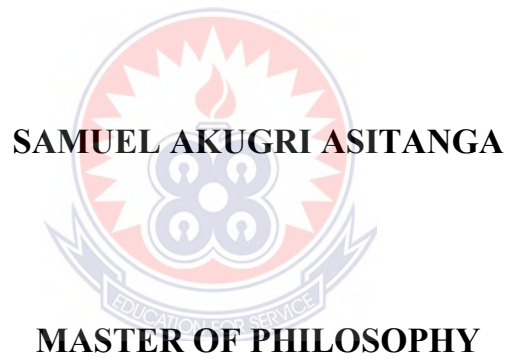


UNIVERSITY OF EDUCATION, WINNEBA

**A PHONOLOGICAL AND LEXICAL ANALYSIS OF DIALECT
VARIATION IN KUSAAL**



2021

UNIVERSITY OF EDUCATION, WINNEBA

**A PHONOLOGICAL AND LEXICAL ANALYSIS OF DIALECT
VARIATION IN KUSAAL**

**SAMUEL AKUGRI ASITANGA
(200024397)**



**A thesis in the Department of Gur-Gonja Education,
Faculty of Ghanaian Languages Education, submitted to the
School of Graduate Studies in partial fulfillment**

**of the requirements for the award of the degree of
Master of Philosophy
(Ghanaian Language Studies-Kusaal)
in the University of Education, Winneba**

SEPTEMBER, 2021

DECLARATION

STUDENT'S DECLARATION

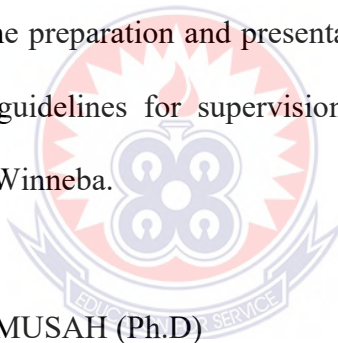
I, SAMUEL AKUGRI ASITANGA, declare that this thesis, with the exception of quotations and references contained in published works which have all been identified and duly acknowledged, is entirely my own original work, and it has not been submitted, either in part or whole, for another degree elsewhere.

SIGNATURE:

DATE:

SUPERVISOR'S DECLARATION

We hereby declare that the preparation and presentation of this work was supervised in accordance with the guidelines for supervision of thesis as laid down by the University of Education, Winneba.



ANTHONY AGOSWIN MUSAH (Ph.D) (Principal Supervisor)

SIGNATURE:

DATE:

SAMUEL ALHASSAN ISSAH (Ph.D) (Co-Supervisor)

SIGNATURE:

DATE:

DEDICATION

This work is in memory of BISHOP DR. JACOB KOFI AYEEBO

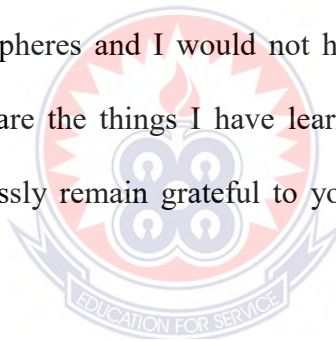
To my daughter WINNIESIM ASITANGA.



ACKNOWLEDGEMENT

I have a singular honour to bless the name of the Lord God Almighty for His guidance and protection throughout the toil of this study. His willful grace has made this piece of work successful. I am favored by His amazing Grace. All glory and honour belong to His Holy Name now and forever.

The blessings of God come through people and I was highly privileged to have met mine in my quest for supervisors. I am grateful to God for directing me to you Dr. A. Anthony Musah and Dr. Samuel Alhassan Issah. You have very much shared the toil of this study intellectually. It was your insightful comments, constructive ideas, and painstaking editing that made this work a whole. You have been genial and very supportive to me in all spheres and I would not have completed this work without your support. Countless are the things I have learned and benefited from you as a mentee and I shall endlessly remain grateful to you both for your efforts. *M pv'bs bedigv* „Thanks much“.



I also wish to express my heartfelt gratitude to the following personalities: Mr. Atibiri Aweaka Sandow (a.k.a Girimadaan) who exposed me to the study of Kusaal and also heightened my desire for its course. You nurtured the spirit of possibilities in my life as a student and I cannot thank you enough. A big thank you also to all the senior members of the Faculty of Ghanaian Languages of the University of Education, Winneba, most especially the lecturers of Gur-Gonja department. I have enjoyed a fatherly and motherly love and trust from you all. I am very grateful for your kind gestures. God bless you all.

My sincere gratitude also goes to all the concerned members of the Ayumah family who saw the light in me and pushed me up to this level. You have never let me feel

left alone since day one. The entire volume will not be enough for me to mention names. I am deeply indebted to you all for your help. I wish to also extend a special regard to my loving wife, Comfort Asitanga, who willfully donated her time and other resources to me to enable me stay comfortably on campus to pursue this course. You are golden.

I am also highly grateful to the people who have contributed in one way or the other to the successful realisation of this study. In this regard, I extend gratitude to Mr. Moses Atiiga, Mr. Alex Asaasim, Mr. Samuel Arang, and Mrs. Selina Alale who always availed themselves to validate my data in the Agole dialect. Thanks also go to all the B.A Kusaal Education students for your immeasurable support. I wish to also thank Dr. Hasiyatu Abubakari, University of Ghana, for taking the pain to provide me with the then, only known material on dialect variation within the Mabilia language group. I am equally grateful to Prof. Evershed A. Amuzu, of the same university for helping me reframe my topic at the onset of this study. Your comments oiled the progress of the study and I am thankful.

Finally, I would like to convey my heartfelt appreciation to my coursemates at the graduate level especially, Lawrence Sandow, Victoria Akuka and Mumuni Agenga. You have both enormously contributed to the great ends of this work. I cannot thank both of you enough for your immense support. Lawrence has been so helpful since our undergraduate days. Your astute comments on this work buffered its academic beauty and credibility. I am very thankful.

TABLE OF CONTENTS

DECLARATION	iii
DEDICATION	iv
ACKNOWLEDGEMENT	v
TABLE OF CONTENTS	vii
LIST OF TABLES	xii
LIST OF FIGURES	xiv
LIST OF ABBREVIATIONS	xv
ABSTRACT	xvi
CHAPTER ONE: INTRODUCTION	1
1.0 Introduction	1
1.1 Background of the study	1
1.2 Kusaal and its speakers	3
1.3 Brief linguistic profile of Kusaal	8
1.3.1 Vowel inventory of Kusaal	8
1.3.2 Consonant system in Kusaal	10
1.3.3 Tone in Kusaal	11
1.4 Statement of the problem	11
1.5 Purpose of the study	12
1.6 Objectives of the study	12
1.7 Research questions	12
1.8 Significance of the study	13
1.9 Delimitation	13
1.10 Limitation	14
1.11 Organisation of the study	15
1.12 Summary	16

CHAPTER TWO: REVIEW OF LITERATURE AND THEORETICAL FRAMEWORK	
FRAMEWORK	17
2.0 Introduction	17
2.1 The concept of language and dialect	17
2.2 Determiners of language and dialects	21
2.2.1 Mutual intelligibility	21
2.2.2 Dialect geography and continuum	23
2.2.3 Autonomy and heteronomy	24
2.3 Language variation	25
2.4 Variation in dialects	26
2.4.1 Phonological variation	26
2.4.2 Lexical variation	32
2.5 The History of dialect studies (dialectology)	36
2.6 Theoretical framework	40
2.6.1 Variationist theory	40
2.6.2 The Theory of generative dialectology	42
2.7 Summary	44
CHAPTER THREE: METHODOLOGY	45
3.0 Introduction	45
3.1 Research design	45
3.2 Research sites	46
3.3 Population	47
3.4 Sample frame	47
3.5 Data collection	48
3.6 Sources of data	48
3.6.1 Primary sources	48

3.6.2 Secondary sources	49
3.7 Data collection strategies	49
3.7.1 Interviews	50
3.7.2 Picture elicitation or naming	51
3.8 Data Analysis procedures	51
3.9 Summary	52
CHAPTER FOUR: PHONOLOGICAL VARIATION IN KUSAAL	53
4.0 Introduction	53
4.1 Evidence of dialect variation In Kusaal	53
4.2 The underlying forms	55
4.3 Phonological variation in Kusaal	57
4.4 Segment alternation	59
4.4.1.1 The /r/ → [t] alternation	60
4.4.1.2 The /g/ → [k] alternation	62
4.4.1.3 The /s/ → [h] alternation	64
4.4.1.4 The /d/ → [r] alternation	68
4.4.2 Vowel alternation	71
4.4.2.1 The /ɪa/ → [a] alternation	71
4.4.2.2 The /ɪa/ → [ɛ] alternation	73
4.4.2.3 The /ɪa/ → [ɛ:] alternation	75
4.4.2.4 The /ʊa/ → [ɔ] alternation	77
4.4.2.5 The /ʊa/ → [ɔ:] alternation	79
4.4.2.6 The /ʊɔ/ or /ʊɔɛ/ → [ɔ:] alternation	80
4.5 The glottal stop /ʔ/ insertion	82
4.5.1 The /ɪʔa/ → [ɛʔɛ] alternation	82
4.5.2 The /ʊʔa/ → [ɔʔɔ] alternation	84

4.6 Segment deletion	85
4.6.1 Consonant deletion	85
4.6.1 Vowel deletion	86
4.6.3 Glottal intervocalic deletion	87
4.7 Segment substitution	89
4.7.1 Consonant substitution	92
4.7.2 Vowel substitution	90
4.8 Nasalisation	91
4.9 Labialisation	92
4.10 Palatalisation	94
4.11 Harmonisation differences	95
4.11.1 Variation in vowel harmony	95
4.11.2 Consonant assimilation	97
4.11.2.1 The /-nɪ/ → [-tɪ] assimilation	98
4.11.2.2 The /-nɪ/ → [-kɪ] assimilation	99
4.11.2.3 The /-nɪ/ → [-ŋɪ] assimilation variation	100
4.11.2.4 The /-nɪ/ → [-pɪ] assimilation	101
4.11.2.5 The /-nɪ/ → [-mɛ] alternation	102
4.12 Summary	103
CHAPTER FIVE: LEXICAL VARIATION IN KUSAAL	105
5.0 Introduction	105
5.1 Lexical variation in Kusaal	105
5.2 Types of lexical variation in Kusaal	106
5.2.1 Onomasiological variation	107
5.2.2 Semasiological variation	107
5.2.3 Contextual variation	107

5.2.4 Formal variation	110
5.3 Variation in nominal items	110
5.3.1 Variation in plant and animal names	110
5.3.2 Variation in body-part names	112
5.3.3 Variation in some insect names	114
5.3.4 Variation in some animal names	115
5.3.5 Variation in some kinship terms	117
5.3.6 Variation in some abstract entities	119
5.3.7 Miscellaneous entities	121
5.4 Variation in pronominal forms	124
5.5 Variation in verbal forms	125
5.6 Variation in adjectival forms	128
5.7 Variation in adverbial forms	129
5.8 Summary	131
CHAPTER SIX: SUMMARY, CONCLUSION AND RECOMMENDATIONS	132
6.0 Introduction	132
6.1 Summary of the study	132
6.2 Major findings	134
6.3 Conclusion	136
6.4 Recommendations	138
REFERENCES	140
APPENDIX A: The Influence Of Taln And Nabt In Toende	149
APPENDIX B: The influence of hausa on agole	150

LIST OF TABLES

Table	Page
0.1: Vowel sequencing in Kusaal	10
0.2: The phonemic consonants of Kusaal	29
0.3: Phonological variation in the northern Ambon Island varieties	34
0.4: Some lexical variations in Tai dialects Kullavanijaya (1999: 137).	61
0.5: /-r/ to /t/ variations in Kusaal	63
0.6: /-d-/ to /-r-/ variations in Kusaal	65
0.7: /-s-/ to /-h-/ alternations in Kusaal	70
0.8: /g/ to /k/ alternations in Kusaal dialects	72
0.9: Segment substitution in Kusaal dialects	74
0.10: Proposed diphthongs in Kusaal (Musah 2010: 39)	75
0.11: Vowel sequencing in Kusaal	78
0.12: The /ɪa/ to /a/ variation in Kusaal	79
0.13: The /ɪa/ to /ɛ/ (coalescences) variations in Kusaal	81
0.14: The /ɪa/ to /ɛ:/ variations in Kusaal (Toende)	83
0.15: The /ɔa/ to /ɔ/ variations in Kusaal (Toende)	85
0.16: The /ɔa/ to /ɔ:/ variations in Kusaal (Toende)	86
0.17: The /ɔɔɛ/ to /ɔ:/ variations in Kusaal	87
0.18: The /ɪʔa/ to /ɛʔɛ/ variation in Kusaal	89
0.19: The /ɔʔa/ to /ɔʔɔ/ variations in Kusaal	91
0.20: Some glottalisation differences in Kusaal	92
0.21: Nasalisation differences in Kusaal	93
0.22: Labialisation differences in Kusaal	94
0.23: Palatalisation differences in Kusaal	96
0.24: Variation in vowel harmony in Kusaal	98
0.25: /-nɛ/ to /-tɪ/ alternations in Kusaal	100
0.26: /-nɛ/ to /-kɪ/ alternations in Toende	101
0.27: /-nɛ/ to /-ŋɪ/ alternations in Toende	102
0.28: /-nɛ/ to /-pɪ/ alternations in Toende	103

0.29: /-nɛ/ to /-mɛ/ alternations in Toende	101
0.30: Contextual variation among peers and adults	109
0.31: Variation in names of plants and animals	112
0.32: Variation in body part names	114
0.33: Variation in names of insects	115
0.34: Variation in some animal names	117
0.35: Variation in kinship terms	118
0.36: Variation in abstract entity names	121
0.37: Variations in some miscellaneous entities	123
0.38: Variation in Kusaal pronominals	126
0.39: Variation in some Kusaal verbs	127
0.40: Variation in Kusaal adjectives	129
0.41: Variation in some Kusaal adverbs	131



LIST OF FIGURES

<i>Figure</i>	<i>Page</i>
0.1: A map of Upper East Region of Ghana showing Kusaal speaking areas	4
0.2: The genetic affiliation of Kusaal	6
0.3: The Kusaal vowel system	9



LIST OF ABBREVIATIONS

ATR	Advanced Tongue Root
C	Consonant
IDEO	Ideophone
HNA	Homorganic Nasal Assimilation
+Lab	Plus Labial
+Nas	Plus Nasal
PL	Plural
GPR	Generative Phonological Rule
PR	Phonological Rule
PvP	Postverbal Particle
SG	Singular
SPE	Sound Patterns of English
3SG	3 rd Person Single
UR	Underlying Representation
V	Vowel
SV	Sequential Vowels
V ₁	Vowel 1
V ₂	Vowel 2
V ₃	Vowel 3
+VAP	Voiced Alveolar Plosive
-VAP	Voiceless Alveolar Plosive
WFP	Word-Final Position
WIP	Word-Initial Position
WMP	Word-Medial Position
+Plosv	Plus Plosive
+Velar	Plus Velar
+Pal	Plus Palatals



ABSTRACT

This study investigates the phonological and lexical variations in the Agole and Toende dialects of Kusaal, a Mabia language spoken in the north-eastern part of Ghana using a synchronic dialectological approach. It employs a qualitative design in which both primary and secondary data were sourced for the analysis. Garu, Bawku, Binduri and their environs constitute the research centers for the Agole dialect while the Toende data were taken from Zebilla, Binaba, Sapeliga, and their surroundings. The study reveals that different phonological processes trigger the phonological variations in the dialects. It is shown that segment alternation, segment deletion and segment substitution are in the dialects where voiced segments at word-final position in Agole are often realised as voiceless segments or deleted in Toende. Also, the concepts of labialisation, palatalisation and glottalisation are present in Agole but absent in Toende. Nasalisation is also in Toende but absent in Agole at least, for some words. Vowel sequencing in Kusaal is also prolific as far as dialect variation is concerned. While Agole accepts diphthongs and other sequential vowels, Toende accepts only monophthongs within morpheme-boundaries. Finally, vowel harmony and consonant assimilation differences are salient factors for the phonological variations in the dialects. While round or spread harmonic features are optimal in Toende, they are not in Agole. On the other hand, [+/-ATR] harmony is also optimal in Agole but not in Toende. The study also depicts that lexical variation is an integral part of languages with dialects and Kusaal is not an exception. It is shown that the two dialects maintain their respective list of words referring to the same referent in the language. It is apparent that nouns, pronouns, adjectives, verbs, and adverbs contain the prominent variables in the dialects. It is observed further that nouns provide a tall list of lexical items showing differences in the dialects. This is possibly so because of language contact and easy borrowing of nouns. This is followed by verbs, adjectives and finally adverbs.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter provides a general overview of the study. It lays the foundation on which the entire research work is built. The chapter is structured as follows: Section 1.1 outlines the background of the study while section 1.2 discusses the language and its speakers. Section 1.3 gives a brief linguistic profile of Kusaal, while section 1.4 states the research problem. Section 1.5 indicates the purpose of the study and 1.6 outlines the objectives of the study. Section 1.7 presents the research questions that guide the study and section 1.8 highlights the significance of the study. Section 1.9 talks about the delimitation of the study, while section 1.10 outlines some limitations of the study. Section 1.11 presents the organisation of the thesis while section 1.12 summarises the chapter.

1.1 Background of the study

Language is the ultimate achievement of any civilised society, as it remains the only medium people use to express their thoughts, feelings, actions, and inactions in societies (Chaturvedi 2015). However, languages all over the world are not spoken uniformly due to people's different social and regional backgrounds. Wardhaugh (2010) posits that spoken forms of every language are not uniform entities but vary based on the area people come from, their social class, their gender, age, ethnicity, level of education among other factors. This created the imperative needs for linguistic and sociolinguistic investigations into the various variations in languages. This study is set to satisfy one of such imperative needs. It seeks to investigate the phonological and lexical variations in the Toende and Agole dialects of Kusaal.

Kusaal is a Mabilia¹ (Gur) language spoken in the northeastern part of Ghana. The language is geographically split into two by the White-Volta forming two intelligible dialects. Natively, the dialects are known as *Atuon* „Mr. in front“² (Western dialect) and *Agol* „Mr. above or up“ (Eastern dialect). However, anglicised and other forms of spelling for the dialects among others include Agole or Agolle for the eastern dialect and Tonde or Toende for the western dialect. The forms adopted for the dialects in the present study are Agole and Toende for the eastern and western dialects respectively.

Evidence from Kusaal data indicates the need for linguistic investigations into the phonological and lexical variations in its dialects. A casual observation on the way its speakers use the language has become a common topic of conversation for many especially, students, scholars, and other linguistic stakeholders of the language. For instance, while Agole speakers would tend to say *gɔsim dama'am* „look at lies (what lies)“, Toende speakers would rather say *gɔhɔm zanweelim* to imply the same thing. Also, whilst Agole speakers will say *pian'am tisim* „speak for me“, Toende speakers will say *ɛɔ'am tihim* to mean the same thing. These kinds of variations in the dialects are so rampant and from linguists' point of view, such variations can at times lead to impediments of smooth conversations if they are not carefully considered (Chambers & Trudgill 2004). This study is therefore set to investigate the linguistic variations in the two dialects of Kusaal. It seeks to identify and analyze the phonological and lexical differences in the Agole and Toende dialects of Kusaal. The study assumes a

¹ The term „Mabilia“ was suggested by Bodomo (1993) to replace Gur as proposed by Hall 1983. Bodomo's suggestion is considered apt for these languages, since not all the languages begin their names with *Gur* as Hall stated. Mabilia describes the sisterly relations of the languages, and that makes it a suitable term for the languages. The term has been adopted by many scholars and will also be the preferred term in this study.

² This is so, because Kusaas nominalise their personal names by adding the prefix *a-* to the noun word

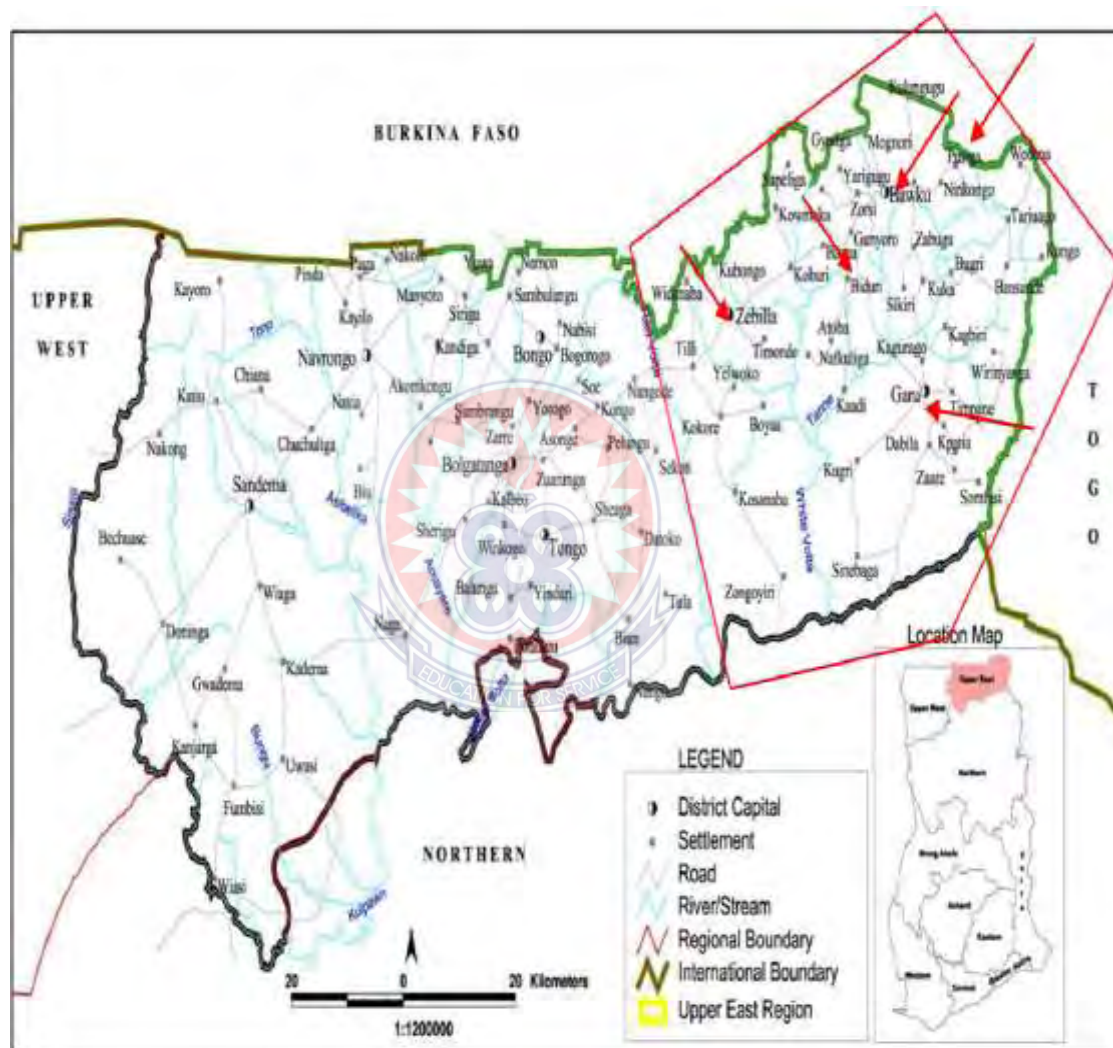
synchronic approach to dialect studies. Therefore, the descriptions and comparisons of the two dialects herein are based on how the dialects are spoken today.

1.2 Kusaal and its speakers

As mentioned in the preceding section, Kusaal is a Mabia language spoken mainly in the north-eastern part of Ghana and the adjoining areas of its neighboring countries such as Burkina Faso and Togo. It is the official language of the Kusaas. Even though the people natively refer to themselves as Kusaas for plural (PL) and Kusaan or Kusaa for singular (SG), other tribes and written forms state the name as Kusasi, Kusaasi, and Kusaasis. In Ghana, Kusaal is spoken widely in the Upper East Region, within an enclosed jurisdiction called Kusaug (the Kingdom or land of the Kusaas). It is located at the north-eastern corner of Ghana, around latitude 11.050000° N and longitude 0.233333° W (Musah 2018). The Kingdom covers six (6) out of the fifteen (15) administrative districts and municipalities in the Upper East Region of Ghana. These include Bawku Municipality, Garu, Pusiga, Tempene, Binduri, and Bawku West District assemblies. The Kingdom is traditionally governed by a single paramountcy at Bawku, the capital town of the Kusaas Kingdom. However, every community has representatives who are appointed and enstooled by the Paramount Chief as divisional and sub-divisional chiefs to assist the paramount chief on leadership and administration of justice at the traditional level. Since the location of the Kingdom is found at the topmost part of the north-eastern corner of Ghana, it shares a boundary with the Republic of Burkina Faso to the North and the Republic of Togo to the East. As a result of these attachments, Kusaal is spoken widely in several villages and towns in Burkina Faso (Niggli 2014) and some adjoining villages of Togo (Musah

2018). Figure 0.1 presents a map of the Upper East Region of Ghana, indicating the geographical location of Kusaal and some major Kusaal speaking towns.

Figure 0.1: A map of Upper East Region of Ghana showing Kusaal speaking areas



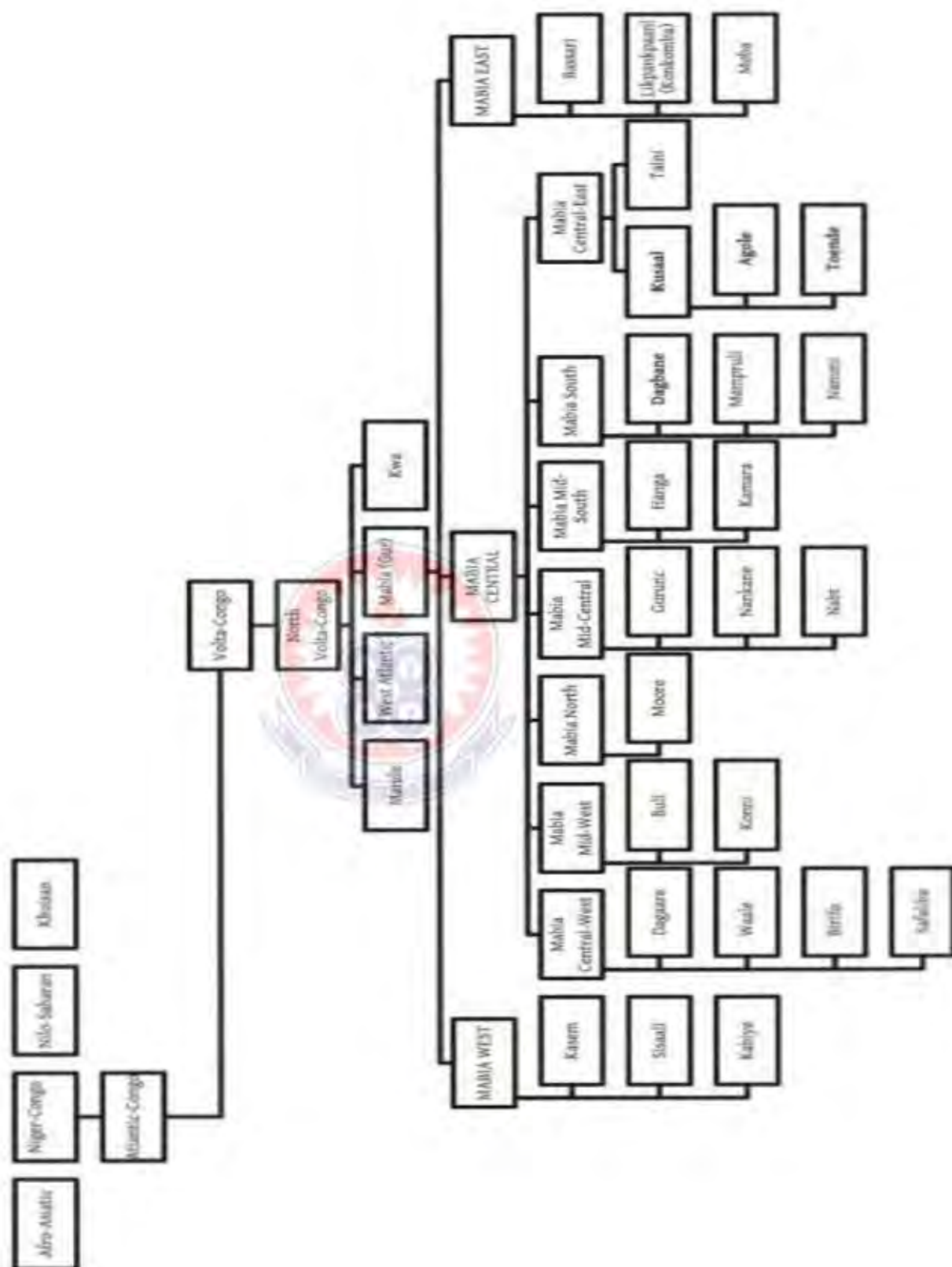
Source: Abubakari, Assem and Amankwah (2021: 66) following Mary Esther Kropp Dakubu (n.d).

Even though Kusaal is the official language of the Kusaas, it is also spoken by other tribes such as Moshi, Mamprusi, Bimoba, Bissa, and Fulani who live with and among the Kusaas. The updated version of the Ethnologue list

ing of languages estimates the current number of speaker population to be about 535,000 people in Ghana. With increasing Agole speakers of 350,000 and Toende speakers of 90,000, totaling the users of the language in the countries to be around 440,000 (Eberhard, Simons & Fennig 2021). Niggli (2014) also states that Kusaal is spoken largely in many villages and towns in Burkina Faso, totaling about 37,000. As the language also shares a boundary with the Republic of Togo, the language is also spoken in the adjoining communities in Togo, totaling about 1,200 speakers (Gblem-Poidi & Kantchoa 2012, cited in Eberhard et al 2021).

Genetically, Kusaal belongs to the Mabilia language family which is traced to the cluster of the larger Niger-Congo languages. Within the larger Niger-Congo language group, it is captured under the Proto Oti-Volta sub-group and to the Western Oti-Volta sub-group of the larger Niger-Congo language families (Naden 1988; 1989, Williamson & Blench 2000 cited in Musah 2018) and Niggli (2014) (See Figure 0.2 below for the genetic affiliation of Kusaal in the larger Niger-Congo language cluster perspective). Occupationally, Kusaas are predominantly farmers who grow different kinds of food and cash crops such as millet, maize, rice, and other cereals for food. They also cultivate large quantities of tomatoes, onions, peppers, okra, watermelon, lettuce, and other vegetables for both food and cash. Other crops and plants such as tobacco, shea-nuts, and dawadawa source the Kusaas a lot of cash. Kusaas are as well noted for their large rearing of domestic animals and fowls. Animals such as cattle, donkeys, goats, and sheep are reared in large quantities in almost every Kusaa home. Chiefs and some wealthy homes keep horses and doves for traditional and commercial purposes. Poultry and other domestic fowls are also sources of meat and income for the Kusaas since every house has several of them for domestic and commercial purposes.

Figure 0.2: *The genetic affiliation of Kusaal (Musah 2018: 34)*



Kusaal has two distinct dialects called Agole and Toende. As noted earlier, the language is geographically split into two by the White-Volta, forming the two distinct but mutually intelligible dialects. The former is spoken in the eastern part of the Kingdom and the latter is spoken in the western part of Kusaug. The two dialects are linguistically independent and are widely spoken in Ghana and many adjoining villages in Burkina Faso and Togo. The two dialects have gained literary development to some extent with each dialect having its unique orthography, dictionaries, and primers for literacy classes (Musah 2018, Niggli 2014).

In Ghana, the Agole dialect is dominant in population and users (Berthelette 2001). It is also the form taught at schools and used in print. It covers the embodiment of all the five political districts in the Bawku East, which include Bawku Municipality, Garu, Tempene, Pusiga, and Binduri Districts Assemblies and their surrounding villages. It is also the form spoken in the neighboring parts of Togo. On the other hand, the Toende dialect is spoken in the western part of Kusaug, ranging from Sapeliga, immediately after the White Volta to the East, through to Zebilla, the district capital of the Bawku West, up to the Tilli forest, where the language shares a boundary with the Talensi-Nabdam to the west and up to Zongoyire where the Kingdom also shares a boundary with the Gambaga Escarpment in the south. As a result of this, there are a few pockets of Toende speakers scattered around some villages and towns in the Nalerigu and Gambaga areas. The Toende dialect is also the form widely spoken in several villages and towns in the south-eastern part of Burkina Faso (Berthelette 2001, Niggli 2014). As I will be analyzing the phonological and lexical differences in the two dialects of Kusaal, it is prudent to briefly outline the linguistic profile of Kusaal for a better understanding of their variations.

1.3 Brief linguistic profile of Kusaal

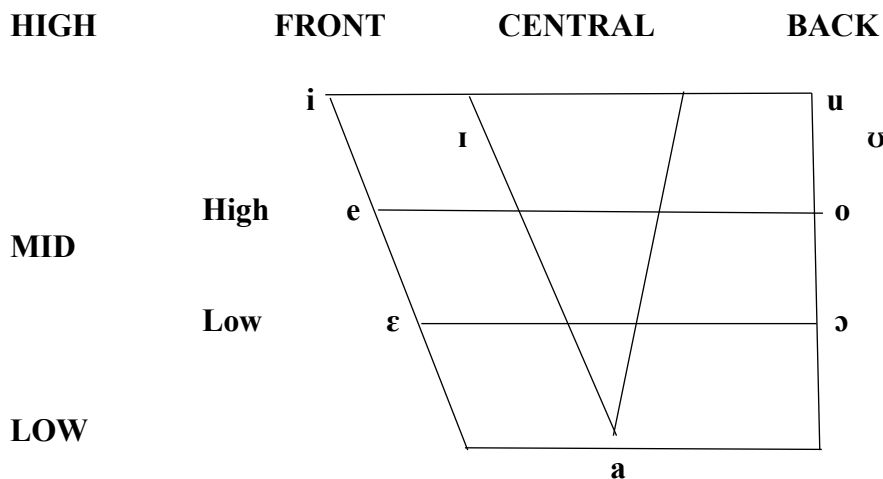
Just like other African languages, Kusaal uses Roman numerals and alphabets in its writing system. Musah, Naden and Awimbilla (2013) present an orthography as a guide to Kusaal spellings and writings. They provide a complete treatise on the linguistic profile of Kusaal, but since the present study is on dialect variations in Kusaal, it is prudent to review the profile to see the phonetic features that cause discrepancies in the two dialects.

