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CODE-SWITCHING AND CODE-MIXING IN PEER GROUP COMMUNICATIONS: SELECTED WHATSAPP CHATS IN GHANA

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DECLARATION

STUDENT'S DECLARATION

I, **Akosua Abrafi Adomah**, 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

I 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.

NAME OF SUPERVISOR: **DR. REBECCA AKPANGLO-NARTEY**

SIGNATURE: ……

DATE: …….

DEDICATION

I dedicate this thesis to my son, Agyemang Appiah Anning, my father, Mr. Joseph Adomah and all my family members not forgetting Mr. Isaac Osei for his enormous support and encouragement.

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ABBREVIATIONS

DET	Determiner
N	Noun
SUF	Suffix
ADJ	Adjective
PREP	Preposition
3SNG	Third person singular
PERF	Perfective marker
COP	Copular
PROG	Progressive
1PL	First Person Plural
V	Verb
2SNG	Second person singular
FOC	Focus marker
ADV	Adverb
PL	Plural
FNT	Finite verb
SUBJ	Subject
PST	Past
QNT	Quantifier
MOD	Modal
FUT	Future
NEG	Negative
POSS	Possessive

SPEC	Specifier
PREF	Prefix
* *	Not acceptable

ABSTRACT

A lot of studies have been done on code-switching. Most of the studies are concerned with face to face interactions but less on online communications. This study therefore gives an account of both sociolinguistics and grammatical aspects of code-switching and code-mixing in peer communications on WhatsApp group chats using the matrix language frame model (Myers-Scotton, 1993) and rational choice theory (Elster, 1986). The paper utilized unstructured interview, participant observation and screen captured chats as the basic data collection instruments. Purposive sampling technique was used to select the participants to correspond with what the research questions demand. The study revealed that intra-sentential code-switching was dominantly practised on the platforms. It also unveiled that majority of the embedded language elements adhered to the Morpheme Order Principle and System Morpheme Principle and as such, most of the embedded language morphemes followed the morphosyntactic structure of the matrix language. It was also found that the participants did back and forth switching and the English Language verbs incorporated into Twi constituents, went through some phonological process. Therefore, the study proposes that there should be a study on English embedded language verbs switched into Twi matrix language constituents.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

WhatsApp as one of the most patronized media, has become very essential tool for exchange of ideas, consolidation of relationship, and sustenance of friendship and commemoration of past events among people. The communication may be between individuals or within group platforms. The groups may be formal or informal. The formal group has strict rules governing messaging via the platform but the informal does not have. The members of the informal group share ideas on any issue they may come across. They may use abbreviations, symbols and code-switching to express views. This study investigates code-switching and code-mixing in peer group communications on WhatsApp chats which fall within the informal group.

1.1 Background to the study

Research in sociocultural linguistics of code-switching is often found in Blom and Gumperz's (1972) 'Social meaning in Linguistic structures' (e.g. Myers-Scotton, 1993; Rampton, 1995; Benson, 2001). In 1972, the term 'code-switching' attracted a lot of researches in linguistics and sociolinguistics perspectives. One of the earliest American studies in linguistic anthropology to deal with language choice and code-switching was George Baker's (1947) which gave description of language use among Mexican Americans in Tucson, Arizona. In Baker's analysis, he intended to answer the question," How does it happen, for example, that among bilinguals, the ancestral language will be used on one occasion and English on another, and that on certain occasions bilinguals will alternate, without apparent cause, from one language to another?" (1947, pp.185-186). Uriel's (1953) '*Languages in contact'* is the basis for code-switching research in linguistic field. His book motivated Hans Vogt, to write

'Language Contacts' (1954) which is cited as the first article to employ the term 'code-switching' in the field of linguistics (Alavarez-Cáccamo, 1998; Benson, 2001).

1.2 Communication

Communication is the interaction between two or more people. Communication can take place in a verbal or non-verbal form. The verbal form is having face-to-face discourse with someone or having mobile phone interaction by speaking to each other either through video calls or not. The non-verbal communication can be in letter writing form, gestures, body language, text messaging through short message service (SMS), Facebook or WhatsApp. The focus of this study will be on communication through texting on WhatsApp chats by peers.

1.3 Text Messaging

According to Leung (2008), college students use text messaging for escape, affection, convenience, entertainment, coordination and sociability. Peers on WhatsApp group chats, use text messaging for similar purposes. Lin and Tong (2007) attest to the fact that text messaging helps people who are far apart to sustain their relationships. This is one of the major reasons why peers create WhatsApp group chats. They always want to keep in contact through texting on their platforms. There are other linguistic concerns (Niedzieski & Preston 1999; Cameron, 1995) about threats to standard varieties and canonical form of communication practices and young people and modern technologies are accountable for these threats. Example of such linguistic concerns is code alternation in standard form of communication on social media and those responsible for this phenomenon include peers and WhatsApp communication technology. The idea of standardness in written language is itself a convention and abstraction from spoken language (Cameron,

1995; Shorts, 2007). The assertion made by Cameron and Shorts is sometimes not transpiring on peers' WhatsApp messaging. In other words, peers' written communications on WhatsApp, most often, do not conform to standardness in written language. They do switch codes which is non-standard form in written communication on WhatsApp because the language coded for written communication on social media in Ghana is solely English Language.

1.4 Peer Group and Interactions

According to Kang (2006), peer group is a group of friends with close relations and have regular interactions. They discuss issues and share views together. Peer group has a very large people in our society. It encompasses members in classroom, year group of a school, workers in an institution and a lot more. These people may have direct or indirect interactions in face-to-face interaction or interaction through social media respectively. Peer group is an association between social environment and behaviours, feelings and thoughts of individuals (James, 1890). Peer group is a social interaction process between people (Hogan & Robert 2004; Swan, 1987). Peer relationships are reciprocal and expect, and maintain track of an even balance (Clarks & Mills, 1979). Most peer groups do represent social networks with different patterns of dyadic relationships (Deaux & Martin, 2003). Peers on WhatsApp group chats therefore represent Ghanaians using WhatsApp for social networks and exhibiting different behavioural characteristics in their conversations on the platforms of which code alternating cannot be ruled out.

1.5 Statement of the Problem

A lot of researches have been done on code-switching and code-mixing in many social perspectives of human communications but there is minimal attention

regarding code-switching and code-mixing in peer group communications on WhatsApp chats. Though, a number of researches such as Opoku-Fofie's (2018) 'The Socio-Pragmatics of Code-Switching in WhataApp Group Chats' and Amuzu et al. (2018) 'I have been calling you saaa': L1 Discourse Markers in L2 English-based WhatsApp conversations among Ghanaians' have been carried out, the conformity of the internal structure of the code switched to the structural order of the base language on peers WhatsApp group chats in Ghana has not been explored in the literature. It is based on this that the current research seeks to investigate code-switching and code-mixing in peer group communications on some WhatsApp chats to fill the gap.

1.6 Significance of the Study

This thesis will create the awareness to people of the fact that peers do code-switching and code-mixing on WhatsApp chats therefore their informal way of face-to-face communication among themselves is also manifested on WhatsApp group chats with their peers. It will provide reasons why such sociolinguistic phenomenon is executed by peers on WhatsApp. Finally, it will serve as a referential document to future researchers in linguistic field.

1.7 Research Objectives

Based on the research questions that ought to be adequately answered to satisfy the problem of the statement, this study purposely has to find out

1. How the Embedded Language (EL) conforms to the Matrix Language (ML) morphosyntactic structure.
2. The frequency of occurrence of the switch types and grammatical classifications of the Embedded Language constituents.
3. The reasons and motivating factors for code-switching and code-mixing.

1.8 Research Questions

1. How does the Embedded Language (EL) conform to the Matrix Language (ML) morphosyntactic structure?
2. What are the frequency of occurrence of the switch types and grammatical classifications of the Embedded Language (EL) constituents?
3. What are the reasons and motivating factors for code-switching and code-mixing?

1.9 Limitations of the Study

Limitations are the anticipated issues that place restrictions on the smooth conduction of a study (Best & Kahn, 1998). The conduction of this study may be influenced by

Participants' unwillingness to use their conversations on the WhatsApp platforms because their identities which are contact numbers and names appear on the WhatsApp pages.

Another limitation may be the availability of the participants for interview on phone. Calling participants on phone for information may encounter problems of participants not able to be reached and those who may be gotten in touch with, may not be readily available to give the researcher the needed information.

1.10 Delimitations of the Study

The study is limited to peers and their written communications on WhatsApp group chats. It is also limited to code-switching and code- mixing with respect to English and Twi. Therefore, any other languages apart from English and Twi are not considered in the research.

1.11 Organization of the Study

This study is of five chapters. Chapter two reviews literature vital to the study. This chapter discusses the theoretical frameworks on concept of code-switching and code-mixing, the similar works done on code-switching and code-mixing in churches, schools and computer mediated interactions as well as the reasons and motivating factors for code-switching and code-mixing. Chapter three is methodology which consists of introduction, research method, populations, sampling technique and sample size. It also comprises data collection instruments, data collection procedure and data analysis method. Chapter four embodies discussions of results of data collected from participants with respect to code-switching and code-mixing. In this chapter, codes switched are analysed grammatically and socio-pragmatically. Chapter five talks about findings, recommendations and conclusion which is followed by references and appendices.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The chapter two of this thesis entails the general views on code-switching and code-mixing, code-switching in online communication, researches in support of code-switching, code-switching as communicative strategy, studies on grammatical constraints, reasons and factors that motivate peers to switch codes on WhatsApp group chats as well as related studies. It also explains the theoretical frameworks which are used to analyse the data grammatically and socio-pragmatically.

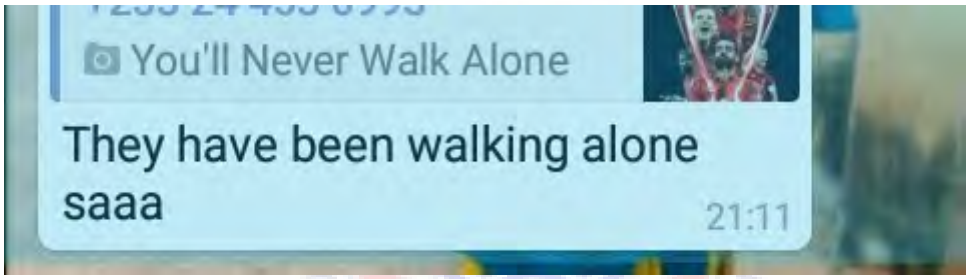
2.1 General views on Code-switching and Code-mixing

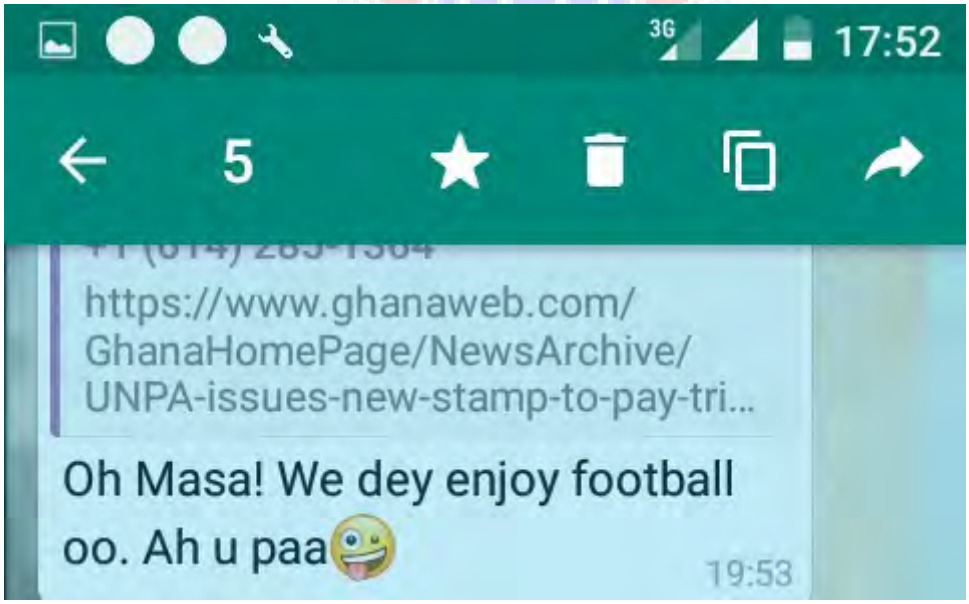
Erman (2002) perceives code-switching as a tool employed by multilinguals to alternate two or more languages. Gross (2006) stipulates that "Code-switching is a complex skilled linguistic strategy used by bilingual speakers to convey important social meanings. This occurs in order to conform to the interlocutor or deviate from him or her. The interlocutor usually determines the speaker's choice of language variety i.e. either to gain a sense of belonging or to create a clear boundary between the parties involved" (p.144). Muysken (2000) posits that code-mixing is the lexical items and grammatical features of two languages that are in the same sentence. In Li (1998; 2000), code-mixing is any mixture of linguistic constituents of two or more languages in the same utterance at various levels: Phonological, lexical, grammatical and orthographical. Meisel (1989) talks of code-mixing when there is fusion of two grammatical systems. Switching of languages happening within the same sentences is code-mixing (Bokamba, 1988; Sridhar & Sridhar, 1980). The code-switching can be lexical, phrasal or clausal.

2.2 Meaning of Code-switching and Code-mixing

The term 'code' is "an umbrella term for languages, dialects, styles etc." (Gardner-Chloros, 2009, p.11). 'Switching' is exchanging of codes by interlocutors between different languages within the same communicational intercourse. Some researchers use code-switching and code-mixing phenomena interchangeable (Gumperz, 1982, Myers-Scotton, 1993). Nevertheless, there are some researchers who perceive these two phenomena differently. Bokamba (1989) sees code-switching as inter-sentential and code-mixing as intra-sentential. Ritchie and Bhatia (2013) refer to code-mixing as the mixing of various linguistic units within a sentence. Gumperz (1982, p.59) posits that code-switching is the "Juxtaposition within the same speech belonging to two different grammatical systems or subsystems". According to Heller (1988, p.1), code-switching is "the use of more than one language in the course of a single communicative episode". Auer (1984, p.1) refers to code switching as "the alternating use of more than one language" while Myers-Scotton (1993, VII) posits that it is "the use of two or more languages in the same conversation". Heller, Auer and Myers-Scotton's definitions seem to be similar. What does not make clear about their definitions is that they do not draw the clear line between code-switching and code -mixing because both phenomena involve the use of two or more languages. In other words, requisite linguistic elements that will help distinguish the former from the later were not utilized in their definitions. Halmari (2004) also sees code-mixing as "the mixing of two or more languages within the same conversational episode" (p.115) or "in the same discourse" (Nunan & Carter 2001, p.59). It is very obvious here that the definitions for code-switching by Heller, Auer and Myers-Scotton have also been used by Halmari, Nunan and Carter as the definition for code-mixing. This affirms the fact that most researchers are not able to differentiate between code-switching and code -mixing and as such makes it difficult for readers to distinguish

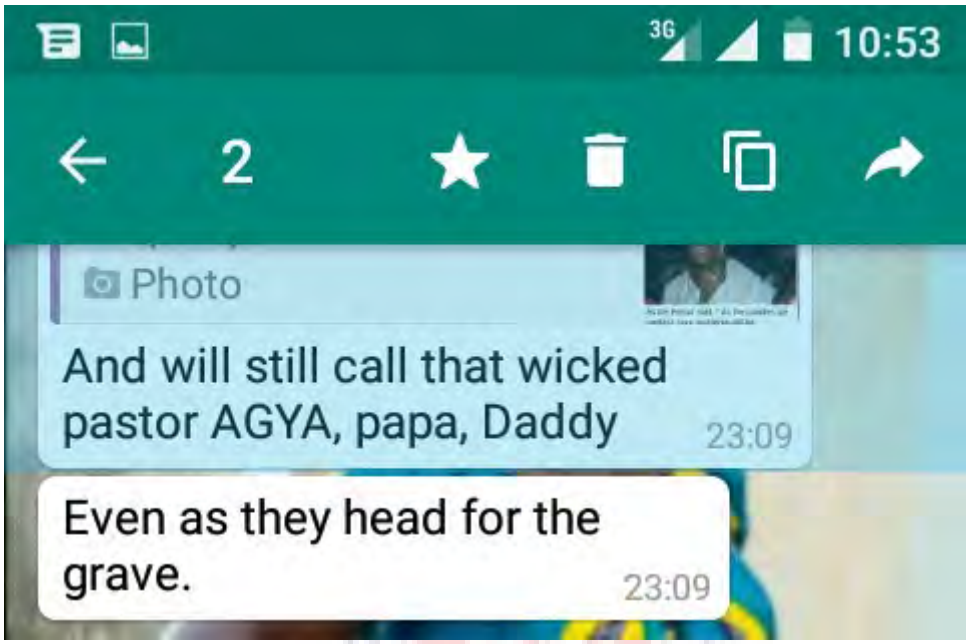
between the two phenomena. Ritchie and Bhatia (2013) state that "creativity and complexity are salient features of code switching and code mixing" (p.388). This is evidence that it is really difficult to side with the proponents of the various definitions of the two phenomena. However, I therefore want to build on Auer (1984) and Halmari's (2004) definitions to draw a clear line between the two phenomena. I therefore define code-switching as an alternation between languages either at the boundaries of a single speech or a complete switch from one language to another in a turn within the same conversation by bilinguals or multilinguals. Below are examples from the data collected;

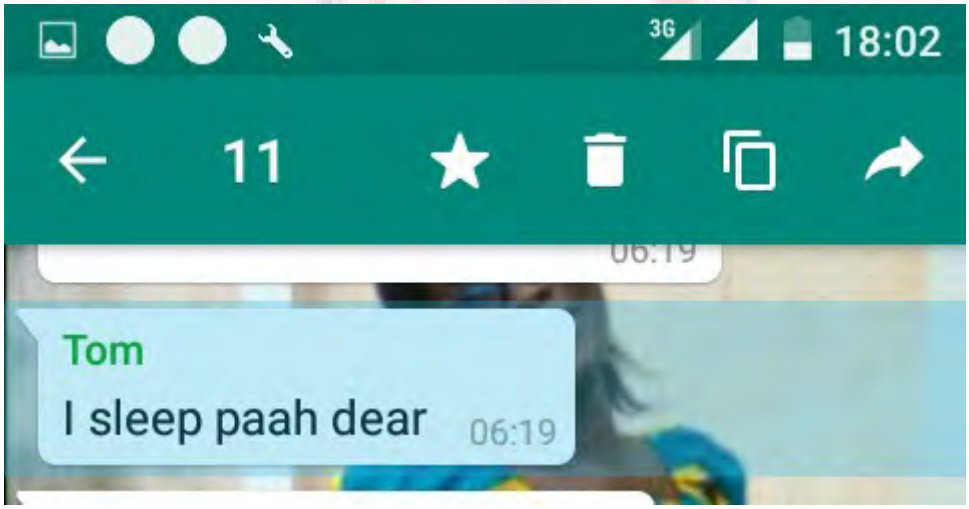




Code-mixing on the other hand, is the alternation between languages where lexical item (s), phrase or morpheme(s) from an embedded language is inserted within a

dominant language in the same conversation by bilinguals or multilinguals. Examples are as follows;





The examples above are code alternations across English Language and Asante Twi which is the focus of this paper. English Language is a default language in this research.

2.2.1 Types of code-switching

There are different types of code-switching proposed by different scholars. Poplack (1980) proposes types of code-switching as inter-sentential switching, intra-sentential switching and tag switching. Jendra (2010) classifies the types of code-switching under two categories. These are grammatical classification which is based on where the code - switching takes place in the sentence and contextual classification which concerns the rationale behind bilingual switches.

Jendra puts intra-sentential code-switching, inter-sentential code-switching and tag code-switching under grammatical classification. The contextual classification encompasses situational code-switching and metaphorical code-switching.

Blom and Gumperz (1972) also state that there are two types of code-switching which are situational-occurs when there is a change in situation and metaphorical occurs when changing a topic. Gumperz (1982) classifies these types of code-switching as subtypes of code-switching within conversational code-switching. According to Heller (1988) the two phenomena are currently equally associated with inter-group interaction as well. Auer explains that “At the heart of the distinction between situational and metaphorical code-switching lies the assumption that there are situational parameters that allow one to predict language choice; [and] there is a simple almost one-to-one relationship between extralinguistic parameters and the appropriate language for this situation"(1984, p.88).

2.2.1.1 Intra-sentential code-switching

According to Muysken (1995) cited in Hammers and Blanci (2000), intra-sentential code-switching can be seen as insertional or alternational. Insertional code-switching positions one language as the matrix language, as established by Scotton (1993), into

which elements from another language are embedded. In the case of the current research, the matrix language is English and the embedded language is Asante Twi. Alternational code-switching on the contrary, composites the usage of switches at clause boundaries.

According to (Li Wei, 2000), intra-sentential code-switching takes place within a sentence or clause. The definition by Li Wei to me is very confusing with code-mixing. The definition is similar to the definition given to code-mixing by Bokamba; Sridhar and Sridhar in 1988 and 1980 respectively. Intra-sentential code-switching is therefore the switches that occur at the edges of a matrix language. It sometimes occurs at the two edges of the matrix language or at one edge of the matrix. “Intra-sentential code-switching is occurred when in a sentence is found a word, a phrase or a clause of foreign language within base language" (Jendra, 2010, p.76).

2.2.1.2 Inter-sentential code-switching

Inter-sentential code-switching manifests outside the sentence or the clause boundary (Li Wei, 2000). Luciana (2006) postulates that inter-sentential code-switching concerns with one clause being in one language and the other clause in the other language. “Inter-sentential code-switching is found when there is a complete sentence of foreign language between two sentences in base language" (Jendra, 2010, p.76). In the same line, Gardener-Chloros (2009) mentions that inter-sentential code alternation takes place when a multilingual speaker employs more than one language in a single speech beyond the clause to communicate his intents well.

2.2.1.3 Tag code-switching or extra-sentential code-switching

Poplack in Hammers and Blanci (2004) prefers extra-sentential to tag code-switching. Jendra (2010) mentions that a tag code-switching occurs when bilingual

fuses short expressions (Tag) from distinct language at the end of his speech. Such short expressions can be command, interjection, idioms.

2.2.1.4 Situational code-switching

Hymes stipulated in Jendra (2010, p.76) that “the changing situations involved could be the setting, the participants or the Norms of Interactions". The situation compels interactants to codeswitch in their conversations. According to Wardhough (2010 quoted in EL-Saghir, 2010, p.3) “Situational code-switching happens when the change in language use occurs according to the situation”. In the same vein, Paolillo (2011, p.3) states that “Situational switching is code-switching that is conditioned by factors of the situation in which an interaction takes place”.

2.2.1.5 Metaphorical code-switching

“Metaphorical code-switching happens when there is change in the perception, or the purpose, or the topic of conversation. In reference with the factors, this type of switching involves the End, the Act sequences, or the key, but not the situation” (Jendra, 2010, p.77). Paolillo says that switching is metaphorical because it uses correlations between codes and social roles of communicative impact.

2.3 Researches in Support of Code-switching.

Lan (2000) asserts that the use of code-switching is a politeness strategy that enhances community connectivity. Peers on WhatsApp chats code-switch on WhatsApp which is a speech community in order to promote connectivity. Code-switching is employed as an effective pedagogical strategy (Canagarajah, 2011) but also seen as linguistic creativity and criticality (Li, 2011). Peers on WhatsApp group chats use the platform as a means of creating their own language style. Code-switching is seen as evidence of advanced executive to justify language choice to

manage communicative demand (Genesee, 2003; Zhu & Li, 2005). Code-switching may be used as a strategy of neutrality when a language used may give a wrong massage (Myers-scotton, 1993.) Peers on WhatsApp group chats code-switch in order to communicate their exact intent. In other words, they practise such phenomenon for their interactants to get what they actually intend to communicate. Trudgill (2000) indicates that 'speakers switch to manipulate or influence or define the situation as they wish, and to convey nuances of meaning and personal intention'. Code-switching is a 'sign of giftedness' when interlocutors switch their codes (Hughes et al, 2006).

