82/13577/09

I write to introduce **Ms. Lucy Mandillah** who is a Postgraduate Student of this University. She is registered for Ph.D degree programme in the Department of English & Linguistics.

Ms. Mandillah intends to conduct research for a proposal entitled, "Cross-Linguistics Influences in the Acquisition of Olutachoni as a First Language"

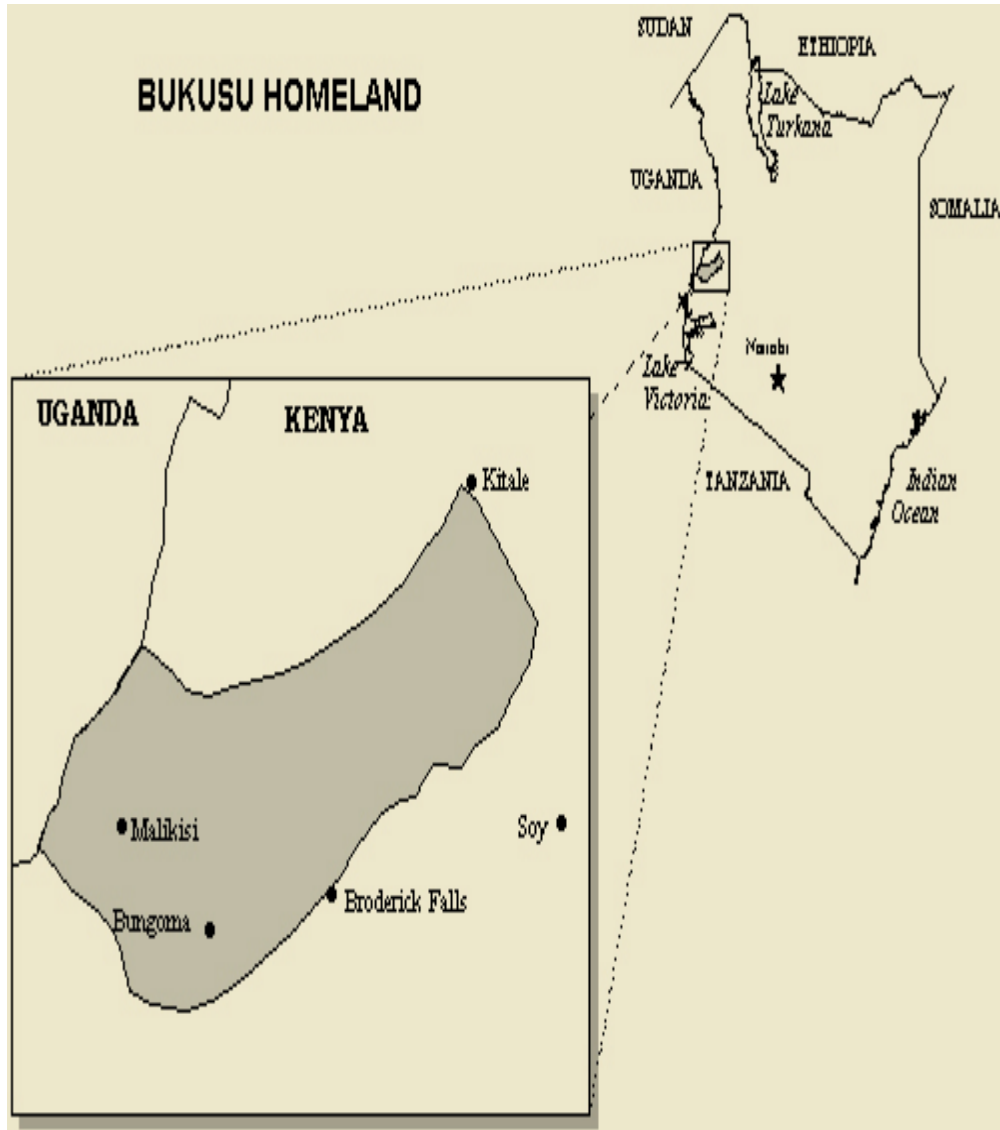
Any assistance given will be highly appreciated.

Yours faithfully,

**JOHN M. ODONGI
FOR: DEAN, GRADUATE SCHOOL**

JMO/bwk

Appendix VII: A Map of Bungoma County



Appendix VIII : Luhya Dialect Map



Luhya dialect map (Kenyan varieties, adapted from Heine & Möhlig 1980 and Leung 1991)