1.3.1 Vowel inventory of Kusaal

Phonetically, Kusaal has nine (9) oral vowel inventories [i, ɪ, e, ɛ, a, ɔ, o, ʊ, u]³ of which five (5) have nasal counterparts [ɪ̃, ɛ̃, ɔ̃, ʊ̃, ã] which are all produced with the advanced tongue root except the central low vowel /a/ which may or may not necessarily be so (Musah et al 2013). The vowels in Kusaal are all described phonetically based on three main parameters, namely the part of the tongue such as front vowels [i, ɪ, e, ɛ]⁴, back vowels [u, ʊ, o, ɔ] and central vowel [a]; the height of the tip of the tongue such as high vowels [i, ɪ, u, ʊ], low vowel /a/ and [e, o, ɛ, ɔ] as mid vowels and the shape of the lips such as round and spread lips for [o, ɔ, u, ʊ] and [i, ɪ, e, ɛ] respectively. All the front vowels are produced with spread lips and the back vowels with round lips. All these phonemic vowels are present in both the Agole and Toende dialects (cf. Musah 2010, Niggli 2014). Figure 0.3 below presents the phonemic vowel system of Kusaal.

³ The high-back retracted vowel /ʊ/ is orthographically represented by the symbol closely related to the voiced labiodental approximant /v/ in Kusaal. (See Musah 2010; 2018, Musah et al 2013, Eddyshaw 2016, Niggli 2014; 2017, Taden 2015, Abubakari 2018 etc).

⁴ The advanced and the retracted front-high vowels /i/ and /ɪ/ are both orthographically represented by /i/. These conventions are also adopted in this study.

Figure 0.3: The Kusaal vowel system

In terms of vowel lengthening, Musah (2010: 38) notes that all the nine oral vowels in Kusaal have their long vowel correlates. This is however refuted in Musah et al (2013: 14). They observe that [e, o] do not have long counterparts in Kusaal except in loanwords. Niggli (2014) presents a Burkina Faso version of Kusaal phonology and states that the Burkina Faso Kusaal has long forms for all the nine vowels. His argument is apt since the Burkina Faso Kusaal is similar to the Western dialect of Kusaal spoken in Ghana (Toende), it will be seen in this study that the Toende dialect rather uses more /e/ and /o/ vowels and their long counterparts /e:/ and /o:/ than /ɛ/ and /ɔ/ and their long forms /ɛ:/ and /ɔ:/ which are also common in the Agole. The sequencing of vowels in Kusaal is not only prolific but also distinctive in the two dialects of Kusaal. While Toende often starts and ends syllables or even in most morphemes with a single vowel quality, the Agole dialect could start and end syllables with two or more vowel qualities. In a nutshell, while there is a systematic sequencing of vowels up to two or three different vowels in Agole, Toende does not accept such constructions of vowels.

1.3.2 Consonant system in Kusaal

In terms of consonants, Musah et al (2013) present twenty-four (24) phonemic consonant sounds in Kusaal. Phonetically, all the 24 consonant sounds correspond to seven (7) places of articulation and six (6) manners of articulation. Unlike other dialects, Toende and Agole have all these consonant sound distributions in their respective inventories (See Niggli 2013; 2014, Abubakari 2018, Musah 2010; 2018). Since the two dialects have all the phonemic consonant sounds in Kusaal, it is prudent to present a single consonantal chart for the two dialects. Voicing is distinctive in Kusaal and as it will be seen in the chapter four of this study, voicing adds to the phonological variations in the two dialects of Kusaal. Due to this, table 0.1 below presents all the 24 phonemic consonants in pairs, such that each pair has the same place and manner of articulation in Kusaal. It also indicates the orthographical representations of the sounds such that, those sounds with different symbols in the orthography have such symbols put in slash lines. The sounds that do not have different representations in the orthography are left the same on the table.

Table 0.1: *The phonemic consonants of Kusaal (adapted from Musah 2018)*

		Bilabial	Labiodental	Alveolar	Palatal	Velar	Labiovelar	Glottal
Plosive	+v	<i>b</i>		<i>d [r]</i>		<i>g</i>	<i>gb</i>	<i>ʔ /'ʔ/</i>
	-v	<i>p</i>		<i>t</i>		<i>k</i>	<i>kp</i>	
Fricatives	+v		<i>v</i>	<i>z</i>	<i>j /j/</i>			
	-v		<i>f</i>	<i>s</i>				<i>h</i>
Nasals	+v	<i>m</i>		<i>n</i>	<i>ɲ /ny/</i>	<i>ŋ</i>	<i>ŋ /nw/</i>	
Approximant	+v				<i>j /y/</i>		<i>w</i>	
Lateral	+v			<i>l</i>				
Trill	+v			<i>r</i>				

1.3.3 Tone in Kusaal

Just like other Mabia languages, Kusaal is a tone language. Hayes (2009: 291) notes that in tone languages, pitch is an indication of lexical items and must appear in some lexical entries of morphemes, just like other phonemic segmental information. This means tone is the contrastive use of pitch that results in distinction of lexical meanings. Spratt and Spratt (1968) cited in Musah (2010) hint that Kusaal is a tonal language but did not discuss the phenomenon in details. The phenomenon was however described into detail by Musah (2010). He identifies three tones in Kusaal which are the high tone // (**H**), low tone / (L) and mid-tone / / (**M**) inventories in Kusaal. These were later on supported by many scholars in the language see (Musah et al 2013, Musah 2017; 2018, Abubakari 2011; 2018 and Niggli 2013; 2014; 2017). Within each of the dialects, tone is used to distinguish meaning of lexical items. Examples of a few lexical items that are distinguished by tone in both dialects of Kusaal are *bá* „father“, *bà* „third-person singular“ (3SG), and *bā* „to fix“, *sáám* „strangers“, *sààm* „father“ and *sāām* „to mash“ among others. Apart from the language in context, it is tone that deciphers them in Kusaal.

Even though Kusaal is a tone language, it does not mark tones in its writing system. Hence, the present study will not also mark tones on its data, unless where tone is need to produce the evidence for the variation in the dialects. For more details on the linguistic profile of Kusaal, see (Musah 2010; 2018, Musah et al 2013, Abubakari 2011, 2018, and Niggli 2014).

1.4 Statement of the problem

Kusaal exhibited an imperative need for a linguistic study on the dialect variation in the language many years ago when literacy works began in the language. The

variations in the two dialects were brought to scholarly attention around the early 1960s when literary materials were developed including the New Testament which was then newly translated into the Agole dialect (Berthelette 2001).

Despite such early notice and need for linguistic studies, a systematic investigation on the linguistic variations in the two dialects of Kusaal has until now not been achieved. Many scholars of the language center their investigations on the phonology of Kusaal (Musah 2010, Niggli 2013), the grammar and syntax of Kusaal (Niggli 2014, Eddyshaw 2016, Abubakari 2011; 2018, and Musah 2018). Musah and Atibiri (2020) also look at metaphors of death in Kusaal from a semantic perspective. From the above, it is obvious that nothing has been done on the variations in the two dialects of Kusaal. This study is therefore set to fill that gap. It seeks to provide an account of the phonological and lexical variations in the Agole and Toende dialects of Kusaal.

1.5 Purpose of the study

The purpose of this study is to provide a comprehensive account of the phonological and lexical variations in the Agole and Toende dialects of Kusaal.

1.6 Objectives of the study

This study sets out, among other things, to achieve the following objectives:

1. to highlight the phonological variations in the Agole and Toende dialects of Kusaal
2. to examine the lexical variations in the Agole and Toende dialects of Kusaal.

1.7 Research questions

The study seeks answers to the following research questions:

1. What are the phonological variations in the Agole and Toende dialects of Kusaal?
2. What are the lexical variations in the Agole and Toende dialects of Kusaal?

1.8 Significance of the study

The findings of this study would be significant in several ways. The study will provide the basics for understanding the major differences between the Agole and Toende dialects of Kusaal and would serve as literature for future studies on dialectology in Kusaal and other Maba languages. The study will also add up to the literature of dialectology in general. As the scientific study of dialect and dialect variation, continues to gain grounds as an independent subfield of linguistics, this study will be beneficial to the development of literature for such fields. The study will also be a useful material to those who intend to learn Kusaal as their second language. This is because it will provide the basis for an easy understanding of the dialects.

1.9 Delimitation

Even though the study of dialect variations (dialectology) is considered a sociolinguistic subfield, such is not our focus in the present study. Dialect studies are usually considered as sociolinguistics because the term „dialect“ is always observed from three main dimensions (Bodomo 1989: 8). According to him, dialect study could be classified based on a temporal dimension where different developmental stages of a language are involved. It could also be classified in relation to a social dimension in which we look at linguistic peculiarities in relation to the individual users of language, and finally, it could be classified based on geographical dimensions where we are permitted to study dialects based on the linguistic differences in people from different geographical areas who claim to be speakers of the same language.

Even though there are quite a lot of evidential needs for studies on the first two dimensions with respect to Kusaal, such is not in the interest of the present study. The scope of this study is delimited to only the third dimension. It confines itself to a pure

linguistic analysis of the phonological and lexical variations in the two dialects of Kusaal within the regional geographical dialectology. The study also essentially relies on a synchronic approach to dialect studies where the differences in the dialects are analyzed, compared, and presented based on the way the dialects are spoken today without reference to their historical antecedents.

Furthermore, the jurisdiction of the language field, where there is evidence of linguistic variation in the dialects is so large that, the researcher could not include the whole area in the present study. As a result, the data that is analyzed in this study was taken from ten (10) communities in four out of the six administrative assemblies in Kusaal. These include Bawku West District for Toende dialect and Bawku Municipality, Binduri, and Garu district assemblies for the Agole dialect. Communities and participants from these districts and localities were purposefully selected to give the researcher varied data even within the respective dialects. It was also to provide varied data on lexical items which could be used to draw the geographical dialect continuum in Kusaal. It is fair to state that, the data in this study cannot and does not contain the whole word list of Kusaal. It only contains a valuable amount of data that could be used to establish the phonological and lexical variations in the two dialects of Kusaal.

1.10 Limitation

It is a fact that irrespective of the research topic, challenges are inevitable in the course of any study. This study is not an exception; and as a result, the researcher encountered some challenges in the course of the study. A few of them are outlined below:

Knowledgeable and accessible population: As the study was conducted during the farming season, access to the participants was very problematic. It was not easy for the people to leave their busy schedules on their farms and give the researcher the needed information. Those who were available could not identify all the pictures shown to them for elicitations. This compelled the researcher to lodge in some of the distant communities and visit the people in the evenings when they retired from their farm work and were then relaxing over calabashes of pito. This resulted in extra cost to the researcher in respect of accommodation and paying for more refreshments for the participants

Also, local Ghanaian scholarly materials on dialect studies are very limited if not unavailable. The only identifiable material on dialect studies in Mabia languages is Bodomo (1989) which was also not easy to access. The researcher thus had to rely on materials from foreign languages for this study which was not easy to relate to due to the vast differences in language groups.

1.11 Organisation of the study

This research work is organised into six chapters. Chapter one introduces the study. It outlines the background to the study, the language and its speakers, the statement of the problem, the purpose and the objectives of the study. The chapter also states the research questions that guide the study and also discusses the significance of the study as well as the limitations and the delimitation of the study.

Chapter two is devoted to a review of related literature and the theoretical framework of the study. The literature review is built on studies in dialectology and other studies in language and dialects. The chapter also provides the theoretical framework of the study.

Chapter three discusses the research design that the researcher used for this study and also outlines the various methods and procedures that the researcher followed in the conduct of this study. Here, the type of design used for this study as well as the population, sampling techniques, and data collection instruments and strategies are explained.

Chapters four and five constitute the core part of the research analysis and findings. The chapter four analyzes the major phonological variations in the two dialects of Kusaal whereas chapter five also examines the lexical variations in the dialects. Chapter six provides the conclusion and summary of the study.

1.12 Summary

This chapter provides the general framework of the entire study. It is the foundation on which the entire work is built. The chapter looked at the background of the study, the language and its speakers; where the Agole and Toende dialects are outlined. For the purpose of establishing the phonological variations in the dialects, the chapter also provides a brief profile of the language. The chapter also discusses the statement of the problem, the purpose, objectives, and significance of the study. The chapter also considered the delimitation of the study and some challenges that the researcher encountered in the course of conducting the study. It concludes with the hierarchical organisation of the entire study.

CHAPTER TWO

REVIEW OF LITERATURE AND THEORETICAL FRAMEWORK

2.0 Introduction

This chapter is devoted to the review of related literature and the theoretical framework of the study. The chapter is organised as follow; Section 2.1 discusses the concept of language and dialect while section 2.2 captures some parameters for determining language and dialects. Section 2.3 looks at the concept of language variation while section 2.4 highlights some variations in dialects. As this study centers on the phonological and lexical variations in the two dialects of Kusaal, such concepts are broadly discussed in this section with illustrations from other languages. Section 2.5 contains information on historical records of dialectology and the impetus for dialect studies. Section 2.6 captures the theoretical frameworks of the study and section 2.7 summaries the chapter.

2.1 The concept of language and dialect

The present study is a dialectological study on the phonological and lexical variations in the two dialects of Kusaal, but it is prudent to investigate the diachronic typological view of language and dialect and also look at the factors for determining which variety should be considered a language or dialect linguistically. This is relevant in this study as peoples' concerns on which of the dialects of Kusaal is the purer form continue to increase. Even though, the present study does not seek to satisfy such curiosities but literature on these concepts will help the researcher to choose the right dialect as the underlying form and derive variations from it for the other dialect.

Most linguists will accept the fact that it is difficult and often controversial to distinguish language from dialects, however, the distinction is useful for many different purposes, such as cataloguing languages, assigning ISO 639-3 codes, preparing maps of languages, planning revitalization efforts, or for doing statistics on language distributions (Korjakov 2017 as cited in Wichmann 2019). On this regards, Haugen (1966) cited in Wardhaugh (2010) sees language and dialect as ambiguous concepts and a source of great confusion. To him, the ambiguity and the resulting confusion is precisely the fact that dialect was borrowed from Greek, where this same ambiguity exists. Wardhaugh (2010) also adds that albeit, the concepts are easy to define to a lay man's understanding but it is not so from a scholarly view. According to him, people ordinarily use these terms in speech and see dialect to be nothing but a local non-prestigious and powerless variety of a real language. He argues further that language refers to either a single linguistic norm or to a group of related norms, and dialect is used to refer to one of the norms (Wardhaugh 2010). Similarly, García and Sghir (2016) also affirm that dialect is not a term particularly easy to define even to linguists and sociolinguists. They support the fact that it was borrowed with inherent ambiguities which led different scholars from different countries and language backgrounds to have several views and notions about the concepts. Batibo (2015: 2) draws the curtain on the foregoing arguments. He opines that distinguishing between the concepts of language and dialect is not easy particularly where the speakers' opinions do not tally with those of the language scholars. He lists examples of languages with this contention as follows:

While the Chagga people, at the foot of Mount Kilimanjaro, consider themselves as speakers of one language, one could easily identify at least three different forms of speech which are not mutually intelligible. Linguistically therefore, one would rightly consider them three different languages. On the other hand, although the Sesotho, Setswana and Sepedi speakers in southern Africa see themselves as

speakers of three distinct languages, their languages are mutually intelligible and could linguistically be considered as dialects of one language (Batibo: 2).

The bone of contention now is how to answer the big question of what exactly is the difference between language and dialect linguistically. Previously, the notion behind language and dialect was on prestige and fame. A language was always considered as the prestigious form whilst dialects are the substandard, low status, and often rustic forms of language (cf. Chambers & Trudgill 1998, Bussmann 1996, Hudson 2001, Bisang 2004, Bayley & Lucas 2007, Groves 2008). However, the above-mentioned notions have been refuted in recent times by many scholars (see Chambers & Trudgill 2004, Holmes 2013, Budiarsa 2015). This study also accepts the new notion that all speakers speak at least one dialect (Junji 2005). Chambers and Trudgil (2004) opine that every speaker speaks at least one variety of a language called „dialect“ and that standard English for instance, is just as much a dialect of any other form of English, and that it does not make any kind of sense to suppose that anyone’s dialect is in any way linguistically superior to another. They refer to dialects as varieties of language that are grammatically, lexically, and phonologically different from other varieties. To them, “If two or more speakers respectively say *I done it last night* and *I did it last night* they are speaking two different dialects”. This view is also shared by (Holmes 2013, Batibo, 2015).

However, Radzi, Jalaluddin and Hamzah (2013) posit that there are size differentials in language and dialects. They argue that a language is larger than a dialect because it is a housing of several dialects. Here, we can have English, German and French as languages and their respective varieties such as *Lancashire*, *Bavarian* and *Parisian* as dialects (Chambers & Trudgill 2004), and Ewe as a language and her varieties such as

Anlo, Tɔŋu, Ho, Vɛ, Kpando, Peki and Awudome as dialects (Abdul 2014). Similarly, we have *Dagara, Waale, and Birifor* as the main dialects of Dagaare (Bodomo 1989), and Farefare as a language with varieties such as *Gurenɛ, Talni, Boone, Nabt* and *Nankani* as dialects (Atintono 2013). Also, Kusaal as a language has *Toende* and *Agole* as dialects (Berthelette 2001; Musah 2010; Niggli 2014).

In view of the above classifications, language is nothing but an abstract umbrella of dialects while dialect is one of the real forms of communication in the society or country. This idea agrees with Finegan (2008, 2015) who concludes that linguistically, there is no distinction between language and dialect. He records that every language is a dialect and every dialect is a language. Similarly, Fujiwara (1961: 57) considers dialects as “each of the individualised or the distinguishable blocks of local languages mutually contrasted and differentiated”. It is also argued that one needs to understand the meaning of standard language in order to decipher the difference between language and dialects (Chambers & Trudgill 1998). However, Holmes (2013) states that a standard language is a particular dialect that gained its special position as a result of social, economic, and political influence. He adds that every dialect is linguistically considered as a distinct language with its distinct linguistic properties such as pronunciations, lexemes, and grammar. Linguistically, there is no difference between language and dialects. A dialect is simply known as the real language in action. What people use in their everyday communications are dialects and that abstract name that constitutes such dialects is known as a language. For example, people speak Twi, Bono, Fante Nzema etc but no one practically speaks Akan. Similarly, Kusaas speak either Toende or Agole but not Kusaal. Nevertheless, Kusaal is the abstract name of the language of the Kusaasi.

2.2 Determiners of language and dialects

Even though there is no perfect and accurate criterion to help us determine which form of related varieties should be considered a language or dialect, there are some factors that can to some extent determine language and its dialects. In the literature, factors for determining language and dialects could be categorised into two broader perspectives namely; linguistic factors and non-linguistic factors (cf. Yule 2006, Britain 2010 and García & Sghir 2016). Those factors that relate to pronunciations or words are considered linguistic whereas those relating to social class as well as policies and political power are also considered non-linguistic factors (cf. Yule 2006, Wichmann 2019). The determiners of language and dialects discussed in this work are those identified by Chambers and Trudgill (2004) as mutual intelligibility, dialect geography and continuum, autonomy and heteronomy. It is, however, good to note that none of these factors could give an accurate distinction between language and dialects (See Fishman 1979 cited in Wardhaugh 2010, and Chambers & Trudgill 2004).

2.2.1 Mutual intelligibility

According to Chambers and Trudgill (2004), dialects are considered as mutually intelligible forms of language whilst language is seen as a collection of mutually intelligible dialects. It also argued by Groves (2008) that dialects share linguistic similarities even though there may be variations within them. Nomlomo (1993) says that people who speak the same language should understand each other and that if they don't understand each other's dialects, they are speaking different languages.

This criterion might look apt in determining language and dialects but it poses some challenges in providing us clear and holistic distinctions between language and dialects (Chambers & Trudgil 2004). They reject mutual intelligibility as a successful candidate for determining language and dialects because mutual intelligibility may not be equal in both directions. To them, it is influenced by several factors such as the listeners' degree of exposure to other languages, level of education, and more interestingly, their willingness to understand. Schiffmann (1996) also condemns mutual intelligibility by asserting that speakers of variety A may claim to understand variety B but speakers of variety B may deny understanding variety A. He cites an example that, whilst Polish speakers claim not to understand Russian, Russian speakers claim they understand Polish with ease. With this, Chambers and Trudgil (2004) also assert that people sometimes do not understand others' variety because, at some level of their consciousness, they just do not want to understand. They postulate that:

A study carried out elsewhere in Africa showed that, while one ethnic group A claimed to be able to understand the language of ethnic group B, ethnic group B claimed *not* to be able to understand the language of ethnic group A. It then emerged that group A, a larger and more powerful group, wanted to incorporate group B's territory into their own on the grounds that they were really the same people and speak the same language. Clearly, group B's failure to comprehend group A's language was part of their resistance to this attempted takeover (p. 4).

Contrary to this, Berthelette (2001) reports that the Agole and Toende dialects of Kusaal are to some extent, mutually intelligible, and the speakers have positive attitudes towards each others dialects. They only resort to using their respective dialects in their inter-communications because they cannot speak each others' dialects.

2.2.2 Dialect geography and continuum

This has to do with the geographical landscapes of the language and its dialects. This is necessary as the variations in the dialects of Kusaal are readily seen within the regional levels of the language. Radzi et al (2013) indicate that a dialect geography is the study of variations in dialects with regard to the geographical distribution of the dialects. They list the following geographical factors: mountain ranges, river basins, and forest belts as some factors for determining regional dialects. The regional variation is subsequently displayed in the form of a linguistic map where each dialect is demarcated by a linguistic boundary known as an isogloss (Hudson 2001, Radzi et al 2013). Chambers and Trudgill (2004) opine that if dialectal variations are examined geographically, it will reveal that the variations will be cumulative as we move from one area to another. Thus, if the areas are arranged chronologically as from A-Z, the variations will be smaller at the ones closest to A and will be progressively larger to the end where the varieties will be explicitly different from where we started (Donoso & Sanchez 2017). The point here is that linguistic varieties that could be classified as dialects of the same language should share one geographical area. The more dialects are closer to each other, the lesser their variations will be and vice versa.

This is very evident in Kusaal and its dialects. For example, if we toured the jurisdiction of Kusaal speaking area, and had to arrange our movement chronologically from the far ends of the Garu environs through Bawku to the far ends of Zebilla areas, so many isoglosses, for instance, may be drawn for the lexical item *beŋa* „beans“ in Kusaal. While Garu and its environs know it as *bε''ŋa*, Bawku and other parts of Binduri also know it as *beŋa*. The adjoining areas of Binduri to Zebilla and Zebilla township know it as *beŋa*. Not quite unsurprising, it is known as *tīya* in Widnaba, Binaba, and Zongoyire areas which are all at the far ends of Zebilla and in

the adjoining areas of the Taln and Nabt languages where the term is also known as *tia*. Most Toende speakers from these areas do intimate that they do not understand many of the words from Agole while the inhabitants of Timonde and other areas within the Zebilla township understand Agole with ease as a result of their relative closeness, geographically, to the Agole speaking areas.

2.2.3 Autonomy and heteronomy

As seen in most of the definitions of dialect and language, many sociolinguists and dialectologists hold the view that language is always autonomous, that it is independent while dialect is heteronomous, that it is dependent on language for its vocabulary and grammar (Abraham 2006, Junji 2005, Chambers & Trudgill 2004). Although this is seen as a successful concept in looking at the relationship between language and dialects, it also poses its own problems. Since autonomy and heteronomy are politically and culturally motivated rather than purely linguistic terms, their groundings are subject to changes (cf. Biadsy 2011, Holmes 2013). They further challenge these concepts by arguing that anytime there is a reverse of power, these can easily be changed.

As each of the determiners continue to fall short in determining what should be considered as language or dialect, Chambers and Trudgill (2004) resort to the use of a more neutral term “*variety*” which is seen as applicable to any kind of language as a single entity. This was only done after their vigorous attempts at distinguishing language from dialects proved futile. As noted by Finegan (2015: 374) “language, dialects, and registers are all language varieties and what this means is that, there is no linguistic distinction between language and dialects. Every dialect is a language and every language is realised in its dialects”. In conclusion, language and dialect are

linguistically indistinguishable (cf. Shareah et al, 2015, Donoso & Sanchez 2017, Eze 2019, García & Sandhu 2015).

2.3 Language variation

Language is said to be the ultimate achievement of any civilised society since it remains the only successful tool people use to express their thoughts, feelings, actions, and inactions in the society (Mahadi & Jafari 2012, Chaturvedi 2015). One of the significant features of human language that distinguishes it from other forms of communications is the systematic conventions of its arbitrary sounds and symbols (Yule 2006). If this were not so, one would have expected human language to be spoken uniformly among its speakers. This is however, not the case as even people of the same language speak it differently in different social and geographical contexts (cf. Labov 1972, 1990, Koerner 2005). Shareah et al (2015) opine that there is no known human language that is stable, unvarying, or uniform. To them, all languages present internal differences, in terms of pronunciation, choice of lexical items, the meaning of those lexical items and even the use of syntactic rules (cf. Wolfram & Schilling 2016). Wardhaugh (2010) adds that variations are inherent characteristics of all human languages at all times.

Hudson (2001:22) defines language variations as the different manifestations of language by its users in a society. To him, speakers who belong to different age groups, social class, gender, and educational background have systematic differences in the way they use language. Language variation is also observed from the angle of people from different regional backgrounds. One can thus easily identify a person's regional background by the kind of language they use (Wanjiku 2018). She adds that language variation could also be found based on the situation or the contexts that the

speakers find themselves. For instance, when a young person is talking to his or her peers, he or she will use the language differently from the way they would have used it if they were talking to an elderly person.

The arguments above affirm that variation is an inherent part of human language which can be observed in three phases, namely social variations, regional variations and contextual variations (cf. Tagliamonte 2006; 2012, Wanjiku, 2018). The focus of the present study is on the regional variations of the two dialects of Kusaal. This is a kind of variation in language or dialects of the same language based on the geographical locations of the speakers. It looks at how the Agole and Toende dialects differ in pronunciations and lexical items based on their geographical locations.

2.4 Variation in dialects

As seen in the previous discussion, dialects differ in many linguistic areas. Some of these are in the pronunciations, in lexical items and their meanings and in their grammatical structures see Hock and Joseph (as cited in Meyerhoff 2006), Bayley & Lucas 2007 & Hazen 2017). While there are shreds of evidence of all the above kinds of variations in the two dialects of Kusaal, this study focuses on the first two types of variations. It thus investigates only the phonological and lexical variations in the Agole and Toende dialects of Kusaal.

2.4.1 Phonological variation

As intimated earlier, dialects refer to the linguistically distinct varieties of a language across space based on pronunciations and grammars (Donoso & Sanchez 2017). Gaskell and Marshen-Wilson (1996) define phonological variations as the systematic variations occurring within conjunctions of speech sounds while Roh (2004) also intimates that phonological variation occurs when a single underlying form in a

language is mapped onto multiple outputs. He posits that dialect variation within the phonological level refers to the different realisations of the same inputs in different dialects. Zuraw (2010) also opines that in analyzing phonological variation in dialects, researchers need to distinguish free variants from what he calls lexical variations. To him, free variation has more than one pronunciation of a sound but lexical variation must have a new representation in the phonology and lexicon of the related dialects under study. Wolfram and Schilling (2016) posit that phonetic and phonological patterns can be indicative of regional dialect differences. They add that if a person has a good listening ear for language variations, one can often pinpoint a speaker's regional and social affiliation with a considerable accuracy based solely on the pronunciations of the lexical items. They argue further that one of the most striking phonological differences is the pronunciation of vowel sounds in languages. It is quite possible for a vowel to be pronounced in a number of different ways but still be considered the same sound (Wolfram & Schilling 2016: 68). They cite an example as "the vowel in the word *hawk*, *broad*, and *taut*, the so-called "thought" vowel, is produced with several varieties. In some regions in England, it may sound close to the vowel in words like *book* and *look*, the „foot“ vowel, while in others it sounds like the „lot“ vowel in *rob* and *swan*". Foulkes (2006) also defines phonological variation as the alternation in the phonological domains of a language or its varieties. He outlines the causes and effects of phonological variation in the dialects of English as vowel sound differences, segmental changes, allophonic variations, and other phonological processes.

Similarly, Holmes (2013) opines that pronunciations or phonological variations are the most noticeable trait of dialect variations in many languages of the world. Gaskell and Marshen-Wilson (1996) analyse some place of assimilation variations in some

regional dialects of English and discover that within some word boundaries, place of articulation assimilation differences take place where a previous consonant adopts the place of articulation of the following segments in some regions but not so in other regions. They however, identify this effect with only coronals such as /t/, /d/, /n/ that are followed by non-coronals such as labials e.g /p/, /b/, /m/ or velars e.g /k/, /g/, /ŋ/. They note that place assimilation is asymmetric in English, such that non-coronal segments cannot assimilate preceding coronals. For instance, in a phrase like /wɪkɪd præŋk/ „wicked prank“ is seen as [wɪkɪb præŋk] but /blæk taɪ/ is not seen as [*blæt taɪ] but as [blæk taɪ] because the place assimilation is asymmetric in English (Gaskell & Marshen-Wilson 1996: 145). Also, Mishra and Bali (2011) present a comparative analysis of phonological variations in Hindi dialects and realise that the major ingredient for the variations in the dialects is vowel quality. According to them, while Awadhi shows a number of allophonic free variations for the following vowels: /e:/, o:/ with /ja:/, wa:/. E.g. *dja:khau* ~ *de:khau*, and can also be shorted when the consonant /k/ is lengthened, e.g. /ek: au/ ~ /e:kau/, they are in complementary distribution with the more common /i/ and /u/ in the Bagheli dialect, e.g. *dustana* ~ *dostana* „friendship“. Similarly, they identified that high vowels in Bundeli tend to be lower than in the other dialects. For instance, *bahota denō se* in Bundeli is heard as *bahota dɪn se* in the other dialects of Hindi to mean „from many days“ (Mishra & Bali 2011: 1392).

Musgrave (n.d) also presents a study on dialect variation in varieties spoken in the northern part of Ambon Island in the Maluku province of East Indonesia and identifies one of the variables that trigger dialect variation in the region to be the shift of /l/ to /r/ with systematic underlying rules applying to their occurrence. According to him, /r/ in varieties like Tulehu, Tengah, Tial, and Liang only occur before /i/, /u/, and

/e/ where cognates in neighboring languages have [l] in such environments. Additionally, he notes that /l/ in the northern villages occurs in all environments, but changes to /r/ before high vowels in the Lease Islands to the east. The data in table 0.2 below presents the cognate sets of variations in the varieties (taken from Musgrave n.d: 5).

Table 0.2: Phonological variation in the northern Ambon Island varieties

Gloss	Tulehu	Liang	Mamala	Hitu	Haruku	Nusalaut	Rutah	Alune
'2sg'	yare	yare	ale	ale	ale	ale	ale	ale
'water'	waer	waer	wail	wail	waele	wael	aelo	'wele
'delicious'	matere	matere	ngatere	matele	matele	mu'ele	emmele	ntele
'house'	ruma	ruma	luma	luma	ruma	ruma	rumalo	luma
'two'	rua	rua	lua	lua	rua	rua	rua	lua
'five/arm'	rima	rima	lima	lima	rima	rima	rima	lima
'eight'	waru	waru	walu	walu	waru	walo	waru	walu

From the data, it is shown that /r/ in languages like Mamala, Hitu, Haruku, Nusalaut, Rutah and Alune always change to /l/ in all environments except where it is preceded by a high vowel such as /i/, /u/ and the mid vowel /e/. They are, therefore, considered as two distinct phonemes in the southern villages with the distinctions remaining the same as where they precede high vowels (Musgrave n.d: 5).

Chambers and Trudgill (1998) also find that the dialectal area for the pronunciation of the word „road“ separates Colchester from the northern towns of Ipswich and Lowestoft, while the pronunciation of the word „rowed“ separates Lowestoft from the two other towns. Kak, Fanzoo, and Mehdi (2008) also discuss phonological variations in the Srinagar variety of Kashmiri in India, and record that, different phonological processes in a language produce phonological variations in dialects. They note that phonological processes are innate mental operations applied in a speech to substitute a

less difficult class of sounds or sound sequence for a more difficult sound or class of sounds (Stampe 1979 cited in Kak et al 2008: 117). They classify the phonological processes into three categories namely syllable structure processes, such as cluster reduction, e.g /bik/ for /brick/, assimilatory processes, such as velar harmony e.g /geik/ for /gate/, and substitution processes, such as fronting e.g. /tau/ for /cow/. Other phonological processes that they identify as triggers of phonological variation in the Srinagar variety of Kashmiri are elaborated below with data from their work.

1. Epenthesis as a phonological variation in Srinagar variety of Kashmiri

Kashmiri	Srinagar	Gloss
a. <i>dry</i>	<i>dirry</i>	„swear by“
b. <i>prazna:va:n</i>	<i>parazma:va:n</i>	„to recognise“
c. <i>dryka:kan</i>	<i>dirika:kan</i>	„sister in-law“

The phonological process in the above data is epenthesis. It involves the insertion of a vowel within consonant cluster. For instance, the clusters in the data are broken by the insertion of the vowels /ɪ/ and /a/ in the Srinagar dialect. However, the insertion may not be in isolation but may be accompanied by other changes like deletion of /y/ as it is in the case of the example c.

Also, there is a cluster reduction in Srinagar. For example, [sron] and [trakur] in Kashmiri are realised as [son] and [takur] in Srinagar to mean „deep“ and „stiff“ respectively. There are also segment substitutions occurring in all three positions within a word in Srinagar but not in Kashmiri. The data below presents segment substitutions in Srinagar which is absent in the Kashmiri.

2. Segment alternation as a phonological variation in Srinagar variety of Kashmiri

Kashmiri	Srinagar	Gloss
a. [kru:r]	[kyu:r]	„well“
b. [brə:r]	[byə:r]	„cat“
c. [ju:rith]	[ju:ɖith]	„tied“
c. [kho:vur]	[kho:fur]	„left“
d. [dəriya:v]	[dəriya:b]	„river“
f. bru h	bru t h	„in front“

Other variations identified by Kak et al (2008) in the Srinagar variety of Kashmiri include segment addition, elision, metathesis, and vowel variations. Some of such phonological processes discussed above are also found in the Agole and Toende dialects of Kusaal (Niggli 2014). For instance, he identifies /r/ to /t/ alterations in the Agole and Toende dialects of Kusaal and also adduces evidence of labialisation, palatalisation, and segmental changes in the two dialects of Kusaal.

Similarly, Eze (2019: 60-61) investigates linguistic variations in Umunze, a dialect of Igbo, and discovers that segment substitution is the most noticeable evidence of phonological variation in Umunze from standard Igbo. She outlines that Umunze speakers use the close back vowel /u/ in place of the close front vowel /i/ in the words like *du* instead of *di* to mean „is“ and the voiced labio-dental fricative /v/ in place of the voiced bilabial plosive /b/ in a word such as *yuu* and *buu* „to carry“. The velar sound /gh/ in Umunze is also the representation of the voiceless labiodental fricative /f/ in Igbo, e.g *oghe* in Umunze is *ofe* in Igbo to mean „soup“ while the voiced lateral consonant /l/ in Umunze is the nasal alveolar sound /n/ in a word like *chileke* instead of *chineke* in Igbo for „God“. Her data shows that segmental substitutions are not systematic, as each segment could be used to substitute many segments in different words.

