UNIVERSITY OF GHANA

LANGUAGE MEETS TECHNOLOGY: WORD FORMATION PROCESSES IN COMPUTER MEDIATED COMMUNICATION (CMC) IN GHANA

BY

MATILDA APPIAH
(10289024)

THIS THESIS IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF MPHIL ENGLISH DEGREE.

DEPARTMENT OF ENGLISH
UNIVERSITY OF GHANA

JULY, 2016

CHAPTER ONE

1.0 INTRODUCTION

Chapter one gives a detailed introduction to communication in Computer Mediated Communication (CMC). It outlines the types of CMC and highlights their uniqueness. It gives the statement of problem, research questions, scope of study, significance of study and outlines how the entire work has been organized.

1.1 Background to the study

Since the introduction of the World Wide Web in the early 90s, CMC has changed the nature of communication. Computer oriented people resort to CMC as far as their communication needs are concerned. Users are at liberty to explore the type of CMC that best suits them. Compared to the writing of letters, most of the people I interacted with cited convenience and the fast nature of CMC as some of the major reasons for choosing either synchronous or asynchronous CMC. Whether synchronous or asynchronous, CMC could be said to be a solution for effective communication across different locations (Sriker &Vakkalanka, 2012).

In their communication, users employ words and structures that have undergone one word formation process or the other. Factors that account for such words and structures include creativity, the quest for speed, the informal nature of CMC as well as the lack of social rule and the absence of criticism and control. This study looks at three (3) categories of CMC, WhatsApp Facebook and SMS. While WhatsApp is purely synchronous, Facebook is both synchronous and

asynchronous. The words and structures employed in these media will be studied in order to identify the word formation processes underlining them. It must be noted that the users of these words and structures do not preoccupy themselves with the word formation processes underlining these words and structures before they employ them. In fact, some users who might not be language oriented may not even be aware of what word formation processes are. Those who are language oriented hardly employ their knowledge of word formation when communicating. This study will collate some of these words and structures as used by the researcher's friends and their mutual friends who are basically speakers of Ghanaian English. The emphasis on Ghanaian English has become necessary since the literature on CMC has revealed that words and structures are not universal but context based.

A comparison will be made between Facebook, WhatsApp and SMS discourses, to determine the possible effect of space on word formation.

1.2 THE CONCEPT OF COMPUTER MEDIATED DISCOURSE

Computer Mediated Communication (CMC) is defined as any human communication that occurs through the use of two or more electronic devices (Thurlow, Lengel & Tomic, 2004:83). December (1997) also defines it as a process of human communication via computers, involving people, situated in particular contexts, engaging in processes to shape media for a variety of purposes. Another definition by Stasser (1992) also considers CMC as a process by which a group of social actors in a given situation negotiate the meaning of the various situations which arise between them. Jones (1995) also describes CMC as not just a tool but a form of technology, medium, and engine of social relations which does not only structure social relations

but it is in itself the space within which the relations occur and the tool that individuals use to enter that space.

The definitions above highlight the importance of context and actors as far as CMC is concerned. Both actors and context are constant variables but meaning varies. Meaning is dependent on the type of context and the category of actors involved. Meaning in CMC is therefore not universal.

CMC embraces communication that occurs via computer-mediated formats such as instant messaging, email, chat rooms, online fora, social network services as well as other forms of text-based interaction such as text messaging. The commonest device of CMC is the phone.

Communication via CMC can be described in two ways: synchronous and asynchronous (Dix, Finlay, Abowd & Beale, 1993). Synchronous communication happens in 'real time'. However, asynchronous, communication happens at a 'delayed time'; messages are thus posted at any time, and read and responded to by other users also at times which suit them. In other words, users do not have to be online at the same time, as they have to be for synchronous exchanges. While some forms of CMC are purely synchronous, others are not. Email, mailing lists, usenet and computer conferencing are all asynchronous, while Internet Relay Chats (IRC) such as Viber, Tango and WhatsApp, Internet telephony and videoconferencing all take place synchronously. Facebook could be both synchronous and asynchronous. When one is engaged in a real time chat on Facebook, one is using it synchronously. However, responding to posts, commenting on posts, and responding to chats, at a delayed time, all fall under the asynchronous nature of Facebook.

CMC allows people to combine numerous media in a single message when conversing. It combines the permanent nature of written communication with the speed, and often the

dynamism of spoken communications. The possibilities for interaction and feedback are almost limitless, and not constrained. The textual aspects of CMC and, in particular, of asynchronous CMC, support the possibility of greater reflection in the composition of CMC.

CMC offers individuals the ability to engage in communication with others regardless of the time or location. The freedom for the choice of location within which communication takes place makes communication comfortable and also to be conducted with minimal stress. Once comfortability is achieved, self-disclosure becomes easier; a communicative partner is thus able to open up more easily and be more expressive. The ability to be expressive could also be attributed to the fact that users are not inhibited by any social rule neither are they subjected to any criticism or control (Sproull & Kiesler, 1991). Since the communication is not face to face, individuals who hitherto might have been intimidated by factors such as character or disabilities are able to participate in communication freely.

Conversations may be archived for future reference, including the ability to re-visit the full context of a topic. Above all, communication via CMC is cost effective and fairly easy to use.

Users of CMC are creative in their communication; they employ various word formation processes in their preferred language to facilitate communication. Such users may not even be language oriented. Their preoccupation in employing these words and structures that have undergone one word formation process or the other is to make their communication faster, easier and livelier. Such words and structures are not universal, rather they are context-based (Herring : 2012). In fact, such words and structures have been described as a bridging mechanism to make up for the absence of meta communicative features like facial expression, posture and tone of voice in CMC.

1.3 Statement of problem

The use of English has evolved over the years. There is specialized language associated with specific contexts or situations and with specific functions of the language in those contexts (Kittredge and Lehrberger, 1982). This could be termed as registers since the words and structures that make them up are only recognized in certain fields. Technology has had its effects on the use of the English language. More people are being captured in the net of English users due to technology. It is gradually becoming mandatory for any literate person to be technologically inclined. The place of language in technology cannot be ignored since technology uses one form of language or the other.

> Literacy is no longer a static construct from the standpoint of its defining technology for the past 500 years; it has now come to mean a rapid and continuous process of change in the ways in which we read, write, view, listen, compose, and communicate information. Thus, literacy acquisition may be defined, not by acquiring the ability to take advantage of the literacy potential inherent in any single, static, technology of literacy (e.g., traditional print technology), but rather by a larger mindset and the ability to continuously adapt to the new literacies required by the new technologies that rapidly and continuously spread on the internet. (Coiro et al 2008:5)

Although technology has made communication easier, the English language has had to adapt to the trends of communication via technology. It has been observed that words and structures employed in Computer Mediated Communication are different from words as used in formal settings like the classroom (Crystal, 2005). A lot of word formation processes underlie the formation of these words and structures although the users may form them with or without the knowledge of the available word formation processes in English.

Research in various aspects of CMC abound. As far as word formation in CMC is concerned, Crystal (2008) captures it as part of his multilingual analytical perspective in his book *txtng the gr8 db8*. Okeke and Obasi (2014) analyse the processes that underlie the creation of new words in users of the Global System for Mobile Communication in Nigeria. The researcher is of the view that, the language that is used in these CMC's vary from Standard English. It is imperative therefore that the word formation processes that underlie the creation and the usage of vocabulary in the chosen CMC domains are investigated. It is this assumption that underlies the problem investigated in this research. This study presents word formation processes in two relatively novel media (WhatsApp and Facebook) and the existing phenomenon of the Short Message Service (SMS). The study is situated within the sphere of Ghanaian English since research has proven that language as far as CMC is concerned is not universal (Herring : 2012) The study explores the various word formation processes that underlie the words and structures that are employed in Computer-Mediated Communication. It seeks to draw a comparison between CMC that has limitation on the Characters and the CMC that has no character limitation. It also attempts to create a database of some of these words.

1.4 Objective of the Study

This study seeks:

i. To identify and examine word formation processes employed in some selected forms of CMC (both synchronic and asynchronic).

ii. To determine the extent to which space influences the use of word formation processes in the selected forms of CMC

iii. To compare the relative use of word formation processes in the CMC of SMS, Facebook and WhatsApp.

1.5 Research questions

i. What are the word formation processes employed in CMC?

ii. Does space influence the word formation processes used in the focused media of the study?

iii. Are there relative differences in the use of word formation processes in SMS, Facebook and WhatsApp.

1.6 Significance of study

The study is of major relevance to the academia as it presents analysis on a relatively new domain of language use. It also contributes to the field of morphology within the scope of CMC.