2.4 Gumperz's works on Code-switching

John Gumperz is often cited as the scholar who spearheaded code-switching as a field of study. He sometimes wrote some papers alone and sometimes with other scholars. Blom and Gumperz (1972) examine not switches between language varieties but between dialects of the same language-Norwegian. The 1972 article in conjunction with the study of code-switching among Hispanic Americans (Gumperz & Hernandez- Chavez, 1970; 1978) made Gumperz the most influential linguistics scholar in discussions of the social motivations of code-switching in 1970s and 1980s (Myers- Scotton, 1993). According to Myers-Scotton (1993), Blom and Gumperz were first to investigate code-switching as a field of study. They differentiate between two types of switching, which are; 'situational' and 'metaphorical' switching. Situational switching "assumes a direct relationship between language and the social situation" (Blom & Gumperz, 1972, p.116). This switch takes place when there is an alteration in how the interactants realize the social situation encompassing changes in the interactant's definition of each other's

right and obligations. Metaphorical switching also comes into play when there is a change in the subject matter or topic.

Gumperz (1982) again worked on two varieties involved in code-switching: the 'we' and the 'they' codes. He points out that the we-code is related to the minority language which is often employed for in-group and informal activities. The they-code on the other hand is associated with the 'more formal, stiffer and less personal out-group relations. He notes that the correlation between communicative style and group identity should be treated as symbolic as language usage is not directly predictable by it. The 'we-code' associates with family, home and peer groups and as such participants for this particular research are of high possibility of manifesting some of its features because they are also peers.

2.5 Code-switching in Ghana

Forson (1979,) reveals that code-switching was not a code choice in Ghana until after the early 1950s when English was introduced as the medium of instruction in the elementary school. I want to argue on Forson's report because before the introduction of English as medium of instruction, Ghanaians had learnt English and communicated in English. Owing to Ghanaians innate indigenous languages, there was definitely the possibility of English as a subject of learning how to write and speak it by Ghanaians, to have contact with the indigenous language. I therefore want to assert that obviously, Ghanaians would practise code-switching before the introduction of English as a medium of instruction but its occurrence might not have come to the realization for study and therefore might be thought that it was not in existence.

Amuzu (2005) reviews Forson's (1979) claim on code-switching as the 'third tongue' of the educated Ghanaian. He stipulates that 'code-switching, to a large extent, has become the first tongue of most educated youth'. I am in strong support of Amuzu's assertion because the rate at which code-switching prevails on WhatsApp chats, indicates that very soon code-switching will be the solemn language in peers WhatsApp communications in Ghana.

Asilevi (1990) examines Ewe-English code-switching in conversational discourse in the case of English as a second language in Ghana as well as the impact of English on the educated Ewe indigenous speaker. He talks about Ewe-English code-switching and the sociolinguistic and other linguistic factors that actuate such switching. His work is relevant to this research because this study investigates similar aspects of code-switching but between English and Asante Twi on peer WhatsApp group communications.

Amuzu (2012) gives in-depth textual analysis of the code-switching that Ewe-English bilingual employs in different social contexts which encompasses informal interactions at home, semi-formal discussions in study group meetings at school and interactions on radio talk. He reports that code-switching seems to be predominantly unmarked. Amuzu (2005) also reveals that code-switching has spread its tentacles to a lot of formal settings where the bilinguals employ it to perform variety of socio-pragmatic interactions. This thesis also looks at the socio-pragmatic aspect of code-switching in the informal interactions in peer communications on WhatsApp group chats.

Quarcoo (2012) on the other hand, defines code-switching as the usage of two different grammars in a single clause. Code-switching does not occur in a single

clause only but also between sentences and phrases as well. Her definition is solely grammatical. Her work on grammatical constraints on verb phrases in Twi-English code-switching will be very useful for this work because this study also analyses the grammatical constraints of the codes switched in peer communications on WhatsApp group chats.

Asare-Nyarko's (2012) work on Akan-English code-switching in some selected churches in Accra also investigates the types and the patterns of code-switching and their manifestations in conversations in the churches. She conducted an audio - recording of naturally occurring speech activities for example at Ringway Assemblies of God and Pentecostal Fire Ministry. Her findings unveiled intra-sentential, inter-sentential and tag-switching as the types of code used in the various conversations that were recorded. The types of code-switching and the switch patterns are also the focus of this study.

2.6 Code Alternations in Group Interactions

According to Asilevi (1990), code-switching is commonly used in group interactions. Code-switching is employed in preaching and performing other church services (Andoh 1997, Albakry & Ofori, 2011; Asare-Nyarko, 2011). Code-switching in the classroom has been worked on by (Asilevi, 1990; Amekor, 2009; Ezuh, 2009; Brew, 2012). Code-switching concerning students' academic discussions has also been done by (Obiri-Yeboa, 2008). Yevudey (2009) has also researched on code-switching in radio discussions. These are very relevant to the current study because it also concerns with group interactions.

2.7 Researches on Code-switching and Code-mixing in Computer Mediated Communication

Warschauer, EL Said and Zohry (2002) is one of the earliest studies to research code-switching in computer mediated interaction. They investigate English and Arabic language use in email communication by a group of young professionals. In their investigation, it was found that English was more often used when searching the internet and in formal email interactions. They also found that a Romanized version of Egyptian Arabic was most often used in informal email messages and in online chats in Egypt despite the existence of the two varieties of Arabic in Egypt namely classical Arabic and the Egyptian Arabic. This choice of code was also preferred by interlocutors when expressing highly personal content. Goldbarg (2009) also investigates the Spanish-English code-switching in email exchange of five Latin American participants. She found in her research that English was frequently correlated with communications that dealt with professional and job-related issues. Spanish, the interactants L1, was often used in communications to express intimacy, informality and group identification. Peers on WhatsApp group chats sometimes employ L1 which is Asante Twi in conjunction with English in their communications for similar purposes.

Durham (2003) examines language choice in a Swiss mailing list investigating a corpus of 996 emails gathered from 1999 to 2002. The interactants were students from distinct medical schools in Switzerland where instruction was imparted in German. She found that the usage of English escalated from 10% to 80% within four years. She explained that the reason for that trend was due to the fact that English was a non-native language for all interactants. She found that the interactants resorted to the usage of English as the main language because the usage of more than

one language in the email exchange was impractical and confusing to the participants.

Huang (2004) investigates code choice and language use in the emails employed for interpersonal communication written by 8 Chinese-English bilinguals in Taiwan. From his analysis of a corpus of 223 emails accompanied with interviews and questionnaires, interactants used three modes of email communication: Chinese-English bilingual, Chinese monolingual and English monolingual modes. He reports that the Chinese monolingual mode was used when interactants wanted to express their personal thoughts and feelings. This mode was also preferred when exhibiting their local identities. English monolingual mode was employed by participants to exhibit "an embrace of international and internet identity and of younger generation identity" (p.307). According to his report, topics associated with movies, shopping, sports, computers, food, motivated instances of code-switching in his data. A lot of issues discussed on WhatsApp group chats, trigger peers to switch from the L2 to L1 or vice versa.

2.8 Peer Group and Code-switching in Online Communications

Many researches have been made concerning code-switching in online communications like Facebook, Twitter and SMS. Examples of studies made with respect to code-switching in online communications are (Axelsson, Abelin & Schroeder, 2003; Goldbarg, 2009, Lee, 2007; Montes-Acala, 2007; Sukyadi, Wirza & Hasiani, 2012; Tastan, 2012). These people did the research in online because they realized that a lot of people go online and as a result much communications do transpire there and therefore wanted to investigate the kind of dominant languages that are used. This research is aimed at doing similar investigation but on WhatsApp.

Goldbarg (2009) investigated the study of Spanish-English communication to analyse bilingual code-switching. This paper is aimed at achieving similar objectives but the study is on English-Asante Twi switch. Waschauer and Zohry (2007), investigated a study on code-switching among a group which comprised Arabic-English bilinguals. The study relates to this research because it also concerns group chats and bilinguals as well.

A few studies show that time spent using internet outwits time spent in face-to-face interaction with friends and families (Nie, Hillygus & Erbring, 2002). People really spend time on email and instant messaging to interact with others. Peers for instance use the internet for connectivity and maintenance of relationships on WhatsApp group chats. Electronic games and information online can facilitate conversation and interaction among peer groups (Livingstone & Bovill, 2001; Orleans & Laney, 2000; Suoninen, 2001; Valentine & Holloway, 2002) and these make peers to use languages in diverse ways. Frequent conversations and interactions are the major reasons why peers create WhatsApp group chats. Lee and Kuo (2002) establish that time is increasingly spent in interacting with friends on internet. Valkenbury and Peter (2005, 2007) also assert that increased time with friends in online communication improves the quality of relationship.

According to Yus (2011), written texts which are words to be communicated verbally, are also associated with WhatsApp interactions and taking new trends by peers in WhatsApp group chats. These texts constitute a new language variety. Before one could undertake any WhatsApp interactions, one would need a smart phone. The emergence of new technological devices has made people use mobile phones differently (De Souza, 2013). Horst (2013) posits that mobile phones and

mobile media are widely considered as one of the most global communications platforms. Regarding the contemporary research on mobile written interactions, diverse approaches have addressed everyday communication (for instance, Baron, 2008; Durscheid & Stark, 2011, Ling & Baron, 2013). Linke (2013) establishes the integration of mobile, online media and communication in a research on the practices of everyday communication. The language employed in this new communication environment offers opportunities to give rich contribution to the analysis of language alternations as written mobile communication seems to offer new language (e.g. Dürscheid & Stark, 2011).

Androutsopoulos (2011) highlights on the important role of language variation in new media discourse studies. The role of language variation in online communication is very crucial because participants of particular social network employ 'social languages' to be recognized as members of the group (Jones & Hafner, 2012). Indeed, members of peer group WhatsApp chats do embrace code alternations because that is one of the features that tag their communications as informal. Nevertheless, the code switched, should be one that is understood by all so that there will be no communication barrier.

2.9 Previous Studies on WhatsApp Chats

Some of the previous studies conducted on WhatsApp chats are some aspect of language studied with sociolinguistic corpora like discourse units and phenomena such as turns-taking, speech acts and interactions (Bani-Khair et al., 2016; Gascuena, 2016; Alcantara Pla, 2014; Arriola, 2014); linguistic variation from diaphasie, diastratic or diatopic point of view (Perez-Sabater, 2015; Sanchez-Moya & Cruz-Moya, 2015); multimodal communication (Verbal, iconic or hybrid), (Sanchez-Moya

and Cruz-Moya, 2015); use of orthotypographic elements (Vazquez-Cano et al., 2015); the role of the so-called emoji in communication (Sampietro, 2016 a, b; Durscheid & Siever, 2017) and didactic use of instant massage for digital and linguistic competence (Castillo, 2017). Another interesting phenomenon is code-switching in IM (Nurhamidah, 2017; Zaehres, 2016; Zagoricnik, 2014. Al-Emran and Al-Qaysi (2013) stipulate that WhatsApp is found to be the most social network App used for code-switching by both students and educators. This is why the researcher is conducting the current research on code-switching and code mixing on WhatsApp to investigate if peers practise them in their communications on WhatsApp group chats.

2.10 Similar Corpora Database

Despite that the study of WhatsApp chats is a relatively new research field, there are some corpora database conducted on them. *The what's up,* Switzerland? corpus (Stark et al., 2014) aims at the characterization of WhatsApp chats and the comparison of the chats to short message service (SMS). It has 617 chats written by 1,538 participants. Only 426 participants shared demographic information (Uber-wasser & Stark, 2017). 46% of the corpus is in German, 34% in French, 14% in Italian, 3% in Romansh and 3% in English. The different languages are due to the fact that Switzerland is multilingual country. The socio-demographic information encompasses age, gender, educational level and place of residence grouped in a region. This research focuses on the variety of languages which are English and Asante Twi switched in the conversations on WhatsApp chats by peers.

Verheijen and Stop (2016) gathered a corpus which is part of the SoNaR (STEVIN Nederland-stalig Referentiecorpus) of posts and WhatsApp chats in Dutch. The

corpus has 332,657 words in 15 chats given by 34 interactants. Their meta-data comprises interactants' name, birth place and date, age, gender, educational level and place from which chats were sent. This corpus was employed as a basis for a research where WhatsApp chats and other written forms were compared (Verheijen, 2017). In this study, the chats will be compared on the basis of lexical, phrasal, sentential and code-switching types to find out which of them are predominantly used by the participants. Hile et al. (2017) gathered a corpus of chats between Flemish teenagers ranging from 13 to 20 years old from Facebook Messenger, WhatsApp and IMessage. The purpose was to find out the effects of social variables, age, gender and education in relationship to teenagers, non-standard use of language in computer mediated communication. The non-standard use of language in his analysis will be very relevant in the recent study but focuses on WhatsApp as its setting.

2.11 Code-switching as Communicative Strategy

In a multilingual society, languages fulfil certain roles and represent different identities so that they complement another to serve "the complex communication demands of a pluralistic society" (Sridhar, 1996, p.53). Peers on WhatsApp group chats constitute a multilingual community and therefore frequently switch from one language to another in order to meet these complex communicative demands. Nilep (2006) and ZainalAriff (2012) argue that code-switching in multilingual and bilingual societies has become known as a form of communication strategy employed by multilingual speakers whenever they are triggered by diverse needs. Interlocutors on WhatsApp peer group chats switch from English Language to Asante Twi to achieve particular communication goals with members on the platforms.

According to Gross (2006), "Codeswitching is a complex skilled linguistic strategy used by bilingual speakers to convey important social meanings. This occurs in order to conform to the interlocutor or deviate from him or her. The interlocutor usually determines the speaker's choice of language variety i.e. either to gain a sense of belonging or to create a clear boundary between the parties involved" (p.144). Peers' switching on WhatsApp chats influences other members sometimes to also switch to Asante Twi when responding to the speaker during his or her turn in order to achieve his communication purpose. As a communication strategy, code-switching offers numerous purposes to various speakers to perform different functions such as quotations, addressee specification, interjections, reiteration and message qualification (Gumperz,1982). Tarone (1983) stipulates that communication strategies "are used to compensate for some lack in the linguistic system and focus on exploring alternate ways of using what one does not know for the transmission of message, without necessarily considering situational appropriateness" (p.64). Tarone added these strategies for consideration: paraphrase (approximation, word coinage, circumlocution), borrowing (literal translation, language switch, appeal for assistance, mime) and avoidance (topic avoidance, message abandonment). The focus of this study dwells on language switch.

2.12 Code-switching as Unmarked Choice

The unmarked choice maxim explains that interlocutors choose the most expected linguistic variety as a medium of communication exchange. According to Myers-Scotton (1993), unmarked code-switching happens when the interlocutor makes a code choice the unmarked index of the unmarked RO (Right and Obligation) set in the talk exchange when he wants to establish the RO set. Kieswetter (1995, p.114)

stipulates that “the unmarked code choice occurs when the overall speech pattern carries the social meaning rather than the individual switches”.

According to (Myers-Scotton, 1993, p.117) “The unmarked code choice is used to indicate simultaneous identities and usually consists of continuous pattern using two or more languages”. In WhatsApp group chats, a lot of peers are fond of using switches continuously in most discussions that will be transpired on the platform. Most of the time, a switch that a speaker or textee makes, influences the other interlocutors to also switch in the speech exchange. At a point in time, all the conversations will be in switches therefore making them unmarked. Interlocutors “choose their codes based on the persona and /or relation with others which they wish to have in place” (Myers-Scotton, 1993, p.75). The interlocutors on peer WhatsApp group chats use unmarked choice because it indexes an expected inter-personal relationship.

2.13 Code-switching as Marked Choice

“Make a marked code choice which is not the unmarked index of the unmarked RO set in an interaction when you wish to establish a new RO set as unmarked for the currently exchange” (Myers-Scotton, 1993, p.131). This type of code-switching is manifested when a speaker wishes to establish a change in the RO set by diverting from the expected code but switches to another code purposely to establish a new RO set. Marked code-switch can be employed to escalate the social distance between interactants through authority or anger as an ethically-based exclusion strategy, and for aesthetic effects (Myers-Scotton, 1993). From the study carried out, the participants usually use marked code-switching to express anger, dissatisfaction or disapproval. Examples from the data are;

1. Mada koraa 'I have fallen asleep'

2. Matcheew 'I have chuckled'

2.14 Studies on Grammatical Constraints on Code-switching

These people have researched on grammatical constraints specific to code-switching (Belazi, Rubin & Toribio, 1994; Halamri, 1997; Joshi, 1985; Myers-Scotton, 1993; Pfaff, 1979; Sankoff & Poplack, 1981). Some writers on universal principles of syntax to account for switches within utterances are (Bentahila & Davies, 1986; Mahootian, 1993, 1996, 1999; Woolford, 1983) and within words (Mahootian, 1993, 1996, 1999) but the focus of this research will base on the ideas of the first set of the writers. Thus, the writers who gave accounts on switch within words will not be relevant to this study because this particular linguistic phenomenon does not pertain in this research. All the researchers mentioned above agree that mixed utterances are end result of rule-governed system. "Cross language interactions and competition occur at the level of the grammar as well as the lexicon" (Kroll & Bialystok, 2013, p.510).

Vihman (2016) examines code-switching with verbs and gives an overview of core verb morphology. Kaalep (2012) delineates seven basic declension classes with extra subclasses with the first three case (NOM, GEN, PAR) which are the grammatical cases. NOM, GEN and PAR mean Nominative, Genitive and Partitive respectively. "Codes may be switched after any constituent in discourse if only that constituent is not a bound morpheme" (Poplack, 1980, p.585). Code-switches can appear in discourse where juxtaposition of L1 and L2 elements do not contradict a syntactic rule of either language, that is at points round which the surface structures of the two languages have a bearing on each other (Poplack,1980). The study of code-switching

had been concerned with identifying structural constraints on switches and also structural and situational triggers for switches (Pfaff, 1979; Benthahila & Davies, 1983; Berk-Seligson, 1986; Clyne, 1987). This research also looks at the grammatical constraints of the language constituents that are switched.

2.15 Studies on Functions and Reasons for Code-switching

Apart from structural discussion, some researchers have tackled the rationale behind speakers' choice of codes (Gumperz, 1980; Auer, 1984; Backus, 1996; Li, 2005). Hoffman grouped the rationale behind code-switching into seven categories. Gumperz (1982) illuminates a series of social purposes for code-switching. People switch to enhance group identity (Blom & Gumperz, 1972). The bilingual language choices are related to their own set of socio-pragmatic functions (Backus & Eversteijin, 2002; Blom&Gumperz, 1972; Kachru, 1982; Mahootian, 2000, 2002).

Bilinguals employ code-switching to express social and linguistic meanings during conversation (Gumperz, 1983). Bollinger (1975) asserts that bilinguals use code-switching as conversational difficulties that may rise in the course of communicating. Bilinguals may use code-switching as to misinform, disguise or brag to the listener outside the conversation. (Crystal, 1997) mentions that the speakers employ code-switching for some reasons like the deficiency, expressing solidarity and portraying attitude. Sort (2005) delineates four functions of code-switching to offer genuine to the communication and to make the speakers conceptualize what is communicated. Such functions are equivalence, floor holding, reiteration and conflict control. Reyes (2004) on the other hand talks about different functions of code-switching like imitation, quotation, accommodation, question shift, clarification or persuasion, person specification, topic shift and discourse makers. Ayeomoni (2006) states three

functions of code-switching which are intra-group identify, poetic creativity and the expression of modernization. Strengthening solidarities, showing seriousness and authority, aesthetic effects, manipulating words, requesting for vocabulary meaning and expressions, asking for accommodation and bridging a communication are the various functions for code-switching (Myers-Scottion, 1995; Myers-Scotton & Jake, 2009. Scotton & Ury, 1977). Peers on WhatsApp group chats also have their own reasons for switching on WhatsApp group chats.

2.16 Social Factors Motivating Code-switching

Many researchers have argued on factors that determine the pattern of code-switching. Some scholars establish that linguistic constraints determine the pattern of code-switching. Others argue that bilinguals code-switching are based on social factors. According to Gardner (2009), variation in code-switching can be associated with extra linguistic factors which are dependent on specific community or interlocutor. Every speaker in any speech community has a mitigating factor that triggers him to employ peculiar speech style in his or her interactions. A lot of social considerations are measured before any choice of speech style is utilized. According to Scotton (1993), the social factors that influence the performance of code-switching may be different from the factors influencing its basic structure. The social factors concern with the speaker and the interactions, what they communicate, the communication environment and whatever changes occur with respect to them but not grammatical constraints that are involved in their speeches. Social factors are the elements that determine the choice of particular speech style over another. These are essential measures for investigating utterances of all types of social contacts (Holmes,2013). Holmes again points out that how people communicate is been affected by some social factors. Social aspects like the context, participants, the topic

and purposes are relevant factors in explaining diverse socio-linguistic concepts such as borrowing, diglossia, code-switching, register, style and interference (Holmes, 2013). The participants concern the speakers thus who are the speakers and who are they interacting with. What is the status of the speakers and the interactants; thus, their social roles and the kind of interpersonal relationship that exists between them. In other words, the personalities of the speakers and their interlocutors, determine the code choice to utilize.

Grosjean (1982) conducts some interviews about how interlocutors influence bilingual's languages. The Greek-English interviewee said, "I find myself code-switching with my friends who are all Greek … they know English so well and nobody gets offended with code-switching … I don't switch with my parents as I do with my friends" (p. 149). Another French-English bilingual was interviewed and remarked "I tend to use both English and French within the same conservation, within the same sentence, when I'm with Francos who are obviously bilingual, but also with Francos with whom I am at ease" (p.149). The context is about the setting or the environment where the communication is performed. The topic on the other hand refers to whatever issue on board that is the nature of the topic calls for a particular choice of codes. The message content is about the topic under discussion such as quotations, reiteration, topic, comment, relative clauses, hedging, interjections, idioms and deep-rooted cultural wisdom, cause code-mixing (Bhatia & Ritchie, 2004). Gumperz (1982) guises examples in the case of a Spanish-English bilingual who mixes two languages through quotation.

Bhatia and Ritchie (2004) stipulate that another issue that causes bilinguals to mix languages is reiteration or paraphrasing. Code-switching and mixing signal when

topic is introduced in Japanese (Nishinura, 1989) and also an important function in hedging (Bhatia & Ritchie, 2004). That is wherein a speaker does not want to give apparent answer, he or she uses code-switching or code-mixing. Interjection or sentence filler for example, the use of "la "at the end of sentences by Singaporeans (Tay, 1989) also marks the usage of language mixing and switching. The purpose indicates the speaker's intentions for using a particular code choice. Every individual has his or her own purpose for any linguistic choice to socially switch during interactions. The social context is another factor in language choice (Wordhaugh, 2011).

2.17 Related Studies

Opoku-Fofie's (2018) 'Socio-programmatic of code-switching in WhatsApp group chats among Ghanaians' is seen to be the first sociolinguistics research on code-switching done on WhatsApp in Ghana. She adopted Community of practice, Markedness Model and Variationist socio-linguistics as frameworks in analyzing the data. She employed interviews, participant observation and chats as the main instruments for data collection. Data from six WhatsApp group chats were collected for the study. Age and gender were the basis for selecting the groups. The six WhatsApp groups comprised participants who were all Ghanaians but from different groups so that different factors that motivated them to switch codes on WhatsApp chats would be attained. The current research also employs similar instruments for data collection. It also uses five WhatsApp group chats. It does not base on gender and age but on educational background for the selection of the groups. Her findings revealed that participants of the various WhatsApp chats utilized marked code-switching when quoting, being emphatic, when the unmarked code could not better express humour. Her work is very relevant to the current study because it also looks

at the reasons and factors that motivate peers to switch codes on WhatsApp group chats.