2.4.2 Lexical variation

Holmes (2013) opines that pronunciation and other phonological differences are probably the most noticeable differences that people are so much aware of in English dialects, although there are other variations such as lexical and grammatical differences. Similarly, Guy (2007) also records that the study of language variations is often mistaken to deal exclusively with only the phenomenon of phonological variations, meanwhile there are other components of grammar that pose more serious variations in languages and dialects in the world. Some of them include lexical, morphological, semantic, and syntactic variations (Guy 2007). This is true as regional dialects are easily identified by their choice of lexical items rather than their phonology (cf. Coetzee 2008, Tagliamonte 2012 and Da-Rosa 2017). This fact is quite obvious in Kusaal as one can easily identify that *tia* „beans“ and *bvraa* „man“ are Toende terminologies while Agole will term them as *beŋa* and *dav* respectively rather than [dɛʔɛ] and [dɪʔa] „to collect“ which are phonological variations in Toende and Agole respectively.

Hazen (2017) defines lexical variation as the alternation between various lexical items for the same object or idea. He intimates that the most discussed lexical variation in the varieties of American English is the analysis of the lexical item for a carbonated sweetened beverage: *pop*, *soda* or *coke* in the United States of America. This argument is also found in Wolfram and Schilling (2016) who argue that speakers of English all over England use different words to refer to various foods and drinks which differ from those found in American English. Abdulai, Abdul-Razak, and Sanus (2019) also record that apart from dialects being phonologically distinct they are also characterised by differences in the use of vocabulary and grammar. Wieling, Montemagni, Nerbonne and Baayen (2014) also define lexical variation simply as the

mismatches of lexical items in dialects and consider the differences found in the Tuscan dialects and the standard Italian language as being historically linked. Edmonds and Hirst (2002) state that lexical variation should not be confused with polysemous words. They decipher the two concepts in that while polysemy refers to a semantic situation where a single referent could be mapped to two or more lexical items by the same speakers of a dialect, lexical variation is a cross dialectal phenomenon where two or more lexical items are uniquely mapped to a particular referent by speakers of related dialects. Asnaghi (2013) also supports that one needs to pay special attention to what she terms as suitable synonyms when choosing lexical items to analyze dialect variations. She explains that an analysis of lexical variations in dialects comes with two problems such as how to deal with ambiguous (polysemous) words and synonymous words in languages. She concludes that lexical items selected for dialect study should be suitable synonyms, thus they should have non-hierarchical relationships in the dialects, expressing the sense but serving the different purposes in terms of context or register (Asnaghi 2013: 103).

While many scholars contemplate the causes of lexical variations in dialects, Beal (2010) points out that lexical variation is a result of language contact and alterations. He holds the view that all dialects were once a common variety which split into many varieties due to language growth and development. His idea trails in line with Bailey's wave theory which is of the view that linguistic variation and change spread outward from some starting point like waves on a pond into which a pebble has been tossed (Eze 2019: 58). Asnaghi (2013) also uses a similar assertion to analyze some regional dialect variation within the lexicon of Standard Californian English and avers that the underlying dialect dissimilarities in northern and southern California are historically motivated. She suggests that all lexical items selected for dialect studies should have

some historical and geographical distributions in the related dialects. She identifies the use of the following pairs of lexical alternations in the northern and southern dialects of Californian English respectively: *buddy* and *pal* „for a friend“, *butte* and *mesa* „for a kind of table“, *regulation* and *rule* „rules“, *vacation* and *holiday* „for any off-working days“, *costly* and *expensive* „for high price“, *ill* and *sick* „for not feeling well“, among others.

Wolfram and Schilling (2016) record that lexical differences in dialects usually lead to confusion if not outright communication breakdowns. They state that one would be pleasantly surprised when they travel to different parts of the United States and order a „soda“ and receive a simple carbonated drink in Philadelphia, or a carbonated drink with ice cream in Chicago. Kullavaniyaya (1999) also observes that the northern Tai dialects are lexically different from the central Tai dialects. He presents a few lexical classes including body organs, basic verbs, plants, animals, household objects, and weather phenomena to point out this kind of variation. A few of these lexical items are listed table 0.3 below (taken from Kullavaniyaya 1999: 137).

Table 0.3: Some lexical variations in Tai dialects

Chongzuo	Tiandong	Nandan	Faimor	Wuthang	Tamrak	Debao	Gloss
<i>thu</i>	<i>caw</i>	<i>caw</i>	<i>law</i>	<i>ʔan hlaw</i>	<i>kaw</i>	<i>thu</i>	„head“
<i>pəj pa:k</i>	<i>fi pa:k</i>	<i>naŋ pa:</i>	<i>phe pa:k</i>	<i>phəj pa:k</i>	<i>fuj pa:k</i>	<i>phej pa:k</i>	„lips“
<i>məw</i>	<i>foŋ</i>	<i>fəŋ</i>	<i>məj</i>	<i>məj</i>	<i>foŋ</i>	<i>məŋ</i>	„hand“
<i>puŋ</i>	<i>ʔdat</i>	<i>hem</i>	<i>det</i>	<i>nut</i>	<i>na:t</i>	<i>dut</i>	„warm“
<i>ʔdew</i>	<i>piat jam</i>	<i>pu</i>	<i>thew</i>	<i>fəj</i>	<i>tew</i>	<i>pu:t tew</i>	„run“
<i>ŋow</i>	<i>ŋia</i>	<i>ŋu</i>	<i>ni</i>	<i>ŋi</i>	<i>ŋu</i>	<i>ŋow</i>	„snake“
<i>lun</i>	<i>ʔan la:n</i>	<i>ra:n</i>	<i>la:n</i>	<i>la:n</i>	<i>la:n</i>	<i>lun</i>	„house“
<i>mak pja</i>	<i>mit</i>	<i>mit</i>	<i>ja:</i>	<i>mət</i>	<i>cha</i>	<i>pja</i>	„knife“
<i>thaŋ wan</i>	<i>caŋ ŋən</i>	<i>ta: ŋwan</i>	<i>tha nin</i>	<i>tha ŋwan</i>	<i>taŋ ŋən</i>	<i>tha wan</i>	„sun“
<i>ʔa:m</i>	<i>haw ha:u</i>	<i>haw</i>	<i>aw ʔa:p</i>	<i>haw</i>	<i>ha:w</i>	<i>khaw</i>	„rice“

From the data, it is obvious that some of the lexical items in some of the dialects are very similar while in other dialects, they are completely distinct. This situation contextualises the regional dialect continuum from the northern to the southern Zhuang dialects.

Languages portray various degrees of lexical items not only within regional dialects but also among speakers of the same dialects. This makes it possible for lexicologists to study lexical variation within the same dialects or languages using different terminological distinctions to capture the variations in lexical choice (Geeraerts 1993). He expounds these kinds of lexical variations as onomasiological, semasiological, formal and contextual variations. Onomasiological variation is where a referent or type of referent is named by means of various conceptually distinct lexical items, for example, a bag can either be referred to as /mbagi/ or /mondo/ in the Gikūyū language (Wanjiku 2018). This kind of study is necessary when one is interested in investigating the lexical variations among people who speak the same dialect. For instance, Among the speakers of Toende, the referent „cat“ has many distinct conceptual names, e.g *doog biig*, *apɔʔxabilig* and *amus*. Semasiological variation occurs when a particular lexical item is mapped to different referents. In Gikūyū for instance, Wanjiku (2018) maps the word *ahūa* onto either „coffee“ or a diminutive form of „a flower“. Both Toende and Agole dialects of Kusaal also contain such kinds of lexical variations. For example, the word *laʔade* either refers to „luggage“ or „laughing“ in Kusaal. Geeraerts (1993) defines the formal variation as a type of lexical variation in which a particular referent is named by different lexical items irrespective of their conceptual representations while the contextual variation is where the lexical choice is made due to contextual factors such as the formality of the speech situation, the geographical location, word meaning and sociological characteristics of

the participants in the communicative interaction. Within the Mabia language family, evidence of dialect variation within the lexicon is presented in Bodomo (1989) in the dialects of Dagaare. This will be highlighted later in the data analysis.

2.5 The history of dialect studies (dialectology)

The present study assumes a synchronic approach to dialect study and hence, will not need the historical development of the dialects under investigation to establish their differences. This notwithstanding, a review of literature on the etymology of dialect studies is necessary as it will among others link the present study to the existing literature. Chambers and Trudgill (2004) note that a systematic study of dialect and dialect variations is known as dialectology. They record that dialectology is relatively new, although observations on dialect variations can be traced as far back as the early days when people started talking to one another. In addition, Britain (2010) posits that evidence of coherent and systematic studies in dialectology and other variations in dialects was very little until the mid to late nineteenth century. According to him, characterisations of dialect areas and descriptions of dialect differences were merely intuitive and casual. Kebeya, Bwire, Erastus and Makokha (N.d.) also state that dialectal differences were mostly identified and described by orthoepists, dictionary developers, grammarians, and the like, without any formal or systematic documentation or approach to its study.

Chambers and Trudgill (2004) outline a few historical records of such early dialect observations and its later systematic descriptions. They note that in France for instance, the first dialect division between the north and the south was identified as early as 1284 by the poet Bernart d'Auriac, who coins the terms *langue d'oil* and *langue d'oc* from the word „yes“ which were used in the north as *oil*, now *oui* and the

south as oc respectively. In England, Trevisa describes a notice of dialect variation in 1387. He observes that “men of middle England, understandeth better the ending languages, which is the northern and southern than the northern and southern understandeth each other”. Dialectologists in English later supported this description of the dialect continuum in England from north to south after Trevisa made those statements for over five centuries (Chambers & Trudgill, 2004: 14).

Moreover, it is stated that earlier descriptions of dialectal differences were largely in the form of dialect atlases (cf. Kroch 1978, Kortmann 2004, Koerner 2005, Britain 2010, Donoso & Sanchez 2017). According to Kroch (1978), Wenker’s description of German dialects in 1881 (*Sprachatlas des Deutschen Reiches*) was the first published document on dialectology and it was shortly followed by Gillieron’s *Atlas linguistique de la France*, which began in the year 1896 with the final volume published in 1910. It is as well recorded by Britain (2010) that Britain's regional dialect mappings by Alexander Ellis in 1889 also contributed to the study of dialectology in the early days.

It is obvious that hitherto the mid-nineteenth century, traditional dialectology and other variations in languages were mere intuitive descriptions. There were no theoretical-based descriptions on the subject until the mid-nineteenth century when it became apparent that such characterisations were inadequate (Chambers & Trudgill 2004). According to them the first conscious effort to systematise the observations of dialect differences was seen as a direct response to some advances made by the Neogrammarians who did a systematic study on classical language variations and discovered some interrelationships and general principles of language variation. Britain (2010) supports this history by stating that the Neogrammarians’ principle of

dialectology was centered on the argument that sound changes are exceptionless in all languages. This view sparked interest in dialectology because there was evidence of dialect diversity, and with such hypothesis, it was admirably refutable (Britain 2010: 4). The result was the development of dialect geography in the late 19th century, which developed accurate sets of methods for gathering evidence of dialect differences systematically (cf. Fujiwara 1961, Booji 2002, Britain 2010, Etman & Bees 2015).

Irrespective of the above, in the early 1960s, dialectology and other studies in dialect variations were still barely traditional and considered as rural dialectology (cf. O'Neil 1963, Wolfram & Fasold 1974, cited in Britain 2010). Britain captures the early 1960s as the era that gave birth to the sociolinguistic inquiries into dialect differences with a whole new set of theoretical orientations and a whole new set of methods, with William Labov considered the leading researcher in this field. The purpose was among others to formally and systematically explore social and regional variations of languages and related dialects (see Chambers & Trudgill 2004, and Britain 2010 for more details on the historical records of dialectology and other dialect studies).

There are several imperative needs for dialect studies as languages continue to portray varying degrees of alternations and changes. Languages all over the world are not spoken uniformly due to people's different social and regional backgrounds (Labov 1990). In addition, it is stated that variations in human languages are not haphazard but structured along defined groups such as geographical location, social class, gender, education, age and contextual situations of the users which gives rise to a linguistic need to account for such differences (cf. Henry, Barbu, Alban & Hausberger 2015). Accordingly, the establishment of a systematic account of the variations in a

language is necessary for a better understanding of the differences in its dialects. In that regard also, Bodomo (1989) states that dialect variation is a very recurrent feature in the daily lives of most people who speak a language with different dialects, as is the case with Dagaare. He adds that dialect study is necessary as people often look down on others who do not speak their dialect, regarding the others' speech as being of an inferior type.

This observation by Bodomo is not only in Dagaare but also in most languages with regional dialects. The attitude of dialect speakers towards other dialect speakers of their language cannot be overlooked. Every dialect speaker views their version of their language as the purer and superior form as identified by David and Nancy Spratt among speakers of Kusaal (Berthelette 2001). According to Spratt and Spratt (1994) cited in Berthelette (2001: 12), Toende speakers of Kusaal allege that there has been outside influence in the Agole dialect and customs and that they (Toende) are the custodians of the purer form of Kusaal. These kinds of allegations are pertinent in almost every language and a proper account of dialect variation is needed in every language to curtail such allegations.

However, beyond such folks' considerations and views, dialect study constitutes an important subject matter especially for historical and comparative linguistic theory and is therefore, an important academic exercise for such linguists (Bodomo 1989). He adds that a systematic study of dialect variation in languages constitutes an essential source of tracing the history of any language. To add to this, Bodomo records that language is dynamic but the changes that occur in it are not homogeneous and simultaneous but rather inconsistent, and a systematic analysis of such differences

is needed to show that there is no such thing as an inferior or superior dialect (Bodomo 1989).

2.6 Theoretical framework

This section of the chapter presents a review of literature on the theoretical frameworks that this study is built on. The present study adapts the synchronic approach to dialect study. Under this approach, dialect differences are described based on the evidence of variations found in the dialects at a single point in time without reference to the historical antecedents of the dialects. The theoretical frameworks that the present study relies on include the theory of generative dialectology which is pioneered by Ferdinand de Saussure in 1857-1923 (cf. Koerner 1971) and the variationist sociolinguistic theory propounded by William Labov in 1972. Notes on these theories and how they are applied in this study are elaborated below.

2.6.1 Variationist Theory

The variationist sociolinguistic theory is of the view that language variation is systematic within the social and regional characteristics of the speaker. This theory states that variation is an inherent property of any human language which can be identified and analysed both synchronically and diachronically (Labov 1972). These approaches, in their basic sense, mean that variations in language have their historical development and impacts on the current situation and usage (cf. Hazen 2017 and Wanjiku 2018). The theory particularly avers that languages vary across different regions of the same linguistic community and socio-geographical distributions (Wanjiku 2018). Tagliamonte (2012) also establishes that language variation happens rather systematically within a common social group, geographical domain and situational context. The theory views language variation in two broader perspectives;

namely social variations and regional variations. Though Labov centers his findings on the social aspects, he also notes that languages differ across regional boundaries (cf. Labov 1972; 1990, Tagliamonte 2012 and Wanjiku 2018).

The aspect of the theory applied in this study is the regional variationist theory. It is of the view that languages manifest differently in different regions. It is apt for the study since the dialects of Kusaal are considered regional dialects and exhibit several variations in their phonologies and lexical items. Wanjiku (2018) employs this theory to provide an analytical account of the regional lexical variation and change in the northern dialect of the Gikũyũ language. This aspect of the theory will also be used to analyse the regional lexical variations in the Agole and Toende regional of Kusaal.

The variationist theory is governed by several tenets. Some of them are described by Tagliamonte (2006) as the principle of accountability, speech community, accessing the vernacular, function asymmetry, the quantitative methods, linguistic variables and the context of the variables. Since this study is qualitative in nature, only the tenet of linguistic variable will be shown in the analysis. A linguistic variable as a tenet of the variationist theory refers to the items that could be realised differently within the same linguistic setting (Tagliamonte 2006). Here, it falls within the individual lexical items that trigger the lexical variations in the two regional dialects of Kusaal. The context of the variable on the other hand describes the kind of situation in the linguistic variation. As the variationist theory is of the view that language variation is an inherent property of every human language and could be influenced by several factors, the context of the variable tenet explains the factors responsible for the variations in the language. These could be social, geographical or situational use of the language (cf. Tagliamonte 2006; 2012, and Wanjiku 2018). For the interest of the

present study, the context of the variable will espouse the different lexical items that the users of the two regional dialects refer to the same referent in Kusaal.

2.6.2 The theory of Generative Dialectology

The theory of Generative dialectology is closely related to the theory of generative grammar and works within the theory of generative phonology propounded by Chomsky and Halle (1968) in their study on the sound patterns of English (SPE). The theory of generative dialectology asserts that since generative phonology accounts for surface forms that are different from the underlying forms within one variety, it could also be used to account for the differences in different varieties (cf. Abubakar 1982, Chambers & Trudgill 2004, and Mambwe 2008). Newton (1972) notes that since dialects are more or less from a uniform language, it is possible to show that they can, for the best part be described in terms of a common set of underlying forms. Under this, it is asserted that these forms and the rules to be applied to the related dialects under study have certain realities in that they are part of the native speaker's competence, his intuitive knowledge of the language and it is this knowledge of the common underlying forms and the rules that enable a dialect speaker to understand speakers of other dialects (Pertyt 1980 cited in Abubakar, 1982).

In more clearer terms, the theory of generative dialectology involves the application of concepts and findings from generative phonology in the description and comparisons of dialect differences. It is guided by the principles of identifying the underlying forms which are the phonological forms upon which lexical forms are listed in the lexicon; the phonological rules that could be applied to the underlying forms to convert them to surface forms and ultimately, into their actual pronunciations. It is stated that "in particular, forms involved in alternations of

various kinds appear in the lexicon as only one form, the others being the result of the application of rules” (Chambers & Trudgill 2004: 39). Furthermore, the theory works on the assumption that a single underlying form can be postulated for related dialects where the dialects differ based on (a) the phonological rule that applies to the underlying form, and/or (b) the environment in which the rules apply, and/or (c) the order in which the rules apply. With this theory, we are able to for several phonological variations in the dialects such as the /s/ to /h/ alternations in the Agole and Toende dialects of Kusaal. Here, one could arbitrarily establish that /s/ is the underlying form in Agole and account for the phonological rules that apply to it in Toende and it changes to /h/ at its word-medial and in some cases word-final positions. Generative dialectologists' concerns are on the identifications of the underlying forms. The rest will be their interests to generate phonological rules and use those rules to generate formulas to account for the variations in related dialects. In Kusaal for instance, the phonological rule below could be used to explain the /s/ to /h/ alternations in the eastern and western dialects respectively.

3. *Some segment alternations in Kusaa*

UR	Agole	Toende	Gloss
a. /gɔsim/	[gɔsim]	[gɔhɔm]	„look“
b. /t si m/	[t sim]	[t ham]	„shout“
c. /kɔsɔg/	[kuosug]	[kɔ:hɔk]	„selling“
d. /isir/	[isir]	[ihit]	„scar“

Rule /s/ \longrightarrow [h]/ [+vowel] — [+stress] in Toende

The generative phonological (GPR) rule states that the voiceless alveolar fricative /s/ in the Underlying Representation (UR) is realised as a voiceless glottalic fricative [h] when it is preceded by a vowel and also followed by a vowel that is stressed in Toende. As it is seen in the data, /s/ in the UR is the same in Agole but changes to [h] in Toende because it is found between two different vowel qualities in that the vowel

following it is often stressed. Pertinent to the above rule, the situation is different when the voiceless alveolar fricative /s/ occurs in an environment of two identical vowels. For instance, /dasan/ in UR is also pronounced as [dasan] in Toende to mean „young man“. From such data, the voiceless alveolar fricative /s/ does not change in Toende because it occurs between two identical vowel sounds. This will be used to account for the phonological variations in the two dialects of Kusaal.

2.7 Summary

In this chapter, we attempted to conceptualise the ideas of previous scholars in the areas of language variation and dialect studies. The chapter discusses the existing literature on language and dialects, determiners of language and dialects and some historical records of dialect studies (dialectology) including the need for dialect studies in languages. It further discusses the concept of language variation, types of language variations and some variations that occur in dialects of the same language. As the present study centers on phonological and lexical variations in the two dialects of Kusaal, such concepts are broadly discussed in this section with illustrations from other languages. The chapter also reviews literature on the theoretical frameworks that this study is hinged on. It looks at the aspect of the variationist theory that views language variation from the perspective of the different regional background of the speakers. It also looks at the Theory of Generative Dialectology which will be used to account for the phonological differences in the dialects of Kusaal.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

Research methodology as described by Tracy (2013) is the systematic way of analysing phenomena in our daily lives for a better understanding of the world and the things around us. She opines that everybody consciously or unconsciously engages in research every day, and the common enjoyable way of spending time in doing such researches is the research methodology. As this study is a synchronic approach to dialect studies, it employs the methods and procedures that the early dialectologists used in identifying, describing and presenting dialect differences in the synchronic perspectives. This chapter discusses the methodological framework of the study. It is structured as follows: Section 3.1 points out the research design, 3.2 outlines the research sites and section 3.3 captures the research population. Section 3.4 situates the sample frame while section 3.5 contains data collection and the data sources itemised in section 3.6. Section 3.7 outlines the data collection strategies while section 3.8 profiles the data analysis procedure. Section 3.9 concludes the chapter with a summary.

3.1 Research design

The classification of educational research based on design includes qualitative, quantitative and mixed methods (Owu-Ewie 2017). He adds that the selection of a research design is not haphazard but based on certain criteria that researchers need to be well abreast with before selecting a design. As this study is a synchronic approach to dialect studies, it employs the qualitative type of research design to provide the linguistic descriptions of the Kusaal dialects. Bijeikienė and Tamošiūnaitė (2013) see

qualitative design as a set of methods that aim at gathering empirical data for an in-depth understanding of the phenomenon under study. It is a design that allows researchers to provide a descriptive, interpretive and explanatory approach to the phenomenon under study in its natural setting. The researcher, therefore, selects this design to approach the dialects of Kusaal.

3.2 Research sites

This study was conducted in an enclosed jurisdiction called Kusaug, the land or the Kingdom of the Kusaas. It is found in the Upper East Region around latitude 11.050000° N and longitude 0.233333° W in the far-ending part of the north-eastern corner of Ghana. This site consists of six administrative assemblies namely Bawku Municipality, Garu, Pusiga, Tempane, Binduri, and Bawku West District Assemblies. In all, ten (10) communities, five (5) from each dialect group, were selected from four administrative assemblies including Bawku Municipal, Garu and some parts of Binduri Districts were visited for the Agole data and Bawku West District was also visited for the Toende data. The sampled communities were Kpukparigu, Aniise, Garu, Mesiga and Saabun-Gari for the Agole dialect and Widnaba, Sapeliga, Timonde, Binaba and Kusanaba for the Toende data. The uneven number of the sampled districts for the dialect groups is a result of the fact that Agole occupies more land than Toende and for that matter, selecting one place in Agole may not produce the empirical data that the researcher needed to establish the differences in the two regional dialects.

3.3 Population

Population in this sense refers to a group of individuals that have more or less the same characteristics and are of interest to the researcher (Best & Kahn 2006 cited in Owu-Ewie 2017). He postulates that the purpose of any research is to provide unique principles and findings that have universal applications among its population. This present study seeks to establish the phonological and lexical variations in the two dialects of Kusaal. Its research population constitutes the native speakers of the Agole and Toende dialects of Kusaal

3.4 Sample frame

Even though this present study covers all native speakers of Kusaal as its research population, it is not practical to involve all the research population in the study. The larger population is therefore, reduced to a sizeable and accessible number of people known as sample size for the study. These people were convenient to the researcher and also represent the entire population in the study. Fifty (50) native speakers, twenty-five (25) from each dialect group were selected to participate in the study. Five participants from each community comprising three (3) females and two males form the sample size for the study. The rationale behind the gender disparities was availability. The women were often available and willing to respond to the interview questions. In this study, the probability sampling technique was employed in selecting the participants. The rationale behind the adoption of this technique is that dialect variation is evident in all those who speak them. As everyone who speaks either of the dialects is capable of providing evidence of dialect variations, the selection of this technique is aptly right.

3.5 Data collection

This study was not done based on native speaker intuitions alone, but also through scientific means of gathering empirical data from other native speakers of the two regional dialects of Kusaal. Creswell (2007) opines that for a researcher to be able to arrive at a meaningful and acceptable conclusion of research findings, the researcher needs to use scientific means to gather empirical data on the phenomenon under study. The researcher, therefore, collected data from multiple sources through a systematic means for the analysis of the lexical and phonological differences in the Kusaal dialects.

3.6 Sources of data

It behooves qualitative researchers to employ empirical, naturalistic and multi-sourced data to examine, describe, interpret and explain the phenomena under study (cf. Creswell 2007, Tracy 2013, Bijeikienė and Tamošiūnaitė 2013). As this research seeks to analyze the phonological and lexical variations in the two dialects of Kusaal, the researcher sourced data from both primary and secondary sources. As a native speaker of the language, native speaker intuition also provided the researcher an invaluable amount of data for the analysis.

3.6.1 Primary sources

Primary data for this study was taken from native speakers of Kusaal. The researcher was open-minded in the selection of the participants, as any native speaker of each of the dialects is capable of providing evidence of dialect variations, they were randomly selected to provide the data. The researcher took a large volume of empirical data from fifty (50) native speakers of Kusaal, twenty-five (25) each from Agole and Toende dialects. These native speakers provided the researcher with data in groups of

five from each community through interview, discussion and picture elicitation. The data was recorded with a smart phone voice recorder which was later on transcribed and analyzed to deduce the phonological and lexical variations in the dialects. The researcher's intuitive knowledge also provided some primary data on the dialect variations in Kusaal.

3.6.2 Secondary sources

The study also drew some data from secondary materials such as books and dictionaries of Kusaal. Among them are the two main dictionaries of Kusaal (Naden 2015) for the Agole and (Niggli 2017) for the Toende dialect. These two dictionaries provided the researcher with some data on lexical items. These secondary materials were used because they contain vital information that could help in finding answers to the research questions of this study.

3.7 Data collection strategies

In qualitative studies, data collection is not done haphazardly but through strategic means and procedures (Creswell 2007). The strategies that were employed to solicit information from participants for this study are interviews and picture elicitations. As Milroy and Gordon (2003) cited in Akrobetto (2019) opine, the researcher was always guided by the purpose of the study when he was using these strategies in the data collection process. A questionnaire was prepared with simple questions to interview participants on the phonological and lexical variations in the dialects. The questionnaire was designed such that it contains questions that could solicit natural data for the answering of the research questions set in this study. A picture elicitation instrument was also designed and shown to participants to name them with intent of soliciting data on lexical variations in the dialects. For the purpose of gathering data

on various domains of words, some of the pictures were demanding descriptions by which participants were engaged to communicate so that their voices could be recorded for the analysis of both phonological and lexical variations in Kusaal.

3.7.1 Interviews

Interviews are purposeful conversations that a researcher holds with participants for the purpose of obtaining information to answer set research questions (Busmann 1996). There are three main types of interviews which Fontana and Frey (2005) cited in Akroetto (2019) outline as structured, semi-structured and unstructured interviews. In this study, the semi-structured type was used to administer the questionnaire. Patton (2002) stipulates that a semi-structured type of interview specifies issues and topics to be covered in an outlined form and the interviewer decides the wording and sequencing of the questions during the process of the interview.

For the purpose of gathering natural and empirical data, the researcher employed this strategy and asked participants varied questions concerning their occupations, livelihoods, the environment and their observations on the variations in the two dialects. The semi-structured interview technique was adopted so that researcher could engage respondents in free conversations using both open-ended and closed-ended questions in the data gathering sessions. During the interviews, the researcher modifies some questions, clarify and also explain issues and topics for respondents to better understand the problem under study and also regulate their responses on the open-ended questions, such that they do not deviate from the aims of the study. The researcher also added questions, and probed further for more explanations of lexical items used during the interviews.

3.7.2 Picture elicitation or naming

According to Tavakoli (2012) cited in Akrobetto (2019), elicitation is a data collection technique in which the researcher engages a respondent to produce a speech or writing through viewing pictorial items. Under this strategy, respondents were shown a list of pictorial items to identify them by the names they called them in their respective dialects. In all, about one hundred pictorial items comprising of several themes including, weather conditions, plants and animals, crops and cereals, arts and pottery, birds and poultry, family and kinship, reptiles, insects, parts of the body among others were shown to participants to identify them in their various dialects. To solicit data on verbs, adverbs, adjectives, and other functional words, respondents were asked to name and describe the last ten (10) pictures. While some of the pictures were captured using a smartphone's camera, others were sourced online at Groups (2021) and are duly acknowledged.

3.8 Data analysis procedures

The data collected for the study was not analysed haphazardly but through a systematic procedure that aids in the understanding of the phonological and lexical variations in the two dialects of Kusaal. The recorded data was transcribed using a traditional native speaker's knowledge of the Kusaal language. Lexical items that were entirely different in the two dialects but refer to the same referent or group of referents were treated under lexical variation. For example, *mgbam* and *apɔnnɔr* for „toad“ in Toende and Agole respectively, are lexical variations. An inexhaustible amount of such lexical items were identified and analysed in themes. On the other hand, those lexical items that were different in the patterning of speech sounds and/or pronunciations were analysed under phonological variation in the dialects. Examples

of these lexical items includes: [pie] in Agole and [pɛ:] in Toende „to wash“, [buʔosug] in Agole and [bɔʔɔhug] in Toende to mean „question“ in both dialects.

3.9 Summary

This chapter provides the methodological framework of the study. It discusses the type of research design adopted for the study with respect to the qualitative type of design and the rationale for selecting this design is outlined in the chapter. The chapter also discussed the population, sample and sampling technique used in this study. It also stipulates the data collection strategies, source of data, data collection instruments as well as the data analysis procedures which guide the overall outlook of the study.



CHAPTER FOUR

PHONOLOGICAL VARIATION IN KUSAAL

4.0 Introduction

This chapter provides an analysis of the phonological variation in the Agole and Toende dialects of Kusaal. The chapter is structured as follows: Section 4.1 introduces some evidence of variation in the dialects while section 4.2 discusses the concept of underlying forms and the basis for their selection in this work. Section 4.3 introduces the various phonological variations in the two regional dialects of Kusaal in which section 4.4 talks about segment alternation, section 4.5 discusses segment substitution and section 4.6 enumerates vowel sequencing or diphthongisation differences in the dialects. Section 4.7 talks about the process of inserting the glottal stop /ʔ/ in between diphthongs while 4.8 captures variation in glottalisation process in the dialects. The process of nasalisation, labialisation and palatalisation differences in the Agole and Toende dialects are discussed in sections 4.9, 4.10 and 4.11 respectively. Finally, section 4.12 discusses vowel harmony and consonant assimilation differences while section 4.13 summaries the chapter.

4.1 Evidence of variation in Kusaal

Variation in languages is so obvious that a casual observation could produce accurate results on which kind of language a speaker is affiliated to most especially, when the observation is made on regional dialects (Wolfram & Schilling 2016). Kusaal exhibits several evidences of linguistic discrepancies in its two regional dialects and one could rightly judge the regional background of a speaker by observing their choice of words and/or their pronunciation of certain words. For instance, while speakers of the Agole dialect will say *saa isigim a ti e η* to mean „wake up early and we go“, speakers of

the Toende dialect will tend to say *saa ihi im a ti tiη* to imply the same. Similarly, regional dialect speakers of Kusaal are also identified easily based on the pronunciation of word like these in the Agole and Toende dialects respectively: *gɔsim* and *gɔhɔm* „to look“, *di''e* and *de''e* „to receive“, *sie* and *sɛɛ* „to reduce“ and *duoe* and *dɔɔ* „to rise“ amongst others (see also in Niggli 2014: 11-12) for similar observations in the dialects.

In addition to the phonological variation in the dialects as seen above, evidence of lexical variation in the dialects is also obvious and appear to even be more noticeable and distinguishable than the phonological variation. For instance, while the Toende speakers refer to a „blind person“ as *zɔ''m*, Agole speakers will say *zɔηzɔη* to imply the same. Moreover, while the Toende speakers refer to „man“ as *bvraa*, „basket“ as *ti''ɪk* and „flies“ as *zun''us*, Agole speakers refer to them as *dav*, *pɛog* and *tampɔɔs* respectively. These kinds of lexical variations in the language are common in the dialects which pose serious constraints on the mutual intelligibility status of the dialect continuum. Chambers and Trudgill (2014) observe that when these lexical variations become so rampant in a language, they could sometimes lead to impediments of smooth communication between inter-dialect speakers. Although evidence of dialect variation in Kusaal is acknowledged by many scholars of the language such as (Spratt and Spratt 1968 as cited in Musah 2010, Berthelette 2001, Musah 2018, Niggli 2014 and Abubakari 2018) only a few efforts have been made to systematically analyse such variations. The next few sections will attempt to do this in much detail.

4.2 The underlying forms

As already stated in the preceding chapters, this study assumes a synchronic approach to dialect descriptions in Kusaal and proffers generative interpretations to the observed pronunciation differences in the two dialects of the language. Since the theory of generative dialectology applies findings of generative phonology to the description and comparison of dialect differences, the tenets of generative phonology are used in this study. Within the theory of generative dialectology, dialectologists usually identify underlying forms, apply a systematic phonological rule to the underlying forms and derive other variations from them to account for the differences in related dialects (cf. Abubakar 1982, Chambers & Trudgill 2004). In view of this, there is a need to outline the criteria for selecting the underlying forms and how our so-called underlying forms will be.

There are several methods and criteria that dialectologists adopt to identify underlying forms or select a dialect with the underlying forms for a dialect variation study. Holdcroft (1991) posits that the early dialectologists described dialect differences in an ad hoc manner by arbitrarily taking forms from one dialect as the base forms and deriving other dialect forms from the selected underlying form. In analyzing the dialects of modern Faroese, O'Neil (1963) uses this approach in selecting the underlying forms while Brown (1972) uses same in analyzing phonological variations in English dialects.

It was later observed that the method of choosing forms from just one dialect as underlying forms could sometimes be arbitrary and therefore might not be reliable (Abubakar 1982). As a result, he supports the notion that underlying forms should be more abstract and independent. This opinion is buttressed by Thomas (1967) cited in

Abubakar (1982) who avers that underlying forms should be more abstract and reliable. For this reason, they hold the view that one must select more or less abstract underlying forms which are independent of the dialects under study and derive variations for each of the dialects in question. Newton (1972) on the other hand believes that since dialects have their historical developments. The history of dialects could be used to identify underlying forms. He therefore relies on historical evidence to establish the underlying segments and derive variations from them for the other dialects. Goldstein (2001) also relies on dominance and usage of the dialects to identify the underlying forms in Spanish dialects.