1.7 Definition of Terms

Speech Community: A speech community comprises people who are in habitual contact with one another by means of speech, which involves either a shared language variety or shared ways of interpreting the different language varieties commonly used among them. The term cannot be exactly equated with groups of people who speak the same language in different parts of the world. Speech community is sometimes used to discuss speakers of the same language in different parts of the world. Speech Community in this paper is used to refer to the users of CMC.

Ghanaian English: Refers to the variety of English used in Ghana by Ghanaians

Standard English: Standard English (SE) is that dialect of English, the grammar, syntax, morphology, slang and vocabulary of which are most widely accepted and understood. "widely" in this sense, means, both socially and geo-graphically, that is, the dialect that, least of all, raises critical judgements about itself and is generally considered overtly prestigious.

WhatsApp Messenger: A cross-platform instant messaging application that allows iPhone, Blackberry, Android, Windows Phone and Nokia smartphone users to exchange text, image, video and audio messages for free over the Internet.

Facebook: Facebook is a popular free social networking website that allows registered users to create profiles, upload photos and video, send messages and keep in touch with friends, family and colleagues. The site is available in 37 different languages. The medium, among other things allows members to see which contacts are online and chat with them.

Within each member's personal profile, there are several key networking components. The most popular is arguably the Wall, which is essentially a virtual bulletin board. Messages left on a member's Wall can be text, video or photos. Another popular component is the virtual Photo Album.

Short Message Service: Short Message Service (SMS) is the most basic communications technology for mobile data transfer and is characterized by the exchange of short alphanumeric text messages between digital line and mobile devices. SMS messaging's key influential factor is affordability. SMS messages hold up to 140 bytes (1,120 bits) of data, which allows a 160-

character alphanumeric message in the default 7-bit alphabet or a 70-character message in a non-Latin language, such as Chinese. SMS is also known as text messaging.

Smartphone: A Smartphone is a mobile phone built on a mobile operating system, with more advanced computing capability and connectivity than a feature phone.

1.8 Organization of the study

The study is organized into five chapters. Chapter one gives a detailed introduction of the topic, the statement of problem, aims and objectives, methodology and significance of study. Chapter two delves into some available literature in the chosen area of the study and explores the theoretical framework within which the study is conducted. Chapter three looks at the methodology employed in the entire study. Chapter four analyses the data that has been collected and chapter five draws conclusions and make recommendations for the study.

1.9 Summary

Chapter one has presented a detailed introduction to the study. It has provided the background to the study, stated study objective, highlighted the research questions and defined some terms in the area of the study. Chapter two will present a review of some available literature in the field of study and the theoretical framework within which the study has been conducted.

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.0 INTRODUCTION

Chapter one presented the general introduction to the study. It outlined the statement of problem, research objectives and questions and a general scope of the study. Chapter two will present a review of some available literature in the focused field of study as well as the theoretical framework that guides the analytical procedure.

2.1 THE INTERNET AND LANGUAGE

Crystal (2005) examines CMC as a means of communication. He mentions that in terms of conversational speech, CMC lacks simultaneous feedback, which is very critical to successful conversation. There is also the absence of a non-segmental phonology or tone of voice, which emoticons attempt but fail to express. There is not enough evidence to determine if he was referring to synchronous or asynchronous type of CMC. It is however obvious that his presentation was skewed in the direction of asynchronous CMC. Technology has advanced since his publication and synchronous CMC could be likened to conversational speech. This is true of the types that have the chat feature. In fact, some synchronous CMC allow the users to record their voice, thus fulfilling the phonological aspect of a true conversation. Although these are traits that liken the synchronous CMC to conversational speech, it must be noted that these cannot be a replacement for face-to-face communication since they are devoid of some human attributes such as gestures. Compared to writing, CMC has the ability to frame messages as in e-

mail cutting and pasting and its hyper textuality, which is only hinted at in traditional writing through the notion of foot notes.

Kačmárová (2005) is of the view that the traditional perception of a two-way exchange of information (written and spoken) is strongly undermined due to the emergence of CMC. He asserts that CMC has the potential of a new linguistic medium alongside speech and writing. To him, the discourse of the internet represents a novel interaction on the boundary between speech and writing. He explains that when it comes to communication on the internet, one's verbal production is dependent on their computer literacy and capability of exploiting the character options on the keyboard so that the proposition of the message is sustained despite the absence of body movement or vocal paralinguistic cues. He further explains that the interactivity of the medium often causes communication via the internet to resemble a spoken mode while making people believe that they are exposed to 'written speech'.

Baron (2003) mentions some of the linguistic tools employed in this form of communication. She opines that most people find written language on the internet more like speech than writing. She explains further that communication via CMC is physically a written medium, and that it is not surprising that some of the linguistic conventions common in more informal types of CMC (especially synchronous CMC) are finding their way into traditional off-line writing. She also avers that some traits of language used in CMC are found in face-to-face communication, mostly of adolescents. She cites an example of a sentence to depict the language adaptation of young people in America and also to depict how language on the internet is gradually finding its way into face-to-face communication. "We were all ROTFLing when the teacher walked in".

Both Baron (2003) and Kačmárová (2005) show the difference between CMC and the traditional mode of speaking and writing and demonstrate the uniqueness of communication via CMC.

While Kačmárová (2005) situates communication via CMC on the verge of speech and writing, Baron thinks written communication in CMC is more akin to speech than writing. Baron makes such a claim because she found that most of the informal things that are produced in speech were written as far as CMC is concerned, thus making communication in CMC more speechlike. Again Kačmárová's equation of one's verbal production to one's dexterity on the keyboard/keypad is apt. Once one is able to work efficiently and effectively with the keyboard/key pad, it is enough proof that one is a good communicator as far as CMC is concerned.

Crystal (2005) acknowledges the fact that, with the advent of the internet and, for that matter, CMC, the language's resources for expressing informality in writing have hugely increased. He does not however condemn the internet and its effect on language. Instead, he enunciates the positive nature of the internet in that it has given the language new stylistic varieties and allowed users to explore the power of the written language in a creative way, something which was largely lost when Standard English came to be established in the 18th Century.

Crytstal (2005) again states that the striking feature of texting as far as his data is concerned is the combination of standard and non-standard features. According to him, although many young texters like to be different and enjoy breaking the rules, they are mindful of the need to be understood. After all, what is the point if the words are altered so much to the extent that they cease to be intelligible; there is therefore an unconscious pressure to respect some of the standard properties of the orthography.

Herring (2012), on her part, brings out some of the differences between grammar in electronic language and grammar in relation to speech. Like Crystal (2005), Herring (2012) also states the difference between the grammar of the spoken language and that of CMC. She postulates that while the grammar of the spoken language include phonology, morphology and syntax, phonology is largely irrelevant in text-based CMC. This function is taken over by typography and orthography. Herring is justified in saying that, in CMC, morphology and syntax are subsumed in typography and orthography. However, the assertion that phonology is largely irrelevant is not entirely true. This is because a careful study of some of the words employed in CMC will reveal that although the users are not aware of the phonological properties between the words as employed in CMC and the actual words, there are actually some real phonological relations. For example, when a user choses to write 'you' as /u/ in CMC, what the user has actually done is some kind of phonological exercise. The user has replaced the word with a letter that shares phonetic similarity with the most sonorant sound of the transcription of the represented word: 'you' is transcribed as /juː /, the user thus chooses to represent the entire word with /u/. This is a clear example of the existence of phonology in CMC. Examples of words that have undergone such processes abound in CMC.

2.2 CMC AND EDUCATION

Crystal (2005) takes a look also at CMC from an educational perspective. To him, the fact that new forms other than Standard English are emerging means that communicators must pay attention to their communication and teach children about the importance of Standard English as a medium of educated communication. In his view, children must be taught about their language and taught how to respond to language appropriately. He puts this responsibility at the door step

of teachers. In his view, it behooves on the teacher to spot any signs of communicative inefficiency such as children being stylistically inconsistent or conflating features that belong to different styles. Crystal (2005) touches on an important issue as far as children and the internet are concerned. Children should not be left at the mercy of the internet. They should be taught to differentiate between Internet language and formal language that is fit for the classroom work. I however do not agree that the responsibility should be placed at the doorsteps of the teacher alone. Parents should assume the responsibility as far as their children and the internet are concerned. Parents should pay due attention to the oral communication and writing of their children and make them understand and appreciate what is acceptable and what is not. Linguistic supervision as far as CMC is concerned, should be a shared responsibility.