Also, in 'Code-switching Analysis in English Literature WhatsApp Group' (Ameliza & Ambalegin, 2020), the main purpose was to find out the types and reasons of code-switching on WhatsApp group of Putera Batam University. The instrument used to collect the data was non-participatory observation method. In the findings, all the three types of code-switching delineated by Poplack (1980) which are intra-sentential, inter-sentential and tag switching were employed by the participants. The type of code-switching that was predominantly used by the participants was intra-sentential switching but tag switching was rarely used. Out of the ten reasons of code-switching stipulated by Grosjean (1981), three were identified in the participants' communications. This study is very relevant to the current research because it also finds out the types of switches used by peers on WhatsApp group chats.

Omotosho et al. (2017*)* also worked on 'Sociolinguistics of Selected WhatsApp Interactions among Students of University of Nigeria, Nsuka'. 50 participants were used for the study of which 25 were males and 25 females. The study dwelt on the sociolinguistics variables like gender, age, class and educational background for the analysis and also investigated the styles and variations that were frequently used in the students' WhatsApp chats. 1000 screenshots were extracted from the chats of the participants. The study also used Interactional Sociolinguistics and Variationist Sociolinguistics theories propounded by Gumperz (1982*)* and Labov (1982) respectively. The study found out that the gender and age of the interlocutors influenced the topic and choice of words in a particular chat and language used by

both genders differed. It was unveiled that male students used Nigerian Pidgin more than female students. The distribution of the types of language used will be very useful in the distribution of the switch types in the current research.

Amuzu, Kuwornu and Opoku-Fofie's (2018) work on pragmatic functions of L1 discourse markers in Ghanaians' English-based WhatsApp conversations, analyzed data extracted from WhatsApp platforms that comprised only Ghanaian participants using the Markedness Model of (Myers-Scotton, 1993; 1998). The findings revealed that the participants used the DMs (Discourse Markers) to enhance their in-group solidarity and the familiarity built in verbal conversational interactions. It was shown that the DMs manifested as marked code-switches.

Code-switching in WhatsApp Messengers among Kuwaiti High School Students by (Elsayed, 2014), used Sequential Approach of code-switching established by (Auer, 1984) to analyze the data. A corpus of 100 WhatsApp messages was taken from 60 participants. The findings showed that Kuwaiti Students alternated between Arabic and English to attain communicative purpose. Peers on WhatsApp chats also have their own reasons for switching between English and Twi.

2.18 Theoretical Frameworks

This study uses two frameworks to conduct the analysis of the data collected. These frameworks are Matrix Language Frame model and Rational Choice theory.

2.18.1 Matrix Language Frame

The study of code-switching can be conducted on the structural features and syntactic constraints governing its operation. To undertake this linguistic exercise, the appropriate framework to use is the Matrix Language Frame. This framework

was developed by (Myers-Scotton, 1993). In code switching, the dominant language is normally called the matrix language and the language from which items are inserted into the matrix language is called embedded language. Researchers whose interests are on the structure and syntax of alternating languages agree that code-switching is a rule-governed linguistic behaviour and has a grammar (Grumperz, 1976; Hoffman, 1991; Pfaff, 1979; Poplack, 1980; Meechan, 1998; Myers-Scotton, 1993, 1995; Silva, 1994). The concept of Matrix Language Frame is influenced by psycholinguistic theories Grosjean (1988). Matrix Language Frame makes a distinction between content and system morphemes which are crucial in identifying the matrix language. Content morphemes, e.g. nouns, verbs, adjective and some prepositions, express semantic and pragmatic aspects and assign or receive thematic roles. These are important to carry messages in communication. System morphemes, e.g. functional words and inflections, express the relation between content morphemes and do not assign or receive thematic roles. They are important in building grammatical frames. The Matrix Language Frame requires that the matrix language morphosyntactic structure should always be maintained. Myers-Scotton designed two main principles to cater for the maintenance of the morphosyntactic structure of the matrix language. These principles are Morpheme Order Principle and System Morpheme Principle. These principles will be applied to the data to find how the Embedded Language conform to the Matrix Language word order in the analysis.

2.18.2 Rational Choice theory

"Rational choice theory does not attempt to account for the character of social groups and their relations, or for the nature of conversation. It attempts to explain what people do. It does not seek correlation between language choice and activity type, or between language choice and the sequential nature of the conversation. The Rational

Choice theory is always between the correlation between language choice and the agent's intent to act rationally based on available evidence" (Myers-Scotton & Bolonyai, 2001, p.6). Choice of words by peers on WhatsApp group chats for language alternations in their communications is made for a purpose. Thus, there is a rationale behind the choice of every word in code alternations in every communication. According to Elster (1986), any given human action is the end product of two successive filtering devices. The first filtering device includes the set of structural constraints, which are defined as "… all the physical, economic, legal and psychological constraints that an individual faces" (p.14), and such constraints produce an "opportunity set": the courses of action that are possible giving the constraints. The assertion made by Elster is in line with rational choice theory which was propounded by Myers-Scotton. Myers-Scotton (1997) perceives such structural constraints as those factors classified under the term 'social context' which encompasses the speakers' social identity features such as age, sex, socio-economic status, ethnic group, social class etc.as well as the speech context (Grumperz, 1982). Thus, in linguistic choice, an actor's opportunity set is his or her linguistic repertoire. The choices speakers make at a particular point in a discourse are based on their beliefs, desires and values (Elster, 1986). The codes peers used to communicate on WhatsApp group chats are made based on a particular reason. " When faced with several courses of action, people usually do what they believe is likely to have the best overall outcome. This descriptively simple sentence summarizes the theory of rational choice" (Elster, 1986, p.22). This study therefore uses the Rational Choice theory to analyse the socio-pragmatic reasons why peers use alternating codes in their communications on WhatsApp group chats.

2.19 Conclusion

In this chapter, concepts on code-swishing and code-mixing were discussed and the various researches reviewed, gave different meanings of code-switching and code-mixing but there was no clear line to apparently distinguish between the two phenomena. The researcher therefore built on Auer (1984) and Halmari's (2004) ideas and suggested other definitions to clearly differentiate between the two phenomena. The types of code-switching some of the researches discussed were intra-sentential code-switching, inter-sentential code-switching, tag code-switching, situational code-switching and metaphorical code-switching. Code-switching in relation to online communications as well as studies related to code-switching on WhatsApp, were thoroughly discussed. Some of the reasons and factors that motivate people to switch and mix codes that were discussed in this chapter were to misinform, disguise, brag, for solidarity, portraying attitude, equivalence, topic shift, seriousness and intra-group identity.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter elaborates the methodology employed in carrying out the research. It expatiates on the research design for the study, population, sampling technique and sample size. It also provides information on the instruments and procedures utilized for data collection and analysis for the study as well.

3. 1 Research site

Research site is the place where the research is conducted. The official Language used in Ghana is English Language. Ghana has over 45 local languages but Twi which is one of the Kwa Languages is mostly used in all corners of Ghana. Ghana has a lot of people who are literate and can express themselves in English but in most cases, these literate mix the Twi with English in their communications. Five WhatsApp chats from secondary schools were used. Two of the group chats are staff group chats in Sunyani Senior High School, Berekum Methodist Senior High/Technical School with two social group chats one from each of the schools making four groups. There is another group chat made up of old students of Sunyani Senior High School making five group chats in all. All the members of the various groups are enlightened with the least educational level being a Bachelor's degree. They are also bilinguals or multilinguals who speak English and also Asante Twi though some of them are not native speakers of Twi.

3.2 Research method

This section delineates the research approach and research design that was employed. This research therefore follows qualitative research approach and employs ethnographic research design.

3.2.1 Qualitative research approach

The study is qualitative research which helps to observe, analyse as well as interpret the data gathered on code-switching and code-mixing in peer conversations on WhatsApp group chats. Research approach examines the patterns of human lives, experiences and humans' worlds (Creswell, 1994). This helps the researcher to examine the patterns of switches done by peers on WhatsApp group chats.

The patterns of Strauss and Corbin (1990, p.3) stipulate that qualitative research findings are not dependent on statistical proceedings. Strauss and Corbin said qualitative research may concern "humans' lives, lived experiences, behaviours, emotions, feelings and also about organizational functioning, social movements, cultural phenomenon and interactions between nations". This explains that qualitative research deals with events in their natural settings and describes them.

Qualitative research is multi-method in nature. The multi-method nature of this design involves interpretive techniques such as describe, decode and translate to arrive at a meaning (Maanen, 1979). The design was considered suitable because "it provides a detailed description of participant feelings, views and experiences, and interprets the meaning of their actions" (Denzin, 1989, p.110). The researcher describes the reasons and motivations for peers' code-switching and code-mixing on their WhatsApp group chats by seeking their views regarding their experience in their various WhatsApp conversations. According to Owu-Ewie (2012), qualitative

design renders detailed and comprehensive information. This study employs qualitative design for detailed and thorough analysis of peers' code-switching and code-mixing on WhatsApp group chats.

3.2.2 Ethnographic design

As a means to obtain vivid information about the participants' language behaviour in a natural form from a natural setting, an ethnographic design was adopted. Johnson (1998) mentions that the fundamental aim of ethnography is to describe and interpret the culture behaviour which involves the culture a group of people portray in their communications. In this research, the language behaviour of peers on WhatsApp group communications are described and interpreted grammatically and socio-pragmatically. According to Seidu (2012), ethnographic approach is a fully active or passive participation in a study for experience sharing and understanding of a situation as a researcher. This helps the researcher to study the code-switching and code-mixing phenomena in a natural setting.

3.3 Population

The population size is a vital factor in sample size (Cohen et al., 2000; Ladico, Spaulding & Voegtle, 2006). Population is very essential element for determining the sample size. According to Seidu (2012), population is the whole entities under study by the researcher. It can be human-beings, animals or any entities that the researcher wants to study. The population of the current research is peers on WhatsApp group chats in Bono Region. To Polit and Beck (2006, p.258), a population is "the total number of people or elements that fit the specific set specification of the study". Thus, the entire entities for the study must possess some specific features to fit into the study. These peers were first degree holders. They could speak and understand

both English and Twi. These peers shared life experiences and trending issues on the platforms and these triggered a lot of discussions. In the course of the discussions, these peers showed many character traits like mockery, creating laughter and using languages in diverse ways. In spite of the peers' educational level, they took delight in using Twi on the platforms. Most of these peers had nick-names and were addressed with the nick-names by other interlocutors on the platforms. The population for this study was 500 peers from 5 WhatsApp group chats. Table 1 shows description of population of each WhatsApp group chat.

Table 1: Number description of population for the study

Name of WhatsApp group	Number of population
Sunyani Senior High School Old Students 97 group	109
Sunyani Senior High School Staff group	169
Sunyani Senior High School social group	23
Berekum Methodist Senior High/Technical School Staff group	101
Berekum Methodist Senior High/Technical School social group	98
TOTAL	**500**

3.4 Sampling and Sample size

Sampling designs and sample size are very crucial in helping qualitative research purposes (Onwue-gbuzie & Leech, 2007). This was supported by Denzin and Lincoln (2005) stating that sampling is vital to confront the problems of

representation. The sample size for this study is therefore 50 participants. These participants were chosen for the study because they were “information rich” (Patton, 1990, p.169) because they portrayed the features that would help the researcher attain the requisite information for the study. 20 participants were taken from the alumni group because the participants of this group could talk a lot on the platform due to the fact that they were mates at school and for that matter, raised a lot of issues concerning past events back at school. This paved way for more discussions by causing many interlocutors involved which made majority of the participants to alternate languages in their communications. 10 participants each from the remaining four WhatsApp group chats were also considered.

Sampling technique helps the researcher to arrive at a specific conclusion or to make generalization. The sampling technique for this particular research is purposive sampling. Purposive sampling is a non-random sampling technique that does not demand a set of number of informants. The researcher takes decision on what requires to be known and plans to find out which people can and are willing to give information based on knowledge and experience (Benard, 2002; Lewis & Sheppard, 2006). Purposive sampling was used because the researcher knew the type of data she was looking for and as such, the focus of the survey was basically on the participants who practised code-switching and code -mixing on the WhatsApp group chats. The purposive sampling was used by ignoring those participants who did not practise the phenomena and focused on those who practised them and this was done by having the research questions and the theoretical frameworks at the back of mind.

3.5 Data Collection Instruments

These explain the instruments and procedures that were employed in gathering the data for the research. The instruments used to collect the data were observation, interview and chats.

3.5.1 Interviews

Cohen et al. (2007, p.29) stipulate that interviewing is "a valuable method for exploring the construction and negotiation of meanings in a natural setting". This was supported by Berg (2007, p.96) by stating that interviewing aids interviewees to "speak in their own voice and express their own thoughts and feelings".

The participants who were sampled for this study, were called on phones for interview to find out why they practised code-switching and code-mixing on the WhatsApp group chats. Telephone interview was therefore used to conduct the interview as was said by Ilies et al. (2007), Maritan, (2001), Sturges and Hanrahan (2004) in order to get in touch with participants that might not be easy to reach face to face or through other means. The participants were scattered far apart to have face to face interaction with them so interviews on phone were found very appropriate to get in touch with them. The participants' contact numbers were therefore taken from the WhatsApp page and were called and interviewed by the researcher one after the other to find out from them the reasons why they code-switched and code-mixed in the WhatsApp chats. The researcher used unstructured interview and open-ended questions to conduct the interview, recorded all the responses that were given by the respondents and transcribed the responses into simple English.

3.5.2 Observation

According to Patton (2000), observation gives first-hand experience of an event in a setting. Creswell (2007) supported Patton by saying that observation is the means of collecting open-ended and first-hand information through observation of participants and areas at a research environment. Observation is one of the tools in collecting naturalistic data through participant or non-participant observation (Parke & Griffiths, 2008).

In the case of the recent study, the researcher employed participant-observation to fully part-take in every event that transpired on the platforms. The researcher therefore had the chance to embark on observation in a holistic language behaviour of the participants in communicating on the WhatsApp group chats. The researcher was very careful in all the conversations that she engaged in so that there was no instance of her influencing other members on alternating their language use so as to avoid the occurrence of bias. During the observation, participants who were noted for switching and mixing codes, had their contact numbers noted down.

3.5.3 Chats

Participants' conversations that contained code-switching and code-mixing were screen captured.450 conversations that contained the phenomena were taken but not all were used in the analysis. Some of these conversations are displayed in appendix B.

3.6. Data Collection Procedure

The duration for the research was five months commencing from 29th September, 2019 to 28th February 2020. The WhatsApp conversations that contained code-switching and code-mixing were screen captured by ignoring the participants'

contact numbers and names. The screen captured chats were saved automatically in the file manager of the phone. All these chats were latter cropped and saved in a file on the researcher's personal computer.

3.7 Data Analysis Method

The data analysis process unfolded a detailed study of the syntactic structure of the embedded language under the categorization of the type of switches with respect to lexical, clauses and phrases. The embedded codes in every extract are written in bold print. The number '3' in every written word represents the front vowel 'ɛ' in Asante Twi which is found in the data as a result of lack of the letter in the media. The embedded codes are translated in every extract before the syntactic investigation. Simple calculations are also used for the distribution of the occurrences of switches (code-switching and code-mixing) and the switch types (inter-sentential and intra-sentential) in percentages on graphs.

Data collected are also analysed according to the categorization of reasons for code alternations which are in line with Appel and Muysken (1987) and Baker (1995) on similar phenomena. Factors for motivating code alternations by peers on WhatsApp group chats are also analysed under categorizations.

3.8 Ethical considerations

According to Hancock and Algozzin (2006), the researcher must comply with the legitimate and ethical considerations for every investigation concerning human-beings. It was therefore appropriate that the researcher had to apply and comply with measures that were agreed on to safeguard the participant's dignity and personality to ensure a fruitful research. The researcher sought permission from the administrators and the administrators informed the rest of the members by putting her quest on the

WhatsApp platforms. Members expressed their views on how the data could be collected without disclosing their identity. There was a general consensus that member's names and numbers should be omitted from the data. The researcher promised to do as such and assured them that anonymity would be applied and there would not be any instance that their views aired would be associated with them personally (Oliver, 2004).

CHAPTER FOUR

ANALYSIS OF DATA

4.0 Introduction

This chapter elucidates how the Embedded Language (EL) elements conform to the morphosyntactic structure of the Matrix Language (ML) in the first section. The second section also deals with the switch types, grammatical classifications of the embedded language constituents and their frequency of occurrence. The third section also looks at the socio-pragmatic aspects of code-switching and code-mixing concerning the reasons and motivating factors for practising them.

4.1 Testing the Matrix Language hypothesis to assess the EL conformity to the morphosyntactic structure of the ML

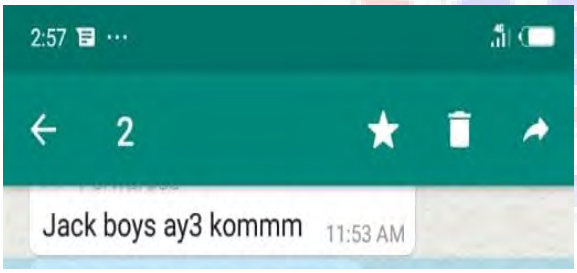
This section elaborates the application of the Matrix Language hypothesis to the data to assess the conformity of Embedded Language (EL) constituents to the Matrix Language word order structure. The Matrix Language hypothesis states that (Myers-Scotton, 1993, p.82) "As an early step in constructing…constituents [containing code switches], the matrix language provides the morph syntactic frame…". This hypothesis engulfs two principles. These principles are Morpheme Order Principle and System Morpheme Principles. The System Morpheme Principle subcategorizes into early system morpheme and late system morpheme. The late system morpheme is also categorized into outsider late system and bridge late system morpheme. The principles will be applied to the data to assess how the Embedded Language constituents conform to the Matrix Language surface structure. (Myers-Scotton, 1993, p.69) claims that "the ML may change across time and even within a conversation".

In the current research, the Matrix Language changes due to the fact that the switch patterns are not consistent. Therefore, these two switch patterns English/Twi and Twi/English are used to test the Matrix Language Frame through its underlying principles.

4.1.1 Morpheme Order Principle Vs English/Twi switches

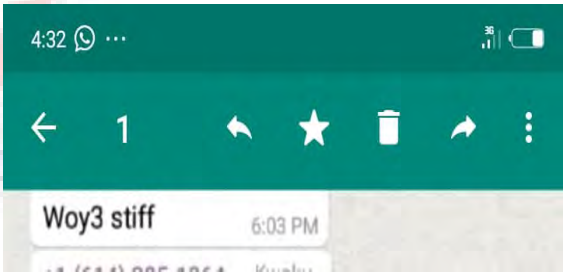
(Myers-Scotton, 2002, p.59) stipulates that in every "ML + EL constituents consisting of singly occurring EL lexemes and any number of ML morphemes, the surface morpheme order will be that of the ML". Here, English Language is the Matrix Language (ML) and Twi is the Embedded Language (EL) meaning the morpheme order should be that of English. The word order of English is subject-verb-object (SVO) and that of Twi is also Subject-Verb-object (SVO). The following examples from the data reflect English word order.

Excerpt 1



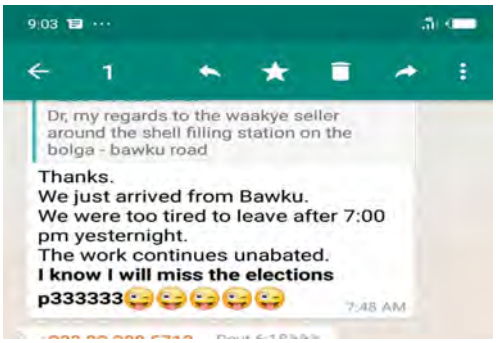
Jack boys **ay3** **kommm**
PERF. COP-are ADJ-silent
'Jack, boys are silent'

Excerpt 2



Woy3 stiff
2SNG.COP-are ADJ
'You are stiff'

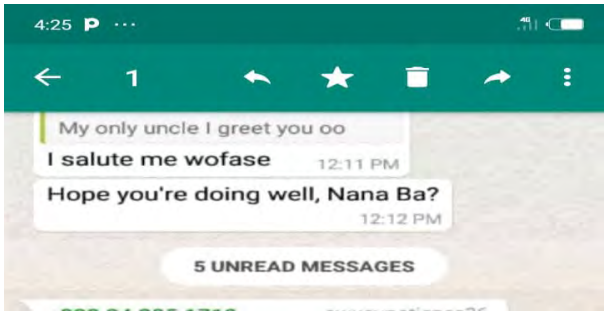
Excerpt (3)



Thanks. We just arrived from Bawku. We were too tired to leave after 7:00 pm yester night. The work continues unabated. I know I will miss the elections **p333333**
ADV-by all means

'Thanks. We just arrived from Bawku. We were too tired to leave after 7:00 pm last night. The work continues unabated. I know I will miss the elections by all means'

Excerpt (4)



I salute me **wofase**. Hope you're doing well, Nana ba?
1SNG-my N-nephew

'I salute my nephew. Hope you are doing well, chief's son?'

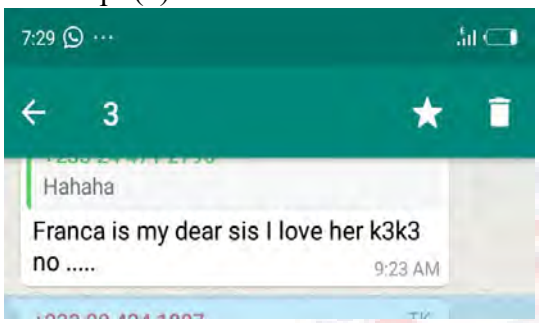
Looking at excerpt (1), the verb phrase **'ay3 komm'** meaning 'are silent' which is an embedded Language (EL) island, occurs after the Matrix Language (ML) constituent 'boys' which is a noun. There is no mismatch as far as the two mixed constituents are concerned because it conforms to copula-adjective order of the Matrix Language. **'Woy3'** meaning 'You are' in excerpt (2), does follow the subject-verb order of the Matrix Language and therefore agrees with its word order structure so there is no violation. In excerpt (3), the noun phrase **'me wofase',** appears immediately after the verb 'salute' which reflects the subject-object order of English. Excerpt (4) also has an adverb **'p3333'** which means 'by all means' adhering to the surface morpheme order of English because its position in the maximal projection, does agree with the grammatical structure of English which is the matrix language.

There is no mismatch in excerpt (1)-(4) because in the English –Twi switches above, all the configurations are grammatical in the case of English syntactic structural

order therefore the constructions in excerpt (1)-(4) comply with morpheme order principle.

There are some instances where the morpheme order of the ML and EL configuration reflects the order of the EL but appears to be ungrammatical in the case of the ML. The data in excerpt (5) and (6) are judged to be well-formed by EL morpheme order but ill-formed according to the word order of the ML.

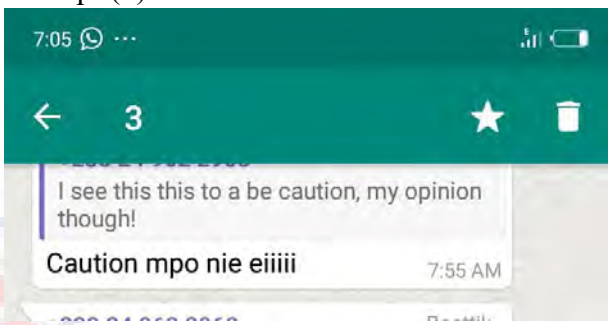
Excerpt (5)



Franca is my dear sis I love her **k3k3**
ADV-Just

'Franca is my dear sister I just love her'

Excerpt (6)



Caution **mpo** **nie**
FOC is this
'Is this just a caution eiii'

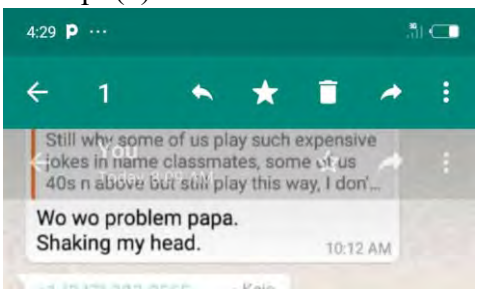
The EL Island **'k3k3'** in excerpt (5) is an adverb in its maximal projection. It causes violation to the morphosyntactic structure of the ML because the English word order in expect (5) for instance expects that the adverb appears before the verb 'love'. In English word order, the focus maker **'mpo'** is supposed to precede its content morpheme which is 'caution' in this case but here, the focus marker succeeds the content morpheme. It is therefore obvious that excerpts (5) and (6) breach the Morpheme Order Principle.