In view of the above, it is apparent that dialectologists do not entirely agree on any unique acceptable criteria for the identification and selection of dialects with the so-called underlying forms. Abubakar (1982: 30) thus notes that “whichever method one adopts to establish the underlying forms, a claim is made that a generative treatment of dialect differences will formalise the essential fact about dialects: that they have much in common but still have some differences”. In the present analysis of Kusaal dialects, we attempt to combine two criteria in selecting our underlying forms. On one hand, we employ the selection of forms that are somehow abstract and independent of the two dialects as used by Thomas (1967) cited in Abubakar (1982) and on the other hand, the method proposed by Goldstein (2001) is also adopted to select the underlying forms where the so-called abstract forms could not be applied. With this method, the dominance criterion is adopted to select underlying forms from the Agole dialect. This is because the Agole dialect is dominant and widely used in Ghana. It is also the dialect used in schools and in print. We therefore admit that though our underlying forms are said to be more or less abstract and independent of the two dialects, they tend to relate more to the Agole dialect than the Toende dialect. In any

case that the forms are Agole than Toende, the criterion is solely on dominance and usage. In the analysis also, the Agole dialect is mostly postulated first and Toende derived from it. This, however, does not in any way seek to purport that any of the dialects is fundamental, original, or superior to the other. This study only observes, compares and describes the two regional dialects of Kusaal in an ad hoc manner by postulating their phonological and lexical differences independently.

4.3 Phonological variation in Kusaal

Gaskell and Marshen-Wilson (1996: 145) posit that a phonological variation refers to systematic variation occurring within the production and pronunciation of speech sounds. Wolfram and Schilling (2016: 68) also assert that phonological patterns can be indicative of regional and/or socio-cultural differences, and a person who has a good ear for language variation can often pinpoint a speaker's general, regional, social and ethnic affiliation with considerable accuracy based solely on the phonology of his/her dialect. To them, phonological variation manifest in many ways but one of the most striking differences involves the pronunciation of vowel sounds. This is quite true and it is not only in English but also in most Mabia languages of northern Ghana including Kusaal. As the literature suggests, phonological variation in languages and dialects all over the world are caused by different phonological processes (cf. Goldstein 2001, Kak et al 2008, Abubakar 1982). This is obvious in the phonological variation of Kusaal dialects. For instance, Kusaal exhibits the occurrence of /s/ in Agole which is realised as [h] in word medial and word final positions in Toende. It also shows the preference for /ʊ/ in Toende while Agole uses /ɪ/ as a location marker. For instance, [pʊ:ɡɪn] in Agole is heard as [pʊ:ɡʊn] in Toende to mean „inside“, [zugɪn] in Agole is realised as [zugʊn] in Toende to mean „on the head“. More of these will be elaborated in the subsequent discussions.

A similar phenomenon occurs in Dagaare, one of the Mabia languages spoken in the southern part of the northern Ghana. For instance, Bodomo (1989) explores dialect variation in Dagaare and discovers that the dialects of Dagaare do not have an equal number of phonemes. He states that certain phonemes are present or absent in certain dialects only, and this fact is one of the most important aspects that bring about the differences in pronunciation in the various dialects of Dagaare. He notes further that one of the features that distinguishes the Northern and Western dialects of Dagaare from the Central and Southern dialects is the presence of the glottalised (not glottal) consonant phonemes /'l/ and /'m/ in their phonologies. To him, while there is evidence of such phonemes in the Northern Dagaare, the Central dialects do not have such phonemes (Bodomo *ibid*: 33-34). He uses the data in the following to buttress his assertion.

4. */'m/ and /m/ variations in the Northern and Central Dagaare (Bodomo 1989:33)*

Northern /'m/	Central /m/	Gloss
[ˈmaaru]	[maaru]	„wetness“
[ˈmure]	[mur]	„pollute/slip“
ln r	[mor]	„to get swollen/ use“

5. */'l/ and /l/ variations in Northern and Central Dagaare (Bodomo 1989:33)*

Northern /'l/	Central /l/	Gloss
[ˈlor]	[lor]	„to put in water“
[ˈlag]	l g	„to pull off“
[ˈla]	l	„to break apart“

Bodomo further identifies many phonetic and phonological differences in the dialects of Dagaare. Some of them are the presence of the voiceless glottal fricative /h/ in the Northern Dagaare which is however absent in other varieties and the absence of the

voiced alveolar fricative /z/ in Waale and Birifor which is present in other dialects and many more. Many scholars of the language do agree with this establishment of dialect variation in Dagaare one of whom is Nerius (2013) who posits that Dagaare has phonological features that are not common in all its four major dialects. As cited in Neriu (2013) (Bodomo 1997, Dakubu 2005 and Saanchi 2006) agree that the Birifor and Dagara dialects have some features that are not in the other dialects resulting in phonological variations in the language.

It is observed that the phenomenon of dialect variation in Kusaal is slightly different from how it is mainly realised in Dagaare. Each of the two dialects of Kusaal has all the phonemic features in Kusaal but vary in many phonological environments and conditionings. This section identifies and highlights the phonological processes that trigger the phonological variations in the two dialects of Kusaal. Some of the prominent ones are segment alternation, segment substitution, segment deletion, palatalisation, nasalisation, and harmonisation differences in the dialects. Each of these processes is elaborated in the succeeding sections.

4.4 Segment alternation

This is a phonological process that allows speakers of a language to alternate or modify a segment or group of segments in the UR due to some phonotactic constraints (cf. Katamba 1989). Speakers of Agole and Toende dialects of Kusaal exhibit this kind of phonological process on both consonants and vowels. It is often observed at word-medial and word-final positions in the two dialects of Kusaal. Even though this phenomenon is mostly analysed in social dialects where different social factors may influence the choice of a particular variable over another in speech production, it is also observed in regional dialects as in the case of the present study. The present study

describes the phenomenon within the regional dialect variation perspective where a segment is realised differently in the dialects. Both consonant and vowel alternations are discussed below.

4.4.1 Consonant alternation

In Kusaal, four main kinds of consonant alternations are identified within the two dialects. These include /r/ ~ [t] and /g/ ~ [k] which we termed as „voicing constraints“ at word-final position (WFP) in Toende, as well as /s/ ~ [h] and /d/ ~ [r] also in Toende at word-medial positions (WMP) due to other phonotactic constraints in Toende. Though the segment alternations above may be seen more of substitution than alternation, in the sense that the segments are all phonemes in Kusaal. They are, however, labelled and treated here as segment alternation because of the systematic phonological processes that occur between the segments. As it will be seen in our subsequent analysis, there are other kinds of segment alternations in the dialects that are not systematic and cannot be phonologically accounted for. Those alternations are termed as segment substitution in this study. The subsections below elaborate the above-listed consonant alternations in detail.

4.4.1.1 The /r/ —————> [t] alternation

There is a systematic /r/ ~ [t] alternation in Toende at its word-final positions but realised. In Kusaal, the evidence of [r] ~ [t] alternation at word-final position draws the isogloss between the Agole and Toende speakers. While the Agole speakers end some words with the voiced alveolar trill [r], the Toende speakers end the same words with the voiceless alveolar plosive [t]. The data in table 0.4 below exemplifies this assertion.

Table 0.4: /r/ to [t] variation in Kusaal

No.	UR	Agole	Toende	Gloss
1.	/ : r/	[a:nr]	: t]	„tearing“
2.	/baʔar/	[baʔar]	[baʔat]	„lesser god“
3.	/b ʔ r/	b ʔ r]	b ʔ t	„patient“
4.	/ber/	[ber]	[bet]	„to set a trap“
5.	/beʔer/	[beʔer]	[beʔet]	„bad“
6.	/da:r/	[da:r]	[da:t]	„day“
7.	/daʔabir/	[daʔabir]	[d ʔ bit]	„slave“
8.	/ε:bir/	[ε:bir]	[ε:bit]	„foundation“
9.	/fa:r/	[fa:r]	[fa:t]	„inheritance“
10.	/g ʔ r/	g ʔ r]	g ʔ t]	„udder“
11.	/gɪ ʔ r/	[gɪ ʔ ar]	g ʔ t]	„jar“
12.	/gũ:r/	gũ:r]	gũ:t]	„mushroom“
13.	/gɔ:r/	[gɔ:r]	[gɔ:t]	„cola-nuts“
14.	/gb ʔ r/	gb ʔ r]	gb ʔ t]	„decision“
15.	/gber/	[gber]	[gbet]	„thigh“
16.	/kokər/	[kokər]	[kokət]	„throat“
17.	/kpa:r/	[kpa:r]	[kpa:t]	„farmer“
18.	/laba:r/	[laba:r]	[laba:t]	„message“
19.	/laŋir/	[laŋir]	[laŋit]	„hat“
20.	/mer/	[mer]	[met]	„pus from a sore“
21.	/mər/	[mər]	[mət]	„swell“
22.	/mɔʔar/	[mɔʔar]	[mɔʔət]	„river“
23.	/nar/	[nar]	[nat]	„deserve“
24.	/nɔ:r/	[nɔ:r]	[nɔ:t]	„mouth“
25.	/yɔʔɔr/	[yɔʔɔr]	[yɔʔɔt]	„name“
26.	/z ʔ ar/	[z ʔ r]	[z ʔ t]	„anvil“
27.	/dɔ:r/	[dɔ:r]	[dɔ:t]	„dawadawa fruit“
28.	/zɔ:r/	[zɔ:r]	[zɔ:t]	„tail“
29.	/bɔ:r/	[bɔ:d]	[bɔ:t]	„want“
30.	/bɔ:r/	[bɔ:r]	[bɔ:t]	„vindication“

PR 1. /r/ → [t] / — | # in Toende

The above phonological rule states that the voiced alveolar trill /r/ in the UR is realised as a voiceless alveolar plosive [t] when it occurs at word-final position (WFP) in Toende. The symbol (#) therefore, represents word-boundary in this study. It is observed that apart from nasals, Toende does not accept voiced consonants at its WFP

and as the alveolar trill /r/ is voiced, it not preferred at WFPs in Toende. This is, however, not so in the Agole dialect as it is shown, the reverse is the case in Agole. Except in few cases, the Agole dialect does not accept voiceless segments at its WFPs. Hence, the pronunciation of voiced and voiceless plosives at word-final positions in Kusaal defines the regional background of the speakers in Kusaal.

The rationale for substituting the trill /r/ with the voiceless alveolar plosive /t/ by Toende speakers is due to the fact that the alveolar trill /r/ and the voiced alveolar plosive /d/ are free-variants in Kusaal (cf. Musah et al 2013, Niggli 2014). Therefore, when the trill occurs at WFP in the UR, Toende speakers will, replace it with the variant /d/ and actually utter it as [t] due to the voicing constraint in the dialect. The examples in data (1-30) confirm this notion on the dialects. Apparently, all the data indicate that the alveolar trill /r/ is realised as a voiceless alveolar plosive [t] at WFP in Toende. The pronunciation of lexical items such as [:r] for „tearing“ [baʔar] for „lesser gods“, b ʔ r] for „patient“ [bɛʔɛr] for „bad“, [daʔabir] for „slave“ among others are easily identified as Agole dialect speakers while those pronouncing them with [t] such as : t], [baʔat], b ʔ t], [bɛʔɛt], and [daʔabit] respectively are also identified as Toende speakers. The simple reason is that since voiced plosives are not preferred at word boundary in Toende, its speakers will often adopt the voiced alveolar plosive /d/ and replaced it with the voiceless counterpart [t] at word-final position in speech production.

4.4.1.2 /g/ → [k] alternation

This is another consonant alternation that occurs at word-final position as the case of the phenomenon discussed in the preceding subsection. The same constraint on voiced segments occurring at WFP in Toende ignites this kind of consonant

alternation in Kusaal. It is another salient phonological variation in the Agole and Toende dialects where one can easily decipher the regional background of a speaker based on their pronunciation of words ending with plosives. The fact is that while the Agole dialect accepts voiced plosives at its word boundaries, the Toende dialect prefers the voiceless counterparts. The data in table 0.5 below highlights our claims on this assertion.

Table 0.5: /g/ to /k/ alternation in Kusaal

No.	UR	Agole	Toende	Gloss
1.	/sɔʔɔg/	[sɔʔɔg]	[sɔʔɔk]	„half-full“
2.	/bɔʔɔg/	[bɔʔɔg]	[bɔʔɔk]	„valley“
3.	/tɔg/	[tɔg]	[tɔk]	„to carry“
4.	/sɔsɔg/	[sɔsɔg]	[sɔsɔk]	„center“
5.	/bɔdaɔg/	[bɔdaɔg]	[bɔraɔk]	„billy goat“
6.	/dadɔg/	[dadɔg]	[darɔk]	„ladder“
7.	/lɔdɔg/	[lɔdɔg]	[lɔrɔk]	„corner“
8.	/ɛdɔg/	[ɛdɔg]	[ɛrɔk]	„worries“
9.	/fɛdɪg/	[fɛdɪg]	[fɛrɪk]	„turn“
10.	/g d ɪg/	g d ɪg]	g r ɪk]	„respond“
11.	/kɔdɪg/	[kɔdɪg]	[kɔrɔk]	„slaughter“
12.	/zug/	[zug]	[zuk]	„head“

PR 2. /g/ → [k] / — |# in Toende

The phonological rule 2 above explains that the voiced velar plosive /g/ is realised as [k] when it occurs at the environment of word-final position in Toende. As seen in the previous analysis, this alternation also draws the isoglosses between the Agole and Toende dialect speakers. In table 0.5 above for instance, the data show that while Agole ends words with the voiced velar plosive /g/, Toende substitutes it with the voiceless plosive /k/ at its WFP due to the constraints it has on voiced plosives

occurring at word boundaries. For example, [bɔʔɔŋ], [dadɔŋ], [fɛdɪŋ], [kɔdɪŋ] and [zug] in Agole are pronounced as [bɔʔɔk], [darɔk], [fɛrɪk], [kɔrɪk] and [zuk] to mean „valley“, „ladder“, „turn“, „slaughter“ and „head“ as shown in the data (2), (6), (9), (11) and (12) respectively. It is common to hear pronunciations like [dap] „men“, [t p] „war“, [mɔt] „to possess“, [kpa:t] „famer“ among others in Toende and in Agole as [dab], t b], [mɔd/r], [kpa:d/r] respectively. All these are indications that the process of voicing is not only prolific in Kusaal but it is also distinctive in the two dialects especially at word-final positions. While the eastern dialect (Agole) prefers voiced plosives at WFPs, the western dialect (Toende) opt for the voiceless counterparts.

4.4.1.3 /s/ → [h] alternation

Similarly, there is a systematic /s/ to [h] alternation occurring at word-medial position (WMP) and in some WFP in the two dialects of Kusaal. Here, the differences in the dialects are drawn between the pronunciation of [s] in Agole and [h] in Toende, mostly at word-medial positions. Niggli (2014: 11) also notes this kind of consonant alternation in the two dialects. This kind of segment alternation may probably be an instance of lenition in Kusaal where the voiceless alveolar fricative /s/ in the underlying form reduces the degree of its oral constriction to the glottalic fricative [h] in Toende at WMP (cf. Kirchner 1998 cited in Hudu 2018). It is, however, consistent with the phonological environment that the voiceless alveolar fricative /s/ occurs in the UR. Apparently, /s/ only changes to [h] when it occurs in between two different vowels or vowel qualities within a word or morpheme boundary. The data in table 0.6 below explicate this observation.

Table 0.6: /s/ to [h] alternation in Kusaal

No.	UR	Agole	Toende	Gloss
1.	/s ɪb/	sɪb]	hɪp]	„uncle“
2.	/bĩʔĩsim/	bĩʔĩsim]	bĩʔihim]	„breasts-milk“
3.	/buʔosug/	[buʔosug]	[bɔʔɔhɔk]	„question“
4.	/dɪgɪsɪr/	[dɪgɪsɪr]	[dɪgɪhɪr]	„a sleeping place“
5.	/ɛ:sɪm/	[ɛ:sɪm]	[ɛ:hɪm]	„attitude“
6.	/fa:sɪm/	[fa:sɪm]	[fa:hɪm]	„swollen“
7.	/g d ɪsɔg/	g d ɪsɔg]	g r ɔhɔk]	„a sour taste“
8.	/ɪsɪg/	[ɪsɪg]	[ihɪk]	„to wake up early“
9.	/k s ɪr/	k sɪr]	k h t]	„an unripe fruit“
10.	/kisug/	[kisug]	[kihuk]	„totem“
11.	/kuosug/	[kuosug]	[kɔ:hɔk]	„selling“
12.	/m ʔ s ɪr/	m ʔ sɪr]	m ʔ hat]	„wet“
13.	/miʔisug/	[miʔisug]	[miʔihuk]	„sour“
14.	/ɔ sɪg/	[ɔ sɪg]	[ɔ hɔk]	„to miss“
15.	/ɔsɪd/	[ɔsɪd]	[ɔhɔt]	„hot weather“
16.	/p s ɪg/	p sɪg]	p h k]	„to separate a fight“
17.	/pɛsɪg/	[pɛsɪg]	[pɛhɪk]	„to dedicate“
18.	/tɛʔɛs/	[tɛʔɛs]	[tɛʔɛh/i]	„to think“
19.	/ɛbɪs/	[ɛbɪs]	[ɛbih/i]	„to scratch“
20.	/ɛ:s/	[ɛ:s]	[ɛ:h/i]	„to wipe“
21.	/kpĩ:s/	kpĩ:s]	kpĩ:h/i]	„to quench fire“
22.	/ɔ:s/	[ɔ:s]	[ɔ:h/i]	„to warm up“

PR 3. /s/ → [h] / [+vowel] — [+vowel] in Toende
 [+stress]

The generative phonological rule 3 states that /s/ becomes [h] in Toende when it is preceded by a vowel and also succeeded by a vowel that is stressed in the underlying form. Due to the influence of the intervocallic, the coronal /s/ debuccalises to form [h] in Toende. In speech production, this kind of consonant alternation clearly defines the geographical area that a speaker is coming from. While the Agole speakers will often pronounce the voiceless alveolar fricative [s], the Toende speakers pronounce the voiceless glottalic fricative [h] mostly at WMPs and some WFPs. Data (1-22) in table 0.6 provide evidence of synchronic variation in the dialects of Kusaal. For instance, while lexical items like „uncle“, „breasts-milk“, „question“, „a sleeping place“, and

„attitude“ are termed in Agole as [sɪb], [bĩʔĩsim], [buʔosug], [dɪgɪsɪr], and [ɛ:sɪm] respectively, they are pronounced in Toende as [hɑp], [bĩʔĩhim], [bɔʔɔhɔk], [dɪgɪhit], and [ɛ:him] accordingly as seen in data (1) to (5). This kind of segment alternation among other phonological processes ignite variations in the dialects as seen in all the data provided in table 0.6 above.

A similar observation is made in Dagbani, another Mabilia language spoken in northern part Ghana (Hudu 2018: 214). He opines that “debuccalisation describes any phonological process that results in the loss of oral constriction of a segment”. He further contends that this process targets coronals and dorsals making them glottals in Dagbani and other languages as seen in Toende dialect of Kusaal. The data below show the /s/ ~ [h] alternation in Dagbani.

6. /s/ to [h] alternation in Dagbani (Hudu 2018: 214)

- | | | |
|--------------|-----------|---|
| a. /m :s l / | [máh l] | „cool weather after rain“ (cf. mà:s m „the state of being cool) |
| b. /nè:-s / | [nɛ-h] | „awaken-pl.“ (c.f. nè:-s m „the state of being awake/clear“) |
| c. /m : s / | [mɔh] | „become reddish“ (c.f. mò:-s m „reddishness“) |
| d. / n :s / | [ánáh] | „four“ |
| e. /bisím/ | [bihím] | „milk“ |
| f. /bí:-sí/ | [bí-hí] | „children“ |
| g. /bo:s / | [bɔh []] | „ask“ |

From the data, it is apparent that the /s/ to [h] alternation in Dagbani is similar to that of Kusaal. However, it differs in two main areas: first, where the glottal fricative /h/ is not considered a phoneme in Dagbani but only surfaces as a variant of /s/, the existing literature of Kusaal indicates that /h/ is a phoneme in Kusaal (cf. Hudu 2018: 207, Niggli 2014, Musah 2018). As it cannot be refuted or otherwise stated in this study that /h/ is a phoneme or not in Toende, more needs to be made on the sound systems of the Toende dialect spoken in Ghana. The second difference in the Dagbani

data has to do with the debuccalisation taking place alongside the shortening of the preceding long vowel. This is not observed in Toende. For instance, while /m :s l / surfaces as [máh l] and / n :s / surfaces as [ánáh for „cold weather“ and „four“ respectively in Dagbani, the /s/ will debuccalise to [h] in Toende without shortening any long vowel preceding it. For example; /ka:sug/ and /kɛ:sog/ are realised as [ka:hok] and [kɛ:hok for „crying“ and „shaving“ respectively in Toende.

It is pertinent to state that when the voiceless alveolar fricative /s/ occurs between the same vowels or vowel qualities, it does not change in Toende. For instance, /dasan/, /posog/, and /sɔsog/ in the UR are realised as [dasan], [posok], and [sɔsok] for „young man“, „middle“ and „center“ respectively in Toende but not [*dahan] or [*sɔhok]. It is also important to note that the phonological rule is not applicable in compound words. Morphologically, the voiceless alveolar fricative /s/ can occur at WMP in Toende when the word in question is a compound word. In Kusaal, when the low-central vowel /a/ is used as a prefix to a base beginning with the voiceless fricative, the fricative does not change in Toende. This is mostly shown in nominal items where the prefix [a-] functions as a nominaliser in Kusaal. The data 7 below provide examples on this regard.

7. Exception in /s/ to /h/ alternation

UR	Agole	Toende	Gloss
a. /a + sibi/	[a-sibi]	[a-sibi]	„Mr Saturday“
b. /a + sida/	[a-sida]	[a-sira]	„Mr true / true“
c. /a + siakɪr/	[a-siakɪr]	[a-sakɪt]	„Mr red bishop (a bird)“
d. /a + siman/	[a-saman]	[a-saman]	„Mr compound“
e. /a + sɛ:/	[a-sɛ:]	[a-se:]	„Mr unless“
f. /a + ser/	[a-ser]	[a-set]	„Mr wall-gecko“
g. /a + suor/	[a-suor]	[a-sɔt]	„Mr road“
h. /fu:g + sɔ:diŋ/	[fu-sɔ:diŋ]	[fu-sɔ:roŋ]	„cover cloth“
i. /zug + sɔŋ	[zu-sɔŋ]	[zu-sɔŋ]	„lucky“
j. /bɔn + siʔal/	[bɔn-siʔal]	[bɔn-sɛʔɛl]	„snake“

From the data, it is apparent that the voiceless alveolar fricative /s/ the UR does not change in the Toende data because /s/ is the initial consonant of the words while the low-central vowel /a/ is only added as a prefix to nominalise the lexical items in Kusaal. This is clearly seen in examples a-g of data 7 above. For instance, the [asibi] is morphologically split as /a + sibið/ „Saturday“ which becomes [asibi] as a personal day-name. The examples in data (h-j) on the other hand, show compound words where the fricative /s/ occurs at the initial position of the second word. As shown in the data, [fu-sɔ:ɾɔŋ] in Toende is /fu:g + sɔ:dɪŋ/ in the underlying form, hence the occurrence of /s/ in the word-midial position in Toende.

4.4.1.4 /d/ → [r] alternation

As intimated earlier, the alveolar trill /r/ and the voiced alveolar plosive /d/ are free variants in Kusaal (Agole). It is however, prudent to state that they do not substitute each other in all phonological environments in Kusaal and such cannot be overgeneralised in Kusaal as it is not so in Toende. In terms of the environment, they cannot replace each other at word-initial positions (WIP). Also, it is not in all WMP that they can be replaced each other. Their free-variation is only permissible at word-final positions (WFP) in the Agole dialect but certainly not in Toende as none of them is preferred at WFP in Toende. For example, [z ? d/r] for „anvil“, [zɔ:d/r] „tail“, and [bɔ:d/r] „want“ as seen elsewhere in table 0.4 are only acceptable in Agole but not Toende. Also, /d/ and /r/ are not free-variants at (WIP) even in Agole since, /darvɔ/ „ladder“ cannot be pronounced as [*radvɔ] or /daan/ „owner“ be seen as [*raan] in Agole. This is unarguably true because while the alveolar trill /r/ does not begin words in Kusaal, the alveolar plosive begins words (Musah et al 2013). Furthermore, they may replace each other at WMP, but not in all instances. For instance, /yadda/ „faith“

cannot be pronounced as [*yarra] or /tɪnd ? n/ „a dry mud“ be pronounced as [*tɪnrən^han], and more so, /Toende/ in the UR cannot be pronounced as [*Toenre] even in the Agole dialect where the segments are claimed to be free-variants. It is, therefore, apparent that the /r/ and /d/ free-variation at WMP is motivated by the regional dialects. While /r/ is more preferred in Toende, /d/ is preserved for use in the Agole dialect. The data in table 0.7 below explicate this explanation in detail.



Table 0.7: /-d-/ to /-r-/ variation in Kusaal

No.	UR	Agole	Toende	Gloss
1.	/asida/	[asida]	[asira]	„true“
2.	/bodaug/	[bodaug]	[boraok]	„billy goat“
3.	/bedigu/	[bedigu]	[berugu]	„plenty“
4.	/bidibiŋ/	[bidibiŋ]	[biribiŋ]	„boy“
5.	/bo:dom/	[bo:dum]	[bo:rom]	„needs“
6.	/bidikin/	[budikin]	[birikin]	„noble person“
7.	/dadug/	[dadug]	[darug]	„ladder“
8.	/lodug/	[lodug]	[lorok]	„corner“
9.	/edug/	[edug]	[erok]	„worries“
10.	/fada/	[fada]	[fara]	„hardships“
11.	/fedig/	[fedig]	[ferik]	„turn“
12.	/g d ig/	[g dig]	[g rik]	„respond“
13.	/kodig/	[kodig]	[korik]	„slaughter“
14.	/nidib/	[nidib]	[nirib]	„people“
15.	/podug/	[podug]	[porok]	„share“
16.	/ya:dim/	[ya:dum]	[ya:rim]	„salt“
17.	/zedigir/	[zedigir]	[zerigit]	„blame“
18.	/yida:n/	[yida:n]	[yira:n]	„landlord“
19.	/dadiga/	[dadiga]	[daraga]	„malice“
20.	/zuda:n/	[zuda:n]	[zura:n]	„executive“

PR 4. /d/ → [r] / [+vowel] — [+vowel] in Toende

The generative phonological rule 4 states that the voiced alveolar plosive /d/ becomes [r] in Toende when it occurs intervocalic in the UR. In other words, it explicitly states that /d/ is realised as [r] when it is preceded by a vowel and followed by a vowel in Toende. The data in table 0.7 validate the generative phonological rule and its assertions. From the data, it is observed that at WMP, [d] is often pronounced in Agole while /r/ is also opted for in Toende. For example, while Agole speakers pronounce words like „true“, „plenty“, „ladder“, „anxiety“ and „people“ as [asida], [bedigu], [dadug], [edug] and [nidib] respectively, speakers of Toende tend to

pronounce the same words as [asira], [berigu], [darok], [ɛrok] and [nirip] as respectively seen in data (1), (3), (7), (9), (14) and the rest in the table.

4.4.2 Vowel alternation

Vowel alternation is also another common indicator of dialect differences in Kusaal. Just like the consonant alternations, the two dialects of Kusaal alternate certain kinds of vowels in their respective phonologies due to certain constraints. This is mostly observed in where sequential vowels in the underlying representations are maintained in Agole but either undergo vowel deletion or the process of coalescence in Toende. There are several kinds of vowel alternations in the Kusaal dialects but for lack of space, about seven (7) of them are analysed in this study. These include; /ia/ ~ [a] alternation, /ia/ ~ [ɛ] alternation, /ia/ ~ [ɛ:] alternation, /ua/ ~ [ɔ] alternation, /ua/ ~ [ɔ:] alternation, /uɔ/ ~ [ɔ:] alternation and /uɔi/ ~ [ɔ:] alternation in Toende. While some scholars of Kusaal describe the sequential vowels as diphthongs and triphthongs (see Musah et al 2013: 14, Musah 2018: 57, Abubakari 2018: 38, and Niggli 2014: 39), this study would, for the time being refer to them as sequential vowels (SV) for the purpose of the analysis herein.

4.4.2.1 /ia/ → [a] alternation

As stated above, one of the phonological variations in the Agole and Toende dialects is the /ia/ ~ [a] alternation in Toende. It is observed that the version of Toende spoken in Ghana does not accept vowel sequencing within morpheme boundaries except where there are some morphological processes within the morpheme. Some of the instances where vowel sequencing may occur in Toende are those outlined by Niggli (2014: 39) for the version of Kusaal spoken in Burkina Faso which is closely related

to Toende in Ghana. Due to this restriction, the SV /*ia*/ in the UR either undergo vowel deletion or coalescence in Toende.

Basically, the SV /*ia*/ in the UR is mapped onto three surface realisations in Toende. One of them is where /*ia*/ is realised as the low central vowel [a] in Toende. This is mostly observed in where the SV /*ia*/ is nasalised in the UR. The Agole dialect, however, does not restrict vowel sequencing, hence, /*ia*/ is often pronounced as such in Agole thereby creating differences in the dialects. See data in table 0.8 below for more details on this claim.

Table 0.8: The /*ia*/ to [a] alternation in Kusaal

No.	UR	Agole	Toende	Gloss
1.	/dɪ ʔ d/	[dɪ ʔ d	d ʔ t	„dirf“
2.	/ɪ ʔ g/	[ɪ ʔ d	ʔ t	„flying“
3.	/gɪ ʔ r/	[gɪ ʔ r	g ʔ t	„jar“
4.	/kpɪ k/	[kpɪ k	kp k	„to economise“
5.	/pɪ ʔ /	[pɪ ʔ	p ʔ	„to speak“
6.	/pɪ k/	[pɪ k	p k	„slap“
7.	/tɪ k/	[tɪ k	t k	„to massage“
8.	/zɪ k/	[zɪ k	z	„to wither off“
9.	/zɪ ɪ ʔ /	[zɛ ɪ ʔ	[gbɛ ʔ	„lazy person“
10.	/ɪ k/	[ɪ k	[k	„stimulus“
11.	/ɪ ʔ r/	[ɪ ʔ r	[ʔ t	„root“
12.	/ ^w ɪ k/	[^w ɪ k	[^w k	„to squeeze“

PR. 5 /*ia*/ → [a] ~ |V₁&V₂| → [1V +Nas] / — | word in Toende

The generative phonological rule 5 above explains the environment where this kind of vowel alternation occurs in Toende. The rule states that /*ia*/ becomes [a] in Toende when vowel₁ and vowel₂ of the SV are considered a single vowel and is nasalised within a word. Due to the fact that Toende does not allow vowel sequencing within

word or morpheme boundaries, it often deletes the first vowel /ɪ/ of the SV /ɪa/ when there is nasality in the phonological environment that it occurs. The nasal feature is necessary in the environment for the deletion process to take place, as it will be shown in our succeeding subsections, where nasality is absent in the environment and the SV /ɪa/ is realised differently in Toende.

The data (1) to (12) in table 0.8 above show the differences in the eastern and western dialects of Kusaal as a result of the /ɪa/ to [a] alternation in Toende. For example, while „dirt“, „flying“, „jar“, „to economise“, „slap“, and „to speak“, are pronounced in Agole as [dɪ ʔ d], [ɪ ʔ d], [gɪ ʔ r], [kpɪ k], and [pɪ ʔ] respectively, Toende speakers delete /ɪ/ and pronounce them as [d ʔ t], ʔ t], [g ʔ t], [kp k], and [p ʔ] as shown in examples (1) to (5) in the table. The rest of the data in the table indicate this same alternation in the dialects. The motivation for the /a/ preservation in Toende is due to its higher degree in sonority. As De-Lacy (2002: 98) points out, low vowels come first (highly sonorous) in the sonority hierarchy and as Niggli (2014) also confirms it in Kusaal by positing that “when one vowel of a diphthong is deleted, it is the high vowel, not a low or mid vowel” (P. 47). The dialect therefore maintains the low central vowel /a/ because of its higher sonority.

4.4.2.2 /ɪa/ → [ɛ] alternation

This is another alternation of the SV /ɪa/ in Toende. Here, the SV /ɪa/ in the underlying form coalesces to form the front mid-low -ATR vowel [ɛ] in Toende. It is observed to large extend that this form of coalescence occurs in Toende when there is no evidence of nasality in the environment that the SV /ɪa/ occurs in the UR. Unlike the previous section where the dialect deletes only the front-high vowel /ɪ/ in the SV

and maintain the /a/, the two vowels merge (coalesce) into /ɛ/ in this section. The data in table 0.9 below enlightens this further.

Table 0.9: The /ia/ to /ɛ/ alternation in Kusaal

No.	UR	Agole	Toende	Gloss
1.	/sia/	[sia]	[sɛ]	„enough“
2.	/wia/	[wia]	[wɛ]	„to hatch“
3.	/tia/	[tia]	[tɛ]	„to change“
4.	/kpi/	[kpi]	[kɛ]	„to restrain“
5.	/via/	[via]	[vɛ]	„to burn (by fire)“
6.	/fia/	[fia]	[fɛ]	„to remove one’s eye“
7.	/wia/	[wia]	[wɛ]	„to shuffle“
8.	/kia/	[kia]	[kɛ]	„to harvest“
9.	/ia/	[ia]	[ɛ]	„search“
10.	/pia/	[pia]	[pɛ]	„to wash“

PR. 6 /ia/ → [ɛ] ~ |V₁&V₂| → [1V -Nas] / — |word in Toende

Just like the generative phonological rule 5 in the previous section, PR 6 explains that /ia/ becomes [ɛ] in Toende when vowel₁ and vowel₂ of the SV /ia/ are considered a single vowel and also not nasalised with a word. Unlike the first instance where the SV /ia/ is realised as [a], here the SV /ia/ in the UR merges to form the front mid-low vowel [ɛ] in Toende due to the fact that the SV /ia/ is a combination of two [spread, -ATR] vowels, it is necessary that the new vowel has similar features hence, the adoption of the mid-low spread [-ATR] vowel [ɛ] to replace the sequential vowel. This is, however, not observed in Agole since it does not restrict vowel sequencing. In table 0.9 for instance, while lexical items such as „enough“, „to hatch“, „to change“, „to restrain“ etc are pronounced in Agole with SV /ia/ as in [sia], [wia], [tia] and [kpi], they are pronounced in Toende as [sɛ], [wɛ], [tɛ] and [kɛ] as

respectively shown in data (1) to (4) above. The same evidences are shown in the rest of the data.