On the issue of the dangerous effects of texting on the written work of students, Crystal (2008) differs. In fact, he is of the opinion that inadequate literacy in school children is nothing new; they existed long before texting was invented. He expatiates that, as a matter of fact, there are children who are weak at writing, poor spellers, and bad punctuators. He also opines that before one can write abbreviated forms effectively and play with them, one needs to have a sense of how the sounds of one's language relate to the letters. One also needs to know that there are such things as alternative spellings. Once one is able to tell that his/her texting behaviour is different, one must have already intuited that there is such a thing as a standard. All these, according to him, are marks of literacy.

The view by Crystal (2008) that inadequate literacy in children is nothing new and that it existed before texting is not entirely true. There are children whose writing skills have gone bad because

of the internet. Most students unintentionally use these words and structures that are considered non-standard in their formal writings and even in classroom work. I had a chat with a teacher in the Junior High School who showed me a sample of essays of his students and how they had used a lot of contracted forms which are not standard. Apparently, these are students who own mobile phones. In this era of technology, monitoring and supervision of the grammar used in class room work and other formal settings should be encouraged. Such monitoring and supervision as it has been stated earlier on should be a shared responsibility between teachers and parents.

Herring(2012) On their part, Davis and Thiede (2000) are of the view that the text-based nature of CMC helps learners improve their writing skills as they have more time to deliberate on the content of their writing, resulting in more accurate and grammatically complex content. Amer (2006) also adds that CMC offers a low-stress environment for trying out language with new friends from all over the world. He is of the opinion that CMC may help in turning unsuccessful learners into achievers by increasing their motivation, improving their self-efficacy and creating a better learning environment.

Herring (2012) claims that self-report studies indicate that young people are increasingly using e-grammar in their offline writing (e.g., Pew, 2009). Rather than this causing a decline in their language skill, Plester, Wood and Joshi (2009) found that greater knowledge of SMS abbreviations was associated with higher word reading, vocabulary, and phonological awareness measures. She suggests that language change is being affected and effected by the Internet communication. She opines that if anything, e-grammar enriches rather than impoverishes language users and languages themselves.

Crystal (2005) shares in the optimistic opinion of Herring (2012). He marvels at the creative ability of users of CMC and the fact that users are able to use limited space to produce effective pieces in their communication; this is especially true with regards to the SMS which has a limit of 160 characters. He introduces the concept of blogging, a personal online journal, which he describes as a new genre of diary writing, which was thought to be dying out as a literary domain. Blogging, like diary writing, is devoid of editors, sub editors and proof readers and could be best described as a new stage in the evolution of the written language and a new motivation for child and adult literacy.

Crystal (2008) explores the phenomenon of texting. He condemns a commentary in *The Guardian Newspaper* (2002), which describes texting as a mask of dyslexia, mental laziness and an act of poor spelling. The commentary is said to be categorical on the fact that texting is for illiterates. Crystal (2008) avows that being able to use the computer/mobile phone technology is enough proof that texters have been taught to read and write.

He therefore stresses this as a sign of the creativity of texters. To him, abbreviations speed up things and whenever speed becomes a feature of behavior, competitions arise. It is therefore not surprising that there are now texting competitions. In a text messaging competition organized by the same *The Guardian Newspaper*, competitors were asked to write poems within the 160 character constraint of text messaging. The competition had over 7500 creative entries.

Plester, Wood and Joshi (2009) as well as Herring (2012) agree that CMC somehow bridges a gap as far as a language learner is concerned. In most language classrooms, learners somehow feel intimidated to try out the things they have learnt. However, with CMC, learners are able to use the medium to explore their new communicative skills without being afraid of being mocked,

laughed at or punished for their mistakes. Leaners are also at liberty to reflect over their constructions over and over again; the practice gradually helps learners to spot their own mistake and perfect their skills. Users of CMC also tend to exhibit a high level of creativity. The medium is devoid of rules of construction of verbal structure, thus, users stretch their creative abilities unknowingly and come up with words and structures tailored to their needs. Crystal (2005) does not only hail this positive side of CMC, he cautions that this aspect should be handled tactfully as far as learners and children are concerned since it could be detrimental to them in distinguishing between the formal and the informal.

2.3 CMC AND APPLIED LINGUSITICS

Crystal (2005) introduces the term Applied Internet Linguistics. According to him the internet has some benefits such as documentation, which allows easy recordings of ethnological materials, it also aids in language revitalization by enabling speakers separated by space to maintain a virtual contact through email, chat and instant messaging. Although communication via CMC is limited to literate users, he is hopeful that the sphere and users of CMC and, by extension, Applied Internet, will increase as technology advances. Herring (2012) also introduces the term e-grammar to refer to the set of features that characterize the grammar of the electronic language. She is however quick to add that her use of e-grammar is not intended to imply that there is a single grammar for all varieties of Computer Mediated Language. She refers to the stance of Crystal (2005) who has suggested the term 'Netspeak' to refer to CMC as a single language variety. Crystal (2005) believes that as a language variety, 'Netspeak' could be divided into sub varieties that are related to different communication modes. For example,

the language of emails is different from the language of chat groups. Herring (2012) nonetheless notes that considerable empirical evidence points to e-grammar as varying systematically across languages, contexts, users and technological modes.

Herring (2012) looks at electronic grammar in terms of typography, orthography, morphology and syntax. By typography, she seems to mean the use of non-alphabetic keyboard symbols such as numbers, punctuation and some special symbols as well as emoticons. She uses orthography to refer to loosened orthographic norm. This loosened orthographic norm, according to her, is viewed by language prescriptivists as misspellings or errors.

In her view, although early research emphasizes the playfulness and creativity driving these phenomena, especially in recreational chat environments, recent research suggests that a relatively small number of nonstandard spellings (e.g., u 'you,' msg 'message,' wanna 'want to') have become conventionalized and occur often in mainstream online contexts, while unique formations are less common (Kapidzic, 2010).

Herring (2012) refers to morphology in electronic grammar as the emergence of a few productive word formatives. She mentions processes such as semantic shift, blending, clipping. She mentions other word formation processes such as found in neologisms, which she says are less common since they are somehow technical. She makes mention of word formation processes in multiplayer online games as another source of new words.

On syntax, she asserts that when there is a deviation from Standard English, it is termed as telegraphic and fragmented. This may include elision of parts of speech. There is also a diversion from the standard when users attempt to represent a non-standard language variety in their write-ups, she adds.

A syntactic innovation particular to CMC environment is the 3rd person singular present tense performative utterances, also called 'emotes'. She again expresses her optimism for e-grammar and admits that there is still not much evidence regarding the diffusion of e-grammar into language use offline and into languages themselves, as codified in grammars and dictionaries. Herring (2012) states that dictionaries are nonetheless including more CMC and computer related terms all the time.

Okeke and Obasi (2014) analysed the processes that underlie the creation of new words in users of the Global System for Mobile Communication (GSM). The population for the study was made up of young people whose ages are between 15 and 35, since users in this age bracket were perceived by the authors to be more involved in the use of ICT.

The researchers conducted their study in two urban and one rural setting. At each setting, five respondents were chosen and their messages were collated for a period of two weeks. The researchers confirmed the claim by Crystal (2005) and Herring (2012) that grammar in CMC is contextual. Their research established that the new words could only be interpreted in context. Herring (2012) attempts an explanation of the contextual nature of CMC. To her, electronic language is an emergent phenomenon and has not had time (nor attained the requisite social status) to become formalized in "rules", hence its contextual nature.

David Jacobson (2007) writes on the different kinds of knowledge that constitute context which shape the way people behave and interpret the behaviour of others when engaged in CMC. Jacobson (2007) is of the view that context in CMC is not defined in terms of space or temporal setting but rather in terms knowledge and related issues. This, he terms, as common ground and defines it as "the mutual knowledge, beliefs, mutual assumptions and other mutual attitudes shared by people", all of which serve as a framework for interpretation. He equates the concept

of common ground to that of a speech community. Gumperz (1968:114) on the other hand defines speech community as "any human aggregate characterized by regular and frequent interaction by means of a shared body of verbal signs and set off from similar aggregates by significant degrees in language use." Jacobson (2007) goes further to state that a dyad can share common ground and this he terms as personal common ground. Personal common ground thus consists of the knowledge and beliefs these people share. Personal common ground is closely linked to relational culture which wood (1982) described as privately transacted system of understandings that coordinates attitudes, actions and identities of participants in a relationship.

Different relationships emanate from different kinds of shared understandings, hence, the classification of some as friends, acquaintances and strangers. Planalp and Benson (1992), in a study of conversations of friends and acquaintances observed that friends shared mutual knowledge while acquaintances lack mutual knowledge.