4.1.2 Morpheme Order Principal Vs Twi/English switches

Here, the Matrix Language is Twi. All the EL morphemes are content morphemes. Content morphemes are the earliest morphemes conceptualized in the speaker's mental lexicon (Myers-Scotton & Jake, 2000). They either assign or receive thematic

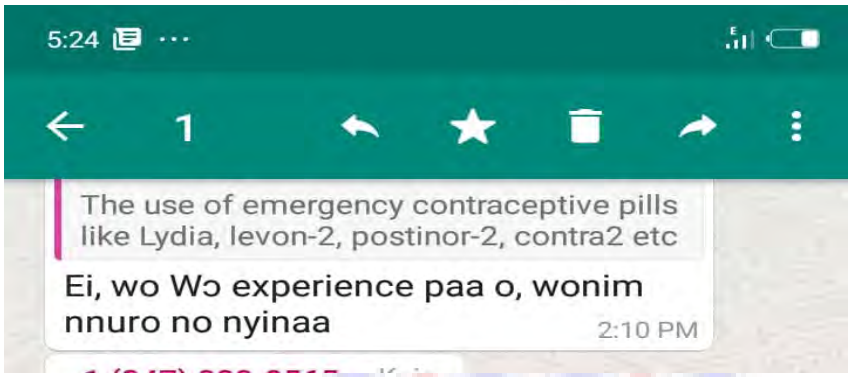
role. Examples of content morpheme are noun, verb, adjective and others. The English EL constituents in excerpt (7) to excerpt (10) are noun.

Excerpt (7)



Wo wo **problem** paa
2SG-You FNT- have ADV-really
'You really have problem. Shaking my head'

Excerpt (8)

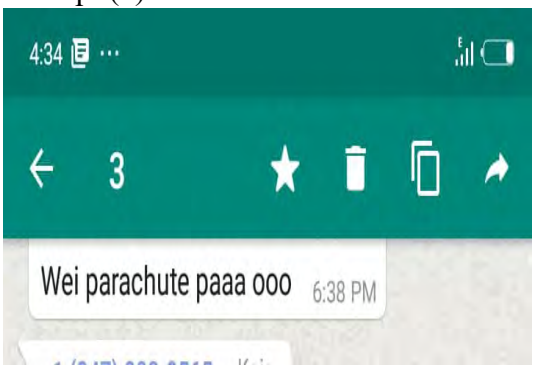


Ei, wo wɔ **experience** paa o, wonim
2SNG- You FNT- have ADV- really 2SNG FNT - you know

nnuro no nyinaa
PL. N-drugs DET-the ADJ-all

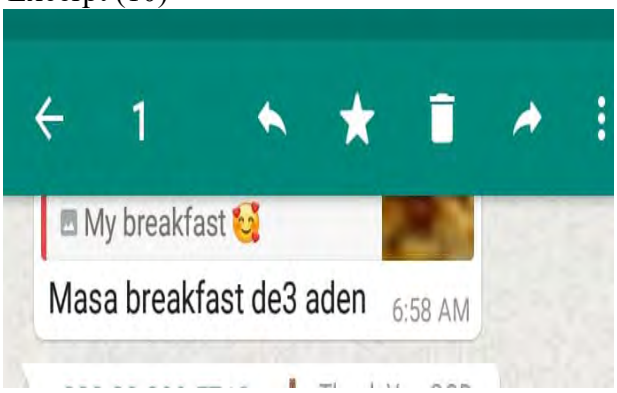
'You really have experience o, you know all the drugs'

Excerpt (9)



Wei **parachute** paa oo
DET-this ADV-really
'Really, this is parachute oo'

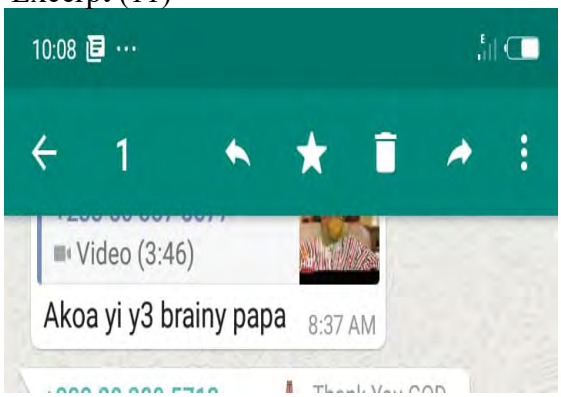
Excerpt (10)



Masa **breakfast** de3 aden
Master FOC why
'Master why breakfast'

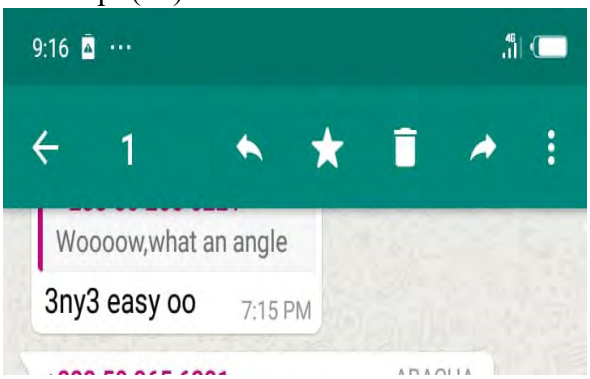
All the EL morphemes adhere to the morpheme order of the ML, because excerpts (7) to (9) follow noun- adverb order of the ML. In the same vein, excerpt (10) follows noun-focus order of the ML. The excerpts (11) and (12) contain EL morphemes which are adjectives.

Excerpt (11)



Akoa yi y3 **brainy** papa
N-Man DET-this COP-is ADV-really
'This man is really brainy'

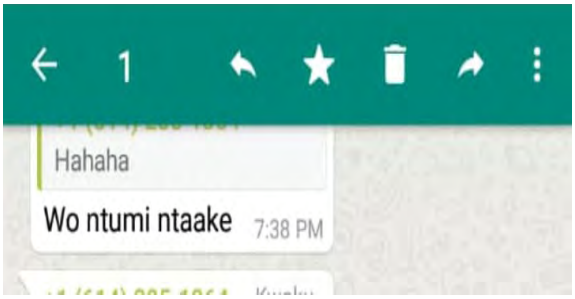
Excerpt (12)



3ny3 **easy** oo
3SNG. NEG. COP-It is not
'It is not easy'

The EL morphemes in excerpts (11) and (12) are in congruent with the morphosyntactic structure of the Matrix Language because both **'brainy'** and **'easy'** follow the copular- adjective order of the Matrix Language. Similarly, excerpts (13) to (20) have the EL morphemes to be verb. Excerpts (13) and (14) follow modal-verb order of the Matrix Language.

Excerpt (13)



Wo ntumi **ntaake**
2SNG NEG.MOD-can NEG.V-attack
'You cannot attack'

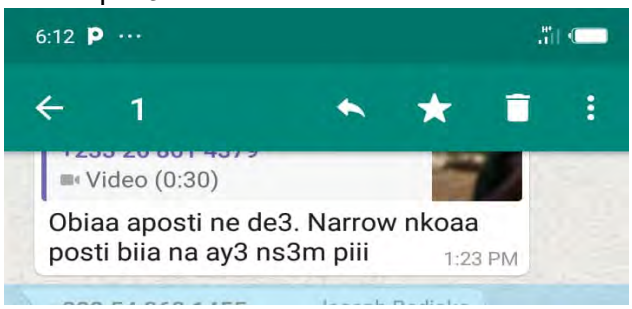
Excerpt 14

Salia gathered the girls in a meeting and told them that
"saa mo Jonas no, mo nhw3 no yie
this your SPEC you watch PRO well
ɔb3tumi **acauso** paa
3SNG.FUT. MOD PERF- cause ADV-really
'this your Jonas, you should be careful with him he can really cause'

In Twi, when there are two serial verbs and are used to express negativity, the two verbs take negative marker like the case of excerpt (13) having negative verbs 'ntumi ntaake' meaning 'cannot attack'. The EL morpheme **'attack'** does not violate the morpheme order of the ML because the ML modal 'ntumi' by convention, should accept a verb with negative marker. Therefore **'ntaake'** bearing the matrix language negative marker, does not cause violation to the ML morpheme order which is line with (Pokua, 2014) that in serial verb construction analysis, it is factual that aside from languages such as English, all the verbs in a sequence can be negated and take aspectual affix. This is also supported by (Aboh, 2009 cited in Cansada, 2010, p.25) that "an analysis like this relies on the assumption that fully lexical verbs and their functional counterparts are morphologically identical in serializing languages, which is an unexplained phenomenon".

Also, when there is a modal expressing future, the verb that follows it should be preceded by perfective marker /a-/ to make that verb like '**acauso'** which is the case of excerpt (14) is acceptable to accompany the initial verb. This is explained further by (Cansada, 2010) that another form of Twi marking is a low tone /à-/ prefix manifesting on non-initial verb in some serial verb constructions. He explained further that this prefix is homophonous with the perfect aspectual marker but can surface on non-initial verbs in any non-past construction apart from the habitual construction. It was also asserted that in serial verb constructions in the future, both Twi V_1 and V_2 are obligatorily marked and the marking on V_1 is the future marker /bɛ-/ but V_2 may not carry the future prefix and marking of V_2 is obligatory.

Excerpt 15

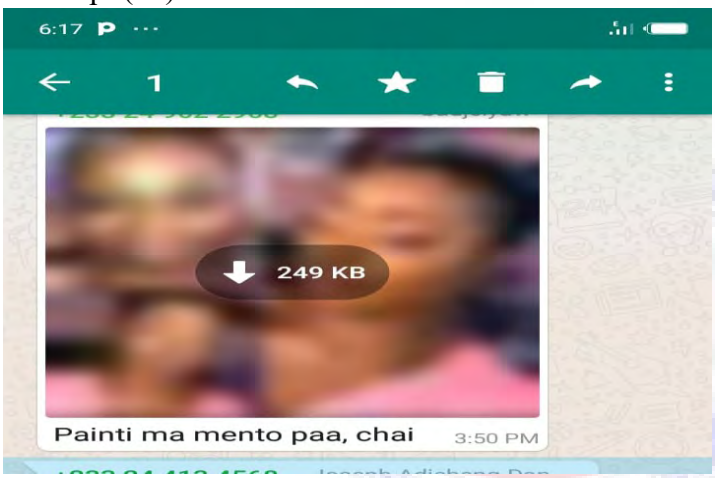


Obiara	**aposti**	ne	de3
Everybody	PERF.V-Post	3PRO-his	N-thing

Narrow	nkoa	posti	bi	a na	ay3	ns3m	piii
SBJ	ADJ-only	PST-post	QNT-some	FOC.	PERF.COP-is	PL. N-issue	ADJ-a lot

'Everybody has posted his. If Narrow posted his then there are a lot of issues'

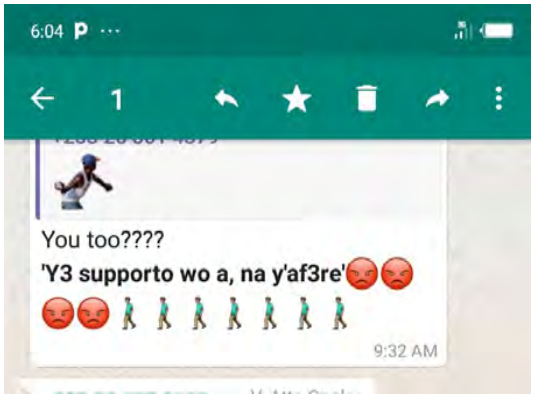
Excerpt (16)



Painti	ma	mento	paa,	chai
V-Paint	V-give	1SNG.V-I buy	ADV-really	

'Really, paint and let me buy'

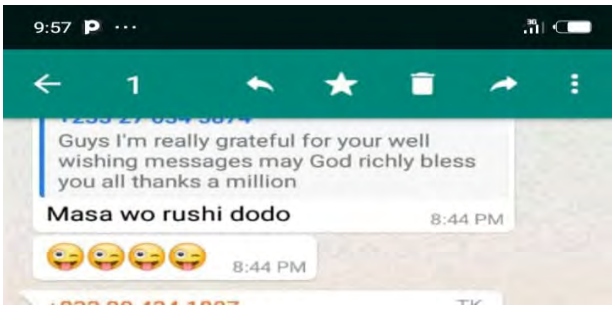
Excerpt (17)



Y3	**supporto**	wo	a, na	y'af3re
1PL-We	V-Support	2SNG	FOC	1PL.PERF-shy

'When we support you then we become disappointed'

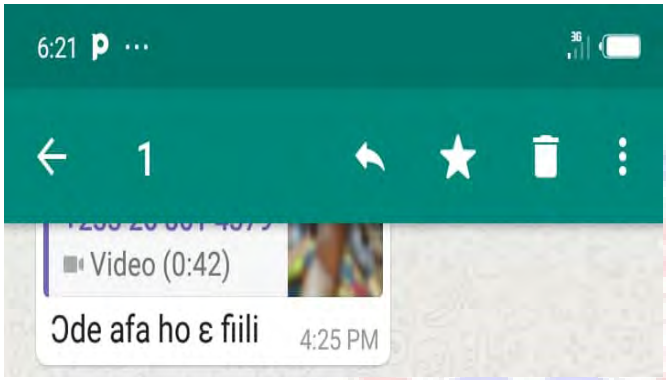
Excerpt (18)



Masa	wo	**rushi**	dodo
Master	2SNG-you	V-rush	ADV-too much

'Master you rush too much'

Excerpt (19)



Ɔde	afa	ho	**ɛ fiili**
3SNG.COP	PERF-take	PREP-outside	PROG-feel

'He has taken that as an advantage then feeling'

Excerpt (7) to excerpt (20) all conform to the morpheme order of the matrix language therefore there is no violation to the morpheme order principle.

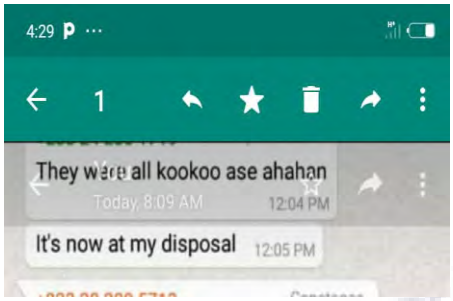
4.1.3 The system Morpheme Principle Vs English/Twi switches

System morphemes are structurally-assigned morphemes (Myers-Scotton, 2002). The system morphemes are the functional or closed morphemes in the complementizer phrase (CP) or the maximal projection. The system morphemes give more information about the whole projection. They express correlation between content morphemes and do not assign or receive thematic roles. They are vital in the erection of the morphosyntactic frames. Examples are quantifiers, possessives, tense and aspect, determiners and so on.

4.1.4 Outsider late System Morpheme Vs English/Twi Switches

According to (Myers-Scotton, 2002), outsider late system morphemes are co-indexed with forms outsider the head of the maximal projection. They refer to information outside the maximal projection. Examples from English/Twi corpora are illustrated as below;

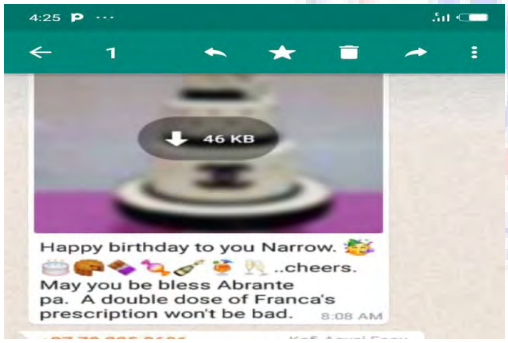
Excerpt (20)



They were all **Kookoo** **ase** **ahahan**
N-cocoa PREP-under N-leaf

'They were all cocoa leaf. It's now at my disposal'

Excerpt (21)



Happy birthday to you Narrow **...** cheers. May you be bless **Abrante** **pa.**
N-man ADJ-good
A double dose of Franca's prescription won't be bad.

'Happy birthday to you Narrow. Cheers, may you be blessed good man. A double dose of Franca's prescription won't be bad'

In excerpt (20), **'kookoo ase ahahan'** which is a noun phrase but functions as a complement, refers back to the pronoun 'They' which is an ML element**. 'Abrante pa'** in excerpt (21) is a noun phrase referring back to 'Narrow' which is in the ML constituents. There is violation of system morpheme principle in excerpts (20) and

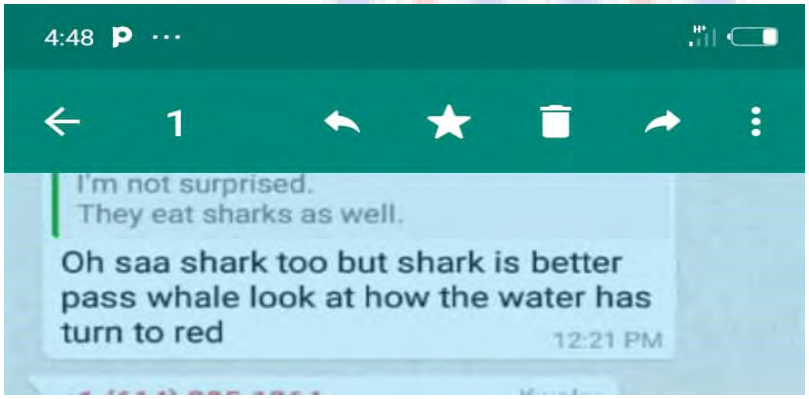
(21) because "in ML + EL constituent, all system morphemes which have grammatical relations external to their head constituents will come from the ML" (Myers-Scotton,1993, p.83) but here it comes from the Embedded Language.

4.1.5 Early System Morphemes

The Early System Morphemes here are **'saa', '-s3m' and 'bi'**. "Early System Morphemes are conceptually activated, meaning they are abstract concept realized at the mental lexicon. They give immediate accompaniment to content morphemes to accomplish "bundle of semantic and pragmatic features satisfying their speaker's intentions" (Myers-Scotton & Jake, 2000, p.106). They add meaning to their heads. According to (Jacobson, 2001), early system morphemes are formed at the lemma level and as such point to the content morphemes which they accompany. Examples are determiners, affixes, demonstratives etc.

In English/Twi switches, some examples can be found in excerpt (22), (23), and (24)

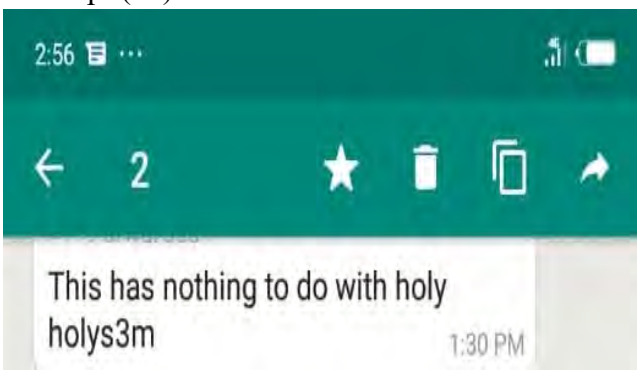
Excerpt (22)



Oh, **saa** shark too but shark is better pass whale look at how the water has turn to red
DET-that

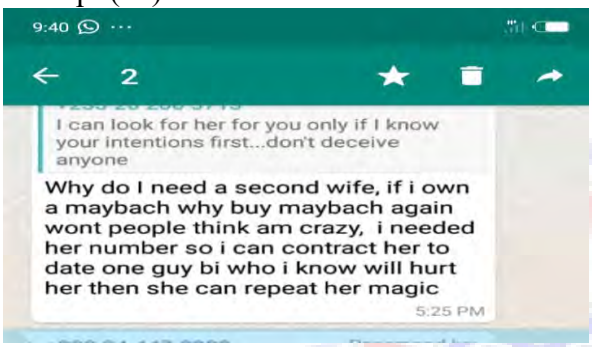
'Oh, that shark too but shark is better than whale look at how the water has turned red'.

Excerpt (23)



This has nothing to do with holy holy**s3m**
SUF-issue
'This has nothing to do with holiness'.

Excerpt (24)



Why do I need a second wife, if I own a Maybach why buy Maybach again won't people think am crazy, I needed her number so I can contract her to date one guy **bi**
DET-a
who I know will hurt her then she can repeat her magic.
'Why do I need a second wife, if I own a Maybach why buy Maybach again wont people think am crazy, I needed her number so that I can contract her to date a guy who I know will hurt her then she can repeat her magic'.

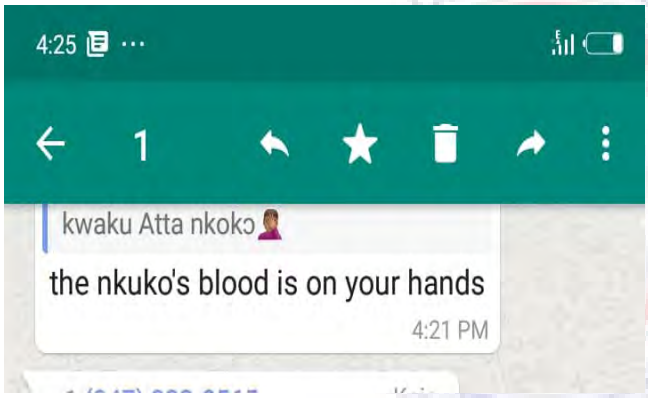
All the early system morphemes in excerpts (22), (23) and (24) are all Embedded Language elements. This is in support of Spanish-English corpus: **el** pharmacy is very […] (Okasha, 1999, p. 110). The early system morpheme **'saa'** meaning 'that' follows the morpheme order of the Matrix Language because in English word order, the determiner precedes noun morpheme. In the same way, **'s3m'** which is a suffix meaning 'ness' also adheres to the English word order because 'holy' takes suffix as its early system morpheme to change from adjective to noun therefore there is no

violation in excerpts (22) and (23). On the contrary **'bi'** which means 'some' does not follow the morpheme order of the Matrix Language because in the Matrix Language which in this case is English, has its quantifier to precede its noun morpheme but here, it appears after the noun morpheme. Therefore, excerpt (24) breaches the morphosyntactic structure of the Matrix Language.

4.1.6 Bridge System Morphemes

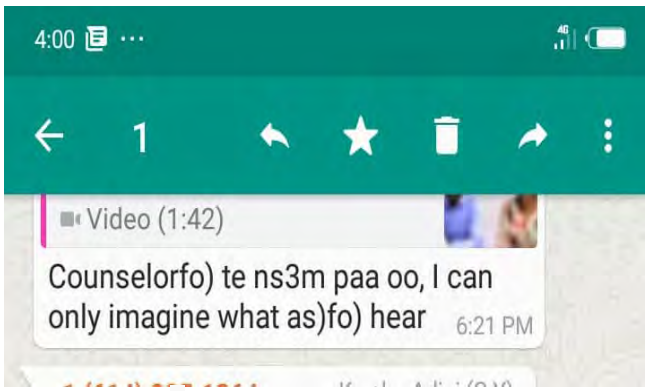
According to (Myers-Scotton, 1993), bridge system morpheme blocks an embedded language content morpheme from appearing after it immediately and this can be *of* or *'s* indicating possession. Examples from the data gathered are shown in excerpts 25 and 26.

Excerpt (25)



The **nkuko's** blood is on your hands
DET PREF.N. POSS-chicken N COP PREP POSS PL. N
'The chicken's blood is on your hands'

Excerpt (26)



Counselorfoɔ te ns3m paa oo, I can only imagine what asɔfoɔ
N.PL-Counselor V-hear PL. N-issue ADV-really PL. N-pastor
'Counselors really hear issues oo, I can only imagine what pastors hear'

In excerpt (25), the matrix language is English. The embedded language element found in the configuration is **'nkuko'** meaning 'chicken' which bears a matrix language possessive maker /-s/. The possessive maker is followed immediately by another matrix language element 'blood'. This happened because the matrix language possessive marker blocked any embedded language morpheme from following it immediately. The matrix language morphosyntactic structure is also well formed but there would be a violation to the blocking hypothesis if there were to be an embedded language morpheme following the possessive marker like *The **nkuko**'s **mogya** is on your hands*.