4.4.2.3 /ɪa/ → [ɛ:] alternation

Another realisation of the SV /ɪa/ that triggers phonological variation in the two dialects of Kusaal is the /ɪa/ ~ [ɛ:] alternation. Here, the SV /ɪa/ in the UR is mapped onto the long form of the mid-low [spread, -ATR] vowel [ɛ:] in Toende. The phenomenon is similar to previous analysis where /ɪa/ changes to [ɛ] in Toende but here, the short vowel /ɛ/ is lengthened in Toende to make it up to the sequential vowels in the underlying form. There are certain instances where the SV /ɪa/ is lengthened or stressed within certain words. In those instances, Toende speakers will still merge the SV /ɪa/ to form /ɛ/ but also lengthen it to form [ɛ:] in order to compensate for the lost of length in the UR. This is however, absent in Agole, thereby causing a clear cut dialect differences in Kusaal. The data in table 0.10 clarifies this in the dialects.

Table 0.10: The /ɪa/ to [ɛ:] alternation in Kusaal

No.	UR	Agole	Toende	Gloss
1.	/bɪa/	[bie]	[bɛ:]	„to astray“
2.	/dabɪam/	[dabiem]	[dabɛ:m]	„fear“
3.	/dɪam/	[diem]	[dɛ:m]	„in-law“
4.	/bɪal/	[biel]	[bɛ:l]	„naked“
5.	/fɪab/	[fiab]	[fɛ:b]	„to cane“
6.	/fɪam/	[fiem]	[fɛ:m]	„freedom“
7.	/zɪamɪs/	[ziemis]	[zɛ:mɪh]	„to underrate“
8.	/pɪas/	[pies]	[pɛ:h]	„wash“
9.	/pɪama/	[piama]	[pɛ:ma]	„arrows“
10.	/dɪa/	[dia]	[lɛ:]	„where is“
11.	/tɪas/	[ties]	[tɛ:h]	„point at“
12.	/wɪam/	[wiem]	[wɛ:m]	„fast“
13.	/sɪam/	[siem]	[sɛ:m]	„to reduce“
14.	/lɪab/	[lieb]	[lɛ:b]	„to become“
15.	/lɪag/	[lieg]	[lɛ:k]	„to pour into“

PR .7 /*ia*/ → [ɛ:] ~ |*V*₁ & *V*₂| → $\left[\begin{array}{c} \mathbf{1V} \\ +\text{stress} \end{array} \right] / \text{---} | \text{word in Toende}$

Phonological rule 7 states that /*ia*/ is realised as [ɛ:] in Toende when vowel₁ and vowel₂ of the SV are considered a single vowel but are pronounced with some degree of lengthening or stressing. As noted earlier, when the SV /*ia*/ is stressed in the UR, Toende speakers will lengthen the mid-low spread vowel /ɛ/ to become [ɛ:] in order to compensate the length of /*ia*/ in the UR. This is not shown in Agole because diphthongs and other sequential vowels are not restricted in the dialect. Examples (1) to (15) in table 0.10 above ratify this assertion. For instance, while lexical items like /*bia*/ „to astray“, /*dabiam*/ „fear“, /*diam*/ „in-law“, /*bial*/ „naked/ and /*fiab*/ „to cane“ are pronounced in Agole as [bie], [dabiem], [diem], [biel] and [fiɛb] as shown in examples (1) to (5), they are pronounced in the Toende dialect as [bɛ:], [dabɛ:m], [dɛ:m], [bɛ:l] and [fɛ:b] respectively.

This is similar to the phenomenon of loanword adaptation in Dagbani as noted by Abdallah (2020: 106). He posits that vowel sequencing is often avoided in Dagbani but not without compensatory lengthening. According to him, diphthongs from English and Hausa are often adapted by a means of compensatory lengthening in Dagbani. A clear example is the adaptation of the English diphthong /*ia*/ in Dagbani. Consider the following data:

8. /aɪ/ *Adaptation in English loanwords in Dagbani (Abdalla 2020:107)*

English	Dagbani	Gloss
a. /baɪdeɪ/	[ba:de:]	„by day“
b. /saɪz/	[sa:s]	„size“
c. /paɪp/	[pa:pɔ]	„pipe“
d. /braɪb/	[b ra:pɔ]	„bribe“
e. /laɪt/	[la:t]	„light“
f. /laɪsəns/	[la:s ns]	„license“
g. /laɪnzməŋ/	[la:s man]	„linesman“
h. /aɪswɔ:tə/	[a:s wata]	„ice water“

It is observed in the data that the diphthong /aɪ/ in English is adapted in Dagbani by vowel deletion and compensatory lengthening. The front-high [-ATR] vowel /i/ in the diphthong is deleted and by compensation, the low-central vowel /a/ is lengthened to [a:] in order to make it up to the lost in source language. This is similar in Toende, where in vowel deletion, it is the /ɪ/ that is deleted and where the SV /ɪa/ coalesce to form /ɛ/, it is often lengthened to [ɛ:] as a compensation for the lost in the underlying form. The phenomenon may, however, be different due to the fact that; while English and Dagbani are distinct languages, Toende is a dialect. Further observations on vowel alternations with similar phonological behaviours in the dialects of Kusaal are postulated in the succeeding sections.

4.4.2.4 /ʊa/ → [ɔ] alternation

Similarly, there is a systematic variation in Agole and Toende dialects of Kusaal due to /ʊa/ ~ [ɔ] alternation in Toende. As noted in the previous sections, Toende does not allow sequential vowels within morphemes and even word boundaries and due to this, all the lexical items in Kusaal with /ʊa/ constructions are pronounced differently by speakers of Toende and Agole dialects. Just like /ɪa/, the SV /ʊa/ is also mapped onto two different realisations in Toende depending on the length of its pronunciation in

the underlying form. One of them is where /*ua*/ is systematically mapped onto the simple mid-low [rounded, -ATR] vowel /*ɔ*/ in Toende. Here, the SV /*ua*/ is not lengthening in the underlying form. Also, since the SV /*ua*/ begins with a [+back] and also a [-ATR] vowel, /*ɔ*/ is the best candidate with similar features, hence its adoption to replace /*ua*/ in Toende. We validate this claim with data in table 0.11 below.

Table 0.11: The /*ua*/ to /*ɔ*/ alternation in Kusaal

No.	UR	Agole	Toende	Gloss
1.	/ <i>ʊag</i> /	[<i>ʊak</i>]	[<i>ɔk</i>]	„to pour-out“
2.	/ <i>bʊag</i> /	[<i>bʊak</i>]	[<i>bɔk</i>]	„to cut open“
3.	/ <i>kuag</i> /	[<i>kuak</i>]	[<i>kɔk</i>]	„to hug“
4.	/ <i>lʊag</i> /	[<i>lʊag</i>]	[<i>lɔk</i>]	„abof“
5.	/ <i>mʊag</i> /	[<i>mʊak</i>]	[<i>mɔk</i>]	„to kiss“
6.	/ <i>nʊag</i> /	[<i>nʊa</i>]	[<i>nɔ</i>]	„to step on“
7.	/ <i>tʊag</i> /	[<i>tʊag</i>]	[<i>tɔk</i>]	„a drop (liquid)“
8.	/ <i>foa</i> /	[<i>fʊa</i>]	[<i>fɔ</i>]	„to castrate“
9.	/ <i>tʊa</i> /	[<i>tʊa</i>]	[<i>tɔ</i>]	„to pound“
10.	/ <i>suak</i> /	[<i>suak</i>]	[<i>sɔk</i>]	„a fishing equipment“
11.	/ <i>wʊag</i> /	[<i>wʊak</i>]	[<i>wɔk</i>]	„tall“
12.	/ <i>zʊa</i> /	[<i>zʊa</i>]	[<i>zɔ</i>]	„friend“
13.	/ <i>soaɪ</i> /	[<i>soaɪn</i>]	[<i>sɔ a</i>]	„witch“
14.	/ <i>vʊ</i> /	[<i>vʊ</i>]	[<i>vɔ</i>]	„to uproot“

PR. 8 /*ua*/ \longrightarrow [ɔ] \sim |*V*₁&*V*₂| \longrightarrow [^{1V} -stress] / — |word in Toende

The generative phonological rule 8 openly states that the SV /*ua*/ in the underlying form is realised as /*ɔ*/ in Toende when vowel₁ (*u*) and vowel₂ (*a*) are considered a single unstressed vowel. This is similar to the /*ia*/ \sim [ɛ] alternation in Toende as seen in subsection 4.4.2.2. As explained earlier, when the SV /*ua*/ is not stressed in the UR, it often coalesces to form [ɔ] in Toende pronunciations. However, Agole speakers realise the SV /*ua*/ as a sequential vowel in the surface form. For example, while Agole speakers pronounce words like [*bʊak*] „to cut open“, [*kuak*] „to hug“, [*mʊak*] „to kiss“, [*fʊa*] „to castrate“, and [*vʊ*] „to uproot“ among others, Toende speakers

in subsection 4.4.2.4 above. The data in examples (1) to (14) affirms this notion. Where the Agole dialect maintains the SV /ʊa/ in words like [bʊas] for „pillars“, [yʊal] „childcare“ [lʊab] „to migrate“, [gʊ] „hunting“ [zʊa] „race“ [bʊalog] „calling“ and [pʊʔayʊa] for „daughter“, the Toende dialect use the long form of /ɔ/ in pronouncing them as in [bɔ:h], [yɔ:l], [lɔ:b], [gɔ:], [zɔ:], [bɔ:lɔk], and [pɔʔayɔ:k], as it is shown in examples (1), (2), (3), (6), (12) and (14) respectively because of the level of stress in the pronunciation of the sequential vowel.

4.4.2.6 /ʊɔ/ or /ʊɔɛ/ → [ɔ:] alternation in Toende

Finally, the last observation on vowel alternation are the /ʊɔ/ ~ [ɔ:] and /ʊɔɛ/ ~ [ɔ:] alternations in Kusaal. These two kinds of vowel alternations in Kusaal are similar to the analysis subsection 4.4.2.5 above. In any case, there is a process of coalescences and compensatory lengthening in Toende which is not in Agole. It is shown at where the Agole dialect could sequence vowels up to three different vowels, Toende will merge them to form /ɔ/ and by way of compensation, lengthens it to form [ɔ:] to make it up to the length of the sequence (cf. Musah 2010, Abdalla 2020). Table 0.13 buffers this assertion with data in both dialects.

Table 0.13: The /ʊə/ or /ʊəɛ/ to [ɔ:] alternation in Kusaal

No.	UR	Agole	Toende	Gloss
1.	/bʊəl/	[bʊəl]	[bɔ:l]	„to call“
2.	/dʊər/	[dʊər]	[dɔ:t]	„a stick“
3.	/yʊəlɪm/	[yʊəlɪm]	[yɔ:lɪm]	„latterly“
4.	/sʊəl/	[sʊəl]	[sɔ:l]	„to take advantage of“
5.	/zʊəl/	[zʊəl]	[zɔ:l]	„to stand on“
6.	/vʊəl/	[vʊəl]	[vɔ:l]	„whistle“
7.	/zʊər/	[zʊər]	[zɔ:t]	„mountain“
8.	/lʊəɛ/	[lʊəɛ]	[lɔ:]	„take some“
9.	/kʊəɛ/	[kʊəɛ]	[kɔ:]	„to complete a building“
10.	/bʊəɛ/	[bʊəɛ]	[bɔ:]	„to dissolve“
11.	/vʊəɛ/	[vʊəɛn]	[vɔ:n]	„to uproof“
12.	/gʊəɛ/	[gʊəɛn]	[gɔ:n]	„to restrain“
13.	/bʊəɛ/	[bʊəɛn]	[bɔ:n]	„to make a mark“
14.	/dʊəɛ/	[dʊəɛ]	[dɔ:]	„to get up“
15.	/fʊəɛ/	[fʊəɛ]	[fɔ:]	„to remove“

PR. 10 /ʊə/ or /ʊəɛ/ → [ɔ:] ~ $\left| V_1, V_2 \text{ \& } V_3 \right| \rightarrow \left[\begin{array}{c} \mathbf{1V} \\ +\text{stress} \end{array} \right] / _ \mid$ word in Toende

Similar to the previous rules, this phonological rule states that SVs /ʊə/ or /ʊəɛ/ are realised as [ɔ:] in Toende when the individual vowels of the SVs are pronounced as one vowel with some level of stress or lengthening within a word. As shown in the data, these also clearly define the dialect background of Kusaal speakers. In table 0.13 above, the data in examples (1) to (7) provide evidence of [ʊə] and [ɔ:] variations in the Agole and Toende dialects respectively while examples (8) to (15) also show the [ʊəɛ] and [ɔ:] variations in the dialects.

The Toende dialect of Kusaal tends to behave like Dagbani in vowel segment adaption. As Abdalla (ibid.) noted, when the Hausa diphthong /ʊa/ is adapted in Dagbani, it undergoes a similar process as seen in the Toende dialect. Let us consider examples (a) and (b) in data 9 below:

9. The adaptation of Hausa diphthong /aʊ/ in Dagbani (Abdalla 2020: 108)

	Hausa	Dagbani	Gloss
a.	/saʊke/	[so:tʃe]	„trade“
b.	/saʊki/	[so:tʃi]	„better in health“

It is observed from the data that the Hausa diphthong /aʊ/ is adapted in Dagbani by the process of coalescence and compensatory lengthening. Just like the case in Toende, the Hausa diphthong /aʊ/ is merged in Dagbani to form the mid-high back vowel /o/ and lengthens to make it up to the lost of length in the host language.

4.5 The glottal stop /ʔ/ insertion

Musah (2018: 58) records that the production of diphthongs and triphthongs in Kusaal is sometimes seen rather a cumbersome phonological process. It is therefore, observed in some lexical items that the glottal stop is often inserted into the sequential vowels causing a seemly re-syllabification of the vowel segments. While this process is common in both dialects of Kusaal, there is a change of vowel quality in the biserted SVs in Toende thereby, causing variations in the dialects. The most noticeable sequential vowels that trigger dialect variation after taking the epenthetic glottal stop are /ia/ and /oa/ in Kusaal. The succeeding subsections elaborate these further.

4.5.1 /iʔa/ → [ɛʔɛ] variation

As noted above, there is a systematic variation in Agole and Toende dialects when the glottal stop is inserted into the SV /ia/. As posited by Musah (ibid.), there are certain words that speakers of Kusaal insert the glottal stop in between the SV /ia/ to break them so that they will no longer be sequence in the surface form. While this process is common in both dialects, it is observed that the seemly syllabified SV /ia/ is often realised in Agole as [iʔa] and in Toende as [ɛʔɛ]. Here, the glottal stop [ʔ] is

perceptually weak in Toende and could not obviously cause separation in the sequential vowels. So, when the glottal stop [ʔ] is inserted between /ia/ as [iʔa], Toende speakers will still regard the vowels as sequential vowels and apply the process of coalescence and compensatory rule to it. The data in table 0.14 highlight this kind of variation in the dialects.

Table 0.14: The /iʔa/ to [ɛʔɛ] variation in Kusaal

No.	UR	Agole	Toende	Gloss
1.	/sial/	[siʔal]	[sɛʔɛl]	„to meet“
2.	/giasog/	[giʔasog]	[gɛʔɛhok]	„disturbance“
3.	/kpiɑ/	[kpiʔɑ]	[kpɛʔɛ]	„neighbor“
4.	/giae/	[giʔa]	[gɛʔɛ]	„to turn“
5.	/iɑ/	[iʔɑ]	[lɛʔɛ]	„to befriend“
6.	/diam/	[diʔem]	[dɛʔɛ]	„to receive“
7.	/diama/	[diʔama]	[dɛʔɛma]	„a play“
8.	/siam/	[siʔam]	[sɛʔɛm]	„outlook“
9.	/tial/	[tiʔal]	[tɛʔɛl]	„to protect“
10.	/i al/	[i ʔal]	[ɛ ʔɛl]	„to hang“
11.	/pial/	[piʔal]	[pɛʔɛl]	„to be full“
12.	/kpiɑl/	[kpiʔɑl]	[kpɛʔɛl]	„to standby“
13.	/zial/	[ziʔal]	[zɛʔɛl]	„put down“
14.	/biɑla/	[biʔɑla]	[bɛʔɛla]	„small“

PR. 11 /iɑ/ → [ɛʔɛ] ~ [ʔ] / [i — a] in Toende

The generative phonological rule 11 states that the SV /iɑ/ is realised as /ɛʔɛ/ in Toende when the glottal stop /ʔ/ is inserted between [i & a]. This means that whenever the SV /iɑ/ is separated by the epenthetic glottal stop /ʔ/, the SV /iɑ/ will change into the long form of the front mid-low vowel /ɛ:/ with the epenthetic glottal stop occurring in it as in [ɛʔɛ] in Toende. As postulated earlier, because the glottal stop is transparent in Kusaal, when it is inserted between the any SV, it cannot actually cause separation in the sequential vowels. The seemingly bisected SV is often still perceived as

SVs in Toende. This process is, however, absent in Agole since it does not restrict SVs. The data in table 0.14 affirms this claim.

4.5.2 /ʊʔa/ → [ɔʔɔ] variation

Another intervocalic glottal insertion that triggers phonological variation in the two dialects of Kusaal is the /ʊʔa/ to [ɔʔɔ] alternation in Toende. Just like the /ɪʔa/ ~ [ɛʔɛ] alternation as shown in the previous discussion, the glottal stop is transparent and could not clearly separate the SV. Toende speakers still view /ʊa/ as a SV and since the dialect bars SVs, the process of coalescence and compensatory lengthening will be carried on the SV yet with the epenthetic glottal stop in it. We exemplify this assertion with data in table 0.15 below.

Table 0.15: The /ʊʔa/ to [ɔʔɔ] variation in Kusaal

No.	UR	Agole	Toende	Gloss
1.	/dʊalɔŋ/	[dʊʔalɔŋ]	[dɔʔɔlɔŋ]	„placenta“
2.	/dʊam/	[dʊʔam]	[dɔʔɔm]	„to give birth“
3.	/bʊam/	[bʊʔam]	[bɔʔɔm]	„half“
4.	/tʊal/	[tʊʔal]	[tɔʔɔl]	„to collect“
5.	/tʊas/	[tʊʔas]	[tɔʔɔh]	„to copy“
6.	/zʊas/	[zʊʔas]	[zɔʔɔh]	„to sprinkle“
7.	/pʊagɔ:dir/	[pʊʔgɔ:dir]	[pɔʔɔgɔ:dit]	„a whore“
8.	/mʊab/	[mʊʔab]	[mɔʔɔp]	„to sucking“
9.	/mʊasɪd/	[mʊʔasɪd]	[mɔʔɔhit]	„to breastfeed“
10.	/lʊasʊg]	[lʊʔasʊg]	[lɔʔɔhʊt]	„avoidance“
11.	/kʊam/	[kʊʔom]	[kɔʔɔm]	„water“
12.	/dʊadɪb/	[dʊʔadɪb]	[dɔʔɔrʊp]	„parents“

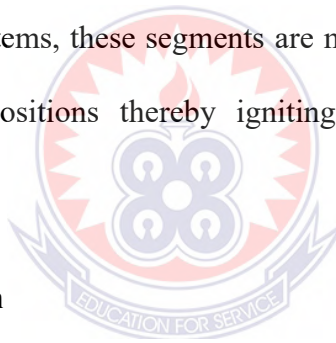
PR. 12 /ʊa/ → [ɔʔɔ] ~ [ʔ] / [ʊ__]a in Toende

The generative phonological rule 12 states that /ʊa/ is realised as [ɔʔɔ] in Toende when the glottal stop /ʔ/ is inserted between |ʊ & a|. As noted earlier, whenever the

SV /ʊa/ takes the epenthetic glottal stop /ʔ/ in the underlying form, it is often realised in Agole as [ʊʔa] and in Toende as [ʊʔɔ]. Refer to the discussions in subsection 4.4.2.1 and 4.5.1 for more details on this assertion.

4.6 Segment deletion

This is another phonological process that causes dialect variation in Kusaal. It is, however, not a wide spread phenomenon in Kusaal. Segment deletion as used in this study refers to the process where a segment (vowel or consonant) is maintained in one dialect but deleted in the other dialect. It is only in word-final position that this process may be observed in Kusaal dialects. The only segments that are affected by this process are the voiced velar plosive /g/ and the front-high retracted vowel /ɪ/ in Kusaal. In some lexical items, these segments are maintained in Agole but deleted in Toende at word-final positions thereby igniting phonological variations in the dialects.



4.6.1 Consonant deletion

As noted above, consonant deletion as an evidence for dialect variation in Kusaal is not wide spread as compared to the phenomenon of consonant alternation. The only consonant that deletes is the velar stop /g/ at word-final position in Toende. Studies in Kusaal reveals that the velar stop /g/ at word-final position in Kusaal could be deleted if two special conditions are met: that is if the stem has a heavy bimoraic syllable and if the vowel segments preceding the velar stop /g/ are long vowels (Musah 2010: 97). Our investigations confirms this claim, however, it is rather befitting in Toende than in Agole. It is observed here that the deletion of /g/ at word-final position is optional in Agole, but very optimal in Toende. The data in table 0.16 below proffers the differences in the two dialects due to the velar stop /g/ deletion in Toende.

Table 0.16: Consonant deletion in Kusaal

No.	UR	Agole	Toende	Gloss
1.	/bi:g/	[bi:g]	[bi:]	„child
2.	/diʔig/	[diʔig]	[diʔi]	„to surprise someone“
3.	/kiʔig/	[kiʔig]	[kiʔi]	„to break“
4.	/fiʔig/	[fiʔig]	[fiʔi]	„to fetch sth“
5.	/miʔig/	[miʔig]	[miʔi]	„to ferment“
6.	/piʔig/	[piʔig]	[piʔi]	„to found“
7.	/liʔig/	[liʔig]	[liʔi]	„to dodge“

PR. 13 /g/ → Ø / $\left[\begin{array}{l} \text{Vowel} \\ +\text{Long} \end{array} \right]$ — # in Toende

The generative phonological rule formalises the data in the table. It states that /g/ is deleted at word boundary when it is preceded by a long vowel in Toende. This is apparently shown in data (1) to (7) in the table where the velar stop /g/ is deleted in Toende at the WFP but maintained in the Agole dialects.

4.6.1 Vowel deletion

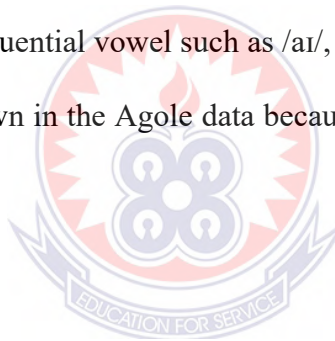
Just like the consonant deletion, vowel deletion is evident in Toende but not in Agole. As noted by Musah (2018), the pronunciation of diphthongs and other sequential vowels is considered a difficult task for Toende speakers, and hence, often adopt several strategies to make complex vowels simple for easy pronunciations. One of these strategies is vowel deletion. The front-high retracted vowel /ɪ/ in words with complex-vowels suffers this process in Toende. We exemplify this with data in table 0.17 below.

Table 0.17: Vowel deletion in Kusaal

No.	UR	Agole	Toende	Gloss
1.	/ba:i/	[ba:i]	[ba:]	„to take all“
2.	/da:i/	[da:i]	[da:]	„to pull a branch“
3.	/ka:i/	[ka:i]	[ka:]	„to visit“
4.	/na:i/	[na:i]	[na:]	„to finish“
5.	/pa:i/	[pa:i]	[pa:]	„to reach“
6.	/va:i/	[va:i]	[va:]	„to collect all“
7.	/wa:i/	[wa:i]	[wa:]	„to fail to hatch“
8.	/tɔ:i/	[tɔ:i]	[tɔ:]	„to sock flour“
9.	/pu:i/	[pu:]	[pu:]	„to cross“
10.	/nɛ:i/	[ni:e]	[nɛ:]	„to brighten“

PR. 14 /i/ → Ø / [+vowel] ___ | # in Toende

The generative phonological rule 14 states that /i/ is deleted at word boundary in Toende if it is preceded by a vowel. Data (1) to (10) in the table validate the rule by showing that /i/ in the sequential vowel such as /ai/, /ɔi/ and /ɛi/ are deleted in Toende. This is however, not shown in the Agole data because complex vowels are allowed in Agole.



4.6.3 Syllable truncation

This phenomenon describes the process of shortening a syllable by deleting some segments in the syllable. In many languages, the deletion takes place at syllable or morpheme boundaries (cf. Katamba 1989, Hayes 2009, Musah 2010). In this study, the deletion occurs at word-medial positions in Toende. In Kusaal, words that consist of long vowels preceding nasal consonants at the syllable boundary pose two different syllable structure processing in Kusaal dialects. In Agole for instance, such words often take an epenthetic glottal stop /ʔ/ between the long vowels but Toende speakers often truncate the syllable by deleting the second vowel in the syllable. The data in table 0.18 below exemplify this notion.

Table 0.18: Glottal intervocalic deletion in Toende

No.	UR	Agole	Toende	Gloss
1.	/ni:m/	[niʔim]	[nim]	„meat“
2.	/ya:m/	[yaʔam]	[yam]	„wisdom“
3.	/kɔ:m/	[kɔʔɔm]	[kɔm]	„hunger“
4.	/sɔ:m/	[sɔʔɔm]	[sɔm]	„good“
5.	/sɪ:ŋ/	[sɪʔŋ]	[sɪŋ]	„to begin“
6.	/dɛ:ŋ/	[dɛʔɛŋ]	[dɛŋ]	„to arrive first“
7.	/gɑ:ŋ/	[gɑʔŋ]	[gɑŋ]	„to choose“
8.	/kɔ:ŋ/	[kɔʔŋ]	[kɔŋ]	„to lose someone“
9.	/gɛ:ŋ/	[gɛʔɛŋ]	[gɛŋ]	„to catch something“
10.	/lɑ:ŋ/	[lɑʔŋ]	[lɑŋ]	„to set fire“
11.	/lɔ:ŋ/	[lɔʔŋ]	[lɔŋ]	„to cross“
12.	/mi:m/	[miʔim]	[mim]	„shaking“
13.	/sɔ:ŋ/	[sɔʔŋ]	[sɔŋ]	„to help“
14.	/zɔ:m/	[zɔʔɔm]	[zɔm]	„flour“
15.	/kpɛ:ŋ/	[kpɛʔɛŋ]	[kpɛŋ]	„to energise“

PR. 15 $\left| \begin{array}{c} \text{VV} \\ +\text{long} \end{array} \right| \longrightarrow \left[\text{V}\emptyset \right] / \text{---} \left[\begin{array}{c} \text{C} \\ +\text{Nas} \end{array} \right]$ in Toende

The generative phonological rule 13 above states that a long vowel is truncated to form a short vowel in Toende when the long vowel precedes a nasal consonant. This is shown in the data where the long vowels in the underlying forms are shortened by deletion, resulting in syllable truncation in Toende. This process is not shown in the Agole dialect. The Agole dialect, however, inserts the glottal stop in between the long vowels, which then, obstructs the pronunciation of the long vowels in the syllables. This kind of syllable structure process indicates the phonological differences in the dialects of Kusaal. For instance, while Agole speakers pronounce words like [niʔim] for „meat“, yaʔam „wisdom“, [kɔʔɔm] „hunger“, sɔʔɔm „good“, [sɪʔŋ] „to begin“ and [dɛʔɛŋ] „to arrive first“, Toende speakers pronounce the same words as [nim], [yam], [kɔm], [sɔm], [sɪŋ], and [dɛŋ] respectively as shown in example (1) to (6) in table 0.18 above.

It is good to note that an alternation of the rule would not produce the same data as there are more data with similar constructions which do not show syllable truncation in Toende. For instance, when the final consonant is the long an oral consonant in the UR, the syllable would not be truncated in Toende. For example, [yɔʔɔg], [daʔar], [kɪʔɪbɔ], [fiʔig], [dɔʔɔs], [tɪʔab] among others in Agole are also pronounced in Toende as [yɔʔɔk], [daʔat], [kɪʔɪbɔ], [fiʔik], [dɔʔɔh] and [tɛʔɛb] to mean „to open“, „buyer“, „soap“, „cut“, „raise“ and „to prepare“ respectively.

4.7 Segment substitution

This is a process of replacing a segment with another segment within a particular phonological environment (Kak at al 2008). They argue that this process can take place at word-initial, word-medial and word-final positions in some languages. This is observed in Kusaal where speakers of the two dialects opt for different segments within the same phonological environment in some lexical items. This phonological process is similar to that of segment alternation but this differs in the random choice of the segments in the dialects. As posited by Kak at al (ibid.), this process can occur at word-initial, word-medial and word-final positions within the two dialects. The substitution can also occur in both vowel and consonant segments in Kusaal.

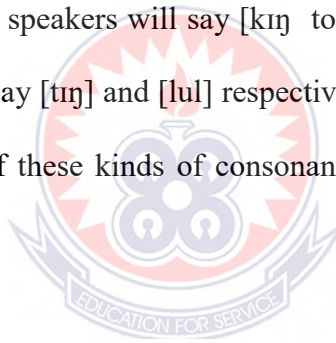
4.7.1 Consonant substitution

As noted earlier, speakers of the two dialects substitute consonant segments within some particular lexical items. Here, the lexical items are often minimal pairs differing by a single consonantal segment in the same phonological environment within the two dialects of Kusaal. The data in table 0.19 below proffers the discussion further.

Table 0.19: Consonant substitution in Kusaal dialects

No.	UR	Agole	Toende	Gloss
1.	/kikirik/	[ḳiḳirik]	[ṣiṣirik]	„dwarf“
2.	/kɪŋ/	[ḳɪŋ]	[tɪŋ]	„to go“
3.	/kɪn/	[ḳɪn]	[tɪn]	„walking“
4.	/niŋ/	[ṇiŋ]	[ḅiŋ]	„to put into“
5.	/pɔ/	[p̣ɔ]	[ḅɔ]	„did not“
6.	/lul/	[yul]	[ḷul]	„to hang“

The data in table 0.19 above exemplify the lexical items that are minimal pairs differing at only the word-initial positions in the two dialects. As shown in the data, pronouncing the consonants at the initial positions define the dialect background of the speaker. While the Agole speakers will say [ḳɪŋ] to mean „to go“ and [yul] „to hang“, Toende speakers tend to say [tɪŋ] and [ḷul] respectively to imply the same as shown in data (2) and (6). More of these kinds of consonant substitutions are shown in table 0.19 above.



4.7.2 Vowel substitution

Similarly, there are instances where a particular vowel is preferred in one dialect and in the other dialect, it is often a different vowel all together. This is treated as vowel substitution in this study. Vowel substitution is observed at all levels within lexical items in Agole and Toende dialects of Kusaal. Let consider the data in table 0.20 below for more clarifications.

Table 0.20: Vowel substitution in Kusaal

No.	UR	Agole	Toende	Gloss
1.	/iŋ/	[iŋ]	eŋ	„do“
2.	/wal/	[wal]	[wol]	„fruit“
3.	/wala/	[wala]	[wela]	„how“
4.	/sɔŋ/	[sɔŋ]	[sɔŋ]	„mat“
5.	/bɔ/	[bɔ]	[bo]	„why“
6.	/tɔʔ/	[tɔʔ]	[toʔ]	„hurry“
7.	/ala/	[ala]	[alɛ]	„how much“
8.	/su/	[su]	[si]	„to deposit“
9.	/vom/	[vom]	[vom]	„life“
10.	/waʔa/	[waʔ]	[wɔʔ]	„to dance“

From the table above, the front-high vowel /i/ in the UR is maintained in Agole but substituted by the mid-high front vowel /e/ at WIP in Toende as seen in example (1) above. In rapid speech, you could hear Agole speaker says [iŋim tɔʔ ka ti kiŋ] and in Toende as [eŋim toʔ ka ti tiŋ] to mean „hurry up and we go“. Data (2)-(4) show vowel substitution at WMP in the two dialects. For example, while the low-central vowel /a/ is used in Agole for words like *wal* and *wala* to mean „fruit“ and „how“ respectively, it is substituted by the mid-high back vowel /o/ and mid-high front vowel /e/ as in [wol] and [wela] respectively in data (2) and (3). Vowel substitution at WFP is also shown in data (5) to (10) in table 0.20 above. For instance, while speakers of Agole pronounce „why“, „to deposit“, and „life“ as [bɔ], [su], [vom] respectively, the Toende speakers pronounce them as [bo], [si] and [vom] to imply the same. Niggli (2014: 12) also points out this kind of segment substitution in the two regional dialects of Kusaal.

4.8 Nasalisation

Nasalisation is another evident phonological process that triggers phonological variation in the two dialects of Kusaal. Nasalisation occurs when oral sounds are produced with a partial lowering of the velum or the hard palate so that airflow can

escape through both the oral and nasal cavities (cf. Hayes 2009, Roach 2009). It is obvious that nasalisation is an inherent property of both dialects but there are certain instances where Toende employs the feature of plus nasal to distinguish words from Agole. Consider the following data in table 0.21 below:

Table 0.21: Nasalisation differences in Kusaal

No.	UR	Agole	Toende	Gloss
1.	/saʔal/	[saʔal]	s ʔ l]	„to advice“
2.	/zaʔas/	[zaʔas]	z ʔ h]	„to refuse“
3.	/saʔam/	[saʔam]	s ʔ m	„to spoil“
4.	/kal/	[kal]	k l	„number“
5.	/karim/	[karim]	k rim]	„to read“
6.	/ka:lɔg/	[ka:lɔg]	k : lɔg]	„counting“
7.	/karɔŋ/	[karɔŋ]	k rɔŋ]	„reading“

PR. 16 /a/ → l / $\left[\begin{array}{c} \text{C} \\ +\text{glid} \end{array} \right]$ in Toende

The generative phonological rule 14 states that the low-central vowel /a/ in the UR is nasalised in Toende when it occurs precedes a glottal stop or From the data, it is seen that while Toende adds [+nasal] feature to the primary oral vowel /a/, Agole does not nasalise it. This draws the isogloss between the Toende and Agole regional dialects of Kusaal in terms of nasalisation. The phonological environment where this phenomenon occurs is however not defined as it is seen in the table 0.21 above.

4.9 Labialisation

Labialisation is another secondary articulation feature that triggers phonological variation in the Agole and Toende dialects of Kusaal. Basically, labialisation is a process in which a primary sound is produced with rounded lips due to precedents of either back vowels or the labio-velar approximant /w/. Even though these defining features are common in both dialects of Kusaal, some lexical items are produced with

visibly rounded lips in the Agole than how they are produced in Toende. This is because Agole accepts complex sequencing of back vowels which is not allowed in Toende. The data in table 0.22 expose a few of such variations in the dialects.