Crystal (2008) points out that, like any other genre of literature, texts are stylistically divergent as far as the individual is concerned. He attributes this to factors such as age, gender, regional and ethnic dialect differences among others.

2.4 CREATIVITY AND CMC

Okeke and Obasi (2014) also established that since there are cost implications in sending SMS, users are usually bent on 'squeezing' all their words on a page thereby stretching their creativity to create new words. This researcher, however, does not entirely believe that it is the cost implication that pushes people to be creative. This researcher believes that it is the nature of CMC itself that makes people become creative. The creative ability of users could be attributed

to the speed associated with the medium. One could say this based on the observation that WhatsApp chat as well as Facebook chat do not limit people with regards to content yet these are the media where people appear to become very creative in their language usage. One could thus assume that creativity cannot be as a result of the lack of space but probably as a result of the nature of the medium and the fact that users have to be swift and smart.

Out of the words and structures collated, Okeke and Obasi (2014) came up with the following processes as predominant in the messages of users: Clipping, initialisms, abbreviation, alphanumeric, sound reduction, deletion.

Crystal (2008) also enumerates six processes in the way texts are written: pictograms and logograms, initialisms, omitted letters, non-standard spelling, shortenings and genuine novelties. All these processes, he explains, are not new to the English language. He traces the roots of these processes to the ancient times. Regarding genuine novelties, he believes they are a form of language play which brings the creativity of the texter to bare.

Clark and Bermann (1984) delve into the acquisition of new words by children. They state that children, like adults coin words to fill lexical gaps, regardless of the language they are learning to speak. To be able to do this, speakers must know the word formation devices in their language and also appreciate which of the devices potentially available are currently favoured in their speech community. They argue that at any given point in history, speakers have preferences that can be characterized as most productive. They draw the differences between word formation in Hebrew and English. They give four general principles for the acquisition and interpretation of new words: semantic transparency, formal simplicity, productivity principle and conventionality

They opine that although the principles may be general, its use is dependent on the language being learnt. For instance, preference for suffixing is common to people learning both Hebrew and English. In the same vein, there are other devices that are preferred in one language than the other. For example, in the area of compounding, Hebrew-speaking children rely far more on compounds for instruments than for agents while English-speaking children do the reverse. This difference in children's choice of word formation device for agents vs. instruments can be attributed to a specific difference in the patterns of lexicalization common in the two languages. Children rely on several general principles as they gain entry into a word formation system; but they must gradually modify those principles in the light of the typology of the language being learned. What is general in acquisition, then, is gradually shaped by each particular language as children learn both how different options are deployed in the conventional lexicon and how to put these options to use in interpreting and constructing new words.

Halle (1973) discusses the idiosyncratic characteristics of words. By this, he refers to characteristics that a given word shares with few other words or even with none. He delves more into idiosyncrasies as far as word formation is concerned. While some words might follow simple word formation rules, others do not. He proposes that the idiosyncrasies of such words should be put in a category which he calls filter. Words will then be passed through such idiosyncrasies after they have been generated by word formation rules. The special information given in the filter under each entry is then added to the representation of the word.

In the case of semantic idiosyncrasies, the filter would supply the appropriate indications about their semantics. The same thing applies to phonological idiosyncrasies where the filter would

supply their appropriate phonological information. Idiosyncrasies are not peculiar to one word formation rule. Thus, one finds that particular case forms of particular words idiosyncratically possess meanings that are in general not those of either the base or the case.

He defines the set of potential words of the language as a combination of the list of morphemes and the rules of word formation. It is the filter and the information that is contained in it which turn this larger set into the smaller subset of actual words. This set of actually occurring words will be called the dictionary of the language.

The process, according to him, can be summed up as, list of morphemes + rule of formation + filter = dictionary of words. Rules of word formation must thus have access to the dictionary since certain words presuppose the existence of other words. This would require that word formation rules be formal devices of considerable power. It would, however, seem that even this increase in power is not sufficient and that additional power is required by these rules.

Halle (1973) believes that it may be useful to substitute rules of word formation with derivational constraints that hold in word formation as has been suggested by Lakoff (1971). He further states that in word formation, one deals with conditions that no string of morphemes can ever violate if it is to be admitted into the dictionary as a legitimate word of the language. He is of the opinion that word formation rules, on the contrary, are not ordered in that tightly constrained fashion as encountered in true phonological rules. To him, the word formation component differs from the phonology by having completely different principles of interaction among rules. Whereas in the phonology this interaction is captured by means of the convention of linear order of rule application, the interaction among word formation constraints may require a different principle altogether.

Although the content of the dictionary is entirely determined by the content of the list of morphemes, the rule of word formation and the exception filter, there is no need to assume that these components are always fully involved in every speech act. Instead, it is possible to suppose that a large part of the dictionary is stored in the speaker's permanent memory and that he/she needs to invoke the word formation component only when he/she hears an unfamiliar word or uses a word freely invented. While this is by no means an exceptional occurrence, its frequency is quite low. There is a fundamental difference between the use of words and the use of sentences. In general, one uses familiar words, words one has heard and used before, and one does not expect to use or encounter new words, whereas one rarely uses sentences that one has encountered before. From the viewpoint of performance, one might say that the role played by the rules of syntax and phonology differs fundamentally from that played by the rules of word formation. The knowledge represented by the latter might be said to be more passive than that represented by the former. If this were indeed the case, it might serve to explain the striking differences that appear to exist with regard to ordering, principles of application, etc. between rules of word formation and those of other components of the grammar.

The use of words in CMC differs from the use of words in formal context. There are no rules regarding word formation in CMC. Users depend on their mental lexicon, their creative abilities as well as the context of the communication. There are also no strict rules as far as syntax is concerned in CMC. Traditional Word formation theories have rules that decomposes words and subject them to analysis. The application of traditional word formation rules to CMC will render most words ‘inappropriate’ for any study. However, the theory that has been chosen for this study is unique and concentrates on the composition of words, the cognitive ability of the user as well as the ability of the user to incorporate both paralinguistic and extralinguistic entities in his

or her communication. The theory allows one to appreciate the cognitive ability of users in that it allows one to interrogate the words that have been used and bring out their inherent word formation processes.

2.5 WORD FORMATION PROCESSES

Delahunty and Garvey (2010) describe words as potentially complex units, composed of even more basic units, called morphemes. They further define the morpheme as the smallest part of a word that has grammatical function or meaning.

The morphemes are further categorized into free and bound. The free mophemes according to them are those that can occur on their own as a word while the bound morphemes are those that must be attached as word parts.

The bound morphemes can further be broken down into affixes. Affixes can be further broken down into suffixes and prefixes. Suffixes are attached after the forms which they are added and prefixes are attached before the forms to which they are added.

Delahunty and Garvey (2010) further talk about inflectional morphology and derivational morphology. According to them inflectional morphemes alter the form of a word in order to indicate certain grammatical properties. Derivation, on the other hand, is the process of creating separate but morphologically related words. Typically, but not always, derivation involves one or more changes in form.

They further talk of compounding which is the combination of two or more words one of which may be bound. They are quick to add, that, compounds are not always predictable from the

meanings of their constituents. They sub divide compounds into endocentric, exocentric and coordinative.

They establish that apart from derivation, language also makes use of coining, abbreviation, blending and borrowing to create new words.

Like Delahunty and Garvey (2010), Zapata (2008) also categorises morphemes into free and bound. However he sub-divides free morphemes into lexical, functional and grammatical. He also makes mention of bound roots and affixes under bound morphemes. Affixes are further subdivided into prefixes, infixes and suffixes. He mentions five major morphological processes that lead to the production of new words. These are: Affixation, Compounding, Symbolism, Reduplication and Suppletion. He then moves further to talk about other processes of word formation that do not necessarily have to be of a morphological nature: Acronymy, Clipping, Blending, Borrowing, Back Formation, Word Coinage, Functional Shift, Morphological Misanalysis and Eponymy.

Aronoff (1974) mentions a third type of morphological phenomenon apart from the already mentioned two types: derivational and inflectional. He calls the third type Syntactic. He further states that, the only classes of words to which new words can be added by coinage are the major lexical categories: Noun, Adjective, Verb, Adverb. New coinages may not be added to the following categories: Pronoun, Determiner, Quantifier, Conjunction, Preposition and Modal Auxiliary. He also mentions some types of coinages such as Blending and Acronym. He mentions another form of coinage which consists of the stringing together of morphemes, with,

of course, appropriate restrictions on what sorts of morphemes go where; suffixes at the end, prefixes at the beginning etc.