In excerpt (26) on the other hand, the matrix language seems is Twi. The embedded language element **'Counselor'** also bears a plural morpheme /-foɔ/ which comes from the matrix language. The matrix language plural marker blocked any embedded language morpheme from occurring immediately after it therefore it is the morpheme 'te' which is an element from the matrix language was permitted to appear immediately after it. There would therefore be violation if it were written as *Counselorfoɔ really hear issues**……***. There is therefore no violation in excerpts 25 and 26 because they follow the morphosyntactic structure of the matrix language.

4.2 The Frequency of Occurrence of Switch Types and the Grammatical Classifications of the Embedded Language Constituents

This section explores the type of switches that were used by the participants through a thorough study of the data gathered. It investigates the frequency of occurrence of the switch types. The grammatical classifications of the embedded language constituents of English/Twi and Twi/English switches in intra-sentential code-switching and their frequency of occurrence is also looked at. Samples of data for

each grammatical classification of each pattern of the intra-sentential code-switching are also provided.

4.2.1The types of switch and their frequency of occurrence

The pattern of language switch can differ from the other. The pattern determines the types of switch done. Sometimes, one language in a switch can maintain its position as a matrix language. Other times too, it can change to become an embedded language. The position of the embedded language constituents in a matrix language configuration can also help determine the pattern leading to the type of switch. Table 2 shows the switch patterns with some corpora leading to the switch types.

Table 2: Switch patterns and their corresponding corpus

Switch Pattern		Corpus	Glossing
1.	Switching from English/Twi or Twi/English	Excerpt A 1. I Remember paa 2. Hw3 That's My Target 3. Master they dare not drop It koraa 4. Good Afternoon All Please Palolo's wedding is this Saturday 19-10-2019. He's the only man 'standing' so let's come in our numbers and support our brother. Me man nti!!	'I really remember' 'Look that is my target' 'Master they dare not drop it at all' 'Good afternoon all please Palolo's wedding is this Saturday 19-10-2019. He is the only man standing so let us come in our numbers and support our brother. For the sake of my country'.

		5. I hope you keep proper record of all members who pay to support others. Ɔkyena asem nti	'I hope you keep proper record of all members who pay to support others. For the purpose of tomorrow'.
2.	Mixture of Twi and English	Excerpt B	
		1. Pastor no adwene 'b' biara jus a question	'Pastor no bad notion at all just a question'
		2. Just go to Youtube. It is only 53 minutes. Charlie, it doesn't look good for Prof. Gyampo.	'Just go to YouTube. It is only 53 minutes. Charlie, it doesn't look good for Prof. Gyampo.
		Man no yɛ guy rough.	The man is really a guy'
		3. Coach, home sweet home, yɛ wild na bra	'Coach, home sweet home, be wild and come'
4.	Total Twi	Excerpt C	
		1. Mada koraa	'I have even fallen asleep'
		2. Woy3 ns3kuro	'You are inquisitive'
		3. Wonim s33 nn3 y3 Fiada	'You know that today is Friday'
		4. Medaase	'I thank you'

From the table, it is obvious that there is not only one switch pattern. Switching from English to Twi or Twi to English in excerpt 'A' is what some researchers call code-switching. There is either a switch from one language to another at the sentence level basis that is either at the sentence boundary level or beyond the sentence level which

are inter-sentential code-switching and intra-sentential code-switching respectively. Also, there is a mixture of Twi and English switch within the same sentence which is code-mixing but Myers-Scotton used both code-switching and code-mixing interchangeably. It is therefore obvious here that, Myers-Scotton saw code-mixing as part of intra-sentential code-switching because code-mixing is manifested within the same sentence. The data in excerpt 'B' are examples to support the code-mixing phenomenon. The researcher therefore applied Myers-Scotton's idea in her research but wants to suggest that code-switching and code-mixing should be different phenomena altogether though her matrix language frame was seen to be working well with code-mixing which she also sees it as intra-sentential code-switching. (1), (2), (3), and (4) of excerpt 'C' are corpora for total Twi which consists of only Twi constituents. There is therefore the identification of another switch type which concerns with switching totally from one language to another devoid of any constituent of the other language. I therefore suggest the name; ***total switching*** for the new switch discovered and will therefore define it as switching from one language to another without any constituent from the other language. The following are some empirical corpora from WhatsApp chats.

Excerpt (27)

'Man, how are you all?'

Excerpt (28)

'Why do you attend that church?'

The various types of switch that were practised by the participants were investigated to find their percentage distribution of their frequency of occurrence in figure 1.

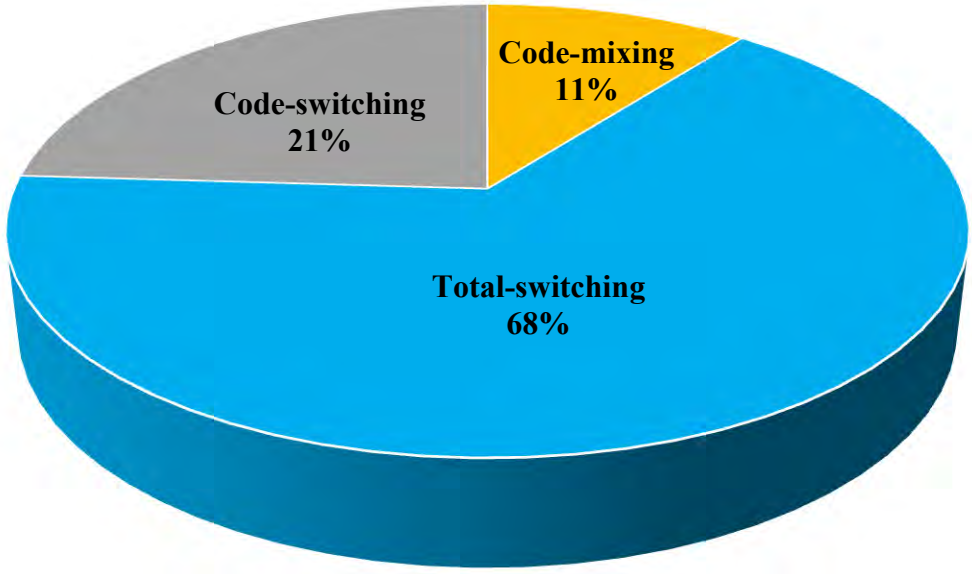


Figure 1: Frequency of occurrence of switch types

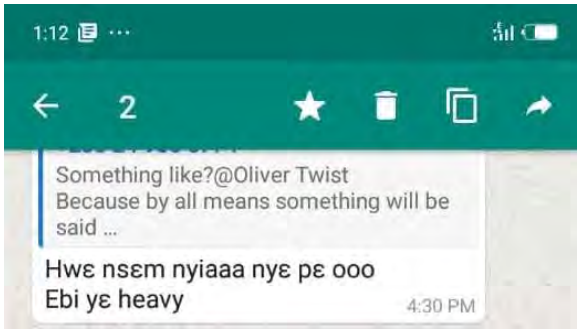
From the graph, code-mixing records 11% which is the least mark. Code-switching records 21% which is the second highest mark and Total-switching records the highest mark of 68%. It can be observed that total switching is very predominant and therefore needs to be considered and researched into.

4.2.1.1Types of code-switching

Two types of code-switching can be identified in this research so far. These are intra-sentential and inter-sentential code-switching. This is in line with Poplack (1980) saying that there are intra-sentential, inter-sentential and tag code-switching. But tag switch does not surface in this investigation. Some corpora of the code-switch types identified in this current investigation are as follows;

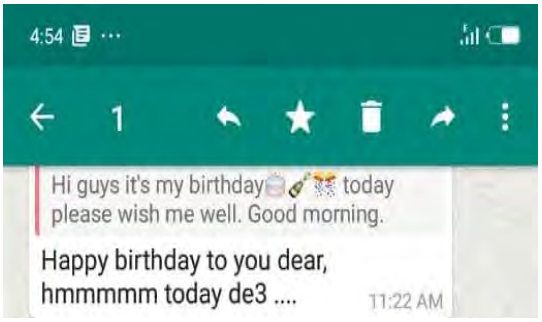
Intra-sentential Code-switching

Excerpt (29)



'Look all issues are not equal oo. Some are heavy'

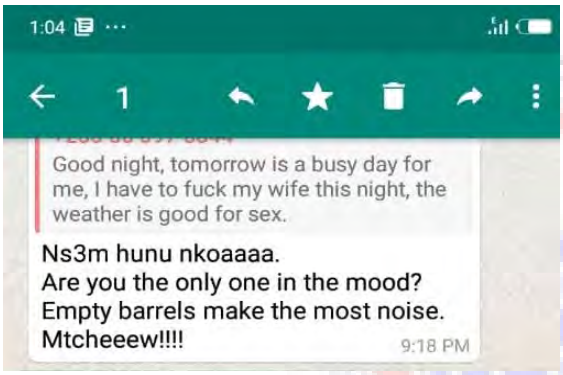
Excerpt (30)



'Happy birthday to you dear, hmm as for today de3…'

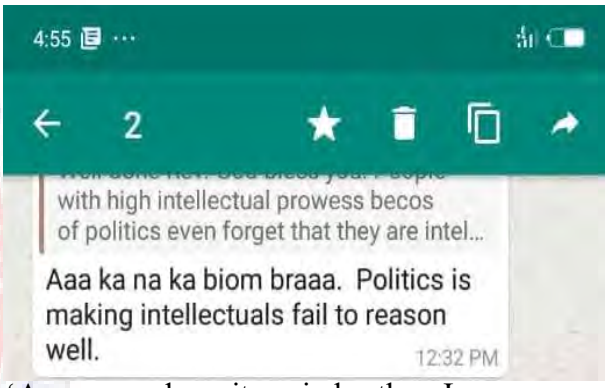
Inter-sentential Code-switching

Excerpt (31)



'Only trivial issues. Are you the only one in the mood?
Empty barrels make the most noise.

Excerpt (32)



'Aaa say and say it again brother. I have chuckled!!!!'Politics is making intellectuals fail to reason well.

4.2.1.2 Percentage distribution of code-switching types

All the code-switched configurations were analysed to find those that belonged to intrasentential code-switching or intrasentential code-switching and found how frequent they occur in percentage perspective. Figure 2 represents the percentage distribution of code-switching types.

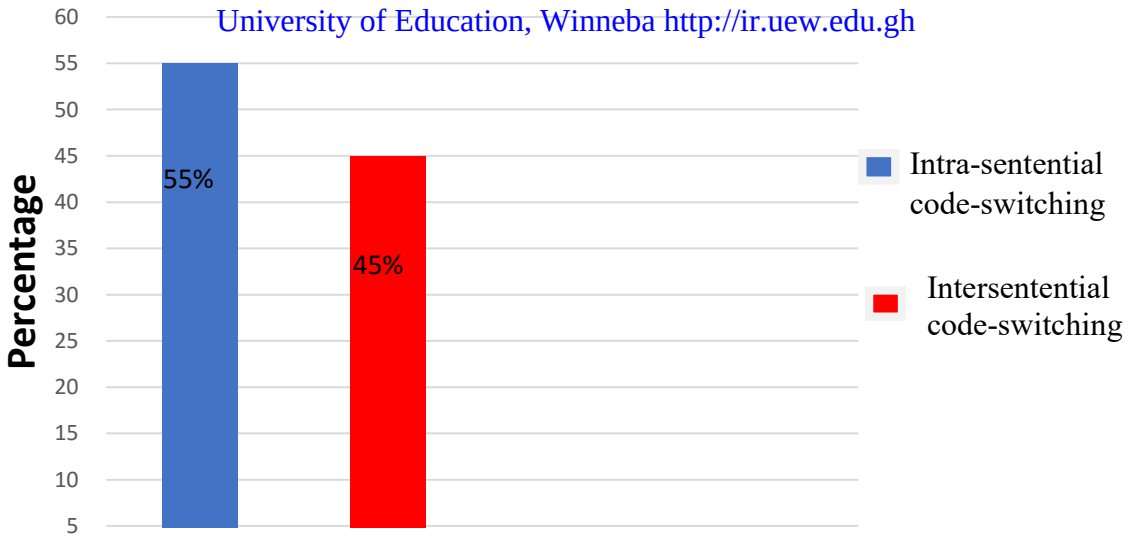


Figure 2: Percentage distribution of code-switching types

From the graph, intra-sentential code-switching records the highest mark of 55% but intrasentential code-switching records 45%. This suggests that the participants used intrasentential more often than intrasentential code-switching.

4.2.2.1 The frequency of occurrence of the grammatical classifications of Twi/English embedded language (EL) constituents

The embedded language constituents of Twi in English matrix language were analysed to find their grammatical classifications and the percentage distribution of the frequency of occurrence. The percentage of the frequency of occurrence of each grammatical classification of the embedded language constituents is represented in figure 3.

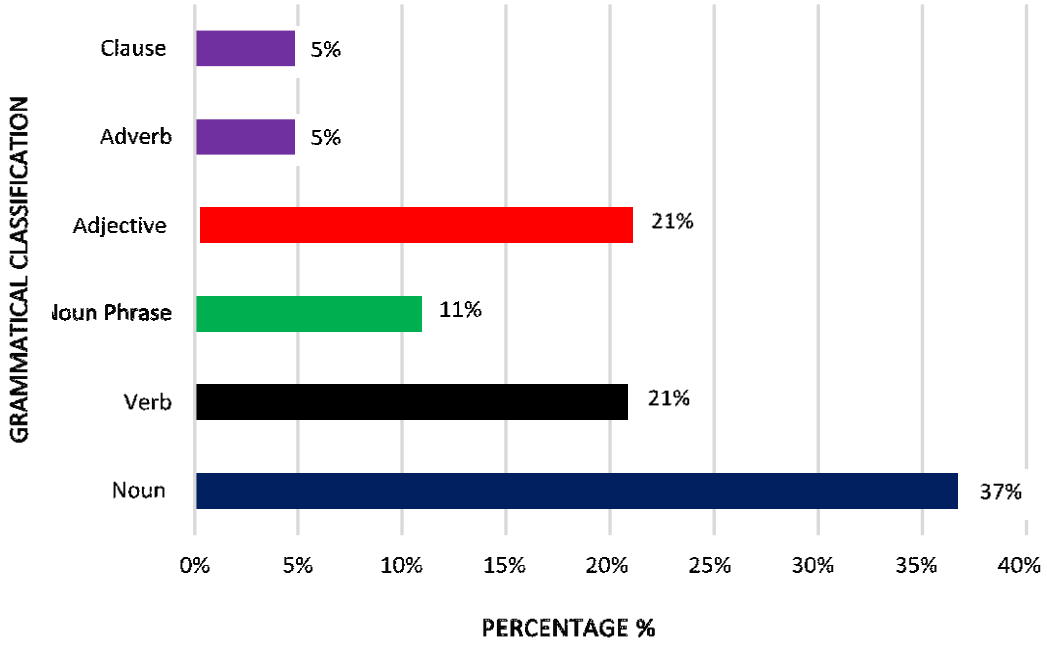


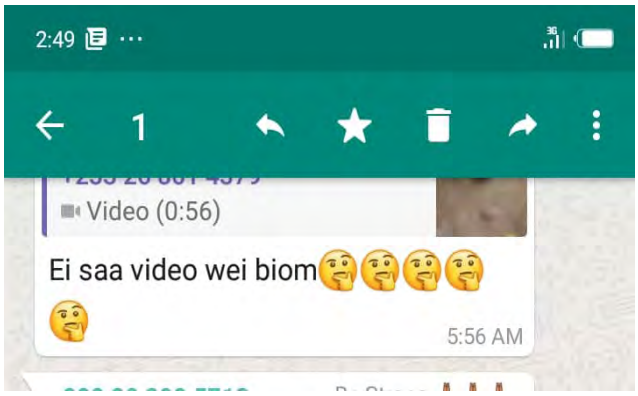
Figure 3: Percentage distribution of grammatical classifications of Twi/English EL constituents

From the graph, the grammatical classifications found in Twi/English EL constituents are noun, verb, adjective, adverb, noun phrase and clause.

It is observed that clause and adverb score the least mark of 5%. Adjective and verb also score 21% which is the second highest of the marks. Noun phrase on the other hand records 11% of the scores which is the highest. Noun also records 37% which is the highest mark on the graph. The overall results indicate that the participants who switch from Twi/English use noun frequently when using intrasentential code-switching. The data below represents some of the noun, verb, adjective, adverb, noun phrase and clause constituents of the Twi/English switches.

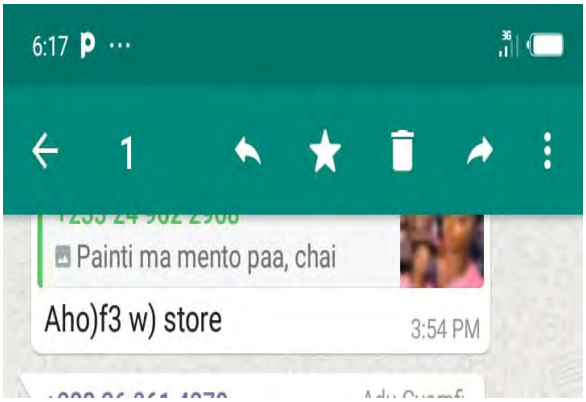
4.2.2.1.1 The EL noun in Twi/English switches

Excerpt (33)



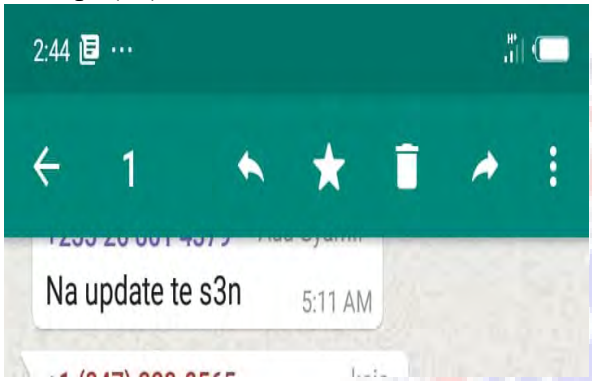
'Ei this video again'

Excerpt (34)



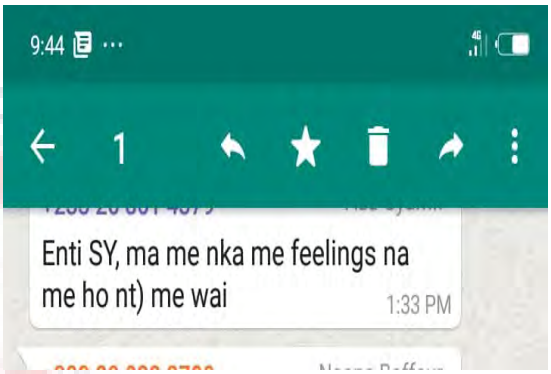
'Beauty is in store'.

Excerpt (35)



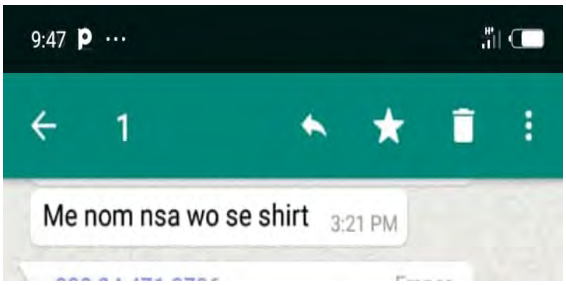
'What is update?

Excerpt (36)



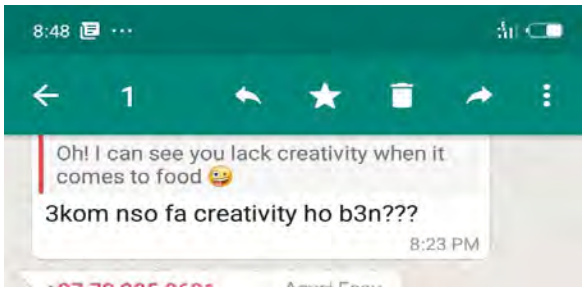
'And So SY, let me also say my feelings so that I will be free okay'

Excerpt (37)



'I take drink and you say' shirt'

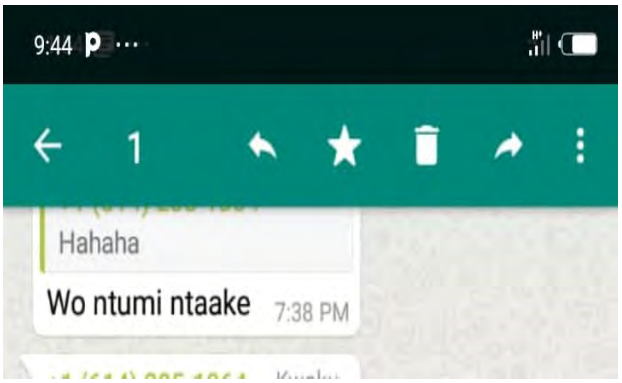
Excerpt (38)



'What has hunger got to do with creativity'.