Table 0.22: Labialisation differences in Kusaal

No.	UR	Agole	Toende	Gloss
1.	/dʊɔɪ/	d ^w ʊɔɪ]	[dɔ:]	„to get up“
2.	/fʊɔɪ/	[f ^w ʊɔɪ]	[fɔ:]	„remove“
3.	/gʊɔɪ/	g ^w ʊɔɪ]	[gɔ:n]	„to restrain“
4.	/kʊɔɪ/	k ^w ʊɔɪ]	[kɔ:]	„to complete a building“
5.	/lʊɔɪ/	l ^w ʊɔɪ]	[lɔ:]	„take off“
6.	/dʊɔɾ/	d ^w ʊɔɾ]	[dɔ:t]	„walking stick“
7.	/zʊɔɾ/	z ^w ʊɔɾ]	[zɔ:t]	„mountain“
8.	/tʊɔb/	t ^w ʊɔb]	[tɔ:b]	„pounding“
9.	/kʊɔb/	k ^w ʊɔb]	[kɔ]	„farming“

PR. 17 $\left[\begin{array}{c} C \\ \text{[-round]} \end{array} \right] \longrightarrow \left[\begin{array}{c} C \\ \text{[+round]} \end{array} \right] / \text{---} \left[\begin{array}{c} SV \\ \text{[+high +back]} \end{array} \right] \text{ in Agole}$

This phonological rule is quite perverse in this study, as it rather defines the behaviour of labialisation in the Agole dialect instead of Toende. The rule explicitly states that a [-round] consonant becomes [+round] when it precedes sequential vowels that begin with a [+high, +back] vowel in Agole. Even though labialisation is caused by back vowels in many languages, when the two dialects of Kusaal are compared phonologically, there are obvious portrayings of lip rounding in Agole than in Toende because of the sequencing of high back vowels in Agole which are not allowed in Toende. As shown in table 0.22 above, while speakers of Agole visibly labialise the initial consonant in words like [d^wʊɔɪ] „to get up“, [f^wʊɔɪ] „to remove“, g^wʊɔɪ „to restrain“, t^wʊɔb] „pounding“, and [k^wʊɔb] „farming“, Toende dialect does not labialise the consonants as shown in the data. It is prudent to note that this assertion is not in isolation as several scholars of Kusaal including (Spratt and Spratt 1968:34 cited in

Musah 2010:84, Niggli 2014:11) among other observe the same labialisation differences in the dialects.

4.10 Palatalisation

This is a phonological process that involves raising the body of the tongue towards the hard palate in the production of non-palatal sounds (Hayes 2009). It is the result of adding a front high vowel /i/ or the palatal approximant /j/ feature to a primary consonant so that the primary articulation of the consonant is changed to become more palatal (Ladefoged 1982 cited in Musah 2010). Just like labialisation, palatalisation is also pertinent in Kusaal but varies in its two dialects. While the Agole makes use of this process in the production of some words, it is absent in most cases in Toende. Just like the labialisation, palatalisation is also caused by the sequencing of vowels beginning with the front high vowel /i/ in Agole. Since, this kind of vowel sequencing are disallowed in the Toende, there is no evidence of palatalisation in Toende. Consider the in table 0.23 below for more details.

Table 0.23: Palatalisation differences in Kusaal

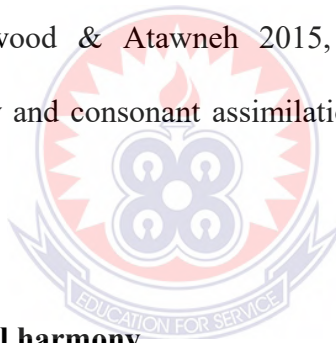
No.	UR	Agole	Toende	Gloss
1.	/dɪ ʔad/	dʲɪ ʔ d]	d ʔ t]	„dirt“
2.	/pɪ ʔad/	pʲɪ ʔad]	p ʔ t]	„language“
3.	/sɪ ʔar/	sʲɪ ʔar]	s ʔ t]	„forest“
4.	/bɪ ʔar/	bʲɪ ʔar]	b ʔ t]	„mud“
5.	/bɪar/	bʲɪar]	[bɛ:t]	„senior sibling“
6.	/bɪal/	bʲɪel]	[bɛ:l]	„nakedness“
7.	/pias/	pʲias]	[pɛ:h]	„to straighten sth“
8.	/dɪam/	dʲɪam]	[dɛ:m]	„in-law“
9.	/sɪam/	sʲɪam]	[sɛ:m]	„reduce“
10.	/ziamis/	zʲamis]	[zɛ:mih]	„to bully“

PR. 18 $\left[\begin{array}{c} \text{C} \\ \text{-PAL} \end{array} \right] \longrightarrow \left[\begin{array}{c} \text{C} \\ \text{+PAL} \end{array} \right] / \text{---} \left[\begin{array}{c} \text{SV} \\ \text{+high, +front} \end{array} \right] \text{ in Agole}$

The generative phonological rule 15 states that a [-palatal] consonant is palatalised when it precedes a sequence of vowels beginning with a high back vowel in Agole. It is observed from the data that palatalisation is evident in Agole because the dialect uses constructions with complex vowels beginning with the front high vowel /i/ in words. This is, however, absent in Toende because the dialect does not employ complex vowels.

4.11 Harmonisation differences

There are two main types of segment harmonisation processes in Kusaal, namely vowel harmony, and consonant assimilation processes. While some authors use the two phenomena interchangeably, others allocate harmony to vowels and assimilation to consonants (see Dawood & Atawneh 2015, Musah 2010). This subsection discusses vowel harmony and consonant assimilation differences in the two dialects of Kusaal.



4.11.1 Variation in vowel harmony

There is a scholarly debate on vowel harmony processes in Kusaal. For example, Spratt and Spratt (1968: 34) as cited in Niggli (2014) claim that Kusaal has no vowel harmony but there is a tendency of harmonising vowels within bars of front/spread and or backness. Musah (2010: 89) on the other hand, posits that “the nine-vowel system of Kusaal can only be divided into the [+ATR] and [-ATR] oppositions. Based on this distinction, the vowels which occur in a word will usually be selected almost exclusively from only one of the sets and not from the two sets at the same time”. This statement suggests that Kusaal only has a vowel harmonic feature of tongue root and vowels do not have other chances of co-occurring with other vowels in words except (+/-ATR) divisions.

On the contrary, Niggli (2014) argues vehemently that there are other kinds of vowel harmonies in Kusaal than the advanced tongue root category as opined by Musah. He refutes Musah's claims by arguing that "...Kusaal words cannot be divided strictly in two rigid word categories, one using exclusively vowels with advanced tongue root [+ATR] and other words using exclusively vowels with retracted tongue root [-ATR] as suggested by Musah". His counteractions are in line with Spratt and Spratt suggestion which opine tendencies to harmonise vowels by the spread/front and or back/round dimensions in Kusaal.

We find these arguments very interesting and highly relevant for the present study, as it is obvious that these scholars might have not viewed the phenomena cross-dialectally. As this present study investigates the phonological and lexical variations in the two dialects, part of our findings reveal that Toende has evidence of front and backness harmonies, but such harmonic features are absent in Agole. This also accounts for the phonological variations occurring at the sequential vowels /oa/ and /oɔ/ in the UR changing onto [ɔ:] in Toende as seen in our previous discussion. Similarly, the front harmony could also be responsible for the behaviour of the SV /ia/ changing into [ɛ:] in Toende. However, the data also show that [+/-ATR] is also an inherent vowel harmonic feature in both the Agole and Toende. This study, therefore, accepts the fact that vowels could harmonise each other based on a unique movement of the tongue root, nevertheless, it is not the only vowel harmonic feature in Kusaal, as there are other vowel harmonies such as front/spread and backness/roundness harmonies in Toende. The data in table 0.24 enlighten this further.

Table 0.24: Variation in vowel harmony in Kusaal

No.	UR	Agole	Toende	Gloss
1.	/bidikin/	[budikin]	[birikin]	„noble person“
2.	/zi?ilim/	[zi?ilim]	[zi?ilim]	„ignorance“
3.	/mi? ilim/	[mi?ilim]	[mi?ilim]	„knowledge“
4.	/pʊ:ɡɪn/	[pʊ:ɡɪn]	[pʊ:ɡʊn]	„inside sth“
5.	/tʊbɪr/	[tʊbɪr]	[tʊbʊt]	„ear“
6.	/bʊbɪɡ/	[bʊbɪɡ]	[bʊbʊk]	„headscarf“
7.	/kʊdɪɡ/	[kʊdɪɡ]	[korok]	„to slaughter“
8.	/lʊdɪɡ/	[lʊdɪɡ]	[lorok]	„corner“

From the table, it is apparent that though the two dialects have a lot in common concerning vowel harmony, yet they pose some differences. For instance, ATR harmony is a common harmonic feature in both dialects but while its adherence is strictly applied in the Agole dialect, it is not so in Toende. In some cases, the Toende dialect can mix both [+ATR] and [-ATR] vowels within a word or morpheme boundary. As it is seen in examples (1) to (3), all the words in Agole stick to one feature of the ATR at a time while a mixture of both [+ATR] and [-ATR] vowels are shown in the Toende data. On the other hand, there is a systematic evidence of round and spread harmonies in the Toende data. These are seen in examples (4) to (8) where /pʊ:ɡɪn/, /tʊbɪr/, /bʊbɪɡ/ among others are pronounced in Toende as [pʊ:ɡʊn], [tʊbʊt], [bʊbʊk] for „inside sth“, „ear“ and „headscarf“ respectively. However, a more detailed study on vowel harmony in Kusaal is needed for a better comprehension of the phenomenon.

4.11.2 Consonant assimilation

Similarly, there is a systematic consonant assimilation differences in the two dialects of Kusaal. Even though, homorganic nasal assimilation (HNA) is the most noticeable consonant assimilation feature in Kusaal, there is also place assimilation process in

Toende. This is, however, observed from a morpho-phonological interface where the consonant in the postverbal particle (PvP) /-ni/ invariably changes to adopt the place of articulation features of the last consonant in a root verb in Toende. Marshall (2013) avers that morpho-phonological interface refers to how sounds in a morpheme alternate in different phonological environments. In Kusaal, and in Toende dialect for that matter, when the PvP /ni/ is in isolation, it is realised as /ni/ but when it is used as an affix to a root verb, the consonant /n/ often changes to assimilate the consonant preceding it. This is quite pervasive in Agole, and hence, the PvP /-ni/ does not change regardless the sound that precedes it in the verb. A few of such differences in the dialects are discussed below.

4.11.2.1 /-ni/ → [-ti] assimilation

The postverbal particle /-ni/ is realised as [-ti] in Toende when the final consonant in the base verb is an alveolar plosive. As noted at the beginning of this chapter, only voiceless plosives are allowed at WFPs in Toende. Therefore, any lexical item with an alveolar plosive /d/ or /t/ in the underlying form is realised in Toende with only /t/. This therefore, triggers the consonant in the PvP /-ni/ to adopt the total phonemic features of the voiceless alveolar plosive /t/ thereby causing a seemingly gemination of /t/ in Toende. This is however not the case in Agol, as the PvP /-ni/ does not change in the Agole dialect. The data in table 0.25 puffer this further.

Table 0.25: /-ni/ to [-ti] assimilation in Kusaal

No.	UR	PvP	Agole	Toende	Gloss
1.	/t s id	+ -ni/	t s id-nɪ]	[t hit-tɪ]	„shouting“
2.	/laʔad	+ -ni/	[laʔad-nɪ]	[laʔat-tɪ]	„laughing“
3.	/dʊəd	+ -ni/	[dʊəd-nɪ]	[dɔ:t-tɪ]	„rising up“
4.	/sɔsɪd	+ -ni/	[sɔsɪd-nɪ]	[sɔhɔt-tɪ]	„begging“
5.	/kpi:d	+ -ni/	[kpi:d-nɪ]	[kpi:t-tɪ]	„dying“
6.	/kɛlɪsɪd	+ -ni/	[kɛlɪsɪd-nɪ]	[kelihit-tɪ]	„listening“
7.	/f :ɛd	+ -ni/	[f : d-nɪ]	f : t-tɪ]	„robbing“
8.	/ka:sɪd	+ -ni/	[ka:sɪd-nɪ]	[ka:hit-tɪ]	„crying“
9.	/nu:d	+ -ni/	[nu:d-nɪ]	[nu:t-tɪ]	„drinking“
10.	/kuod	+ -ni/	[kʊəd-nɪ]	[kɔ:t-tɪ]	„weeding“

PR. 19 /-ni/ → [-ti] / $\left[\begin{array}{l} +\text{Alveo} \\ +\text{Plosv} \end{array} \right]$ — # in Toende

The generative phonological rule explicitly states that the PvP /-ni/ becomes /-ti/ when it is preceded by an alveolar plosive at word-final position in Toende. It is apparently shown in the data that the PvP /-ni/ changes to /-ti/ because the voiced alveolar plosive /d/ at the underlying form is surfaced in Toende as /t/ because the dialect restricts voiced plosives at its WFP. There is therefore, a systematic consonant assimilation in Toende where the consonant in the PvP /-ni/ adopts the features of the /t/ at the boundary of the base verbs. In Agole however, the PvP /-ni/ does not assimilate the voiced alveolar plosive /d/ at the word boundaries.

4.11.2.2 /-ni/ → [-ki] assimilation

Similarly, when the PvP /-ni/ is a suffix to a verb ending with a velar plosive, the consonant /n/ in the PvP often changes to assimilate the velar plosive in Toende. Since it is now established that only voiceless plosives occur at WFP in Toende, the PvP /-ni/ is realised as /-ki/ in Toende. Consider the data in table 0.26 below for more clarifications:

Table 0.26: /-ni/ to [-kɪ] assimilation in Toende

No.	Base	PvP	Agole	Toende	Gloss
1.	/kpɪ k	+ -ni/	[kpɪ k-nɪ]	kp k-kɪ]	„economised“
2.	/tɾak	+ -ni/	[tɾɪ k-nɪ]	[tɛk-kɪ]	„changed“
3.	/sɾak	+ -ni/	[sɾak-nɪ]	[sak-kɪ]	„agreed“
4.	/pak	+ -ni/	[pak-nɪ]	[pak-kɪ]	„branched“
5.	/ ^w ɪ k	+ -ni/	[^w ɾak-nɪ]	[^w k-kɪ]	„squeezed“
6.	/zɪ k	+ -ni/	[zɪ k-nɪ]	z k-kɪ]	„withered“
7.	/ ^w ɪ k	+ -ni/	[^w ɾak-nɪ]	[^w ɛk-kɪ]	„hatched“
8.	/loʔak	+ -ni/	[loak-nɪ]	[lɔk-kɪ]	„verd off“
9.	/mɔʔak	+ -ni/	[mɔak-nɪ]	[mɔk-kɪ]	„kissed“
10.	/puk	+ -ni/	[puk-nɪ]	[puk-kɪ]	„floated“

PR. 20 /-nɛ/ → [-kɪ] / $\left[\begin{array}{l} +\text{Velar} \\ +\text{Plosv} \end{array} \right]$ — |word in Toende

Just like the case in rule 16 above, this phonological rule 17 is also defined as the PvP /-ni/ becomes [-kɪ] when it is adfixed to a base with a [+velar] and [+plosive] in Toende. The differences in the dialects are shown the data where the PvP /-ni/ remains the same in Agole but changes to assimilate the voiceless alveolar plosive /k/ at the final position of the words.

4.11.2.3 /-ni/ → [-ŋɪ] assimilation variation

In the same vein, the postverbal particle /-ni/ is realised as [-ŋɪ] in Toende when the final consonant of the verb is a velar nasal. The data presented in table 0.27 below exemplify this claim.

Table 0.27: /-nɛ/ to [-ŋɪ] alternation in Toende

No.	Base	PvP	Agole	Toende	Gloss
1.	/pɛʔɛŋ	+ -ni/	[pɛʔɛŋ-nɪ]	[pɛŋ-ŋɪ]	„borrowed“
2.	/bɛʔɛŋ	+ -ni/	[bɛʔɛŋ-nɪ]	[bɛŋ-ŋɪ]	„divided“
3.	/dɛʔɛŋ	+ -ni/	[dɛʔɛŋ-nɪ]	[dɛŋ-ŋɪ]	„arrived first“
4.	/sɔʔɔŋ	+ -ni/	[sɔʔɔŋ-nɪ]	[sɔŋ-ŋɪ]	„helped“
5.	/mɔʔɔŋ	+ -ni/	[mɔŋ-nɪ]	[mɔŋ-ŋɪ]	„denied“
6.	/gaʔaŋ	+ -ni/	[gaŋ-nɪ]	[gaŋ-ŋɪ]	„chosen“

7.	/tɔʔɔŋ + -nɪ/	[tɔʔɔŋ-nɪ]	[tɔŋ-ŋɪ]	„joined“
8.	/tɛʔɛŋ + -nɪ/	[tɛʔɛŋ-nɪ]	[tɛŋ-ŋɪ]	„raised“
9.	/kɔʔɔŋ + -nɪ/	[kɔʔɔŋ-nɪ]	[kɔŋ-ŋɪ]	„lost“
10.	/buʔuŋ + -nɪ/	[buʔuŋ-nɪ]	[buŋ-ŋɪ]	„crossed“

PR. 21 /-nɪ/ → [-ŋɪ] / $\left[\begin{array}{l} +\text{Vel} \\ +\text{Nas} \end{array} \right]$ — |# in Toende

The phonological rule states that the PvP /-nɪ/ becomes [-ŋɪ] when it is preceded by a [+velar, +nasal] consonant in a word in Toende. This is evident in the data where the /-nɪ/ constantly changes to [-ŋɪ] because of the velar nasal /ŋ/ in the final position of the verbs.

4.11.2.4 /-nɪ/ → [-pɪ] assimilation

Similarly, the PvP /-nɪ/ is realised as [-pɪ] in Toende when the final consonant of a verb is a bilabial plosive. Due to the voicing constraints on plosives at WFP in Toende, all words that end with voiced bilabial plosives such as /b/ in the underlying form take the voiceless counterpart /p/ in Toende. This makes the alveolar nasal consonant /n/ in the PvP /-nɪ/ to change and assimilate the voiceless bilabial plosive /p/ in the Toende dialect. This is however not observed in Agole, since there is no obvious place of articulation assimilation in Agole. The data in table 0.28 below explicate this observations.

Table 0.28: /-nɪ/ to [-pɪ] assimilation in Toende

No.	Base	PvP	Agole	Toende	Gloss
1.	/ɔb	+ -nɪ/	[ɔb-nɪ]	[ɔp-pɪ]	„chewed“
2.	/sɪb	+ -nɪ/	[sɪb-nɪ]	[sɪp-pɪ]	„to tie in“
3.	/sɔb	+ -nɪ/	[sɔb-nɪ]	[sɔp-pɪ]	„wrote“
4.	/zab	+ -nɪ/	[zab-nɪ]	[zap-pɪ]	„fought“
5.	/k b	+ -nɪ/	[k b-nɪ]	[k p -pɪ]	„burnt“
6.	/tɛb	+ -nɪ/	[tɛb-nɪ]	[tɛp-pɪ]	„struggled“
7.	/pɔb	+ -nɪ/	[pɔb-nɪ]	[pɔp-pɪ]	„wrapped“
8.	/tab	+ -nɪ/	[tab-nɪ]	[tap-pɪ]	„stucked“

9.	/ ^w ɪb + -nɪ/	[^w ɪb-nɪ]	[^w ɪp-pɪ]	„endured“
10.	/vɪb + -nɪ/	[vɪb-nɪ]	[vɪp-pɪ]	„collapsed“

PR. 22 /-nɪ/ → [-pɪ] / $\left[\begin{array}{l} +\text{Bilab} \\ +\text{Plosv} \end{array} \right]$ | word in Toende

The above phonological rule states that the /-nɪ/ becomes to [-pɪ] when it comes after a bilabial plosive at word boundary in Toende. This is shown in table 0.28 where /n/ in the PvP /-nɪ/ adopts the place and manner of articulation features of /p/ in Toende. For more details on the /b/ to [p] alternation in Toende, refer to the discussions in section 4.4 at the beginning of this chapter for more details.

From the above discussions on consonant assimilation differences, it can be concluded that while Toende have a kind of place and manner of articulation assimilation process with regards to the PvP /-nɪ/ within a morpho-phonological interface, such process does not occur in Agole. It is shown in most of the examples provided above that when the PvP /-nɪ/ is added to any verb in Agole, it does not change to assimilate the final consonant of the verb. In Toende, however, it does change to take the total features of the final consonant in the verb that it is post-affixed to causing a kind of consonant gemination in Toende. This occurs in all verbs with closed-syllables in Toende. However, the PvP /-nɪ/ changes to [-mɪ] when the verb is an open-syllabic word in Toende. The following subsection discuss this phenomenon in detail.

4.11.2.5 /-nɪ/ → [-mɛ] alternation

This is rather quite pervasive as far as consonant assimilation process in Kusaal (Toende) is concerned. It is observed that all the base forms of verbs with open syllables takes [-nɪ] in the Agole dialect and [-mɪ] in the Toende dialect. In speech

production, this alternation explicitly points out which dialect background a speaker of Kusaal is coming from. The data in table 0.29 below attest to this fact.

Table 0.29: /-ni/ to [-mi] alternation in Kusaal

No.	Base	PvP	Agole	Toende	Gloss
1.	/di	+ -ni/	[di-ni]	[di-mi]	„ate“
2.	/pɔ	+ -ni/	[pɔ-ni]	[pɔ-mi]	„sworn“
3.	/tɔ	+ -ni/	[tɔ-ni]	[tɔ-mi]	„kicked“
4.	/tʰi	+ -ni/	[tʰi-ni]	[tʰi-mi]	„vomited“
5.	/kpi	+ -ni/	[kpi-ni]	[kpi-mi]	„died“
6.	/f	+ -ni/	[f -ni]	[fa-mi]	„robbed“
7.	/zɔ	+ -ni/	[zɔ-ni]	[zɔ-mi]	„ran“
8.	/piʔi	+ -ni/	[piʔi-ni]	[piʔi-mi]	„covered“
9.	/va:	+ -ni/	[va:-ni]	[va:-mi]	„gathered plenty“

PR 23 /-ni/ → [-mi] / [Syl + Open] — |# in Toende

This rule states that the /-ni/ becomes [-m] when it is used as a suffix to a verb with an open-syllable in Toende. A morpho-phonological account of why [-mi] and not any other sounds goes beyond the scope of this study.

4.12 Summary

Phonological variation in dialects is said to be the alternation of speech and speech sound productions among dialect users. It is usually caused by different realisation of the same phonological processes in dialects of the same language. This chapter explores the different realisations of the phonological processes that trigger some phonological variations in the two dialects of Kusaal. Some of the processes discussed here include segment alternations, segment substitutions and segment deletions. It went further to discuss some secondary articulation processes such as palatalisation, nasalisation as well as syllable truncation as a syllable structure process which also cause differences in the two dialects. The chapter also explores vowel harmony and consonant assimilation processes in the dialects. It is realised that spread or backness

harmonies are in Toende but rarely observed in Agole. Also, the alveolar nasal /n/ in the postverbal particle /-nɪ/ changes to assimilate the final consonant in the base verbs in Toende posing evidence of consonant assimilation process in Toende which is not also observed in Agole.



CHAPTER FIVE

LEXICAL VARIATION IN KUSAAL

5.0 Introduction

This chapter examines the concept of lexical variation in the two regional dialects of Kusaal. It explores the different words that speakers of the Agole and Toende dialects employ for the same referent in Kusaal. Although phonological variations in the dialects are discussed in the previous chapter, wherever a phonological consideration is needed to bring out the differences in lexical items, such facts will be noted in this chapter again. The chapter is organised in three sections such that the section 5.1 discusses lexical variation in Kusaal while 5.2 highlights the various types of lexical variation in Kusaal. Section 5.3 itemises the various variations in some nominal items in the dialects. The nominal items are subcategorised into themes such as plant and animal names, parts of the body, kinship terms, names of insects, and some abstract entities. It also contains names of some lexical items that are classified as „miscellaneous entities“. It is so labelled because the items in this category are not in any way related to one another. Section 5.4 captures the variation in some pronominal items while 5.5 looks at the variation in some verbal forms in the dialects. Section 5.6 discusses the variation in some adjectives while 5.7 also analyses some adverbial differences in the dialects. The chapter concludes in section 5.8 with a summary of the chapter.

5.1 Lexical variation in Kusaal

The term lexical variation as used in this chapter refers to the use of different words or lexical items to name the same referent or kind of referents by speakers of the two dialects of Kusaal. It generally refers to the use of two or more distinct lexical items

to express the same idea (cf. Bodo 1989, Hazen 2017). In a variationist sociolinguistic study, lexical variations are always looked at within a single variety of a language using social factors as parameters to determine the variation. In a dialectological study like the present one, the lexical discrepancies are viewed within regional varieties of a language using geographical boundaries as factors for the variation in the lexical items. Although both dimensions may be present in Kusaal, the present study focuses on regional dialect variations.

Lexical variation as outlined in this study hinges on the formal and contextual types of lexical variations in the two dialects of Kusaal. We look at how referents in Kusaal are given entirely different lexical items regardless of whether the lexical items represent any conceptual entities or not. The context of the variations is however taken from the regional or geographical background of the language users. It is not feasible for the current study to exhaust all items in the language exhibiting these kinds of variations. However, the list given herein is a representative of the differences in Agole and Toende lexical items.

5.2 Types of lexical variation in Kusaal

Lexical variation in dialects and languages all over the world have been classified into several categories. Geeraerts (1993) identifies four types of lexical variations namely, onomasiological, semasiological, formal, and contextual variations. Kusaal exhibits evidence of each of these four kinds of lexical variations. We elaborate on each of these in the following sub-sections and buttress them with data from the language to validate our claims.

5.2.1 Onomasiological variation

This refers to a type of lexical variation in which a referent is named by two or more conceptually distinct lexical items (cf. Geeraerts 1993, Wanjiku, 2018). Users of the two regional dialects of Kusaal employ the use of such lexical items to name objects in the language. For example, a „bag“ is termed in Agole as *kɔlvɔ*⁵ and in Toende as *tampavk*. Conceptually, these two lexical items are related and hence are onomasiologically different. In their respective senses, *kɔlvɔ* is a sack-like object used for housing pieces of items while *tampavk* also means to „carry in your armpit“. Conceptually, they both contain the same semantic component of the word „bag“.

5.2.2 Semasiological variation

This is also a type of lexical variation where a particular lexical item may be used to name two or more distinct types of referents. Here, a single lexical item is employed to name different objects or referents. In Kusaal, *kv* either refers to the verb „to kill“ or the future negator „would not“, *b* either means „father“ or „to peg“ an animal. In the same vein, while *mɔ* refers to „to wrestle“ or „well done“, *mɛ* is „to build“ or „also“, and *pɔ* semasiologically means „to divide“ or is the negator of past tense „did not“ in Kusaal. These kinds of lexical variations are rampant in the language and only the context of usage that will determine the meaning it intends to portray.

5.2.3 Contextual variation

Contextual variation is also a kind of lexical variation in which a speaker varies his or her language or choice of words due to contextual factors such as the formality of the speech, the geographical location, the socio-cultural meaning of words, and the

⁵ The retracted high-back vowel /ɔ/ is represented by /v/ in Kusaal orthography. Since this chapter presents the data in orthographical representations, /v/ shall be seen most often in the data.

sociological characteristics of the participants in the communication (cf. Labov 1972, Geeraerts 1993, Wanjiku 2018). Individual speakers of every language always vary the speech or choice of words depending on who they are speaking to, that is, whether it is an age mate, elderly person, or the kind of situation the speaker finds themselves. This goes in line with the variationist sociolinguistic theory that claims that speakers of every language vary their choice of language depending on the context of the language in use. Except for instances where the context is taken from the regional difference of the speakers, contextual lexical variation is not a dialect phenomenon in Kusaal. there is yet an impetus to register its presence in the language. Table 0.30 proffers examples of such variations in Kusaal.

Table 0.30: Contextual variation among peers and adults

No.	Forms used among peers	Forms used with adults	Gloss
1.	<i>zak</i>	<i>yir</i>	„house“
2.	<i>tɛɛd</i>	<i>la'ad</i>	„luggage“
3.	<i>amus</i>	<i>apv'asabil⁶</i>	„cat“
4.	<i>mgbam/apɔnnɔr</i>	<i>bvn-ma'ahit⁷</i>	„toad“
5.	<i>mbvraa/mdav</i>	<i>m saam/m ba''</i>	„my friend“
6.	<i>fa/nwɛlig</i>	<i>pan''as</i>	„lies“

From the table, it is seen that the choice of lexical items varies according to the users. When a young speaker is speaking with peers in a very informal way, they will prefer to use terms like *zak* and *tɛɛd* for „house“ and „luggage“ respectively than when they are speaking with elderly people where terms like *yir* and *la'ad* are used instead. The terms *zak* and *tɛɛd* are believed to have been borrowed from Mossi another Mabia

⁶ The glottal stop /ʔ/as seen in the phonemic chart is represented by the apostrophe /'/' in Kusaal orthography, hence, it is only the apostrophe that will be seen most often in this chapter.

⁷ The advanced and retracted high front vowels /i/ and /ɪ/ are both represented by the advanced tongue root vowel /i/ in Kusaal spellings. /ɪ/ shall therefore, not be seen in this chapter.

language that is spoken within the Kusaal vicinity. As the youth are always the active users of newer and borrowed terms, as suggested by Wanjiku (2018), they use such terms among themselves while the elderly maintain the use of the indigenous terms. Similarly, terms such as *amus* and *mgbam* are commonly used among the youth but when they speak to adults they use natively well-known terms such as *apv''axabil* and *bvn-ma'asvg* for „cat“ and „toad“ respectively in Kusaal. It is well known that most elderly people, especially men, prohibit mentioning the real names of such animals, especially in the evening for cultural reasons best known to them. An interesting socio-cultural practice is observed in the fact that when such elderly men have not taken their evening meal and children mention the real names of the cat or toad as noted in the table above, they would not eat anything that evening. Although the precise reason for this practice is not known, it is enough grounds for the Kusaas to adopt special names for such animals which they use when speaking with elders in the Kusaal domestic settings.

In the same vein, the word *ndav* is a common term peers use among themselves to loosely mean „my friend“. In view of the fact that such a term cannot be used when they express the same sense with an elderly person in Kusaal, they resort to the use of terms like *m saam* to mean the same. It is also culturally offensive for children to tell an elderly person that he or she is „telling lies“, in Kusaal. They often opt to say the elderly person is „deceiving“ or „fooling“ them. Hence, among peers, the lexical item for „lies“ is *fa* or *nwelig* instead of *pan''as* which is reserved for adults. The above arguments reveal that contextual use of language influences lexical variation in Kusaal.

5.2.4 Formal variation

This kind of lexical variation is common among languages with regional dialects. It is a situation where a particular referent may be named using various lexical items regardless of whether these represent conceptually different categories or not (Geeraerts 1993). This type of lexical variation poses major differences in the dialects. It hence, forms the core aspect of the study. The subsequent subsections itemise the different lexical items that speakers of the two regional dialects of Kusaal employ for the same referents in the language.

5.3 Variation in nominal items

Nouns are generally naming words. They are lexical items that refer to names of people, places, animals, things, events, ideas, and actions. Just like many Mabia languages, the two dialects of Kusaal have uncommon lexical items for the same referents in the language. This poses serious constraints on mutual intelligibility among speakers of the dialect continuum in Kusaal. Below are some classifications of such lexical differences.

5.3.1 Variation in plant and animal names

Kusaal has distinct names referring to the same plants or animals by speakers of the eastern and western dialects. The animals here consist of both domestic and wild mammals including birds. The plants also consist of trees, cereal crops, vegetables, and other plants situated in the Kusaug. Using the variationist theory that states that languages vary according to the geographical location of the speakers, we outline the regional varieties of lexical items and describe their discrepancies in the language within such contexts. Table 0.31 below illustrates the lexical variations in names of plants and animals in the two dialects of Kusaal.

Table 0.31: Variation in plants and animals names

No.	Agole	Toende	Gloss
1.	<i>undun</i>	<i>zan ɔ'ɔt</i>	„hyena“
2.	<i>kurkur</i>	<i>afa</i>	„pig“
3.	<i>lɔlvɔ</i>	<i>wenaaf</i>	„ox“
4.	<i>bageɛɛɛ</i>	<i>bazizalug</i>	„mad dog“
5.	<i>na''azɪnr</i>	<i>sisibig</i>	„acacia tree“
6.	<i>bɛɲa</i>	<i>tiya</i>	„beans“
7.	<i>nwaanɛ</i>	<i>sumɛɲa</i>	„bambara beans“
8.	<i>sambaabir</i>	<i>samviinbit</i>	„jute leaves“
9.	<i>saalim</i>	<i>bvgvhvt</i>	„kind of jute leaves“

The data in the table indicate that speakers of the two dialects use different lexical items for the same plants and animals in the language. In the table, it is observed that the variations in the lexical items are phonologically entirely unrelated and hence cannot be determined by phonology. For instance, there is no phonological motivation for the choice of *un dun* and *zan ɔ'ɔt* for „hyena“ by the Agole and Toende speakers respectively or *kurkur* and *afa* for „pig“ as seen in data 1 and 2 in the table. The context for these variations in the items is attributable to the different geographical backgrounds of the speakers. While the speakers of Agole which is the eastern dialect term „ox“ and „mad dog“ as *lɔlvɔ*, *bageɛɛɛ*, respectively, the Toende which is the western dialect refers to them as *wenaaf* and *bazizalug*. It is the different geographical locations of the speakers that motivate the choice of these different lexical items in the dialects.

Similarly, names of some trees, cereals and other crops also showcase this kind of lexical variation in the two dialects. As „beans“ is well known in the eastern dialect as *bɛɲa*, it is known as *tiya* in the western dialect. Also, „bambara beans“ which is only known in the Toende dialect as *sumɛɲa*, which is loosely translated as „real groundnuts“, is termed as *nwaanɛ* in the Agole dialect. The variations in these lexical

items could be attributed to the influence of Taln and Nabt in Toende and Mossi in Agole. The Toende dialect shares boundary with Taln and Nabt where „beans“ and „bambara beans“ are termed as *tia* and *sumkpila* respectively. As the Agole dialect is also surrounded by languages such as Mossi, Hausa, and Mampruli where the same entities are mostly known as *beŋa* and *nwaange*, it could be one of the affiliated languages that donate *beŋa* and *nwaange* in the Agole dialect.

Finally, the data 8 and 9 in the table contain the different lexical items that users of the two regional dialects employ for the local jute leaves which are popularly known as „ayoyo“ in our markets. While the Agole speakers refer to the first „jute leaves“ as *sambaabir* and the second as *saalim* the Toende dialect speakers name them as *samviinbit* and *bugvhut* as shown in the table.

5.3.2 Variation in body-part names

This is another aspect where speakers of the two dialects employ different lexical items to name some parts of the human and animal body. This includes external and internal body parts. The data in table 0. 32 below contains lexical items showing this kind of variation in the dialects.