Adejumo and Osunbade (2014) mention a new process of word formation which they call Abronymy. According to them, the term was coined by Odebunmi (1996) to explain abbreviation and acronyms. The coinage was occasioned by the discovery that it is not easy to distinguish between an abbreviation and an acronym. According to them some examples of abbronyms are: LAUTECH: Ladoke Akintola University of Technology, ECT: Electro-convulsive therephy (i.e. electric shock theraphy), EEC: European Economic Community among others.

They mention two types of abbronyms: simple and complex. According to them the simple abbronyms are those that have structures that are easily predictable from the initial letters of their words or phrases while the complex ones, on the other hand, are those whose structures are not easily predictable from their complete forms.

2.6 THEORETICAL FRAMEWORK

2.6.1 COGNITIVE ONOMASIOLOGICAL THEORY

The study is conducted within the framework of the Cognitive Onomasiological Theory. The Cognitive Onomasiological Theory (COT) was propounded by Pavol Štekauer (Štekauer 1996, 1998, 2001). His theory identifies word-formation as an independent component of linguistics. The theory was inspired by Dokulil's (1968) idea of onomasiological structure and, primarily, by Horecký's multilevel model of linguistic sign (1983, 1989). The theory, at the same time, responds to the one-sided formalism of the mainstream generative word-formation. The general

linguistic background is that of the functional-structural approach of the Prague School of Linguistics. Therefore, the form-meaning unity (bilateral) nature of morphemes is regarded as the fundamental principle.

The pattern of the theory represents a crucial triad of relations between extra-linguistic reality (object to be named), a speech community (represented by a 'coiner'), and the word-formation component, thus emphasising the fact, ignored by majority of the mainstream word-formation theories, that each act of naming responds to a very real and specific naming demand on the part of a member (members) of a speech community. The notion of speech community should not be taken as absolute since there is hardly any word-formation process which responds to a naming demand of all the speakers of a particular language. Rather, such a demand is closely connected with a limited number of 'first-contact' users; a coinage may or may not subsequently find a wider use.

The following principles are thus reflected in the triad:

a) It lays emphasis on the active role of language users in the process of giving names to objects instead of presenting word-formation as an impersonal system of rules detached from the objects named and from language users.

(b) The naming act is not a purely linguistic act. Naming units do not come into existence in isolation from factors, such as human knowledge, human cognitive abilities, experiences, discoveries of new things, processes, and qualities, human imagination, etc. This position is in accordance with Koch's (2001) idea that the onomasiological viewpoint is closer to that of the speaker as a linguistic innovator than the semasiological viewpoint. An object to be named is not named in isolation but is envisaged in relation to the existing objects. By implication, any

naming act is necessarily preceded (or dominated) by a network of 'objectively' existing relationships. By implication, the naming act is a cognitive phenomenon relying on the intellectual capacities of a coiner.

(c) It stresses a close interconnection between the linguistic and extra-linguistic phenomena.

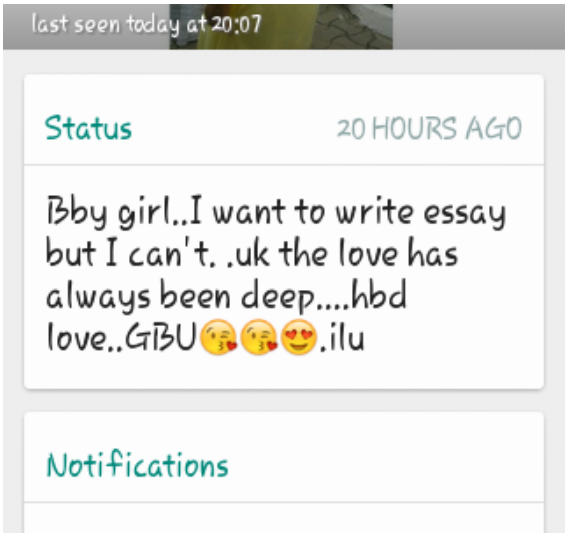
In COT, there is a direct connection between the Word Formation (WF) and the lexical components, and a mediated connection between the WF and the syntactic components. COT is thus different from other models that consider word formation as a part of the lexicon or a part of syntax in the sense that all new naming units formed in the WF component are stored in the lexicon and the lexicon also stores all naming units (monemes and complex words, borrowed words, clippings and acronyms) as well as affixes, and feeds the WF component with WF bases and affixes in accordance with its needs.

Linking it to word formation in Computer Mediated Communication, it can be said that the users form a kind of speech community. In fact, a user, at a particular point in time, could perform the role of a 'coiner' or user. The cognitive capacity of the 'coiner' is emphasized in that they are very active in the role of assigning names to objects. It must be noted that not everyone could be described as a 'coiner' as far as CMC is concerned. In the CMC speech community, speakers learn to use the language of the community. Thus, not everyone can be described as a coiner. In fact, most of the people are users who have learnt to use the language of the CMC community. From a critical study of the words they employ in their communication, it can be said that their approach of word formation is devoid of any form of impersonal system of rule detached from the objects named and from language users. The naming comes into existence in accordance with items such as their human knowledge and cognitive abilities, experiences, discoveries of

new things, processes, and qualities as well as their human imagination. It is evident that there is a close interconnection between the linguistic and extra-linguistic phenomena.

For instance, in a WhatsApp status below, the coiner/user who is actually celebrating her friend's birthday and wishing her well, employs words that have undergone different formation processes and includes emoticons expressing love and giving kisses to her friend. This is a clear demonstration of the close interconnection between the linguistic and extra-linguistic phenomena. One could therefore say that in CMC, word formation processes employ an interaction of the linguistic as well as the extra linguistic to create discourses. This eventually satisfies the cognitive and psychological needs of self-expressions by users in a very creative manner.

<u>An example of a WhatsApp status celebrating the birthday of the user's friend.</u>



The Cognitive Onomasiological Theory (COT) has been chosen above other theories because COT emphasises that word formation is about composing and not decomposing. Traditional models are rather analytical but COT places emphasis on the composing aspect of the formation process. Word formation in COT is thus devoid of any form of impersonal system of rule, detached from the objects named and from language users. The naming process is dependent on the concept that is to be named.

2.7 SUMMARY

This chapter has presented some of the available literature in the chosen field of study. It has presented works to justify the contextual nature of CMC, and the diverse views on communication as far as CMC is concerned. The theory of the Cognitive Onomasiological Theory has also been presented and its appropriateness for the study has been justified. The next chapter will present the methodological processes engaged for the research work.

CHAPTER THREE

METHODOLOGY

3.0 INTRODUCTION

Chapter two presented a review of related literature. It also outlined and discussed the theoretical framework. Chapter three gives a detailed description of the research design of the work. It explains the type of research, the process for data collection, the period for data collection, the participants involved, the instruments that have been used as well as the process for the analysis of the data that has been collected.

3.1 RESEARCH DESIGN

The research is qualitative. The qualitative approach has been chosen above quantitative because the study explores the phenomenon of word formation as far as CMC is concerned. Its main source of data is the phone and computer communication from the participants in whose communication events the researcher sought answers to questions raised in the research questions and the objectives of the research. The data received by the researcher has been analysed, interpreted and a report has been written. The researcher used the purposive sampling method. This is because the sample population that was selected fulfilled the criteria stipulated by the researcher: being active users of CMC for at least two years, ability to spend more than five (5) hours a day in any of the forms of CMC being used for the study and must have had at least tertiary education.

3.2 POPULATION

According to Androutsopoulos (2006:421), the development of the Internet has brought with it three important waves, including the focus on "the role of linguistic variability in the formation of social interaction." This seems to suggest that active users of the internet for communication display high linguistic variability at all levels, including in word-formation. Studies by Madden et al. (2013) and Haddon (2015) have suggested that frequent engagers of Computer Mediated Communication are the youth, often between the ages of 8 and 45 years. It is for this reason that the researcher considers people of this age group as its population for the study, specifically students of the Wisconsin International University College, Ghana and some staff of the same university. It is expected that these users will show a lot more variability in word-formation than all other persons.

3.3 SAMPLE

A total of Twenty (20) students and staff from Wisconsin International University College, Ghana, were randomly but carefully selected as participants for the research. They include both males and females. This was deliberately done to ensure that the analysis of the data would include a fair discussion on the responses by males and females and not skewed towards a particular gender. The participants therefore satisfied the following criteria:

- They have had at least tertiary education.
- They are active users of Computer Mediated Communication
- They have been in active usage of CMC for at least two years

- They spend more than five (5) hours a day in any of the forms of Computer Mediated Communication being considered by the researcher.