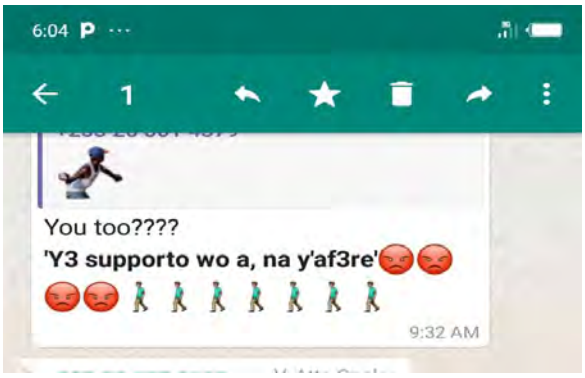
4.2.2.1.2 The EL Verb in Twi / English switches

Excerpt (39)



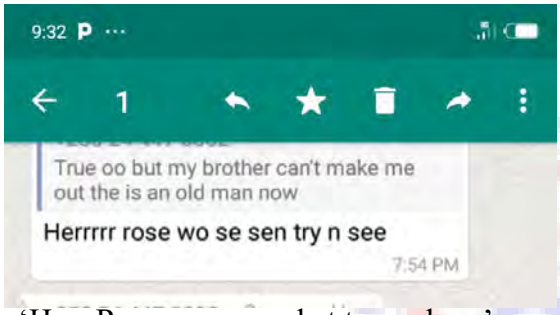
'You cannot attack'

Excerpt (40)



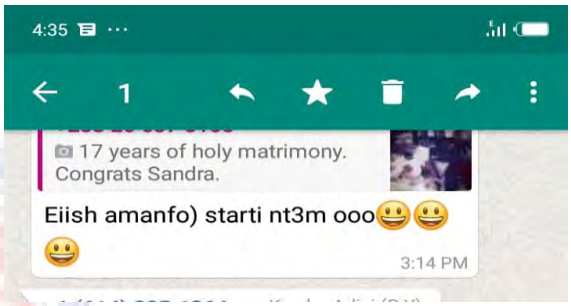
'You make us feel shy when we support you'

'Excerpt (41)



'Herr Rose you say what try and see'

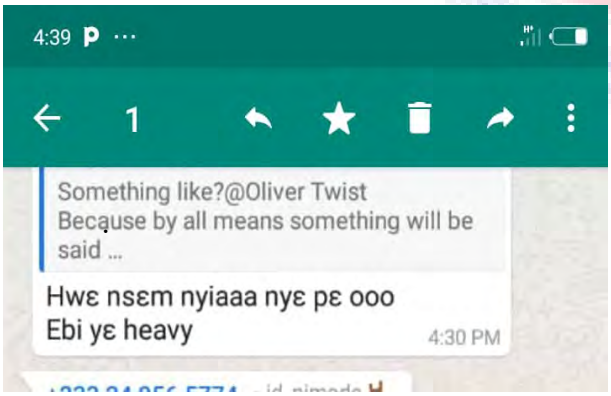
Excerpt (42)



'People started early oo'

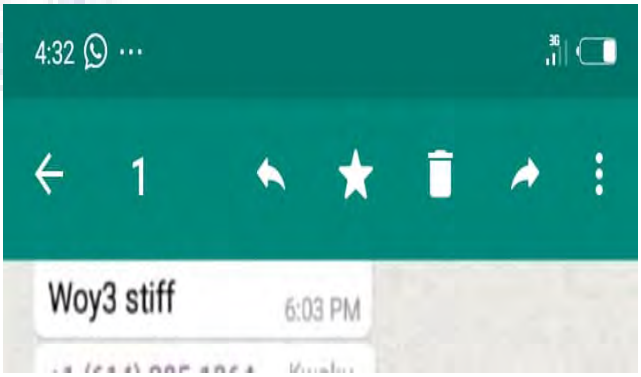
4.2.2.1.3 The EL adjective in Twi/ English switch

Excerpt (43)



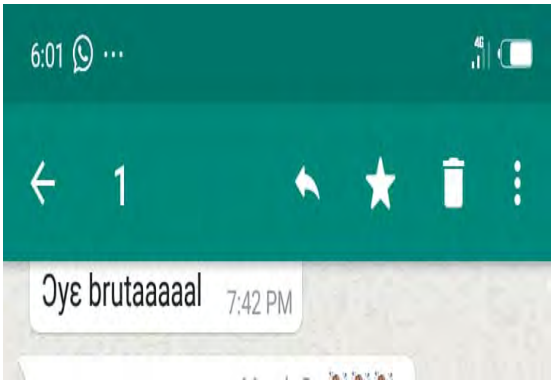
'Look not all issues are equal oo some are heavy'

Excerpt (44)



'You are stiff'

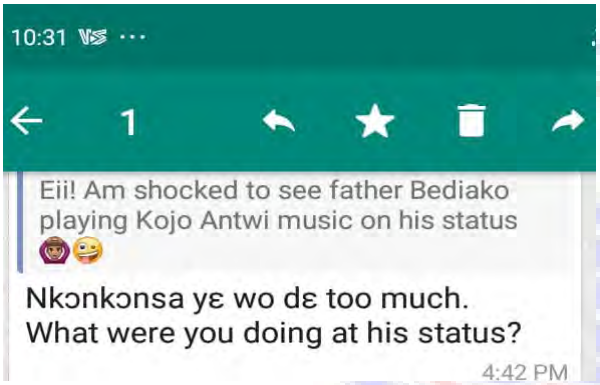
Excerpt (45)



'He is brutal'

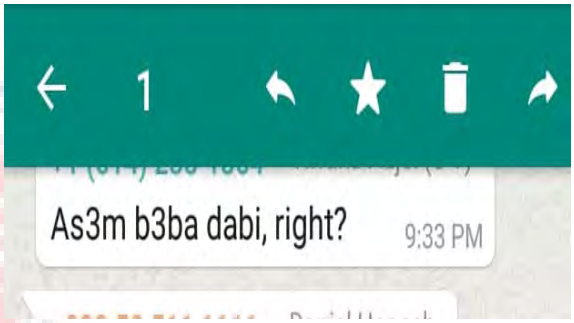
4.2.2.1.4 The EL adverb in Twi/English switches

Excerpt (46)



'You like gossip too much.
What were you doing at his status?'

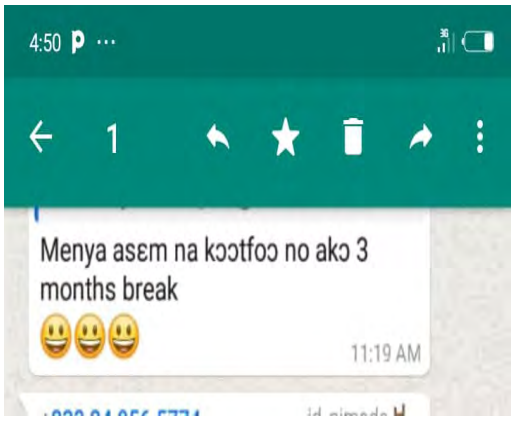
Excerpt (47)



'There will be problem one day, right'.

4.2.2.1.5 The EL noun phrase in Twi/English switches

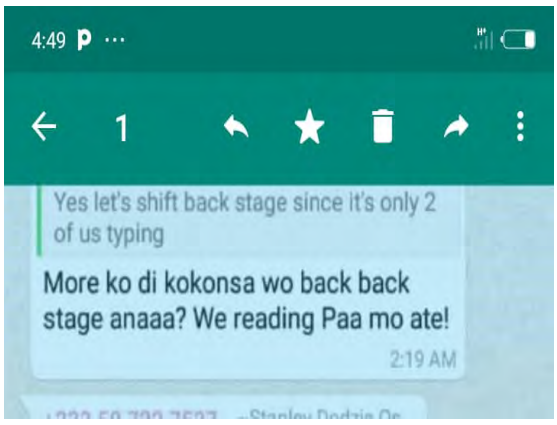
Excerpt (48)



'

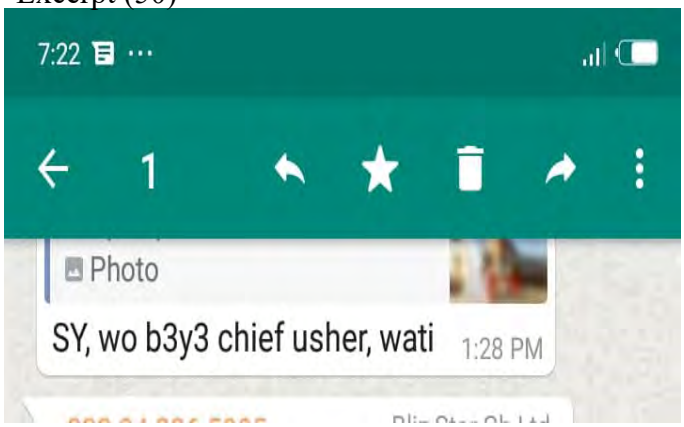
'The time I will get case, court will be on three months break'.

Excerpt (49)



'Are you going to gossip at back stage? We are really reading, have you heard'.

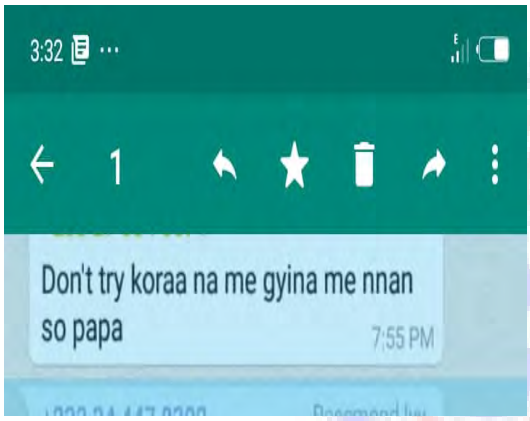
Excerpt (50)



'SY, you will be a chief usher, you hear'

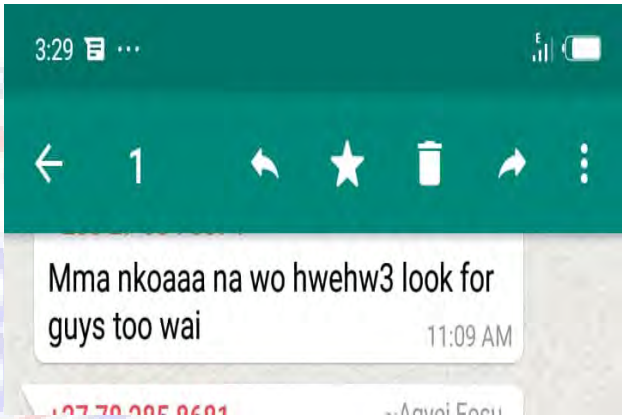
4.2.2.1.6 The EL clause in Twi/English switches

Excerpt (51)



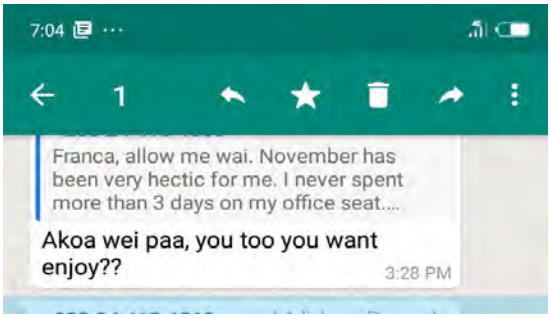
'Don't try at all because I am on my feet'

Excerpt (52)



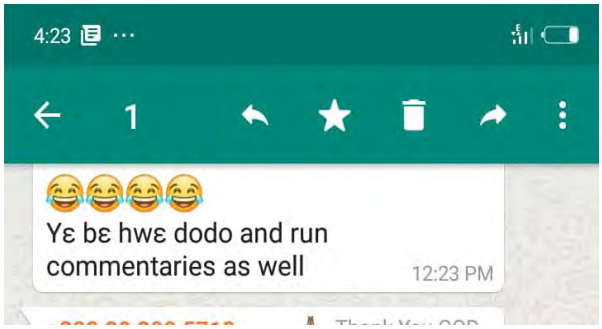
'Only girls that you look for, look for guys too okay'.

Excerpt (53)



'You this boy, you too you want to enjoy?'

Excerpt (54)



'We will watch and run commentaries as well'

The English EL morphemes inserted into the Twi matrix language constituents are summarized in table 3 below;

Table 3: Summary of the English EL morphemes in Twi ML constituents

Grammatical Classification	English EL Morpheme	Glossing (Where necessary)
Verb (The actual English morphemes are: attack, post, rush, feel, support, cause, start)	ntaake	"Cannot attack"
	aposti	'Has posted'
	rushi	'rush'
	fiili	'Feeling'
	supporto	'Support'
	Acauso	'has caused'
	Try	
	starti	'Started'
Noun	video	
	store	
	update	
	feelings	
	shirt	
	creativity	
	parachute	
Adjective	heavy	
	sturdy	
	brutal	
	Stiff	
Adverb	too much	
	right	
	fast	
Noun phrase	back stage	
	3 months break	
	chief usher	
Clause	Don't try	
	Look for guys too	
	and run commentaries as well	
	you too you want to enjoy	

4.2.2.2 The frequency of occurrence of grammatical classifications in English/Twi Embedded Language (EL) constituents

The embedded language constituents in English and Twi switches were carefully studied and classified under the required grammatical classes. The grammatical classes include noun, noun phrase, conjunction, determiner, affix and clauses. These grammatical classifications of the embedded language Twi are showcased with their corresponding percentages in figure 4

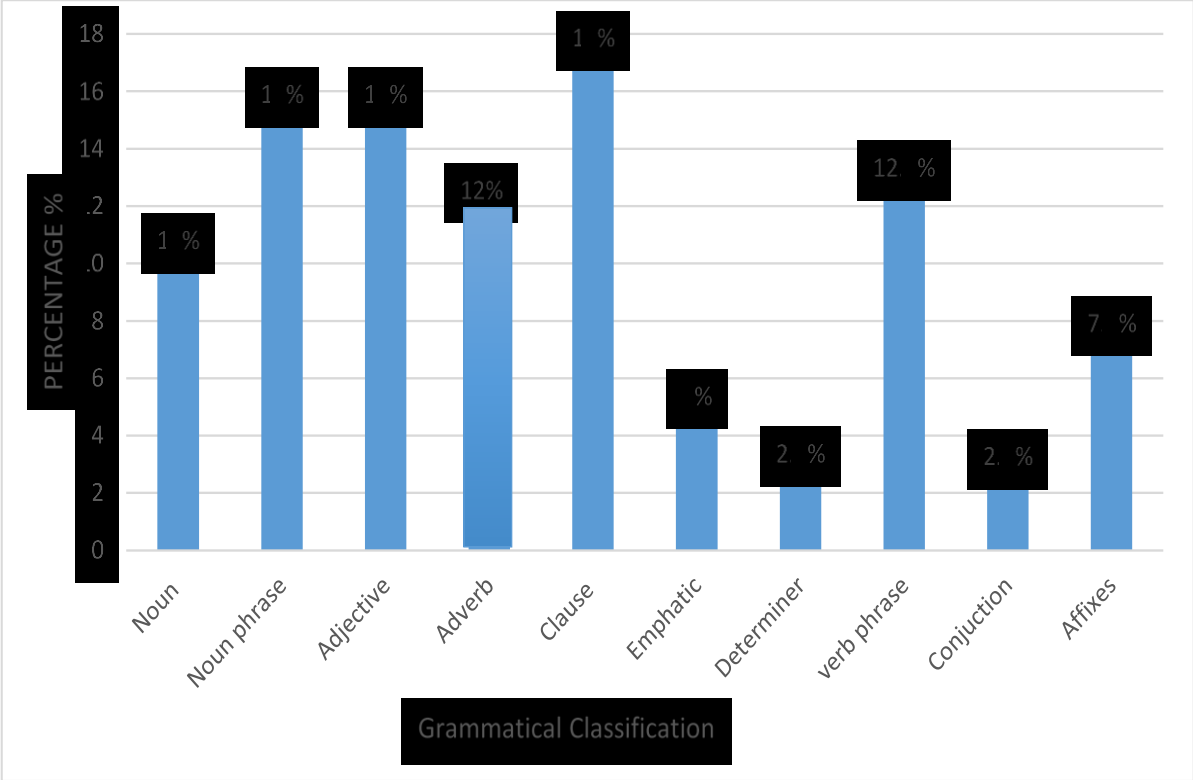


Figure 4: Percentage distribution of grammatical classifications of English /Twi Embedded Language constituents

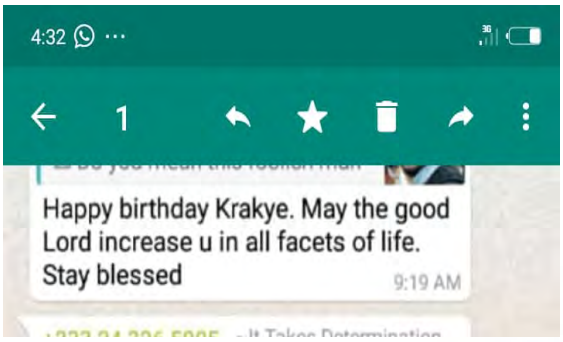
From the graph above, clause records the highest mark of 17%. Noun phrase and adjective record 15% each which is the second highest score. The least score is 2.5% which is recorded by determiner and conjunction, adverb records 12% and verb phrase records 12.5 %. Noun on the other hand, records 10 % but emphatic and affix 5% and 7.5% respectively. There is a clear depiction that the participants often used

clause when switching from English to Twi but used determiner and conjunction in few cases.

Examples below are some data depicting each grammatical class.

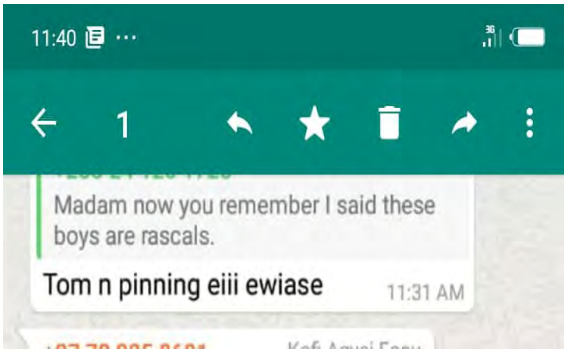
4.2.2.2.1 EL noun in English / Twi switches

Excerpt (55)



'Happy birthday gentleman. May the good Lord increase you in all facets of life. Stay blessed'.

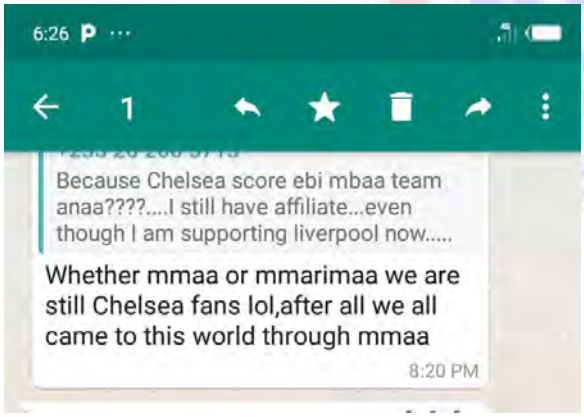
Excerpt (56)



'Tom and pinning eii world'

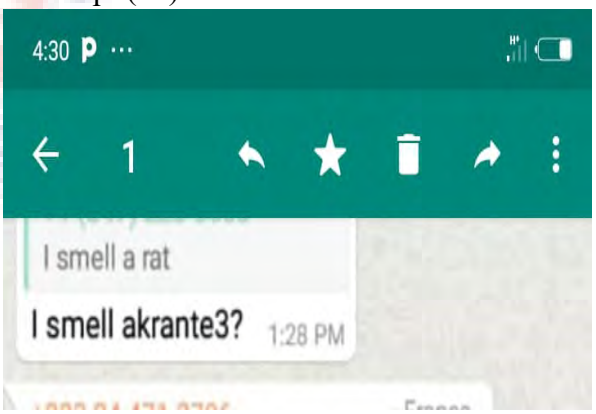
4.2.2.2.2 EL noun phrase in English/ Twi switches

Excerpt (57)



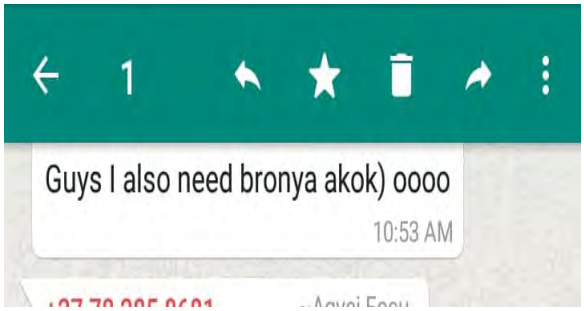
'Whether females or males we are still Chelsea fans lot of laugh, after all we all came to this world through females'

Excerpt (58)



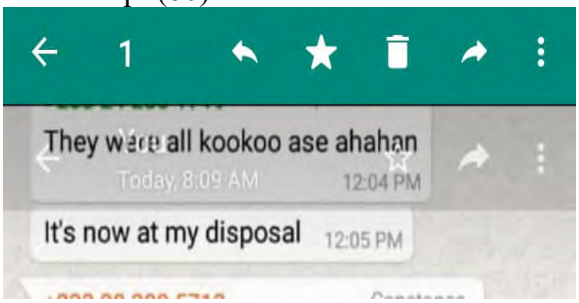
'I smell grasscutter'

Excerpt (59)



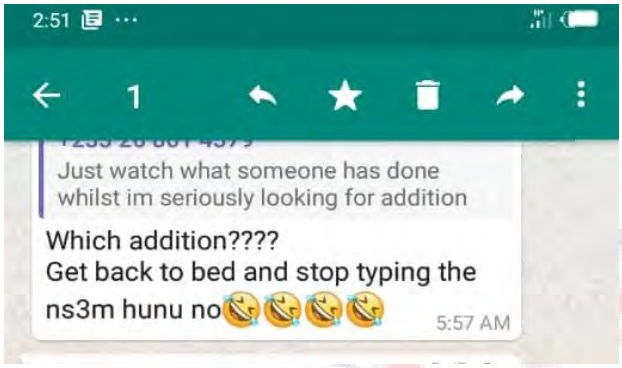
'Guys I also need Christmas chicken oooo'

Excerpt (60)



'They were all cocoa leaf. It is now at my disposal'

Except (61)



'Which addition? Get back to bed and stop typing the nonsense'.

Except (62)

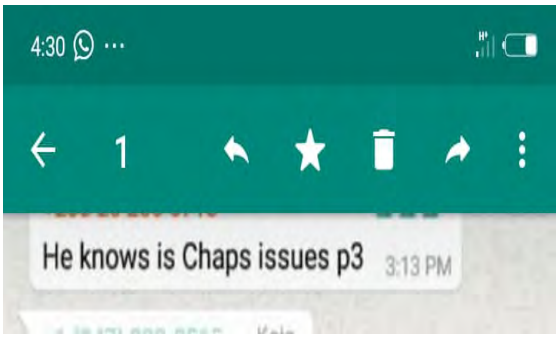
'I salute my nephew. Hope you are doing well, chief's son'.

4.2.2.2.3 EL adjective constituents in English/Twi switches

Excerpt (63)

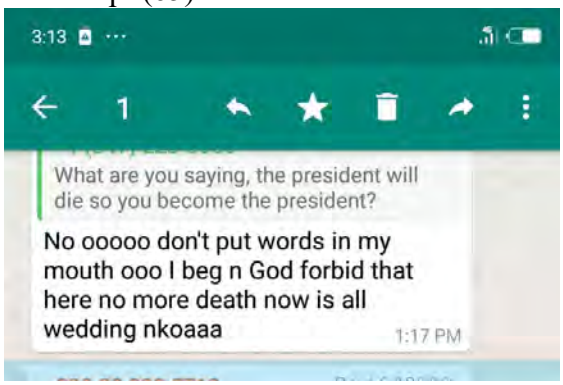
'True oo it's just the Christ part I don't agree if say am a Buddhist'

Excerpt (64)



'He knows it is only chaplaincy issues'

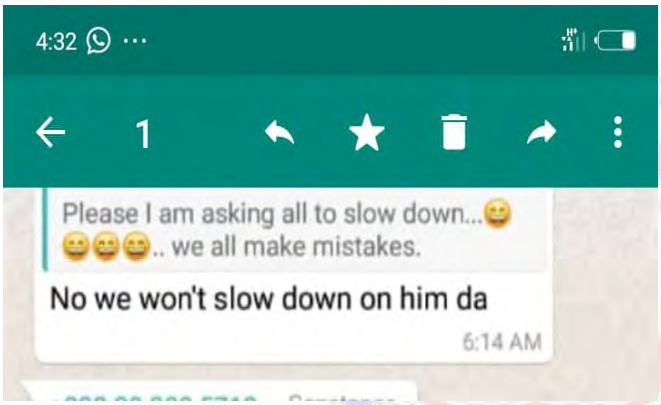
Excerpt (65)



'No oo don't put words in my mouth oo I beg and God forbid that here no more death now is only wedding'

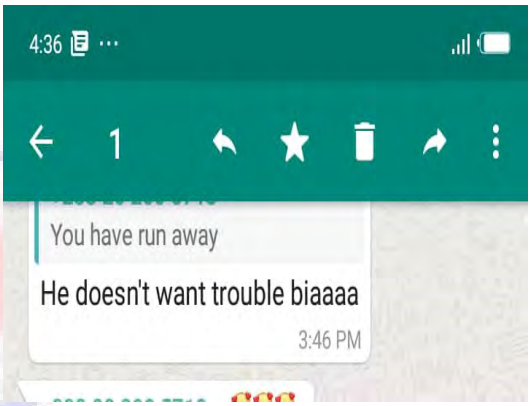
4.2.2.2.4 EL adverb in English / Twi switches

Excerpt (66)



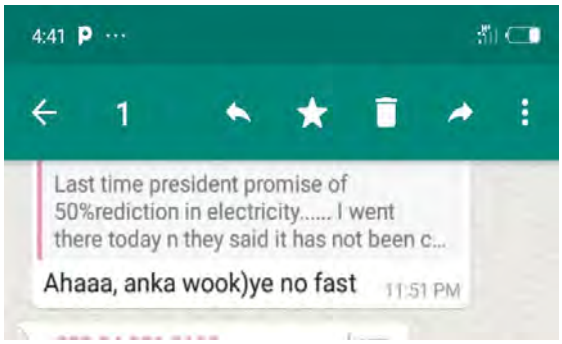
'No, we will never slow down on him'

Excerpt (67)



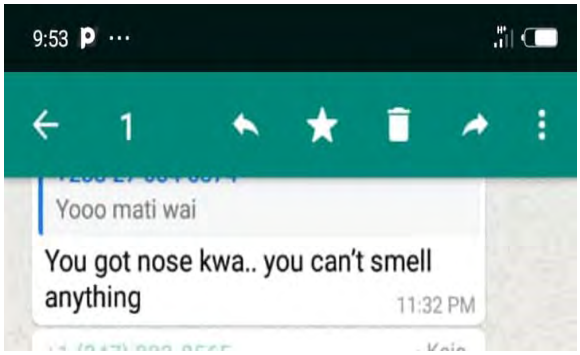
'He doesn't want any trouble'

Excerpt (68)



'Ahaa, you were going to collect it fast'.