Table 0.32: Variation in body part names

No.	Agole	Toende	Gloss
1.	<i>nyu''ur</i>	<i>nyu''ut</i>	„navel“
2.	<i>tvbir</i>	<i>tvbvt</i>	„ear“
3.	<i>dunnir</i>	<i>dunnit</i>	„knee“
4.	<i>nɔbir</i>	<i>nɔ'ɔt</i>	„leg“
5.	<i>pelim</i>	<i>kpaan</i>	„gizzard“
6.	<i>tidir</i>	<i>bankimpiivk</i>	„shoulder“
7.	<i>lal</i>	<i>pivk</i>	„pancreas“
8.	<i>gbaand</i>	<i>ban''at</i>	armpits“
9.	<i>sianini</i>	<i>sɔnhina</i>	„kidneys“
10.	<i>sakpidir</i>	<i>gbepvn</i>	„tigh“
11.	<i>nɔ'ɔpa''asɪnpavɔ</i>	<i>nɔ'ɔta''at</i>	„foot“
12.	<i>vv'vm</i>	<i>vom</i>	„life“
13.	<i>sun''ur</i>	<i>duttit</i>	„a joint“

From the table, it is apparent that speakers of the two dialects employ different lexical items for the same part of the human or animal bodies. From the data, it is observed that the variations in 1, 2 and 3 are phonologically motivated while the rest are lexically distinct. For instance, the variation in *nyu''ur* and *nyun''ut* for „navel“ as shown in the table is attributed to the change of the trill /r/ into an alveolar plosive /t/ in Toende. As discussed in the previous chapter, the trill does not occur at word-final positions in Toende. The variations in the rest of the lexical items are as a result of the geographical locations of the speakers. While the eastern dialect speakers pronounce „armpit“, „gizzard“, „shoulders“, and „hip“ as *gbaand*, *pelim*, *tidir*, and *sakpindir*, users of the western dialect refer to them as *ban''at*, *paan*, *bankimpiivk*, and *gbepvn* respectively. There are no linguistic explanations as to why these lexical items are used in the dialects. The exploration of these items defines the geographical difference in the Agole and Toende dialects of Kusaal.

This is in line with Sam (2021) who discovers that the speakers of the three dialects of Ewe spoken in Ho maintain different lexical items for the same part of the body in

Ewe. According to her, while „buttocks“, „ampit“ and „anus“ are known in Evedome as *kpetefe*, *akɔdodrome* and *mitoeme*, they are known in Aŋlo as *mefi*, *axatome* and *mefime* and in Tɔŋu as *gbi*, *anyixatome* and *gbitome* respectively. Though her work looks at the social components of the lexical variations in the dialects, the variations in the above lexical items define the differences in the three dialect groups.

5.3.3 Variation in some insect names

The two dialects of Kusaal also maintain different lexical items for some insects in their respective settings. Lexical items under this category include names of both crawling and flying insects. A few of such lexical items are outlined in table 0.33 below.

Table 0.33: Variation in insect names

No.	Agole	Toende	Gloss
1.	<i>bvmbarig</i>	<i>tambɔ'ɔrvɛŋ</i>	„black ant“
2.	<i>alim</i>	<i>akan</i>	„grasshopper“
3.	<i>sisɔm</i>	<i>nkan</i>	„locust“
4.	<i>tampuas</i>	<i>zun'uh</i>	„house fly“
5.	<i>tangbeɛnl</i>	<i>taaveɛnl</i>	„hornet“
6.	<i>na''azɔm</i>	<i>afɔɔn-fɔɔn</i>	„kind of insect“
7.	<i>akɔra-diem</i>	<i>saaniŋɔɔtvɛŋ</i>	„praying mantis“

The lexical items in this category pose a complete blockage on the mutual intelligibility in the dialect continuums. The names of these insects are completely different in the two regional dialects. Our data indicate that only those who have contact with the other dialect speakers are intelligible to the other variants in the other dialect. For example, Toende speakers residing in the far ending parts of Binaba and Widnaba areas could not identify the referent expressed in Agole as *bvmbarig* which they only know in their region as *tambɔ''ɔrvɛŋ* which means „black ant“. Also, while

Toende speakers refer to a „grasshopper“ and its variant „locust“ as *akan* or *nkan* respectively, Agole speakers name them as *alim* and *sisom* as seen in data (2) and (3) in the table. Similarly, while the Toende speakers name „houseflies“ as *zun'us*, Agole speakers refer to them as *tampuas* which is completely strange and intelligible to many typical Toende speakers.

The same variation occurs in lexical items for names of „hornet“, „mantis“ and a „kind of insect“ that destroys millets locally referred to as *na'azom* and *afɔɔn-fɔɔn* in the two regional dialects. While the eastern dialect speakers identify a „hornet“ as *tamgbɛnl*, it is known in the western dialect as *taavɛnl* or *vɛnl-vɛnl*. Also, where a „mantis“ in Agole is termed as *akɔra-diem*, it is only known in Toende as *saaningɔvɔŋ* as seen in the data (5) and (7) respectively.

5.3.4 Variation in some animal names

Several types of animals bear unidentical names in Kusaal by speakers of the regional dialects. Here, it is observed that language contact and alternations influence the choice of different lexical items in this category. The Toende dialect tends to have names of some reptiles which are very close to those in Taln and Nabt. Because these dialects of Farafara share boundaries with the western dialect of Kusaal, they leave vestiges of their lexical items in the Toende dialect. Table 0.34 below presents some names of reptiles that show lexical variations in the two dialects of Kusaal.

Table 0.34: Variation in some animal names

No.	Agole	Toende	Gloss
1.	<i>pɔnnir</i>	<i>mgbam</i>	„toad“
2.	<i>abanja</i>	<i>tibandauk</i>	„lizard“
3.	<i>gbanzavg</i>	<i>iivk</i>	„agama lizard“
4.	<i>akɔn'ɔns</i>	<i>asɛnt</i>	„wall gecko“
5.	<i>bamadir</i>	<i>bakol</i>	„tick“
6.	<i>naŋ</i>	<i>ganliŋgavk</i>	„scorpion“
7.	<i>kpakur</i>	<i>pan''aŋ u t</i>	„tortoise“
8.	<i>tvvndir</i>	<i>biligintɔnt</i>	„fat-tailed gecko“
9.	<i>wilisvŋ</i>	<i>baatiwigilv</i>	„snail“
10.	<i>baŋ</i>	<i>bandauk</i>	„crocodile“

From the table, it is apparent that the two regional dialects of Kusaal differ greatly in lexical items within this category. In data (1), (2) and (3) above, the eastern dialect users termed „toad“, „lizard“, and „agama lizard“ as *pɔnnɔr*, *abanja*, and *gbanzavg* while the western dialect users name the same entities as *mgbam*, *tigindauk*, and *iivk* respectively. The names of the items in the Toende dialect are closely related to those in Taln and Nabt where the same referents are named as *mgbam*, *tiibandaug*, and *iiok* respectively. As they share boundaries with the Toende dialect, their influence on it is high.

The example in (4) shows the onomasiology variation in the dialects. The two lexical items are conceptually related in the sense that they both refer to the sound or behavior of the wall-gecko. While the Agole speakers name it using the sounds it makes as *akɔn''ɔ*, Toende speakers name it by its behaviors as *asɛnr* which loosely means „one who spits“.

The examples from (5) to (10) also show vividly the differences in the two regional dialects. While „tick“, „scorpion“, „tortoise“, „fat-tailed gecko“, „snail“, and „crocodile“ are named as *bamadir*, *naŋ*, *kpakur*, *tvvndir*, *wilisvŋ*, and *baŋ* in Agole, they are

referred to *bakɔl*, *ganliŋavk*, *pan''aŋ ut*, *biligimtɔnt*, *abaatiwigilv*, and *bandavk* respectively in Toende. The motivation for the variations in the lexical items in the dialects is said to be arbitrary, as there is no linguistic explanation for their variations in the dialects. They however provide a significant feature for distinguishing between Agole and Toende speakers in Kusaal.

5.3.5 Variation in some kinship terms

Kinship terms as used here refer to the relationships of people of the same family or having a strong feeling of belonging to a family. Kusaal has different lexical items referring to such terms within the two regional dialects. These terms consist of family relations and some names of gender and age distributions. Below are some examples of such terms in the Agole and Toende dialects.

Table 0.35: Variation in some kinship terms

No.	Agole	Toende	Gloss
1.	<i>dakidav</i>	<i>dakii</i>	„brother in-law“
2.	<i>sidpv''a</i>	<i>pɔkii</i>	„sister in-law“
3.	<i>bipv''a</i>	<i>sampɔ''a</i>	„daughter in-law“
4.	<i>danyaam</i>	<i>Sit-ba</i>	„husband“s father“
5.	<i>sibva</i>	<i>sitpit/sitkpeem</i>	„husband“s brother“
6.	<i>pva</i>	<i>bvpɔk</i>	„woman“
7.	<i>dav</i>	<i>bvraa</i>	„man“
8.	<i>saam</i>	<i>ba</i>	„father“
9.	<i>bvnkvdivg</i>	<i>bvranya''aŋ</i>	„old man“
10.	<i>yiwia</i>	<i>gilug</i>	„spinster“

The data in the table define the differences in the two dialects with lexical items for kinships in Kusaal. It is observed that kinship by marriage contains most of the varied lexical items. Any speaker that mentions „brother in-law“, „sister in-law“, „daughter in-law“, and „husband“s father“ as *dakidav*, *sidpv''a*, *bipv''a* and *danyaam* are easily affiliated to the Agole dialect speakers while those pronouncing the same terms as

dakii, *pɔkii*, *sampɔ*’a and *sit-ba* are identified as Toende speakers as seen in data. In the table, example (1) and (4) contain two lexical items each for „brother in-law“ and „father in-law“ in the Agole dialect. They are used interchangeably in most areas but *dakidav* and *diem* are more preferred to the other variants. Variably, while *dakiig* and *diem* are expressed in Toende as *dakii* and *dɛem* respectively, *dakidav* and *danyaam* are not heard in the Toende speaking vicinity. Similarly, a married woman in Agole refers to her husband’s brother as *sibva* but the same term is known as *sitpit* or *sitkpeem* for junior and elder brother respectively in Toende. *Sibva* denotatively means „boyfriend“ which is common in both dialects but while Agole speakers maintain it for one’s husband’s brother(s), Toende speakers use *sitpit* or *sitkpeem* which morphologically means *sit* + *pit* „husband + junior“ or *sit* + *kpeem* „husband + senior“ respectively.

In the table, example (6) to (10) provide variable lexical items for other kinships terms in Kusaal. For instance, *pɔ*’a, *dav* and *s m* in Agole as against *bvpɔk*, *bvraa*, and *b* in oende for „woman“, „man“ and „father“ respectively, distinguish Agole speakers from Toende speakers in the region. In these items, the Agole dialects use shorter forms than Toende, except for „father“ which is *s m* in Agole and *b* in Toende. Also, while Agole speakers refer to an old man and an unmarried woman as *bvkvɔvg* and *yiwia* respectively, the Toende speakers refer to them as *bvranya*’aŋ, and *gilug* respectively. Semantically, *bvkvɔvg* in Kusaal means „something old“ and hence, anything old including people is termed as such in Toende. In Agole however, people are not part of the norm. For them, „old man“ is *bvkvɔvg* and „old woman“ is *pɔnya*’aŋ which is not so in the Toende dialect. An „old man“ in Toende is *bvranya*’aŋ while „old woman“ is *pɔ*’nya’ aŋ which also presents some controversies due to the ambiguous nature of the word „nya’ aŋ“ in Kusaal. When is used in

isolation, it means „back“ and when it is attached to people and animals, it means „+female“. For example, *nɔnya''aŋ*, „hen“, *bvnya''aŋ*, „nanny goat“, *na''anya''aŋ*, „cow“ etc. This makes people especially Agole speakers view it as a feminine marker and hence could not attach it to man which they called *dav*. They, therefore, have *pv''anya''aŋ* for „old woman“ but could not accept **dav-nya''aŋ* for „old man“ as Toende does for both genders. This is in line with the variationist theory that asserts that languages tend to exhibit different qualities within a different geographical location. The variations in these lexical items are observed from different regional backgrounds of the users.

5.3.6 Variation in some abstract entities

The abstract nouns as used here, consist of names of invisible and other entities that cannot be touched. Speakers of the two regional dialects of Kusaal also employ several lexical items for the same abstract entity. The table below contains names of some abstract entities that show lexical disparities in the two regional dialects.

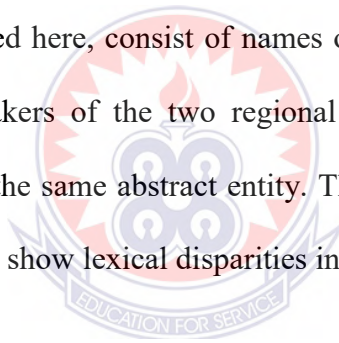


Table 0.36: Variation in some abstract entities

No.	Agole	Toende	Gloss
1.	<i>nyan</i>	<i>valim</i>	„shyness“
2.	<i>nyɔbil</i>	<i>buguhum</i>	„cruelty“
3.	<i>pian“ad</i>	<i>tɔ‘ɔm</i>	„language“
4.	<i>antv“a</i>	<i>tɔ‘ɔm</i>	„case“
5.	<i>yadda</i>	<i>yatta</i>	„faith“
6.	<i>sanya</i>	<i>win</i>	„time“
7.	<i>sisi“em</i>	<i>sabebihuk</i>	„storm / wind“
8.	<i>zɔlvms</i>	<i>gaamih</i>	„foolishness“
9.	<i>kpaana</i>	<i>za‘alvg</i>	„obstinacy“
10.	<i>fufum</i>	<i>nennem</i>	„envy“
11.	<i>mamisvg</i>	<i>yamehvk</i>	„suspicion“
12.	<i>nwedig</i>	<i>meeuk</i>	„fever“
13.	<i>zaalim</i>	<i>neem</i>	„empty/zero“
14.	<i>dama“am</i>	<i>zanweelim</i>	„lies“
15.	<i>zvgv</i>	<i>εεnhim</i>	„character“
16.	<i>enbisvg</i>	<i>zakvɲ</i>	„itching“
17.	<i>liebvg</i>	<i>ge‘ehvg</i>	„disturbance“

From the table, it is observed that the two regional dialects maintain their respective distinct lexical items for the abstract entities in the data. For instance, while the lexical items for „shyness“, and „cruelty“ as seen in example (1) to (2) are expressed in Agole as *nyan*, and *nyɔbil*, they are known in Toende as *valim*, and *buguhum* respectively. Interestingly, while Agole speakers employ two lexical items such as *pian“ad* and *antv“a* for „language“ and „case“ as shown in examples (3) and (4), Toende speakers maintain *tɔ‘ɔm* for both of them.

The examples in (5) and (6) contain borrowed lexical items such as „faith“ and „time“ which are expressed in Agole as *yadda* and *sanya* and told in Toende as *yatta* and *win* respectively. The variations in these items are attributed to their borrowed sources.

While the Agole items are taken from Mossi and Hausa, the Toende items shared similarities with its neighboring languages such as Taln and Nabt.

The variations in the lexical items in data (7) to (17) clearly define the regional differences in the dialects. It is revealed in the study that though these lexical items are common to both dialect users, each of them maintains their own words. While „wind“, „envy“, „lies“, „character“ and „disturbance“ are known in the eastern dialect as *sisi'em*, *fufim*, *dama'am*, *zvgv*, and *liebvg* respectively, they are termed in the western dialect as *Sabebihuk*, *nennem*, *zanweelim*, *εenhim*, and *ge''dvg* in that order as seen in data (7), (10), (14), (15) and (17) respectively. The motivations for their choice of words are observed within the regional boundaries of the language. Each of the dialect groups finds it comfortable using their lexical items even when they are speaking to the other dialect speakers.

5.3.7 Miscellaneous entities

This category of nouns consists of lexical items that are not in any way classified. They are several categories of lexical items that distinguish speakers of the two regional dialects. It is shown in our data that this section contains most of the lexical disparities in the dialects of Kusaal. Table 0.37 presents data on these lexical items.

Table 0.37: Variation in miscellaneous entities

No.	Agole	Toende	Gloss
1.	<i>məkil</i>	<i>məbəbən</i>	„bundle of grass“
2.	<i>pəvg</i>	<i>ti“iu</i>	„basket“
3.	<i>bin“isim</i>	<i>iilim</i>	„milk“
4.	<i>dabisir</i>	<i>gbent</i>	„day“
5.	<i>faad</i>	<i>pan“ahit</i>	„deceit“
6.	<i>digisir</i>	<i>gban“ahit</i>	„bed“
7.	<i>yinne</i>	<i>arakən“</i>	„one“
8.	<i>nintaam</i>	<i>nintəəm</i>	„tears“
9.	<i>ken-ken</i>	<i>zanne</i>	„welcome“
10.	<i>niŋgəttiŋ</i>	<i>ninligidiŋ</i>	„spectacle“
11.	<i>səlvma</i>	<i>lomihə</i>	„tales“
12.	<i>fəl</i>	<i>nyə“a</i>	„chance“
13.	<i>gətiŋ</i>	<i>gohomeŋ</i>	„mirror“
14.	<i>googi</i>	<i>duuduŋ</i>	„music fiddle“
15.	<i>kuguzən‘əvg</i>	<i>gbintim</i>	„bronze“
16.	<i>gumpvzer</i>	<i>akokot</i>	„duck“
17.	<i>kpaməəs</i>	<i>pan“ambibis</i>	„chicks“
18.	<i>zan‘antəlvŋ</i>	<i>bəə</i>	„pillar“
19.	<i>wvsa</i>	<i>kpaan</i>	„all“
20.	<i>zin“g</i>	<i>babit</i>	„place“
21.	<i>zupibug</i>	<i>vənk</i>	„hat“
22.	<i>zvŋzəŋ</i>	<i>zə‘əm</i>	„blind“
23.	<i>zan‘ambəŋ</i>	<i>da“agoŋ</i>	„inner yard“
24.	<i>zak</i>	<i>dan“aŋ</i>	„yard“
25.	<i>gvn</i>	<i>kə‘ət</i>	„inner wall in a living room“
26.	<i>sian“ag</i>	<i>lərvg</i>	„corner“
27.	<i>babir</i>	<i>fəl</i>	„space“
28.	<i>ba“əvk</i>	<i>pampavk</i>	„veranda“
29.	<i>dvdnɛ</i>	<i>wɛmɛ</i>	„so common“

From the tall list of lexical items, it is evident that the two dialects vary greatly in lexical items. It is apparently shown in (1) to (29) that users of the two regional two dialects of Kusaal employ totally distinct lexical items for the same referent in the language. The variations are observed within the geographical location of the speakers. This supports the variationist theory that states that languages vary according to the different geographical locations of the speakers.

From the table, while the eastern dialect users refer to a „bundle of grass“ as *mɔkil*, the same term is known in the western dialect as *mɔbɔbɔn*. The obvious reason for this lexical variation in the dialects is language contact and influence. As signaled earlier, the eastern dialect is surrounded by Mossi speakers where the lexical item in (1) is known as *mokile*. It is, therefore, not wrong to suggest that the term has been borrowed from Mossi into the eastern dialect. It is however interesting to hear items like „basket“, „milk“, „day“, „deceit“, and „bed“ termed as *pɛvg*, *bin''ism*, *dabisir*, *faad*, and *digisir* respectively in Agole but known as *ti''iu*, *iilim*, *gbent*, *pan''ahit* and *gban''ahit* in Toende as seen in (2) to (6). The discrepancies in these lexical items could not be traced to any language influence. They are marked by the different regional backgrounds of the speakers.

These kinds of lexical differences in the dialects pose serious constraints on the intelligibility status of the dialects. Most of the lexical items showing above are strange to the far ending parts of the dialect continuums. Though some of the lexical items in this category are said to be indigenous, their close relationship with languages like Taln, Nabt, Mossi, Hausa, and Mampruli suggests that such languages could have influenced the choice of those lexical items in the dialects.

A similar phenomenon is also worked on in the dialects of Dagaare by Bodomo (1989). He sees lexical variation as a situation where different lexical items in the various dialects have exactly the same meaning or semantic components in the other dialects of Dagaare. He discovers that while Northern and Central Dagaare call „too much“ *suo*, the Southern dialect calls it *gaali*, and the Western part termed it as *lur*. In the same way, „cat“ in Dagaare is known by the Northern and Western dialects as

jiaapuo, Central as *kokola*, and the Southern part as *leora*. Bodomo proposes that this kind of lexical variation occupies an important consideration in Dagaare dialect continuum in terms of communication among the speakers. He argues further that, compared to phonological and other grammatical variations, lexical variation imposes more serious constraints on mutual intelligibility among dialects in most cases than phonological and other grammatical variations in dialects (Bodomo 1989:38). This assertion is true in Kusaal and other Mabilia languages. During the data collection process, respondents for Agole indicate that some of the Toende words for the same referent in their dialect are completely strange to them. Similar claims were also made in Toende as opposed to Agole lexical items.

5.4 Variation in pronominal forms

Pronouns are lexical items that can replace nouns in speech and in writings. Kusaal exhibits lexical discrepancies in its personal and demonstrative pronouns. A few of such variations are presented in the table below.

Table 0.38: Variation in Kusaal pronominals

No.	Agole	Toende	Gloss
1.	<i>ti/tinam</i>	<i>tvn</i>	us
2.	<i>yanam</i>	<i>Ya</i>	you (PL)
3.	<i>banam</i>	<i>Ba</i>	they
4.	<i>di/li</i>	<i>la/li</i>	it
5.	<i>din/lin</i>	<i>lan</i>	„that“
6.	<i>dina/lina</i>	<i>lana</i>	„these“
7.	<i>dinna/linna</i>	<i>lanna</i>	„those“

From the table, it is observed that the lexical items for the personal pronouns vary greatly between the two regional dialects. It is apparent that the Agole dialect uses longer forms for the pronouns than the Toende dialect. For instance, while the Agole dialect users add the affix *-nam* to the plural forms of the first and second personal

pronouns, the Toende speakers maintain the base form of the lexical item. As observed in data (1), the eastern dialect speakers use both *ti* and *tinam* interchangeably for the plural form of the first-person personal pronoun „us“ which is only known in the western dialect as *tvn*. Similarly, the third personal pronoun „it“ is used interchangeably in Agole as *di* or *li* and only known in Toende as *la*. It is to this effect that the dialects continue to pose variations in the other demonstrative pronouns such as „that“ „these“ and „those“ which are used in Agole as *din/lin*, *dina/ lina* and *dinna/linna* and in Toende as *lan*, *lana* and *lanna* respectively as seen in the data (5) to (7).

5.5 Variation in verbal forms

As the objective of the study seeks to examine the lexical variations in the two dialects of Kusaal, other content words such as verbs were explored to figure out the kind of variations that exist in Kusaal verbs within the regional dialects. In common terms, verbs in this sense refer to lexical items that express actions or doings in Kusaal. It was shown that Kusaal has several lexical items showing dialect differences under this category. The two regional dialects have exclusive lexical items referring to the same kind of action or doing in Kusaal. A list of verbs showing lexical discrepancies in the dialects is itemised in the table below.

Table 0.39: Variation in some Kusaal verbs

No.	Agole	Toende	Gloss
1.	<i>gben''e</i>	<i>wik</i>	„to draw water“
2.	<i>ansig</i>	<i>gben''e</i>	„to fetch food“
3.	<i>bəsig</i>	<i>kabig</i>	„to fetch soup“
4.	<i>pɔ'ɔg</i>	<i>zɛem</i>	„to belittle“
5.	<i>welis</i>	<i>gaans</i>	„to separate“
6.	<i>nya''am</i>	<i>waasim</i>	„to whisper“
7.	<i>bəlis</i>	<i>pan''as</i>	„to comfort“
8.	<i>diis</i>	<i>le''</i>	„to feed somebody“
9.	<i>fa</i>	<i>nwelik</i>	„to lie“
10.	<i>endig</i>	<i>vudug</i>	„to shift“
11.	<i>ɛens</i>	<i>duus</i>	„to wipe“
12.	<i>filim</i>	<i>zam</i>	„to cheat“
13.	<i>end</i>	<i>li''</i>	„to block“
14.	<i>pin''</i>	<i>mum</i>	„to bury“
15.	<i>gen</i>	<i>siin</i>	„to get tired“
16.	<i>nij</i>	<i>bij</i>	„to put in“
17.	<i>gəsig</i>	<i>tuug</i>	„to err“
18.	<i>ligil</i>	<i>vugul</i>	„to cover“
19.	<i>madig</i>	<i>wo''ol</i>	„to soak something“
20.	<i>melim</i>	<i>fit</i>	„to vanish“
21.	<i>mamis</i>	<i>yameh</i>	„to suspect“
22.	<i>nij</i>	<i>ej</i>	„to do“
23.	<i>nya''al</i>	<i>wɛel</i>	„to abandon“
24.	<i>ledig</i>	<i>nyɔrig</i>	„to replace“
25.	<i>pibig</i>	<i>vuk</i>	„to uncover“
26.	<i>nwebil</i>	<i>babɔl</i>	„to search for fish in water“
27.	<i>lieb</i>	<i>kilim</i>	„to turn into“
28.	<i>pin''il</i>	<i>siɲ</i>	„to begin“
29.	<i>kvɔl</i>	<i>bugu</i>	„to get sober“
30.	<i>vɔlis</i>	<i>fvh</i>	„to intimidate“
31.	<i>pian''a</i>	<i>tɔ'ɔ</i>	„to speak“
32.	<i>sia</i>	<i>galima</i>	„to make fun of“
33.	<i>walig</i>	<i>siink</i>	„to pour water onto“
34.	<i>yul</i>	<i>Lul</i>	„to hang“
35.	<i>zan</i>	<i>nɔk</i>	„to take“
36.	<i>ma''al</i>	<i>los</i>	„to moisten“
37.	<i>vudug</i>	<i>felik</i>	„to shift“
38.	<i>tɔlvɔm</i>	<i>kpimih</i>	„to trade“
39.	<i>kis</i>	<i>yaa</i>	„to hate“
40.	<i>tilig</i>	<i>piin</i>	„to survive“

The table above presents an inexhaustible list of verbs showing lexical disparities in the two regional dialects of Kusaal. It is, however, prudent to state that users of the two dialects have a fair knowledge of some of the varieties and may use them

interchangeably while others are only intelligible to the exclusive dialect speakers. For example, when *gben''e*, *ansig*, *besig* which are used in Agole to express the act of „fetching soup“, „fetching food“ and „drawing water“ are used in Toende, they mean totally different verbs and hence, cannot express the same sense. In the Toende dialect, those three verbs have their collocated entities. The *gben''e* is a fetching verb which collocates with „fetching of solids“ such as bread, food, and other solid entities. The *ansig* and *besig* are both cutting verbs that collocate with the act of cutting a „branch of a tree“. As seen in the table, these are complete lexical items that speakers of the two regional dialects of Kusaal employ for the action or doing words in (1) to (3) respectively.

These same kinds of variations are observed in the rest of the data. For instance, while speakers of the eastern dialect express the act of „whispering“, „replacing“, „burying the dead“, „intimidating someone“, „shifting“, and „surviving“ as *nya''am*, *endig*, *pin''*, *ledig*, *volis*, and *tilig* respectively, they are variably known in the western dialect as *wæel*, *vuduk*, *mum*, *nyɔrig*, *fvvh*, and *piin* as shown in (6), (9), (14), (24), (30), and (40) respectively in the table. The different geographical backgrounds of the dialect speakers motivate these kinds of discrepancies in the lexical items. This mollifies the regional variationist theory that asserts that languages all over the world tend to vary indiscriminately with different geographical locations of the speakers (cf. Labov 1972, Njuki 2016, Wanjiku 2018). It is prudent to state that such regional variations in the lexicons are so rampant and as observed by Bodomu (1989) in Dagaare, these variations hinder the mutual intelligibility among the dialect speakers. Apart from those who share close contact with the other dialect speakers, most of the lexical items are completely strange and unintelligible to speakers who live in the far ending parts of the two regional dialect continuums.

5.6 Variation in adjectival forms

Just like the lexical category that has been discussed in the previous section, adjectives also display several kinds of lexical variations in the Agole and Toende dialects of Kusaal. Adjectives as seen in this section consist of lexical items that describe or qualify nouns in Kusaal. They are generally known as descriptive items. Below are examples of adjectives showing lexical variations in the two regional dialects of Kusaal.

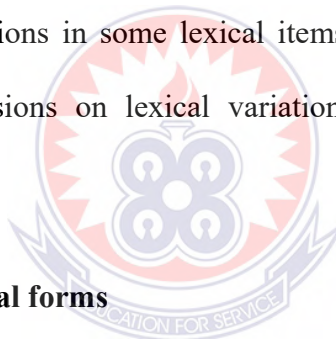
Table 0.40: Variation in Kusaal adjectives

No.	Agole	Toende	Gloss
1.	<i>meŋa</i>	<i>Sira</i>	„true“
2.	<i>naar</i>	<i>ba''ahok</i>	„end“
3.	<i>walisvg</i>	<i>ɔnsit</i>	„warm“
4.	<i>banl</i>	<i>wavŋ</i>	„lean“
5.	<i>deŋ</i>	<i>bɛ''em</i>	„delicate“
6.	<i>ler</i>	<i>lot</i>	„ugly“
7.	<i>fa''as</i>	<i>yalim</i>	„useless“
8.	<i>fvlis</i>	<i>faaham</i>	„swollen“
9.	<i>gɛtim/zɔlvmis</i>	<i>gaamih</i>	„idiotic/foolish“
10.	<i>gɛɛŋ</i>	<i>zizalvk</i>	„mad“
11.	<i>gvvr</i>	<i>gbeug</i>	„shore (river)“
12.	<i>nyan</i>	<i>valim</i>	„shy“
13.	<i>yinne</i>	<i>arakon</i>	„one“
14.	<i>bɔbir</i>	<i>mugut</i>	„force“
15.	<i>dasuŋ</i>	<i>bɛ''ɛ</i>	„selfish/stingy“

The data in the table indicate a clear lexical variation in the two regional dialects of Kusaal with respect to the descriptive words. It clearly shows the kinds of words or lexical items each of the dialect users employ for the same adjectives in the language. Using the regional variationist theory that posits that language varies according to the geographical backgrounds of the speakers, it is observed that all the lexical items in the data satisfy the claim. While the eastern dialect users distinguish „truth“ from the lies by saying *ameŋa*, the western dialect is termed as *sira*. Similarly, while speakers

of the Agole dialect refer to the following adjectives: „warm“, „lean“, „delicate“, „ugly“, „useless“, „swollen“, „foolish“, and „mad“ as *walisvg, banl, deŋ, ler, fa''as folis, gɛtimɔ/zɔlvmis*, and *gɛɛŋ*, they are respectively known in the Toende dialect as *ɔnsit, wavŋ, be''m, lot, yalim, faaham, gaavŋ*, and *zizalvk* as shown in data (3) to (10) respectively in the table.

Also, where the Agole regional dialect users employ these adjectives *gvvr, nyan, yinne, bɔbir*, and *dasuŋ* to express „river bank“, „shy“, „one“, „force“ and „selfish or stingy“. The Toende the users refer to the same adjectives as *gbeeuk, valim, arakon, mugut*, and *be''t* as shown in the (11) to (15) in the table. The variations in the lexical items are observed within the geographical boundaries of the dialect users. This is also similar to the variations in some lexical items that express adverbs in Kusaal. Below are some discussions on lexical variations expression adverbs in Kusaal dialects.



5.7 Variation in adverbial forms

Just like adjectives, adverbs are also another category of lexemes that pose differences in the two regional dialects of Kusaal. Adverbs in this study refer to those words that qualify or describe verbs in sentences. These kinds of lexical items describe when, where, and how an action was carried out in Kusaal. There are several of these kinds in the two regional dialects. Some of them are outlined in the table below.

Table 0.41: Variation in some Kusaal adverbs

No.	Agole	Toende	Gloss
1.	<i>tɔ''</i>	<i>wɛɛm-wɛɛm</i>	„hastily“
2.	<i>ani</i>	<i>nyina</i>	„there“
3.	<i>kir</i>	<i>pahavɲ</i>	„impatiently“
4.	<i>fie</i>	<i>lobug</i>	„cool down“
5.	<i>ɛɛnti</i>	<i>yiti</i>	„always/habitual“
6.	<i>bi''eh</i>	<i>fiin</i>	„small“
7.	<i>gvn''ɔe</i>	<i>nya''a</i>	„refrain“
8.	<i>gvllvm</i>	<i>ma''aa</i>	„alone“
9.	<i>yuolum</i>	<i>nyvrik</i>	„lately“
10.	<i>wvsa</i>	<i>kpaan</i>	„all“

The data indicate that the two dialects of Kusaal contain different lexical items for the same adverb in the language. The table portrays the different kinds of lexical items that speakers of the Agole and Toende dialects employ to express the same adverb in the language. It is observed that in most of the items, the Agole dialect employs shorter forms than in the Toende dialect. For instance, while „to hurry-up“, „there“, „impatiently“ and „cool“ are expressed in the Agole dialect with two or three segments such as *tɔ''*, *ani*, *ir*, and *fie* respectively, they are expressed in the Toende dialect with longer forms such as *wɛɛm-wɛɛm*, *nyinna*, *pahavɲ* and *lobug* as seen respectively in (1) to (4). With the exception of *yitti* „always“ and *fiin* „small“ which contain lesser segments in Toende than they are expressed in Agole, the rest of the items are either longer in Agole than in Toende or they are the same. As it is shown in (7) to (10) in the table, Agole speakers term „refrain“, „alone“, „lately“, „all“ as *gvn''ɔe*, *gvllvm*, *yuolum*, and *wvsa* which are known in the Toende dialect as *nya''a*, *ma''aa*, *nyvrik* and *kpaan* respectively. This assertion in a way supports Niggli (2014: 10) who observes that the Agole dialect use different words and longer forms for the same items than in the Toende. This shows that language manifests itself differently in different geographical areas. As posited by Labov (1972), the speakers of the two regional

dialects of Kusaal maintain the above different lexical items for the same adverbs in the language. Just like the case of the nouns, these variations also pose serious challenges on the mutual intelligibility among the two regional dialect users.

5.8 Summary

This chapter examines the lexical variation in the two regional dialects of Kusaal. It puts the lexical items into some themes such as nominal items, pronominal items, verbal items, adverbial items, and adjectival items. The lexical items in the nominal category are further discussed in themes such as names of plants and animals, body parts, insects, abstract entities, and a group of nouns which are termed „miscellaneous entities“ in this study. The other lexical groups such as pronouns, verbs, adverbs, and adjectives are discussed singularly. The chapter examines the variations in the lexical items synchronically and in ad-hocly by postulating which dialect uses what item. Under each theme, the study attempts to compare the lexical items in the Agole and Toende dialects with similar items in some neighbouring languages and dialects such as Mossi, Hausa, Taln and Nabt to examine possible dialect contacts and lexical borrowing. Though more studies are needed to draw conclusions on this, evidence shown from the study indicates Toende tends to share similar lexical items with Taln and Nabt because it shares boundary with them. On the other hand, Agole also tends to be similar in some lexical items with Moole and Hausa because Agole is surrounded by speakers of these languages. See in the appendix A and B for these lexical resemblance in the contact languages and dialects.