3.4 DATA COLLECTION

The data for this study was obtained through phone and computer records of communications between participants and their contacts and friends. The intention of the researcher was explained to each participant that the researcher was researching into internet language. A structured interview was designed and administered by the researcher to the participants. This was done to determine their level of education, the number of hours they spend using any of such media on a daily basis and how long they have used such forms of communication. A consent form was signed by the participants before data was collected. Data for the research was collected from Facebook, WhatsApp and SMS exchanges between participants and their friends on these platforms. The collection of data from such media lasted for one month.

Data was collected basically via screen shots and email. A screenshot, or screen capture, is a picture taken of one's computer or phone's desktop. This may include the desktop background, icons of files and folders, and open windows. It may also include whatever is being displayed by running programmes. The screenshot was an easy way to save something one sees on the screen such as an open window, image, or a text article. Using the screen shots was therefore not out of place since it satisfies the technological aspect of the research. Again, the screen shot added credibility to the data and made it natural. The researcher was able to follow the conversations, contexts and see how internet language has been employed.

Participants were asked to send a minimum of two shots and a maximum of 10 shots per category. Some participants however sent pdf and Microsoft word formats of their chats via

email. Regarding the group chats in the case of WhatsApp, consent was sought from the group administrators

3.5 DATA ANALYSIS

All chats were grouped according to the medium of communication. All the 20 participants were asked to send the researcher data in the following categories: Facebook Chats, Facebook posts and comments, WhatsApp chats, WhatsApp statuses and SMS.

On Facebook, data was collected from chats, posts and comments. The participants sent screen shots of their conversations to the researcher, these were later put into folders bearing the name of the kind of medium. 'Whc' refers to WhatsApp chats , 'Whs' refers to WhatsApp statuses, 'Fbc' refers to Facebook chats, 'Fbs' refers to Facebook posts and comments and 'SMS' refers to Short Message Service.

The following transcription and translation convention was followed:

- Structures in the data that are of interest to the researcher because they contain word-formation processes were written first
- All the lexical items of interest to be discussed were boldened.
- All other words appear in regular font
- The direct transliteration of identified structures appear on the line below each of the sentence
- The full English paraphrase are given in single quotation marks below

Thus, the sentences for analysis and further discussion were presented thrice. The first form is the original context in which they appear in the data, the second form is the direct translation and the third and final form is the form as it should be in Standard English. This was done because

the words have to be discussed in context. This helps in the interpretation and understanding of the words as they enable the researcher to compare the words as they were presented in CMC and how they should be presented in Standard English. It thus enriches the discussion and analysis by the researcher. The discussion and analysis were done under specific word formation processes and other trends observed.

Again, data from the three media were compared to bring out the differences and similarities in their formation processes. Factors that account for differences and similarities that may exist were looked at.

3.6 APPLICATION OF THE THEORY

The Cognitive Onomasiological Theory (COT) was not used wholesomely. Aspects of the theory that emphasize the role of the coiner/user as a representative of a speech community, the cognitive power of the coiner/user as well as the close connection between linguistic and extra linguistic phenomena were used in the analysis.

COT was chosen above other theories because COT emphasises that word formation is about composing and not decomposing. Traditional models are rather analytical but COT places emphasis on the composing aspect of the formation process. In COT, it is the concept that determines the word that is used and the subsequent meaning/explanation. Thus, the coiner/user sees the need to form structures to fulfill his/her linguistic reality.

3.7 SUMMARY OF CHAPTER

Chapter three presented the research design of the work. It showed the process of data collection, the way participants were selected as well as the process of the analysis of the data collected. Chapter four will present analyses of the data that has been collected.

CHAPTER FOUR

ANALYSIS AND FINDINGS

4.0 INTRODUCTION

The previous chapter presented the research design of the work. It explained the process of data collection as well as the instruments for data collection and the procedure for analysis.

This chapter presents analyses of the word formation processes present in the data that have been collected from the various forms of CMC.

A lot of word formation processes abound in the English language. Some of these processes are evident in the data gathered. Notable among them are the processes discussed below.

4.1 CLIPPING

Clipping, also referred to as shortening, is a process in which a word is reduced to one of its parts (Odebunmi, 2001). It manifests in the following forms: Back Clipping, Fore Clipping, Middle Clipping and Complex Clipping. Several of such features were found in the data.

4.1.1 Back Clipping

In this type of clipping the word (lexical item) is divided into two and the end part or back of the word is clipped or deleted. The front or earlier part is retained and used to represent the full word or lexical item. Some of such features identified in the data are presented in the sentences one to eight below.

1. Fbp

Your boyfriend beats u on a daily basis, yet u use his **pic** as ur dp.

Your boyfriend beats you on a daily basis yet you use his **picture** as your display picture.

Your boyfriend beats you on a daily basis yet you use his **picture** as your display picture.

2. Whc

Ur **bro** responded willing to help

Your **brother** responded willing to help

Your **brother** responded that he was willing to help

3. Fbc

Can't wait to c u, **sis** Evelyn, Cynthia, ur mum n ur jnr brother.

Cannot wait to see you, **Sister** Evelyn, Cynthia, your mum and your junior brother.

I cannot wait to see you, **Sister** Evelyn, Cynthia, your mum and your younger brother.

4. whc

Will **def** stay in touch

Will **definitely** stay in touch.

I will **definitely** stay in touch.

5. Fbc

Yes Ma. **Esp** when you said my mom was a nurse.

Yes Ma especially when you said my mom was a nurse

Yes, madam, especially, when you said my mother was a nurse.

6. whc

yh it was a very **diff** decision but how I go do am

Yes it was a very **difficult** decision but how I go do am

Yes it was a very **difficult** decision but what can I do?

7. whc

They r cute **tho**

They are cute **though**

They are cute **though**.

8. whc

bt I miss u **tho**

But I miss you **though**

But I miss you **though**

In the sentences above, the bold lexical items in each sentence represents a case of a back clipping. In sentences 1, 2 and 3, the words which have been clipped are nouns. In sentence 1, the word "picture" has been back clipped from **pic~~ture~~** to **Pic,** which is used to represent the full word. The same process has been used in sentences 2 and 3, where the words "brother" and "sister" are respectively back clipped from **bro~~ther~~** to **bro** and **Sister** to **Sis**. In sentence 4, 5, 7 and 8, the adverbs "definitely", "especially", and "though" are back clipped from **Defi~~nitely~~** to

Def, **Especially** to **Esp,** and **Though** to **Tho** respectively. In sentence 7 however, the adjective "difficult" is back clipped from **Difficult** to **Diff**.

4.1.2 Foreclipping

In foreclipping, the word is divided into two and the first part is clipped or deleted so that the latter part is retained as a lexical item to represent the entire word. In the data, some of the structure had some lexical items foreclipped. Such items are found in sentences 9 to 13 below.

9. whc

but if nature carry u den **morrow** dat

But if nature carry you then **tomorrow** that

But if nature takes its course then **tomorrow**

10. whc

Ur bro responded willing to help

Your brother responded willing to help

Your brother responded that he was willing to help

11. Fbc

Can't wait to see you, sis Evelyn, Cynthia, **ur** mum n **ur** jnr brother

Cannot wait to see you, sister Evelyn, Cynthia, **your** mum and your junior brother.

I cannot wait to see you, sister Evelyn, Cynthia, **your** mum and your brother.

12. whs

I think I'**ve** learnt enough. Its abt dat time to play it hard.

I think I'**ve** learnt enough. Its about that time to play it hard

I think I **have** learnt enough and it is about that time to play it hard.

13. whc

ve a new car now

Have a new car now

I **have** a new car now

In sentence 9, the word "tomorrow" has been divided into two (**To** + **morrow)** and the first part "**to**" is deleted or clipped and the second part "**morrow**" is retained and used to represent the entire word. The same process is used in sentences 10 to 13 where the words "your" and "have" have been fore-clipped from "~~**Y**~~**our"** to "**ur**" and "~~**H**~~**ave"** to "**ve**"

4.1.3 Middle Clipping

With middle clipping, the word is divided into three parts. The first and the last are clipped or deleted and the middle part is retained and used to represent the entire word. Although not many were found in the data, the use of the letter "r" can be argued to be a middle clipping of the word "are" as used in the sentences 14 to 16 below.

14. whs

Hbd dearie. U **r** blessed. Xoxo + emoticon giving a kiss

Happy birthday dearie. You **are** blessed.

Happy birthday dear. You **are** blessed.

15. whc

hpe u **r** fyn

Hope you **are** fine

I hope you **are** fine?