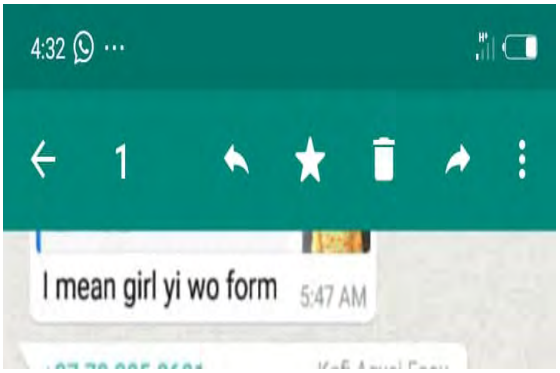
Excerpt (69)



'You got nose for nothing. you can't smell anything'.

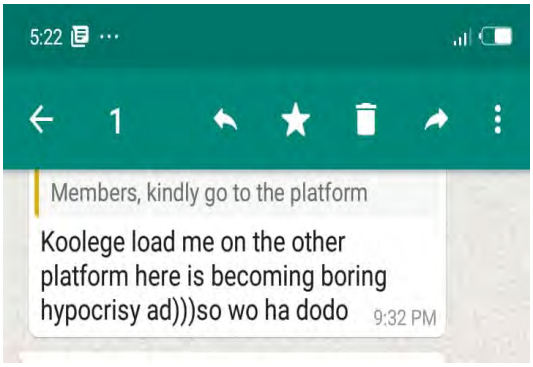
4.2.2.2.5 El verb phrase in English/Twi switches

Excerpt (70)



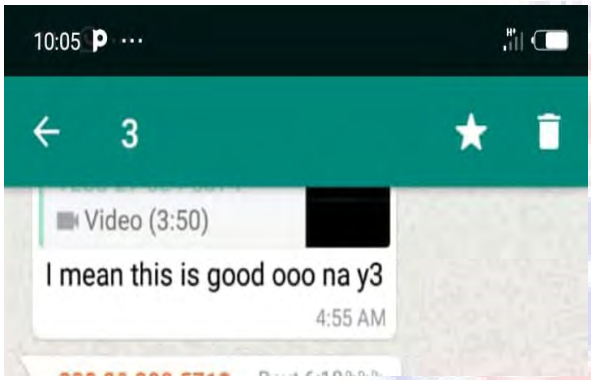
'I mean this girl has shape'

Excerpt (71)



'Koolege, load me on the other platform here is becoming boring hypocrisy is too much here'.

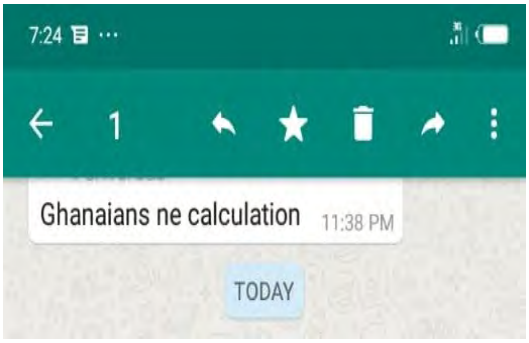
Excerpt (72)



'I mean this is good oo so do it'.

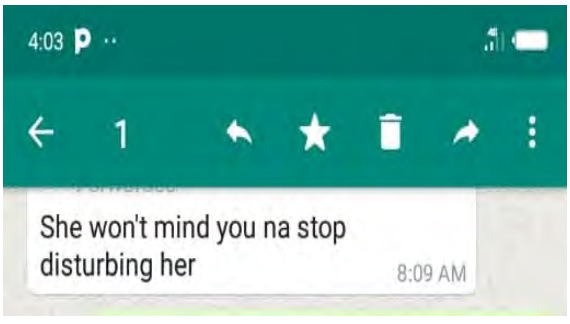
4.2.2.2.6 EL conjunction in English/Twi switches

Excerpt (73)



'Ghanaians and calculation'

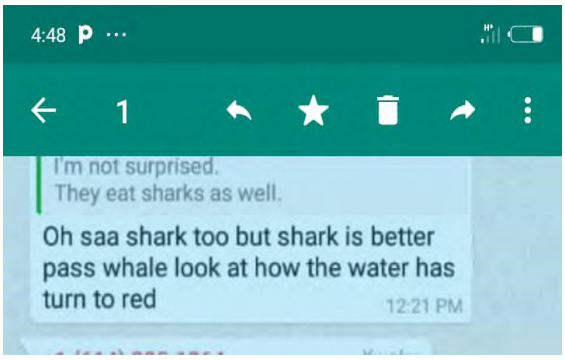
Excerpt (74)



'She won't mind you so stop disturbing her'

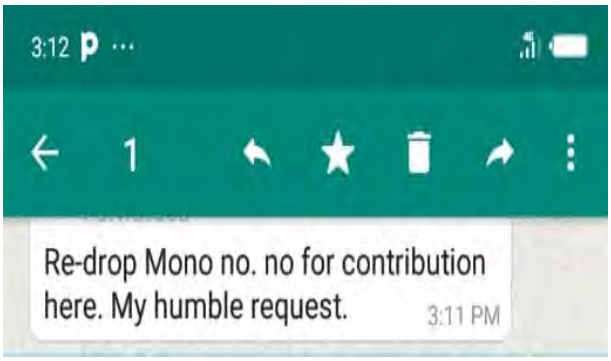
4.2.2.2.7 EL determiner in English/Twi switches

Excerpt (75)



'Oh that shark too but shark is better than whale look at how the water has turned red'

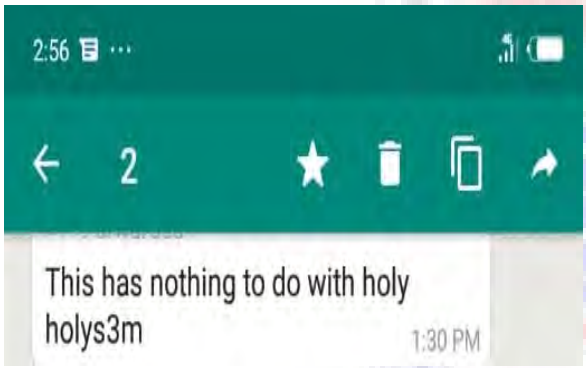
Excerpt (76)



My humble request'.
'Re-drop the Momo number for contribution here.

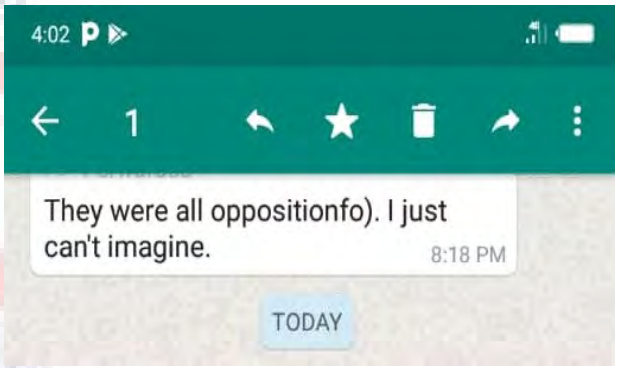
4.2.2.2.8 EL affix in English/Twi switches

Excerpt (77)



'This has nothing to do with holiness'

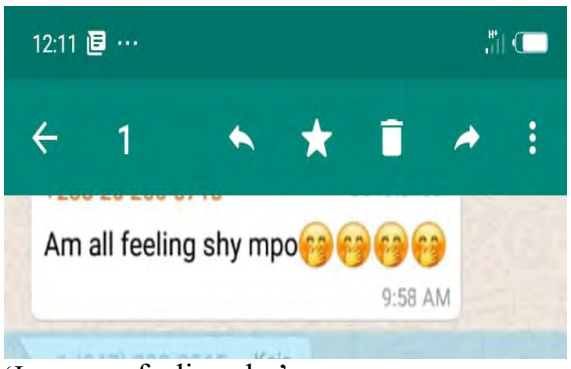
Excerpt (78)



'They were all opposition members. I just can't imagine'.

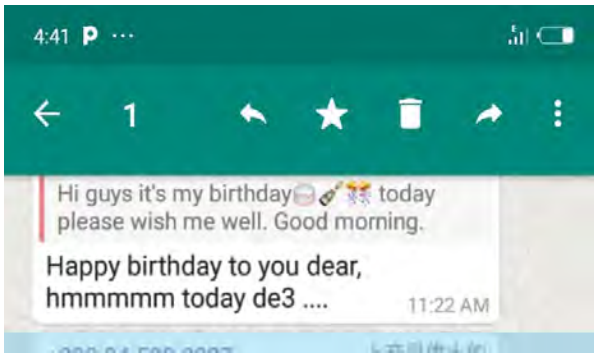
4.2.2.2.9 EL emphatic particle in English/Twi switches

Excerpt (79)



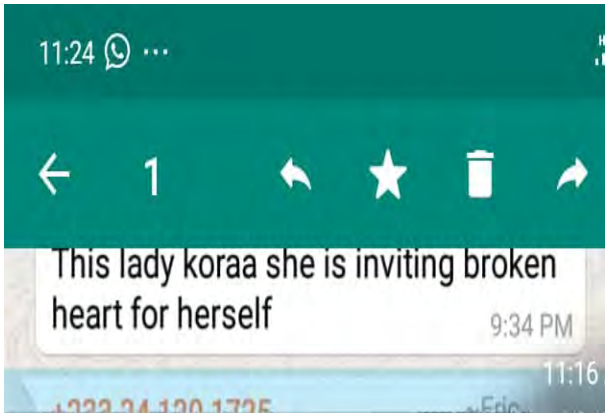
'I am even feeling shy'.

Excerpt (80)



'Happy birthday to you dear, hmm as for today…'

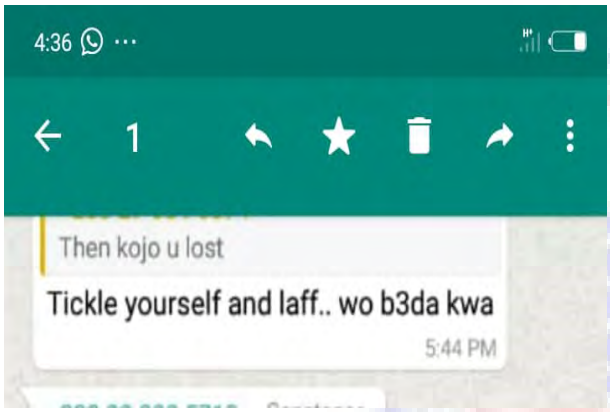
Excerpt (81)



'As for this lady she is inviting broken heart for herself'.

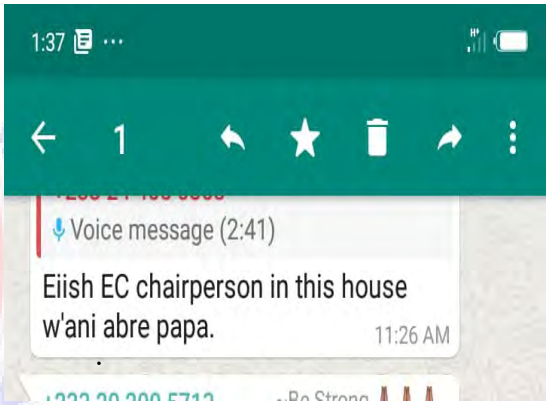
4.2.2.2.10 EL clause in English/Twi switches

Excerpt (82)



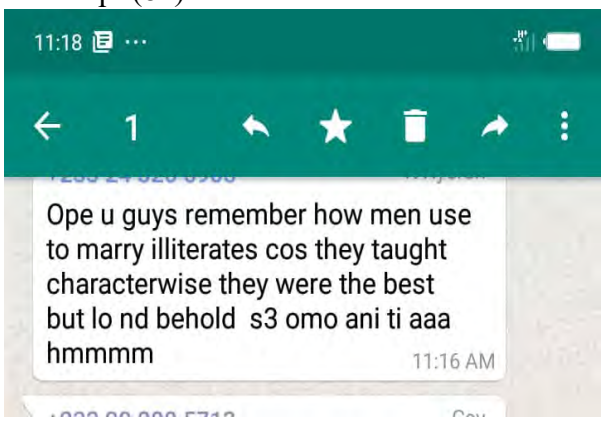
'Tickle yourself and laugh… you will sleep like that'.

Excerpt (83)



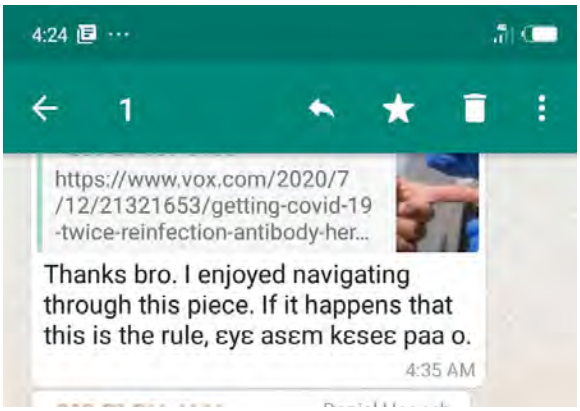
'Eiish EC's chairperson in this house you are really serious'

Excerpt (84)



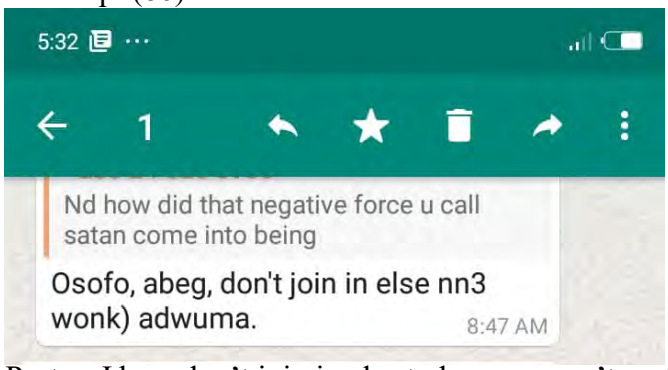
'Ope, you guys remember how men used to marry illiterate because they taught character wise, they were the best but lo and behold if they become wise hmm…'.77

Excerpt (85)



'Thanks brother. I enjoyed navigating through this piece. If it happens that this is the rule, it is a very big problem'

Excerpt (86)



Pastor, I beg, don't join in else today you won't go to work'.

The Twi EL morphemes incorporated into the English matrix language constituents are also summarized in Table 4.

Table 4: Summary of Twi EL morphemes in English ML constituents

Grammatical Classification	**Twi EL Morpheme**	**Glossing**
Noun	ewiase	world
	amanfoɔ	people
	mmaa	females
	mmarima	males
	akranteɛ	Grasscutter
Noun phrase	kookoo ase ahahan	cocoa leave
	abrante pa	good man
	bronya akokɔ	Christmas chicken
	nsem hunu no	nonsense
Verb phrase	yi wo	this has
	adɔɔso wo ha dodo	are many here
	na yɛ	so, do it
Adjective	Ampa	true
	Pɛ	only
	Nkoaaa	only

Conjunction	ne	and
	na	so
Determiner	bi	a
	no	the
Emphaptic	Mpo	Even
	deɛ	Just
	koraa	even
Affix	Sɛm	Ness
	Foɔ	People
Clause	wobɛ da kwa	you will sleep like that
	w'ani abre papa	you are really serious
	Sɛ omo ani tiaa.	when they become wise,
	ɛyɛ asem kaseɛ paa o	it is a very big problem
	Nnɛ wonkɔ adwuma	today you will not go to work

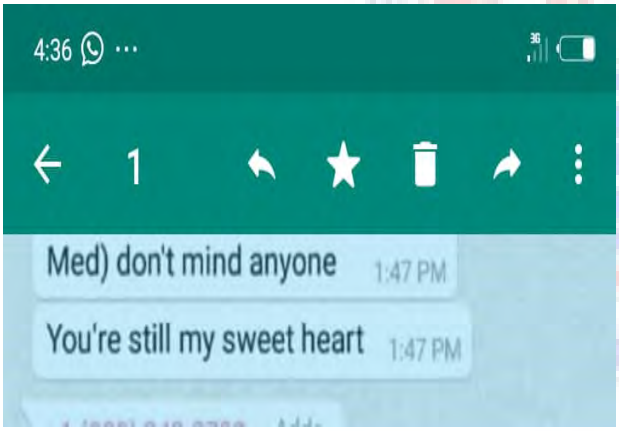
4.3 Reasons and Motivating Factors for Code-switching and Code-mixing on WhatsApp Chats.

According to Grosjean (2001), different factors can cause a speaker at any given time to change the language mode. There are many reasons and factors that motivate a speaker to alternate language in any communication. Upon the interview granted with the participants, participants have their personal reasons for practicing code-switching and code-mixing on their WhatsApp group chats. The reasons and motivating factors are as follows;

4.3.1 Solidarity

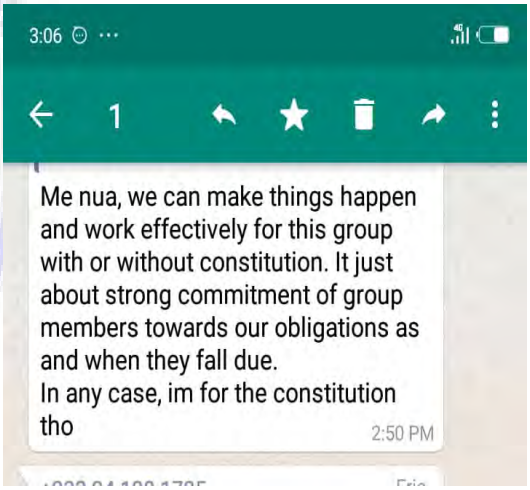
Peers on WhatsApp group chats, use code-switching and code-mixing to strengthen their relationships with their co-interlocutors. This is in line with (Crystal, 1997) and (Sampson, 2011) which state that people switch to maintain interpersonal relationship. Peers switch codes to create the awareness that they are also part of the groups and therefore have to use language that will help enhance the sustenance of the group. In the interview, one of the participants mentioned that "I switch for sense of belongingness". Another participant also said that "I switch to bring people closer" which confirm what Crystal and Sampson said. Excerpts (89) and (90) are examples from the data.

Excerpt (87)



My love doesn't mind anyone.
You're still my sweet heart.

Excerpt (88)



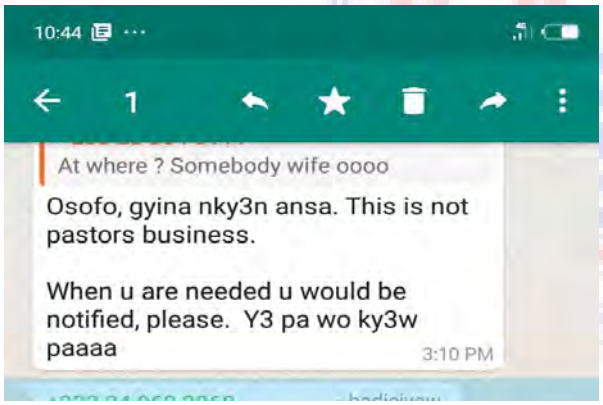
'My brother, we can make things happen and work effectively for this group with or without constitution of group members toward our obligations as and when

The use of **'Medɔ'** meaning 'My love' and **'Me nua'** meaning 'My brother' are some of the expressions used to show cordiality between the interlocutors on the platforms.

4.3.2 Emphasis

Emphasis is used to express something that seems very important to take notice of. Peers sometimes may want their co-participants to take notice of something that to them is very crucial and therefore want to repeat what they have said or what other participant(s) said. Sometimes, some switching codes are used to show their concern about an issue and as such want other participants to also take notice and be serious about it. In order to do that they therefore try to code-switch to show emphasis (Baker, 2006). This confirms what an interviewee said, that "I switch for emphasis". Another one also said "I switch for people to be serious about what I say". Examples from the data in excerpts (91), (92), (93) and (94) show some sense of seriousness and emphasis.

Excerpt (91)

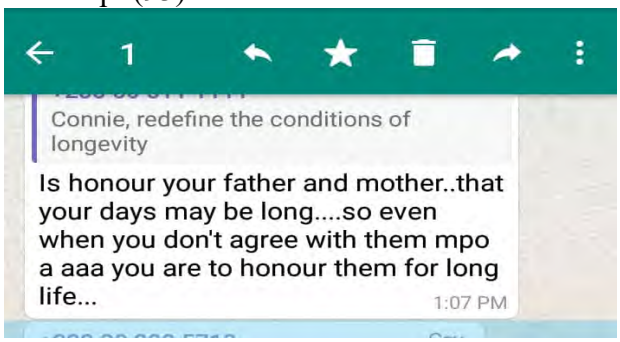


Pastor, stand aside before. This is not pastor's business. When you are needed you would be notified, please.

Excerpt (92)

This man is a traitor. What at all does he want the elders of his party to do for him?? Love your neighbour and hit yourself. Only in Ghana politics.

Excerpt (93)



Is honour your father and mother that your day's may be long… so even when you don't agree with them, you are to honour them for long life…'

Excerpt (94)

'As for where I am, if you even give thousand years, I will not meet any of you guys'

4.3.3 Equivalence

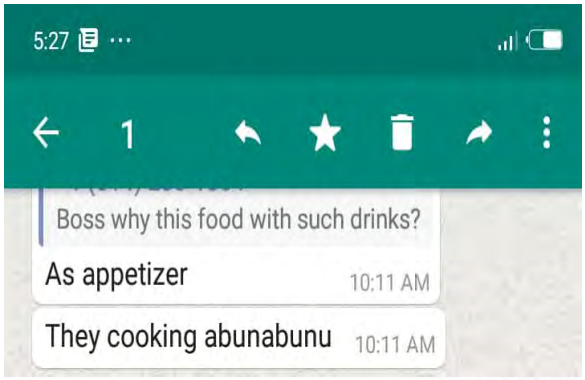
People do code-switch to supplement speech (Skiba, 1997). This is in line with the responses that were given by some of the interviewees that; "I sometimes switch because I want to use the precise word which is difficult to get its equivalence in another language. This pertains in Twi. Not all words and expressions in Twi that have their equivalence in English therefore in mixing English and Twi, one may prefer to use the exact words he wants to employ in his speech. Some instances from the data are shown in excerpts (95), (96) and (97).

Excerpt (95)

'mpusuo' which is animal flesh steamed with pepper and spices to make some small light soup, has no equivalent word in English therefore the participant switches to

Twi. Also '**abubunabunu'** which is soup made of snails and cocoyam leaves and '**B3nkumhene'** which refers to a sub-chief who always sits at the left side of the paramount chief, do not have their equivalent words in English therefore the participants have to switch so that the exact message can be communicated.