CHAPTER SIX

SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.0 Introduction

This chapter gives a synopsis of the entire study on the phonological and lexical variation in Kusaal. It provides a summary of the individual chapters, major findings and recommendations for further studies. The chapter is organised as follows: Section 6.1 presents a summary of the individual chapters while section 6.2 contains the major findings from each of the two objectives discussed in chapters four and five. Section 6.3 draws conclusions from the study and section 6.4 presents some recommendations.

6.1 Summary of the study

This study investigates the concepts of phonological and lexical variation in the two regional dialects of Kusaal. The study is organised into six chapters where chapter one introduces the statement of the problem, the prime purpose and the objectives of the study. It also indicates that dialect variation in Kusaal is not necessarily a recent phenomenon and that scholarly attention was drawn to it since the early 1960s when literacy works had begun in the language (Berthelette 2001). Rather unfortunately, however, since that early notice and the need for linguistic investigations into variation in the dialects, not much has been done to satisfy such a linguistic need. This study therefore set out to fill that scholarly gap. It however limits its scope to the phonological and lexical variations in the Agole and Toende dialects of Kusaal using the synchronic approach to dialect studies.

In chapter two, we appreciate the existing literature on language and dialects and other studies on dialect variation. In this chapter, we find out that dialect variation as a phenomenon has been widely investigated by scholars in other language groups. Some of them include Abubakar (1982), Bodomo (1989), Kullavanijaya (1999), Groves (2008), Mishra and Bali (2011), Asnaghi (2013), Ambato and Echavez (2019), Beal (2010), Eze (2019), Njuki (2016), Sam (2021), Wanjiku (2018) among others. Niggli (2014) also investigates the structure of Kusaal spoken in Burkina Faso and hints the variations in the lexical and phonological domains of the Kusaal dialects but did not provide an analytical account of the variations. This makes the present study necessary for a holistic investigation of the phonological and lexical variations in the Agole and Toende dialects of Kusaal. Chapter three presents the methodological framework of the study. It states the research design as well as the population, sample and sampling techniques used for this study. It also discusses the sources of data, how the data were collection and the procedures used in analysing the data.

Chapters four and five constitute the core of the study. Each of the chapters answers the two research questions that were set to guide this study. The chapter four conceptualises the phonological variation in the two regional dialects of Kusaal. The analysis is developed on the theory of generative dialectology which makes use of the theory of generative phonology to account for dialect differences. The various phonological processes that initiate the variations in the two dialects of Kusaal have been exposed in this chapter. The chapter five also considers lexical variation in the Agole and Toende dialects. It analyses data on various categories of lexical items that pose differences in the two regional dialects of Kusaal. The variationist sociolinguistic

theory that views language variation based on geographical differences is the theoretical framework of the chapter.

The study finalises in chapter six where a synoptical view of the entire work is provided. It summarises the individual chapters and also highlights the major findings of the study. The conclusions drawn from the study as well as the recommendations for future studies on Kusaal dialects are discussed in this chapter.

6.2 Major findings

The study reveals that though the Agole and Toende dialects of Kusaal are to some extent mutually intelligible, they differ significantly in phonology and lexicology. Even though evidence of other kinds of variations are shown in the dialects, phonological and lexical variations are the most noticeable ones and hence form the core objectives of the present study. The prime purpose of the study was to provide a comprehensive account of the phonological and lexical variations in the Agole and Toende dialects. In view of this, the study sought to achieve two main objectives which include the exploration of the phonological difference in the Agole and Toende dialects and also examines the lexical variations in the two dialects of Kusaal. The phonological variations in the dialects were explored before the lexical differences.

Findings from the study reveal that the geographical locations of the speakers influence the phonological variations in the dialects. The geographical factor responsible for this dialect division is the White Volter which bisects the language into two regional dialects namely; Agole „the Eastern dialect“ and Toende „the Western dialect“. The dialects are mutually intelligible and have common observations in their phonologies yet differ greatly in many areas.

It is shown from the study that different phonological processes in the two dialects of Kusaal influence the different phonological variations in the dialects. Phonological processes such as segment alternation (both consonant and vowels), segment substitution and segment deletions differences are among others responsible for the major phonological variations in the two dialects of Kusaal. It is also revealed that while labialisation, palatalisation, and glottalisation are in Agole, these processes are not observed in Toende. On the other hand, nasalisation and a kind of place assimilation are in Toende which are not also observed in the Agole dialect. Even though, vowel harmony is common in both dialects, Agole tends to stick to [+/- ATR] while Toende also sticks to [+/- round or spread] harmonies.

The second objective of the study seeks to highlight the lexical variations in the two regional dialects of Kusaal. This intends to get the different kinds of lexical items speakers of the Agole and Toende dialects respectively refer to the same referent in Kusaal. It is established that lexical variation in languages could be looked at in several perspectives, as in the case of the northern Gikūyū dialect (Wanjiku 2018). These include geographical variation, social variation, contextual variation, formal variation, semasiological variation, onomasiological variation among others. As this study compares and contrasts the Agole and Toende dialects of Kusaal, the geographical variation type was observed in this present study.

The study reveals that the two regional dialects of Kusaal have an exclusive inexhaustible list of lexical items referring to the same kinds of referents in Kusaal. These lexical items comprise both content and functional words. The content words include nouns, pronouns, adjectives, verbs, and adverbs in Kusaal. The functional words are articles, demonstratives and negations which do not show differences in the

dialects and hence are not discussed in the study. The study portrays that only the content words that trigger dialectal variations in Kusaal. It is observed that nouns form the highest word class with lexical differences in the two dialects. This is followed by verbs before any other lexical category follows. The lexical items within the nouns' category were further dichotomised and put into some themes such as names of plants and animals, parts of the body, kinship terms, food and beverages, and other groups classified as miscellaneous entities in the study. The rest of the categories were discussed in one theme with regards to the group such as pronouns, verbs, adverbs, and adjectives.

In an attempt to investigate the motivations for the different lexical items in the dialects, it is observed that the language and dialect contact play a key role. Toende tends to resemble Taln and Nabt which are both dialects of Farafare (see Atintono 2013) and share boundary with the Toende dialect of Kusaal. They therefore, the lexical choice in Toende at least, to some large extend. In a similar vein, Moole and Hausa which are both spoken largely within the Agole dialect also contribute to different lexical items in the Agole which are entirely different and strange in the Toende.

6.3 Conclusion

Dialect variation is an integral part of every human language with dialects and Kusaal cannot be an exception. The variations in Kusaal dialects could be viewed within a social dimension where social factors such as age, gender, class, and educational backgrounds are set as factors that are responsible for the variations in the dialects. It could also be viewed under a geographical dimension where the differences in the dialects are compared based on the regional or geographical backgrounds of the users.

The first dimension falls out of the scope of this study. The present study relies on the second dimension to describe the differences in the two regional dialects of Kusaal synchronically. Below are among others the conclusions drawn from the study.

Though, the Agole and Toende dialects of Kusaal are mutually intelligible to some extent, they differ greatly in their respective phonologies and lexical items. Different phonological processes in the dialects are responsible for the phonological variations in the two regional dialects. While voiced plosives are allowed at word final positions in the Agole dialect, voiced plosives are barred at WFP in Toende. Also, while vowel sequencing is allowed in Agole only monophthongs are accepted in Toende at least, not within syllable or morpheme boundaries. Among other phonological processes that trigger variations in the dialects are; segment substitutions, deletions, vowel harmony and consonant assimilation differences. Furthermore, secondary articulation features such as labialisation, palatalisation, glottalisation and nasalisation also ignite phonological variation in the Agole and Toende dialects of Kusaal.

The study also investigates the lexical variations in the Agole and Toende dialects of Kusaal using the synchronic dialectological approach to dialect studies. It is concluded that, as the dialects are spoken today, there are great differences in the lexical choice in the two dialects of Kusaal. Both the Agole and Toende dialects have an exclusive list of lexical items referring to the same referents in Kusaal. This phenomenon poses serious constraints on the intelligibility ratio within the dialects than phonological differences. This was seen when respondents in Agole dialect could not identify referents described in Toende, for examples *tia* for „beans“ which they know best as *beŋa*, *o“ot* for the „inner gate“ which they called *gun*, and *akan* for

„grasshopper“ which they termed as *susom*. It was the same with the Toende speakers when some could not identify *zvηzωη* which they only know as *zω''m*. The dialects also have different lexical items for verbs, adverbs, adjectives, pronouns determiners, demonstratives, negations, and other functional words.

6.4 Recommendations

This present study investigates the phonological and lexical variations in the two regional dialects of Kusaal using the synchronic dialectological approach. Consequently, the focal point of the study was on the way the dialects are spoken today. It is therefore, prudent that future studies on the dialects concentrate the diachronic or both synchronic and diachronic antecedents of the dialects. This will make room for researchers to compare the historical developments of the dialects and the possible changes that have occurred in them. This will help to provide a holistic view of the dialect variations in the language.

Furthermore, the study of dialect variations (dialectology) is often considered a sociolinguistic subfield, however, such was not the focus of this present study. The focus of this study was exclusively on the phonological and lexical variations within the regional dialects. It will, therefore, be insightful if future studies on the dialects also look at the sociolinguistic and grammatical variations in the dialects.

Finally, the data presented here cannot be the exhaustive list of words showing phonological and lexical variations in the two dialects of Kusaal. The data used in this study is taken from four out of the six administrative assemblies which form the major Kusaal speaking areas. This study cannot be complete without recommendations for further studies on the topic in other areas for a holistic and more explicit picture of the lexical and phonological variations in the Kusaal dialects. Nevertheless, it must be

noted that for now, the present study is considered the first of its kind in the language. It is therefore anticipated that it will set the bases for dialect studies in Kusaal. It will serve as a useful guide for future researchers in Kusaal and other Mabia languages who may be interested in dialect studies.



REFERENCES

- Abdallah, I. (2020). *Phonological and morphological adaptation of loanword in Dagbani*. Unpublished M.Phil Thesis, University of Education, Winneba.
- Abdul, R. E. (2014). *A synchronic sociolinguistic analysis of personal names among the Ewes*. Unpublished M.Phil Thesis, University of Ghana. Retrieved from <http://ugspace.edu.gh>
- Abdulai, M., Abdul-Razak, K. A., & Sanus, K. M. (2019). Exploring dialectal variations on quality health communication and healthcare delivery in the Sissala District of Ghana. *Language and Intercultural Communication*, 1-15.
- Abraham, W. (2006). Dialectology and typology: Where they meet - and where they don't. In N. Terttu, K. Juhani, & L. Mikko (Eds.), *Types of variations: Diachronic, dialectal and topological interfaces* (pp. 243-268). USA: John Benjamins Publishing Company.
- Abubakar, A. (1982). *Generative phonology and dialect variation: A study of Hausa dialects*. Unpublished PhD thesis, University of London.
- Abubakari, H. (2011). *Object-sharing as symmetric sharing: Predicate clefting and serial verb constructions in Kusaal*. Tromsø: Unpublished Master Thesis, University of Tromsø.
- Abubakari, H. (2018). *Aspects of Kusaal grammar: The syntax-information structure interface*. Austria: Unpublished PhD Thesis, University of Vienna.
- Abubakari, H., Assem, I. S., & Amankwah, A. S. (2021). Framing of COVID-19 safety protocols in Kusaal musical health communication: Language and literary analysis. *Language & Communication* 81, 64–80.
- Akrobetto, T. R. (2019). *A sociolinguistic study of lexical borrowings in Dangme*. Unpublished M.Phil Thesis, University of Education, Winneba.
- Ambato, G. A., & Echavez, N. Q. (2019). Phonological and lexical variations of two Subanen dialects. *Researchgate.net/publications*, (1-9).
- Asnaghi, C. (2013). *An analysis of regional lexical variation in California English using site-restricted web searches*. Milano: Università Cattolica Del Sacro Coure Di Milano.
- Atintono, S. A. (2013). *The semantics and grammar of positional verbs in Gurene: A typological perspective*. Manchester University: Unpublished PhD Thesis, University of Manchester.

- Batibo, H. M. (2015). Multilingual matters: Language decline and death in Africa- Causes, consequences, and challenges. In *Multilingual Matters Series 132*. England: Multilingual Matters Ltd.
- Bayley, R., & Lucas, C. (Eds.). (2007). *Sociolinguistic variations: Theory, methods and application*. Cambridge: Cambridge University Press.
- Beal, J. C. (2010). *An introduction to regional Englishes: Dialect variation in England*. Edinburgh: Edinburgh University Press Ltd.
- Berthelette, J. (2001). *Sociolinguistic survey report for the Kusaal language*. SIL International.
- Biadys, F. (2011). *Automatic dialect and accent recognition and its application to speech recognition*. Columbia: Columbia University Press.
- Bijeikienė, V., & Tamošiūnaitė, A. (2013). *Quantitative and qualitative research methods in sociolinguistics*. Lithuania: Vytautas Magnus University Press.
- Bisang, W. (2004). Dialectology and typology: An integrative perspective. In B. Kortmann (Ed.), *Dialectology meets typology: Dialectic grammar from a cross-linguistic perspective* (pp. 11-46). Berlin: Mouton de Gruyter.
- Bodomo, A. B. (1989). *A study of dialect variation in Dagaare*. Trondheim, Norway: Unpublished M.A Thesis, University of Ghana.
- Bodomo, A. B. (1993). Complex predicates and event structure: An integrated analysis of serial verb constructions in the Mbia languages of West Africa. *Working papers in Linguistics*, 20, pp 1-132.
- Booji, G. (2002). Language variation and phonological theory: Inflected adjectives in Dutch and related languages. In J. Berns, & J. Vanmarle (Eds.), *Present-day dialectology: Problems and findings* (pp. 35-56). Berlin New York: Mouton de Gruyter.
- Britain, D. J. (2010). *Dialectology*. Great Britain: Researchgate Publications.
- Brown, G. (1972). *Phonological rules and dialect variation*. Cambridge: Cambridge University Press.
- Budiarsa, M. (2015, Oct 2). Language, dialect and register in a sociolinguistic perspective. *Jurnal Ilmu Bahasa*, Vol. 1(No. 1), 379-387.
- Bussmann, H. (1996). *Routledge dictionary of language and linguistics*. (T. Gregory, & K. Kerstin, Eds.) London and New York: Routledge.

- Chambers, J. K., & Trudgill, P. (1998). *Dialectology (Second Edition)*. Cambridge: Cambridge University Press.
- Chambers, J. K., & Trudgill, P. (2004). *Dialectology: Cambridge textbooks in linguistics (2nd edition)*. Cambridge-UK: Cambridge University Press.
- Chaturvedi, S. (2015). A sociolinguistic study of linguistic variations and code-matrix in Kanpur. *Social and Behavioral Science*, 192, pp 107-115.
- Chomsky, N., & Halle, M. (1968). *The sound pattern of English*. New York: Harper & Row, Publishers.
- Coetzee, A. W. (2008). Phonological variation and lexical frequency. *Proceedings of NELS 38*.
- Creswell, J. W. (2007). *Qualitative Inquiry & research design: Choosing among five approaches (Second edition)*. London: Sage Publications, Inc.
- Crystal, D. (2008). *Dictionary of linguistics and phonetics (Sixth Edition)*. USA: Blackwell Publications.
- Da-Rosa, E. (2017). Linguistic variations in English. *Revista de Letras, Curitiba, Vol. 19(25)*, 35-50.
- Dawood, H. S., & Atawneh, A. (2015). Assimilation of consonants in English and assimilation of the definite article in Arabic. *American Research Journal of English and Literature, Volume 1, (Issue 4)*, (P. 09-15).
- De Lacy, P. V. (2002). *The formal expression of markedness*. Unpublished PhD Thesis, University of Massachusetts.
- Donoso, G., & Sanchez, D. (2017). *Dialectometric analysis of language variation in Twitter*. Spain.
- Eberhard, D. M., Simons, G. F., & Fennig, C. D. (Eds.). (2021). *Ethnologue: Languages of the world (Twenty-fourth edition)*. Dallas, Texas: SIL International. Online version. Retrieved 2 10, 2021, from <http://www.ethnologue.com/language/kus>
- Eddyshaw, D. (2016). *The grammar of Agolle Kusaal (Revised Version)*. Swansea.
- Edmonds, P., & Hirst, G. (2002). Near-synonymy and lexical choice. *Computational Linguists, Vol. 28(No. 2)*, (pp. 105-155).

- Etman, A., & Bees, L. (2015). Language and dialect identification: A survey. *SAI Intelligent System Conference* (pp. 220-231). London-UK: IEEE.
- Eze, P. (2019). Dialectal variations: A critical study of Umunze Igbo. *Journal of Language and Linguistics, Vol 6*(No 2), 51-66.
- Finegan, E. (2008). *Language: Its structure and use*. Boston: Thomson Higher Education.
- Finegan, E. (2015). *Language: Its structure and use (Seventh edition)*. United States of America: Cengage Learning.
- Foulkes, P. (2006). Phonological variation: A global perspective. In B. Aarts, & A. McMahon (Eds.), *The handbook of English linguistics* (pp. 625–69). Malden MA: Blackwell Publications.
- Fujiwara, Y. (1961). *The structure of dialectology*. Honolulu University Press.
- García, F. M., & Sghir, A. M. (2016). The concept of "Dialect" and "Language": A critical sociolinguistic overview. In S. A. Moustou, & M. F. Gracia (Ed.), *Vi Congreso de Árabe Marroquí: Identidad Y Conciencia Linguística* (pp. 47-60). Madrid: Ediciones UAM.
- García, M. I., & Sandhu, A. H. (2015). Language and dialect: Criteria and historical evidence. *Grassroots, Vol. 49*(1), 203-217.
- Gaskell, G. M., & Marshen-Wilson, W. D. (1996). Phonological variation and inference in lexical access. *Journal of Experimental Psychology: Human Perception and Performance, Vol. 22*(No. 1), 144-158.
- Geeraerts, D. (1993). Generalized onomasiological salience. In J. Nuyts and E. Pederson (eds), *Perspectives on language and conceptualization. Belgian Journal of Linguistics* , (PP. 43-54).
- Goldstein, B. A. (2001). The effects of dialect on phonological analysis: Evidence from Spanish-speaking children. *American Journal of Speech-Language Pathology, Vol. 10*, Pp. 394-406.
- Groups, V., U. (2021). *Pictures of African plants and crops*. Retrieved March 12, 2021, from <http://www.izito.ws/image?q=pictures+of+Africn+plants+and+crops....>
- Groves, J. M. (2008). *Language or dialect or topolect? A comparison of the attitudes of Hong Kongers and Mainland Chinese towards the status of Cantonese*. USA: Sino-Platonic Papers.

- Guy, G. R. (2007). Variation and phonological theory. (R. Bayley, & C. Lucas, Eds.) *Sociolinguistic Variation and Change*, Vol. 8(No. 2), 5–23.
- Hall, E. (1983). *Ghanaian languages*. Accra-Ghana: Asempa Publishers.
- Hayes, B. (2009). *Introductory phonology*. United Kingdom: Wiley-Blackwell: John Wiley & Sons, Ltd., Publication.
- Hazen, K. (2017). Language variation: Sociolinguistic variationists analysis. In A. Mark, & R.-M. Janie (Eds.), *The handbook of linguistics (2nd Edition)* (pp. 519-539). USA: John Wiley & Sons Ltd.
- Henry, L., Barbu, S., Alban, L., & Hausberger, M. (2015). Dialects in animals: Evidence, development and potential functions. *Animal Behavior and Cognition*, 2(2), pp. 132-155 doi: 10.12966/abc.05.03.2015.
- Holdcroft, D. (1991). *Saussure: Signs, systems, and arbitrariness*. Cambridge: Cambridge University Press.
- Holmes, J. (2013). *Learning about language: An introduction to sociolinguistics (4th Edition)*. (L. Geoffrey, & J. Chen, Eds.) New-York: Routledge:Taylor and Francis Group.
- Hudson, R. A. (2001). *Sociolinguistics (second Edition)*. Cambridge: Cambridge University Press.
- Hudu, F. (2018). Asymmetries in the phonological behaviour of Dagbani place features: Implications for markedness. *Legon Journal of the Humanities*, 29(2), PP. 197-240.
- Junji, W. (2005). *A synchronic and diachronic study of the grammar of Chinese Xiang dialects*. (B. Walter, H. H. Hock, & W. Werner, Eds.) Berlin - New York: Mouton de Gruyter.
- Kak, A. A., Fanzoo, O. F., & Mehdi, N. (2008). Phonological variation in Srinagar variety of Kashmiri. *Nepalese Linguistics*, Vol. 23, pp. 116-125.
- Katamba, F. (1989). *Learning anbou language: An introduction to phonology*. New York: Longman Group UK Limited.
- Kebeya, H., Bwire, A., Erastus, F., & Makokha, M. (n.d.). An intra-dialectal analysis of a dialect of Luyia: Backwash effects on language teaching/learning. *International Conference on African Languages and Literatures in the 21st Century* (pp. (PP. 1-19)). Kenya: Kenyatta University,.

- Koerner, E. F. (1971). *Ferdinand de Saussure. Origin and development of his linguistic theory in western studies of language: A critical evaluation of Saussurean principles and their relevance to contemporary linguistic theories*. Simon Fraser University.
- Koerner, E. F. (2005). *Dialects across borders: Current issues in linguistic theory*. (M. Filppula, J. Klemola, M. Palander, & P. Esa, Eds.) Amsterdam-Netherlands: John Benjamins Publishing Company.
- Kortmann, B. (2004). *Dialectology meets typology: Dialect grammar from a cross-linguistic perspective*. Berlin: Walter de Gruyter GmbH & Co. KG,.
- Kroch, A. S. (1978). Towards a theory of social dialect variation. *Language in Society, Volume 7*(No. 1), pp. 17-36. Retrieved January 1, 2012, from <http://www.jstor.org/stable/4166972>
- Kullavanijaya, P. (1999). A study of lexical variation in seven Zhuang dialects. *First International Zhuang Studies Symposium* (pp. 230-260). Wuming-China: Chulalongkorn University.
- Labov, W. (1972). *The design of a sociolinguistic research project: Report of the Sociolinguistic Workshop*. India: Central Institute of Indian Languages.
- Labov, W. (1990). The intersection of sex and social class in the course of linguistic change. *Language Variation and Change, Vol. 2*(2), (PP. 205-254).
- Mahadi, S. T., & Jafari, T. S. (2012). Language and culture. *International Journal of Humanities and Social Science, Vol. 2*(No. 17), 230-235. Retrieved Feb. 13, 2021, from <http://www.ijhssnet.com>
- Mambwe, K. (2008). *Some linguistic variations of Kaonde: A dialectological study*. Zambia: Unpublished MAster of Arts Thesis: University of Zambia.
- Marshall, C. R. (2013). *The morpho-phonological interface in specific language impairment*. United States: ProQuest LLC.
- Meyerhoff, M. (2006). *Introducing sociolinguistics*. New York: Routledge: Taylor and Francis Groups.
- Mishra, D., & Bali, K. (2011). A comparative phonological study of the dialects of Hindi. *ICPhS XVII*, pp. 1390-1393.
- Musah, A. A. (2010). *Aspects of Kusaal phonology*. Legon-Ghana: Unpublished M.phil Thesis, University of Ghana .

- Musah, A. A. (2018). *A grammar of Kusaal: A Mabia (Gur) language of Northern Ghana*. Berlin-Germany: Peter Lang.
- Musah, A. A., & Atibiri, S. A. (2020). Metaphors of death in Kusaal. *Journal of West African Languages, Vol. 47*(No. 1), Pp 1-9.
- Musah, A. A., Naden, T., & Awimbilla, M. (2013). *Handbook of Kusaal orthography: A reading and writing guide*. Tamale: GILLBT Press.
- Musgrave, S. (N.d). Dialects and varieties in a situation of language endangerment. *A Journal of Languages, Cultures and Linguistics*, 1-15. Retrieved Mar. 15, 2021, from <http://www.arts.monash.edu.au/ling/staff/musgrave/>
- Naden, T. (2015). *Kusaal (Agole) - English dictionary*. Tamale: GILLBT Interrim Print-out.
- Nerius, K. (2013). *An autosegmental analysis of phonological processes in Dagara*. Legon-Ghana: Unpublished M.Phil Thesis, University of Ghana.
- Newton, B. (1972). *The generative interpretation of dialects*. London: Cambridge University Press.
- Niggli, U. (2013). *Guide d'orthographe Kusaal (Troisième édition)*. Ouagadougou-Burkina Faso: Société Internationale de Linguistique SIL.
- Niggli, U. (2014). *The structure of Burkina Faso Kusaal (Draft Edition)*. Ouagadougou-Burkina Faso: SIL Burkina Faso.
- Niggli, U. (2017). *Dictionnaire: Kusaal-Français-English (editeur)*. Burkina Faso: www.kusaalbf.webonary.org.
- Njuki, G. M. (2016). *The phonological and lexical variation within the Kisumu-South Nyanza dialect of Dholuo*. Nairobi: Unpublished M.A Thesis, University of Nairobi.
- Nomlomo, S. V. (1993). *Language variation in the Transkeian Xhosa speech community and its impact on children's education*. Cape Town: University of Cape Town.
- O'Neil, P. (1963). *Transformational dialectology: Phonology and Syntax*. Germany: Zeitschrift für Mundartsforschungen.
- Owu-Ewie, C. (2017). *Introduction to Traditional and Action Research*. Accra-Ghana: Sam Woode Ltd.

- Patton, M. C. (2002). *Qualitative research and evaluation methods (third edition)*. CA: Sage Publications.
- Radzi, H., Jalaluddin, N. H., & Hamzah, S. N. (2013). Geo-linguistics study on lexical and phonology dialect variations in North Perak, Malaysia. *Procedia-Social and Behavioral Sciences* 118, 152-158.
- Roach, P. (2009). *English Phonetics and Phonology: A practical course (fourth edition)*. Cambridge: Cambridge University Press.
- Roh, K.-Y. (2004). English dialects and optimality theory: Prominent feature hypothesis. *SNU Working Papers in English Language and Linguistics*, 3, 1-19.
- Sam, J. (2021). *Lexical variations in the Ewe language spoken in Ho*. Winneba: Unpublished Mphil Thesis, University of Education, Winneba.
- Schiffmann, H. (1996). Linguists definition of mutual intelligibility. Retrieved February 17, 2021, from <http://ccat.sas.upenn.edu/~harold/fs/540/langdial/node2.html>
- Shareah, M. A., Mudhsh, B. A., & Al-Takhayinh, A. M. (2015). An overview of dialectal variations. *International Journal of Scientific and Research Publications*, Vol. 5(6), 2250-3153.
- Tagliamonte, S. (2006). *Analysing sociolinguistics variation*. Chambridge: Chambridge University Press.
- Tagliamonte, S. A. (2012). *Variationist sociolinguistics: Change, observations and interpretation*. UK: Wiley-Blackwell.
- Tracy, S. J. (2013). *Qualitative research methods: Collecting evidence, crafting analysis, communicating impact*. United Kingdom: Wiley-Blackwell Publication: A John Wiley & Sons, Ltd.
- Wanjiku, F. N. (2018). *Lexical variation and change in the northern dialect of Gikuyu language*. Nairobi: Unpublished M.A Thesis, University of Nairobi.
- Wardhaugh, R. (2010). *An introduction to sociolinguistics (Sixth edition)*. United Kingdom: Wiley-Blackwell Publishing Ltd.
- Wichmann, S. (2019). How to distinguish languages and dialects. *Association for Computational Linguistics*, Vol. 45(4), 823-831.

- Wieling, M., Montemagni, S., Nerbonne, J., & Baayen, H. R. (2014). Lexical differences between Tuscan dialect and standard Italian: Accounting for geographical and sociodemographic variation using generalized additive mixed modeling. *Language*, 90(No. 3), Pp. 669-692.
- Wolfram, W., & Schilling, N. (2016). *American English: Dialects and variations (Third edition)*. United Kingdom: John Wiley and Sons Inc.
- Yule, G. (2006). *The study of language (Third edition)*. New York: Cambridge University Press.
- Zuraw, K. (2010). A model of lexical variation and the grammar with application to Tagalog nasal substitution. *Nat Lang Linguists Theory*, (PP. 1-56). doi:10.1007/s11049-010-9095-2



APPENDIX A

The influence of Taln and Nabt in Toende

No.	Taln	Nabt	Tonde	English
1.	<i>tia</i>	<i>tia</i>	<i>tiya</i>	„beans“
2.	<i>ba</i>	<i>ba</i>	<i>ba</i> “	„father“
3.	<i>yir</i>	<i>yir</i>	<i>yit</i>	„house“
4.	<i>laat</i>	<i>lagt</i>	<i>la</i> “at	„luggage“
5.	<i>summa</i>	<i>suma</i>	<i>sumeŋa/sum pi n</i>	„bambara beans
6.	<i>sumkpem</i>	<i>sukpaam</i>	<i>suma/svmkpaam</i>	„groundnuts
7.	<i>blade/su</i> ’ó	<i>bare /su</i> ’ó	<i>barig</i>	„blade/knife“
8.	<i>yeto</i> ’óm	<i>tógum</i>	<i>tó</i> ’óm	„language
9.	<i>geene</i>	<i>alabaha</i>	<i>gabv</i>	„onion“
10.	<i>tibandwóg</i>	<i>bandoug</i>	<i>tigindaag</i>	„lizard“
11.	<i>bundan/laat</i>	<i>bundan/mórum</i>	<i>pan</i> “a	„riches/wealth“
12.	<i>balorog</i>	<i>balorog</i>	<i>balorug</i>	„ugly person“
13.	<i>keto</i>	<i>kipeleg</i>	<i>baniŋa/beli o</i>	„white sorghum“
14.	<i>tapóg</i>	<i>tapók</i>	<i>tampavk</i>	„bag“
15.	<i>san aañ</i>	<i>bankari</i>	<i>akavn</i>	„grasshopper“
16.	<i>buraa</i>	<i>budaa</i>	<i>bvraa</i>	„man“
17.	<i>bupok</i>	<i>bupók</i>	<i>bvpók</i>	„woman“
18.	<i>bobon</i>	<i>bome</i>	<i>bóbin</i>	„bundle“
19.	<i>kuloot</i>	<i>ngbam</i>	<i>mgbam</i>	„toad“
20.	<i>kolug</i>	<i>kólug</i>	<i>duudiŋ</i>	„local guitar“
21.	<i>dun</i> “no	<i>dó</i> “enitiŋ	<i>dó</i> ’ó	„to lie down“
22.	<i>nuo</i>	<i>nóbil</i>	<i>pan</i> “ambil	„chick“
23.	<i>e-ejeri</i>	<i>tum/itig</i>	<i>eje</i>	„do or act“
24.	<i>wuu</i>	<i>wuug</i>	<i>iivk</i>	„monitor lizard“
25.	<i>bi</i> “ihim	<i>iilim</i>	<i>iilim</i>	„milk“
26.	<i>yeela</i>	<i>lahibare</i>	<i>labaat</i>	„news“
27.	<i>kókperi</i>	<i>inkirug</i>	<i>sisirik</i>	„dwarf“
28.	<i>wó</i>	<i>nkó</i>	<i>yooŋ/ara on</i> “	„one“
29.	<i>boo</i>	<i>boo</i>	<i>bvv</i>	„goat“
30.	<i>pehigut</i>	<i>peog</i>	<i>pe</i> “w	„sheep“
31.	<i>sakuu/duobii</i>	<i>duobii</i>	<i>doobii</i>	„cat“
32.	<i>nobet</i>	<i>nóbire</i>	<i>nó</i> ’ót	„leg“
33.	<i>zuk</i>	<i>zuog</i>	<i>zugu</i>	„head“
34.	<i>guum</i>	<i>gbiheg</i>	<i>gbeem</i>	„sleep“
35.	<i>pupeelem</i>	<i>pupeelug</i>	<i>pupeelim</i>	„happy“
36.	<i>baa</i>	<i>baa</i>	<i>baa</i>	„dog“
37.	<i>kugre</i>	<i>kugre</i>	<i>kugut</i>	„stone“
38.	<i>tampiŋ</i>	<i>taŋ</i>	<i>tampiin</i>	„rock“
39.	<i>tintumbihug</i>	<i>ntan</i>	<i>titan</i>	„sand“
40.	<i>baya</i> “at	<i>yagt</i>	<i>ya</i> “at	„clay“

APPENDIX B

The influence of Hausa on Agole

No.	HAUSA	AGOLE	GLOSS
1.	<i>fitila</i>	<i>fitir</i>	„lamp-kerosene lamp“
2.	<i>gafara</i>	<i>gafara</i>	„pardon for forgiveness“
3.	<i>garwa</i>	<i>gariwaa</i>	„barrel“
4.	<i>girma</i>	<i>girima</i>	„respect, prestige, honourable“
5.	<i>goge</i>	<i>googi</i>	„a large one-string bowed musical instrument“
6.	<i>aljihu</i>	<i>gefa</i>	„pocket“
7.	<i>labari</i>	<i>labaar</i>	„news, information“
8.	<i>lissafi</i>	<i>lisaafi</i>	„counting, reckoning a bill, accounting“
9.	<i>mamaki</i>	<i>mamaki</i>	„astonishment, surprise“
10.	<i>aniya</i>	<i>ania</i>	„determination, zeal“
11.	<i>talotalo</i>	<i>tolotolo</i>	„turkey“
12.	<i>takarda</i>	<i>takata</i>	„paper, letter“
13.	<i>turare</i>	<i>tudaare</i>	„perform, incense“
14.	<i>wanzam</i>	<i>wanzam</i>	„barber“
15.	<i>amarya</i>	<i>amariya</i>	„bride, the latest junior wife“
16.	<i>albasa</i>	<i>alibasa</i>	„onion“
17.	<i>barka</i>	<i>barika</i>	„blessing“
18.	<i>agogo</i>	<i>gogo</i>	„watch“
19.	<i>basukur</i>	<i>baasakut</i>	„bicycle“
20.	<i>saada</i>	<i>saada</i>	„expensive“
21.	<i>shawara</i>	<i>saawara</i>	„advice, counsel“
22.	<i>albarka</i>	<i>albareka</i>	„blessings, prosperity, grace gift from God“
23.	<i>bawa</i>	<i>abawa</i>	„slave“
24.	<i>azurfa</i>	<i>anzurifa</i>	„silver“
25.	<i>lada</i>	<i>laara</i>	„reward, commission“