16. whc

How **r** u

How **are** you

How **are** you?

4.1.4 Other Findings on Clipping

A rather interesting finding on clipping was that lexical items that are clipped, the nouns especially, can take on inflections, especially, to denote number. An example of such a lexical item is "**pic"** which can take the plural morpheme "s" to denote plurality in number. An example is found in sentence 17:

17. Whs

No **pics**, but I swear, am cute + emoticon"

No **pictures** but I swear, am cute + emoticon

No **pictures** but I swear, I am cute + emoticon

4.2 ELISION

Elision or deletion could be defined as the omission of sounds in a lexical item. It is a form of truncation. According to Plag (2002), these truncated forms are used to express familiarity. Thus, truncations are normally used by people who feel familiar with the person referred to and who want to express this familiarity overtly. This seems to be one of the reasons why most participants use elision. Another notable reasons to be associated with this feature seems to be because participants' need-for-speed in discussing issues using Computer Mediated Communication, and also the quest of participants to save time in such discourse.

Three forms of elision were found in the data. These include omission of vowels only, omission of consonants only, and omission of vowels and consonants in lexical items:

4.2.1 Omission of Vowels

The vowel letters omission is the most frequent form of elision that participants engage as seen in the data. With this form of elision, vowel letters of words, which usually occur between words, are deleted and the rest of the letters (consonants) are used to represent the lexical item. The omission of the vowel letters did not, however, disrupt the meaning of the referred words or understanding of the speakers in the discourse. Examples of such instances are identified below in sentences 18 to 24.

18. Nwhs

    Life z **nt** predictable … so be careful…

    Life is not predictable…so be careful…

Life is not predictable…so be careful…

19. Mwhc

nt dat

Not that

It is not that

20. Mwch1

stil **nt** in

Still **not** in

It is still **not** in

21. Mwhs

I've learnt enough. Its **abt** dat time to play it hard.'

I think I've learnt enough. It is **about** that time to play it hard.

I think I have learnt enough and it is **about** that time to play it hard.

22. Mwch

M	where are u?
Friend	**wrk**
	Work
	I am at **work**

23. Mpwhc2 **wrk**

Friend	Sup (what is up?)
MP	**Wrk**
	work
	I am at **work**

24. Owch

Tnx for **crdt**

Thanks for **credit**

Thank you for the **credit**

25. OFbc

    yr of **cmpltn**:June 2011'

    Year of **Completion**: June 2011

    Year of **Completion**: June 2011

26. KLsms

    we got something to talk about so **ltr** wai bro'

    We got something to talk about so **later** wai bro

    We have got something to talk about so **later** brother

In sentences 18 – 20, the word "not" goes through alphabet vowel elision where the vowel letter "o" is omitted so that the lexical item "nt" is used to represent the entire word. Although the letter "o" is deleted, it does not disrupt the recognition and understanding of the word in the context used. In sentence 21, the vowel letters "o" and "u" have been omitted in the word "about" hence, the item "**abt**" is left to represent word. In sentences 22 and 23 the vowel letter "o" is omitted in the word "work" with the remaining "wrk" used to represent the word; while in sentences 24, 25 and 26, the letters "e,i"; "e,i,o"; and "a,e" are omitted from the words "credit", "completion" and "later" in the sentences respectively. What is significant is that in all cases the omissions do not affect the meaning of the words as used in the context of the following sentences.

Other examples of vowel omissions found in the text are listed below:

Lexical item with omission	Full word
Sm	Some
Pls	Please
Jst	Just
Snr	Senior
Jnr	Junior
Hvnt	Have not
R	Are
Grt	Great
Arnd	Around
Cme	Come
Bt	But
Hv	Have
Nd	And
Whn	When
Chldrn	Children
Yr	Year
Nw	Now
Whr	Where
Bby	Baby

4.2.2 Omission of consonants

In the data, there were other instances of consonant omissions in words. With this form of elision, consonant letters of words, usually not all consonant letters, are deleted and the rest of the letters (consonants and vowels) are used to represent the lexical item. The omission of the letters seemed to be guided by pronunciation; hence, consonant letters that are regarded as not significant in the pronunciation of a word are deleted and the remaining letters are retained to represent the word. In cases where letters are parallel or repeated in the spelling of a word but the letters are represented by a single sound in pronunciation, one of the letters is deleted and the other is used. Below are examples of such instances of consonant omissions that were found in the data.

27. Mwhc

K **wil** let u **kno** on mandae **wil** check and **tel** u'.

Ok **will** let you **know** on Monday **will** check and **tell** you

Ok. I **will** let you know on Monday. I **will** check and **tell** you.

28. Lwhc

wil go to aunty abi place tomorrow'

Will go to Aunty Abi's place tomorrow

I **will** go to Aunty Abi's place tomorrow

29. Lwch

so **wen** they ask **wat** do u **tel** them.'

So **when** they ask **what** do you **tell** them

So **when** they ask **what** do you **tell** them?

30. Mwhc

'**stil** nt in'

Still not in

It is **still** not in

31. MwhC

'Hop u **al** doing good'

Hope you **all** are doing good

I hope you **all** are doing good?

32. Swch

‘let finish my exam n see **wat** we can do’

Let finish my exam and see **what** we can do

Let me finish my exam and see **what** we can do.

33. Mwch

‘**wat** **ave** u done’

What **have** you done

What **have** you done?

34. Owhch

‘Hw is the family **doin**’

How is the family **doing**

How is the family **doing**?

35. Owhch

‘we will finish **writin** exams on 25th December’

we will finish **writing** exams on 25th December

we will finish **writing** exams on 25th December'

36. Owhch

'My phone is spoilt so **usin** a frnd's phone for now'

My phone is spoilt so **using** a friend's phone for now

My phone is spoilt so I am **using** a friend's phone for now

In sentence 27, the final consonant /w/ is omitted in the word "know". The omission of the final consonant does not lead one astray in figuring out that "kno" is used for "know". In words which had double consonants, one consonant is employed in place of the two. This is evident in sentences 27 – 35. Phonetically, in the realisation of words with double letters, only one sound is realized: Tell - /tɛ l/, will - /wɪ l/, still - /stɪ l/, all - /ɔ l/. Thus, although, the orthography is not correct as far as Standard English is concerned, communicators are able to interpret these without any struggle.

In sentences 29, 32 and 33, the consonant /h/ has been omitted in the words "when", "what" and "have" to form "wen", "wat" and "ave" respectively. In the sentences in which these forms with omissions appear, their meanings are evident.

In sentences 36, 37 and 38, the final consonant "g" in the words have been omitted. The omission of this letter does not affect the understanding or interpretation of what the person communicating wants to put across. Phonetically, the realization of the combination of "ng" is /ŋ/. This renders the final letter "g" silent. Thus, its omission in the instances above does not affect the pronunciation or interpretation of the lexical item.

Other examples noted in the data are listed below.

Word with omitted letter	Full word
Preparin	Preparing
Travellin	Travelling
Goin	Going
Treatin	Treating
Doin	Doing
Blessin	Blessing
Writin	Writing
Informin	Informing
Waitin	Waiting

4.2.3 Omission of Both Vowels and Consonants

The third form of elision in the data that was realized was the omission of both vowels and consonants in some words. Some instances found in the data are listed below.

37. Mwch

'**shd** I talk to him and then u lobby'

Should I talk to him and then you lobby

Should I talk to him and then you lobby?

38. Mwhs

‘Lost phone n all contacts by default pls identify **urself** with **msg** or preferably call my line…Thanks’

Lost phone and all contacts by default please identify **yourself** with **message** or preferably call my line… Thanks

I have lost my phone and all contacts by default. Please identify **yourself** with **message** or preferably call my number. Thank you

39. Mwhc

‘am **tlkn** about ur dp’

Am **talking** about your dp

I am **talking** about your display picture.

40. Lwch

‘Hey, **mrng**’

Hey, **Morning**

Hey, **Good Morning**

41. Owch

'Den **tmr**'

Then **Tommorow**

Then **To**morrow

42.

'will start ma xmas **tmr**'

Will start ma xmas **tomorrow**

I will start my Christmas tomorrow

43. mwch

'**av** missed my light off buddy'

Have missed my light off buddy

I **have** missed my light off friend

In the highlighted lexical items in sentences 37 to 43, it is realized that both vowels and consonants have been deleted from the actual words. In sentence 37, the letters "o,u,l" are

deleted in the word "should" to form "shd". The same process is used in the elision of "yourself" to "urself" and "message" to "msg" in sentence 38, "talking" to "tlkn" in sentence 39, "morning" to "mrng" in sentence 40, "tomorrow" to "tmr" in sentences 41 and 42, and "have" to "av" in sentence 43. However when it comes to the interpretation of the words in the context in which they appear, there are no ambiguities in the meanings of the lexical items.