Excerpt (96)



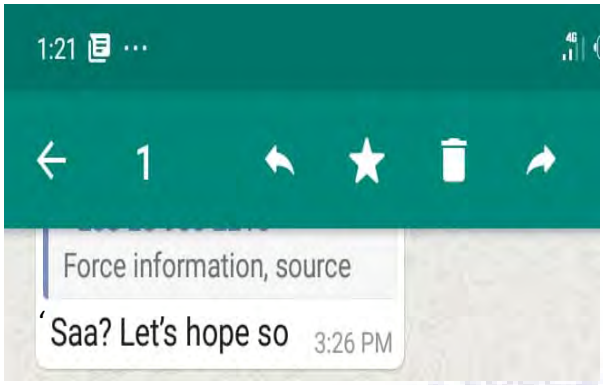
Excerpt (97)

4.3.4 Brevity

Every participant in WhatsApp group has the chance of posting and responding to any post on the WhatsApp chats. Sometimes, a message may even be directed to a particular person on the group chat but one may quickly react or respond to such a message to correspond with that particular message or post, an interlocutor sometimes switches to another language that has very short expressions as compared to the first language so as to attain sequence of other interlocutors interrupting that particular conversation in a moment of time. To attain this, some participants sometimes switch to another language which aid them text message faster in giving responses on WhatsApp group chats. There are some other participants who also switch from one language to another so as to conserve time and energy with respect to lengthiness of word or expressions. To attest to this, a participant upon an interview with him mentioned that "I sometimes switch-codes for so that I can type message within time". Another interviewee also responded that "I sometimes switch because I want to be brief". The responses confirm (San, 2009) which mentions that

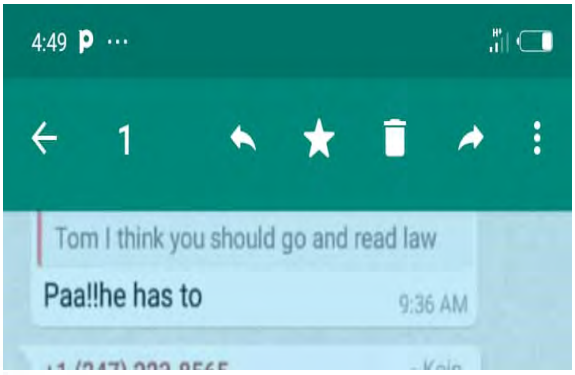
bilinguals choose to employ the least effort in producing their language and so opt for the easiest ones as against the complicated ones. This supports what was said by Gumperz that, to make communication easier, bilinguals opt to use the shortest and easiest words (1982). Excerpts (98) and (99) are examples from the data gathered.

Excerpts (98)



'Is that so? Let's hope so'

Excerpts (99)



'Exactly so !! he has to'

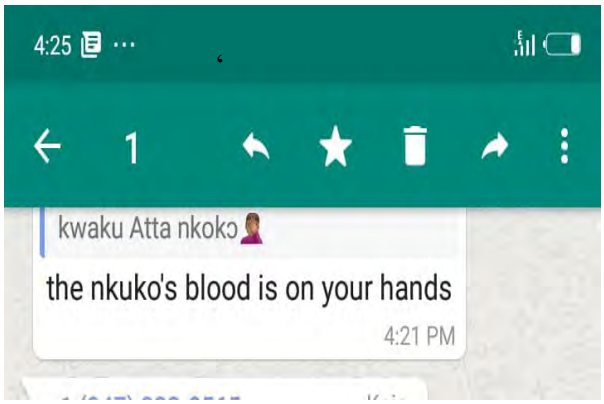
'Saa'and **'Paa'** look very short in length as compared to their meanings, 'Is that so' and 'exactly so' respectively. Therefore, the participants switched by using those words for brevity purpose.

4.3.5 Humour

Peers on WhatsApp most often want to create something on the platform to trigger laughter. They do that sometimes to cause other interlocutors to laugh in order to release tension or stress. Most often, participants having cordial relationship with other participants in the group send messages concerning their life history or personal experiences to create laughter. By so doing, they switch codes to communicate using the exact words or expressions in such a way that there will be some sense of humour in the communications. This confirms (Montes-Alcalá, 2007)) which mentions that bloggers sometimes switch to cause stylistic effect and this can create some humorous effect. Excerpts (100), (101) and (102) are examples from the corpora affirming a participant's response to the interview conducted by the

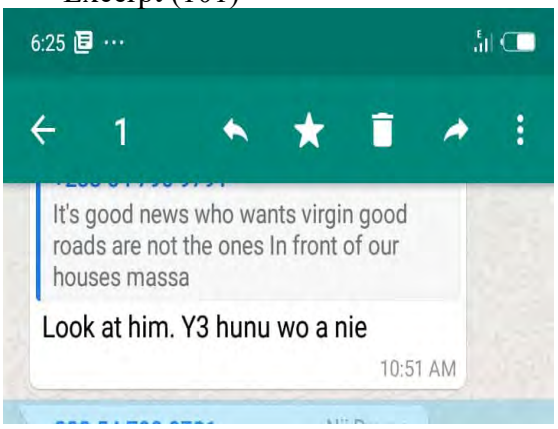
researcher when she said "I do switch codes sometimes to make the chat very interesting".

Excerpt (100)



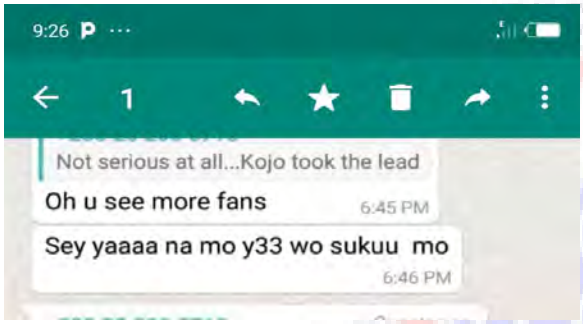
'The chicken's blood is on your hands'

Excerpt (101)



Look at him. This is how we always see you'.

Excerpt (102)



'Oh, you see more fans.
This is what you did in school'.

4.2.6 Enhancement of Communication

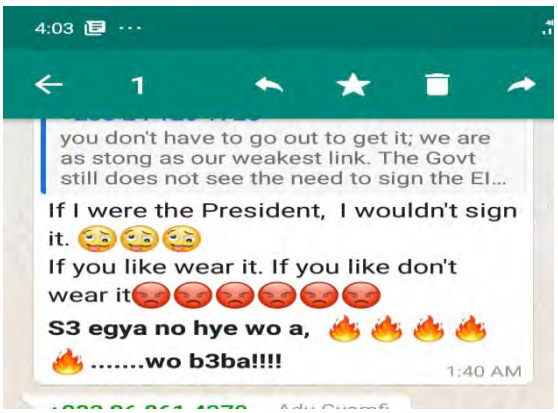
Communication needs involvement of two or more people. For communication to continue, participants in WhatsApp group chats always participate in trending issues or issues under discussion on the group platforms. As a result, there should be clarity to messages texted on the group page so that other interlocutors will be gingered up in participating in the discussions. If there is no clarity in the message posted, participants do not react to it and this make the platform very boring. To enhance participation of interlocutors on the platform by giving views or responses on an issue presented on the platform, textees some sometimes switch codes so that other

participants will have clear understanding so as to react to it to avoid a break in communication. This affirms what Jefferson (1972) says that when there is necessity for clarification in a discourse, by the receipt, the conversation may cease and there can be divergence of communication from the actual topic (Auer, 1984). After interviewing the participants, one responded that "I mix languages so that my message will be understood to enhance communication" which is in line with (David, 2003; Malik, 1994 & Heller, 2001). To do this, speakers sometimes translate the message to L_1 as a way of explaining the content (Gumperz, 1983) by reiterating to enhance comprehension of materials (Lin, 2000). Excerpts (103) and (104) are examples from the data as evidence where the participants switched from English to Twi in order to elaborate why some activities should be performed.

Excerpt (103)

'Ei brother, that's overboard. Are you interested in the impact of the Degree or the certificate? But your Approach is also sound; instead of crippling yourself with PhD, masters give you the leverage to explore several fields. But bear in mind that, you urinate at one place, it forms foam'.

Excerpt (104)

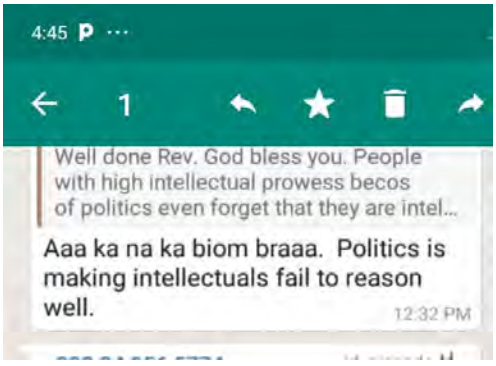


'If I were the President, I wouldn't sign it. If you like wear it. If you like don't wear it. If the fire burns you, … you will come!!!'

4.2.7 Topic

A lot of issues are shared and discussed on WhatsApp group chats by peers. These issues are topics that are raised by participants for discussions. Participants have their own ways of responding to every topic raised on the platform regarding language use. Some topics trigger participants to use different languages in reacting to them. On observation made during the researcher's participation on the platforms, there were particular topics which always induced participants to switch codes. These topics were concerned with food, politics and man-woman relationship which is in line with (Scotton, 1993). Examples from the data are shown in excerpts (105), (106) and (107)

Excerpt (105)

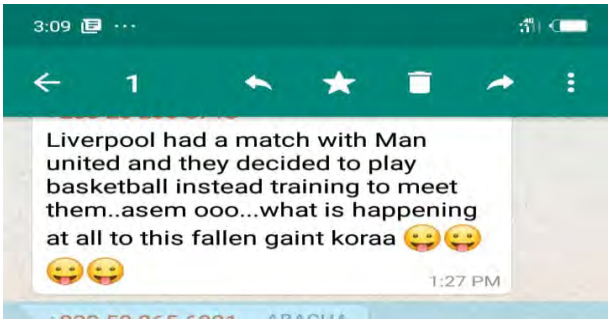


'Aaa say and say it again. Politics is making intellectuals fail to reason well'.

Excerpt (106)

'Please take the picture again…I cannot see the okro too well and the banku is very white in colour'.

Excerpt (107)

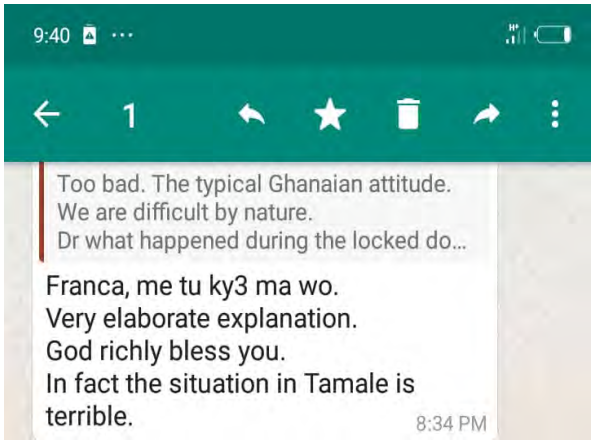


'Liverpool had a match with Man United and they decided to play basketball instead training to meet them …issue oo… what is happening at all to this fallen giant'.

4.2.8 Social Issues

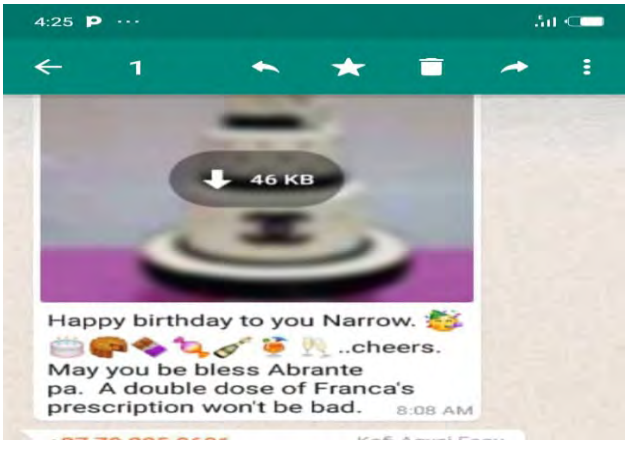
There were some social issues that motivated the peers to switch codes on the WhatsApp platforms. Some of these social issues were related to greetings, birthday wishes, expression of condolences and giving commendations. These attest to what (Scotton, 1993) mentions that social factors motivate bilinguals to code-switch. Excerpts (108), (109), (110), (111), (112) and (113) give evidence on code-switching about expressions of commendations, birthday wishes and greetings.

Excerpt (108)



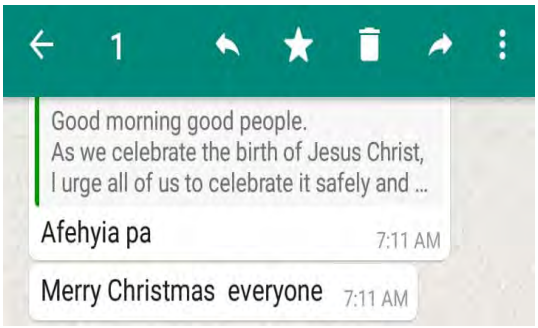
Franca, I salute you. Very elaborate explanation. God richly bless you. In facts the situation in Tamale is terrible.

Excerpt (109)



'Happy birthday to you Narrow… cheers. May you be blessed good man. A double dose of Franca's prescription won't be bad'

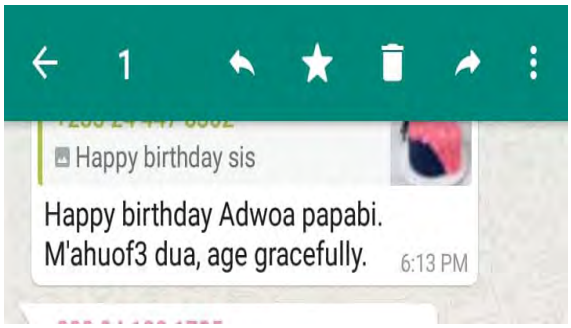
Excerpt (110)



'Happy new year.

Merry Christmas everyone'.

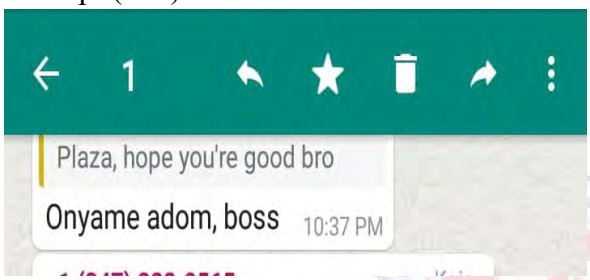
Excerpt (111)



'Happy birthday, nice Adwoa.

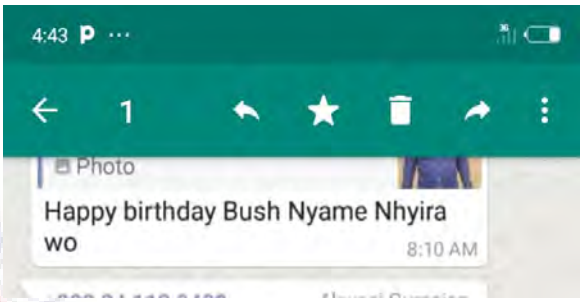
My beautiful tree, age gracefully".

Excerpt (112)



'By God's grace, boss'.

Excerpt (113)



'Happy birthday Bush God bless you'.

4.3 Conclusion

This chapter analyzed the data gathered from the peers' WhatsApp conversations to find out the conformity of the embedded language to the matrix language word order, the switch types and the motivating factors for code-switching and code-mixing. In view of these, the chapter was divided into different sections. The first section of the chapter analyzed the conformity of the embedded language to the matrix language morpheme order. In order to do this analysis, the two major principles namely Morpheme Order Principle and System Morpheme Principle designed by (Myers-Scotton 1993) were used. The findings revealed that the matrix language changed over time which is in line with (Myers-Scotton, 1993). The participants therefore switched back and forth. There were therefore English/Twi switches and Twi/English switches. Considering the MOP, most of the English/Twi EL morphemes followed

the morpheme order of the matrix language or supported the MOP but some few morphemes like focus marker and indefinite article caused violation to the MOP. Also, in the Twi/English switches, all the EL morphemes conformed to the matrix language word order and therefore supported the MOP. Section two also analyzed the data to find out the switch types. More so, this section discussed the distribution of the switch types. The section also analyzed the grammatical classifications of the embedded language and this led to the presentation of distribution of the occurrences of each grammatical item. The findings revealed that the participants used intra-sentential code-switching and inter-sentential code-switching types of code-switching but intra-sentential code-switching was predominantly used. Clause was highly employed in the English/Twi switches but noun was frequently used in the Twi/English switches. Section three also investigated the reasons that motivated peers to switch and mixed codes. The findings proved that the peers practised the phenomena for emphasis, solidarity, equivalence, enhancement of communication, humour, brevity, topic and social issues.

CHAPTER FIVE

FINDINGS

5.0 Introduction

The chapter five of this study summarizes the findings of the conformity of the EL constituents to the ML morphosyntactic structure, the frequency of occurrence of the switch types and grammatical classifications of the EL constituents. it also looks at the findings on the reasons and motivating factors for code-switching and code-mixing. The recommendations of the various aspects mentioned above are also catered for.

5.1 The summary of findings on the conformity of the EL constituents to the ML morphosyntactic structure

From the analysis, it was found that in the Twi/English switches, all the English EL elements that were incorporated into Twi ML morphosyntactic structure, were in congruent with the morpheme order of the matrix language. Most of the English EL morphemes were content morphemes which are noun, verb and adjective. The nouns were positioned either before an adverb or focus marker but in most cases, they appeared before an adverb. All the adjectives from the English EL elements, appeared after Twi ML copula. The verbs on the other hand either appeared after a modal, copula or a pronominal subject. In English EL verbs that ended with alveolar sound /t/ as in ‘support. /s/ as in cause, /ʃ/ as in ‘rush’ and velar sound /k/ as in ‘attack’, participants added a vowel to the end and this created another syllable at the word-final position. Examples are **‘supporto’, ‘acauso’, ‘rushi’ and ‘ntaake’**.

In the English / Twi switches, it was realized that all the Twi EL morphemes which contained copula morphemes adhered to the morpheme order of the English matrix

language. Also, Twi EL noun phrases followed English ML morphosyntactic structure. More so, the Twi EL demonstrative pronoun which is one of the determiners did not cause violation to the English ML structure but determiners like definite and indefinite articles caused a change in the English matrix language word order. In other cases, Twi EL focus marker and adverb which appeared after an object also breached the morpheme order of the English matrix languages. There was no early system morpheme and late outsider system morpheme from the English Language EL found in the Twi ML constituents.

Lastly, in the case of the blocking hypothesis, (Myers-Scotton, 1993) postulates that it is possessive of and ‘s that can block an EL morpheme but it was found in one of the Twi / English switches that Twi ML plural marker which is **/foɔ/** can also be a bridge late system morpheme which blocks an EL morpheme from occurring. It can therefore be concluded here that most of the EL morphemes conformed to the ML morphosyntactic structure except some few cases.

5.1.2 Summary of findings on the frequency of occurrence of switch types and the grammatical classifications of the EL constituents.

Upon a critical observation, it was identified that the type of switches used by the participants were code-switching code, code mixing and total switching of which total switching was mostly used. The types of code-switching that the participants employed were intra-sentential code-switching and inter-sentential code-switching. Among the types of code-switching, the intra-sentential code-switching was predominantly used which confirms what (Goldbarg, 2009, Hasiani, 2012, Sukyadi, Wirza & Tastan, 2012) said that was mostly practised in computer-mediated communication and was prevalent in informal communication. In English/Twi

switches, clause was highly used but conjunction and determiner were less used. In the English EL morphemes, noun and verb dominated all the grammatical classifications which confirms (Myers-Scotton, 1992) that noun and verb are content morphemes which are normally code-switched. English EL clause and adverb were rarely used.

5.1.3 Summary of findings on the reasons and motivating factors for code-switching.

It was revealed in the analysis that, participants switched and mixed codes for the purposes of solidarity, emphasis, equivalence, brevity, humour and communication enhancement. The factors that motivated the participants to alternate codes were topic and social issues.

5.2 Future Recommendations

This section gives accounts of the recommendations on the conformity of the EL constituents, the frequency of occurrence of the switch types and the grammatical classifications and the reasons and motivating factors for code-switching and code-mixing.

5.2.1 Recommendations on the conformity of the EL constituents to the ML morphosyntactic structure.

The researcher intends to look at some phonological processes that can occur in some English Verbs switched into Twi Constituents. It was sometimes difficult to detect the matrix languages when the EL and ML constituents are equal in number, I therefore suggest that the intent of the speaker's message should be considered sometimes to help identify the matrix language from the embedded language.

5.2.2 Recommendations on the frequency of occurrence of the switch types and grammatical classifications of the EL constituents

The researcher recommends that investigation on the switch types and grammatical classifications of the EL morphemes should be carried out on gender basis on peer group WhatsApp chats. Also, total code-switching which was discovered should be researched into.

5.2.3 Recommendations on the reasons and motivating factors for code-switching and code-mixing

There should be a future research on the frequency of occurrence of reasons and motivating factors for code-switching on peer group WhatsApp chats. Also, socio-pragmatic study on words like apuu, twea, kai, twea kai, oyiwa, boi used by peers to communicate on WhatsApp group chats needs to be carried out.

5.3 Conclusion

The investigation of this paper was thoroughly done to find out the conformity of the EL morphemes to the ML morphosyntactic structure using the Matrix Language frame model and most of the EL morphemes were in congruent with the ML morphosyntactic structure. The participants switched back and forth which involved English/Twi and Twi/English switching. This back-and-forth kind of switching, caused the matrix language to change from time to time. In the Twi/English switch pattern, the English EL morphemes were mostly noun and verb. The Twi EL morphemes configured into English matrix language were mostly clauses and noun phrases. It was very obvious that those Twi EL morphemes that caused violations in English/Twi configurations were system morphemes like determiners and focus markers due to their positions by conversion in Twi complementizer phrase (CP).

Code-switching, code-mixing and total switching were the types of switches that were found. Total switching was found to be predominantly used. The types of code-switching that were identified were intra-sentential code-switching and inter-sentential code-switching but intra-sentential code-switching was often used. The frequency of occurrence of the grammatical classification of the EL constituents was investigated and examples of each grammatical classification were also analysed. Peers reasons for switching and mixing languages and what motivated them to practise such phenomena on WhatsApp group chats were researched into as well using rational choice theory.

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APPENDICES

APPENDIX A

Corrections on some Twi morphemes that were wrongly constructed

Wrongly constructed morphemes	Correct morphemes
Nkooaa	nko ara
sɛ omu ani tiaa	Sɛ wɔn ani te a,
me tu kyɛ ma wo	metu kyɛ ma wo
M'ahuofɛ dua	M'ahoɔfɛ dua
Paa	Pa ara
Asem	Asɛm
wo dwonsor gu faako a,3na etwa ahuro	wodwonsɔ gu faako a, ɛna ɛtwa ahuro
Sɛ egya no hye wo a…… wo bɛba	Sɛ egya no hye wo a, wobɛba
Yɛ hunuu wo a nie	Yɛhunuu wo ara nie
sey yaa na mo yɛɛ wo Sukuu mo	Sei ara na moyɛɛ wɔ sukuu mu.
Nkuko	Nkokɔ
Koraaa	Koraa
Yɛ pa wo kyɛw paa	Yɛpa wo kyɛw pa ara
Medɔ	Me dɔ
Osofo	Ɔsɔfo
Kommm	Komm
Wo bɛda kwa	Wobɛda kwa
yi wo	yi wɔ
Wokɔgye	Worekɔgye
Nkoaaa	Nko ara

me wofase	me wɔfase
Mmarimaa	Mmarima
Mma nkoaa na wo hwehwɛ	Mmaa nko ara na wohwehwɛ
Wo bɛyɛ	Wobɛyɛ
More ko di kokonsa	Morekɔdi kɔnkɔnsa
Asɛm bɛba dabi	Asɛm bɛba da bi
wo se sen	Wose sɛn
Wo ntumi	wontumi
Me nom nsa a wo se	Menom nsa a, wose
ɛkom	Ɛkɔm
ma mento	ma me ntɔ
Obiaa	Obi ara
Biia	bi a
Piii	Pii
mo nhwɛ no yie	monhwɛ no yie
aden	adɛn
wo wɔ	wowɔ
Pɛɛɛɛɛɛɛɛ	Pɛɛ

APPENDIX B

Corpus of peers WhatsApp communications on code-switching and code-mixing