Other examples found in the data are listed below

Word with omitted letters	**Full word**
Fgotn	Forgotten
Cud	Could
Wud	Would
Lil	Little
Sth	Something
Gdevng	Good Evening

4.2.4 **Omission of Pronouns**

Another trend that was observed was the omission of pronouns. Most users omitted pronouns and replaced them with verbs. The first person pronoun was the type of pronoun that was used this way. Users replaced this type of pronouns with the verb; the verb that was mostly treated this way is 'to be' in the first person singular form.

44. Whc

Am great

I am great

I am great

45. Whc

Am gud

I am gud

I am good

46. whc

Am happy in my small world oooo

I am happy in my small world oooo

I am happy in my small world

47. whc

Am a sweet person

I am a sweet person

I am a sweet person

48. whc

Hpe u r fyn

I hope you are fine

I hope you are fine

In all the above instances, users omitted the first person pronoun "I". Its use was subsumed in the verbs "hope", "have" and "am". Such an omission is as a result of the fast nature of CMC; users feel the need to be fast in their communication hence the omission of the pronoun. Again, since the receivers are often readily in the know of the person of the senders in the discourse, users find the frequent use of the first person pronoun redundant. The first person pronoun's reiteration in conversations makes the conversation too formal and boring.

4.3 REDUCTION

Words realized by this process are not clipped or shortened; rather, phrases and sentences are reduced to words. Some of such features also occurred in the data. Such examples are listed below.

49. Mwhc

A: 'hey'

B: 'Sup'.

'What is up?'

50. mwhc8

A: u shdnt do it lyk dat

B: wat du advice'

'what do you advice?

The examples 49 and 50 were taken from WhatsApp conversation between two friends. It is realized that the sentence 'What is up?' is reduced to "sup" in example 49 and the elements "do you" are reduced to one lexical item "du" in example 50.

In the examples below, the verb phrase "do not know" and the clauses "thank you" and "that is all" are reduced to "dunno", "tenkew" and "dasoor" in examples 51, 52 and 53 respectively.

51. mwch

    Charlie, a **dunno** wat happened

    Charlie, I don't know what happened

    Friend, I do not know what happened

52. fcb

    Tenkew a lot 4 ur ker

    Thank you a lot for you care

    Thank you a lot for you care

53. mwch

    Take give am **dasoor**

    Take give him that's all

    Give it to him, that is all

Other examples of reduction found in the data are listed below

Reduced form	**Full phrase or clause**
Ders	There is

Hvnt	Have not
Wats	what is
Dats	That is
wanna	want to
Howdy	How are you doing?

4.4 ACRONYMY

Acronymy is the process whereby a new word is formed from the initial letters of constituent words of a phrase or sentence. According to Quirk et al. (1985), there are two main types of acronyms: acronyms which are pronounced as a word and acronyms which are pronounced as sequences of letters. Acronyms which are pronounced as a word often derive phrasal names and are used frequently such that people often use them without the slightest idea of what the words stand for. Acronyms which are pronounced as sequences of letters are also called 'alphabetisms'.

Word formation process of acronymy was found to be another useful word formation process employed by participants in computer mediated communications. Some of these cases are listed below.

54. owch1

C: howz d family

D: Good

C: WTG

We **T**hank **G**od

55. Owhc4

E: Our stress is mor dan urs oo, so u shd be lookin for us all d time

F: Hahaha **Ikr**

I **K**now **R**ight?

56. Mwhc10

G: Howz he?

H: who?

G: ur **bf**

Boy **f**riend

57. Fbc

I: **Gm** dear

Good **m**orning

J: Mrng how r u doing **WOG**

Woman **o**f **G**od

I: Osofo, I'm blessed

J: WTG

58. Whc

K: hey, wer r u hiding?

L: I am around oo

K: I did not greet u po, **btw,** gud mrng

By **t**he **w**ay

L: Morning

59. Mwch

M: Hello dear

N: Yes sweet

M: How r u

N: Feeling sick

M: u r healed **IJN**

in **J**esus **n**ame

From all the examples (54 to 59) above, it is evident that acronymy is regular with CMC communcators and understood by them. The acronyms "WTG" used in 54, "Ikr" used in 55, "bf" used in 56, "Gm" and "WOG" used in 57, "btw" used in 58 and "IJN" used in 59 are understood as "We Thank God", "I Care Right", "Boy Friend", "Good Morning" and "Woman Of God", "By The Way" and "In Jesus Name" respectively and are created by the selection of the first letters of each word in the group.

It is clear also that the case, whether upper or lower, of the acronym does not affect the interpretation as far as communication is concerned. While some participants wrote the same

acronyms in capital, other decided to use small letters. The meanings, however, remained the same.

Other examples of acronymy found in the data are listed below.

Acronym	**Meaning**
JN	Jesus' Name
RIP	Rest In Peace
TG	Thank God
Brb	Be Right Back
LMAO	Laughing My Ass Off
IHR	I hear
OMG	Oh My God
BHG	By His Grace
LOL	Laughing out Loud, Lots of Love
Rofl	Rolling on the Floor and Laughing
Smh	Shaking my head
Hbd	Happy Birthday
Kk	Okay
Imu	I miss you
Wtv	watching television
Uk	You know
GBU	God bless you
Ilu	I love you
TGfyl	Thank God for your life

The only acronym that falls under the first category among the data collected is lol, which could mean Lots of Love (lol) or Laughing Out Loud (lol) depending on the context.

4.5 LOGOGRAMS

Crystal (2008) defines logograms or logographs as using graphic units to represent words, parts of words or even noises associated with actions. These could further be described as phonological lexicalization.

4.5.1 Phonological Lexicalization.

A dominant feature which may be considered as a productive word formation process in CMC, as established in the data, is a feature the researcher terms phonological lexicalization. This is explained as the use of letters or numbers to represent words because of the shared relativity or phonetic association in the pronunciations of the representing letter or number and the represented lexical item. Thus, by this process, letters or numbers are granted lexicalized status based on phonological considerations. The term phonological lexicalization must not be confused with the concept of lexical phonology which posits that "phonology and morphology work in tandem. There are phonological rules that are triggered only by the affixation of a particular morpheme, and which apply in a cyclic fashion" (Plag, 2012:214). Crystal (2008) considers these features as pictograms and logograms.

From the data, two (2) kinds of such phonological lexicalization processes were noted. The first kind is the use of a letter that share phonetic similarity with the most sonorant sound of the transcription of the represented word.

From the data, such examples can be found in the following structures

60. whc

    U 4 no **u** **a** stalkin

    You for know you are stalking

    You must know you are stalking

61. whc

    No. **u** girls shud drink Yafo Yafo

    No. You girls should drink Yafo Yafo (a local herb Medicine).

    No! You girls should drink Yafo Yafo.

62. whc

    N which 1 do **u** **c**

    And which 1 NUM. do you see

    And which one do you see

63. whc

    How **r** **u**

    How are you

    How are you?

64. whc

D lady cam search 4 **u**

The lady came search for you

The lady came to search for you

In the examples presented above, in sentence (60) the letters ‘u’, ‘n’ and ‘a’ are used to represent the words ‘you’, ‘and’ and ‘are’ which are transcribed as /ju:/, /ænd/ and /ɑ :/. It is realized that the letters that are used to represent the words share some similarity with the most sonorant sounds of the transcription of the actual words. The same can be said for the use of the letter ‘r’ to represent the word ‘are’ which is transcribed /ɑ :/ in sentence (63) and ‘d’ to represent the word ‘the’ which is transcribed as /ðə/ in sentence (64).

The language used in example sentence (64) falls under Student Pidgin (SP). According to Huber (1999) Student Pidgin which is also referred to, as mesolectal /acrolectal pidgin, is one of the forms of Pidgin in Ghana. It is spoken by Ghanaians who have progressed to secondary schools and tertiary education. Such people share at least Standard English and local languages such as twi, the major lingua franca of the country or Ga. Descriptions by Huber, (1999); Dako, (2002); and Sakyi-Baidoo, (2011), show that, the linguistic differences between Pidgin English and Student Pidgin are far less great and are largely lexical. Student Pidgin has a lot of functions; among them, is the fact that SP serves as a badge of group membership in opposition to non-group members, especially adults and dominant institutional authorities of the school community like teachers (Sekyi-Baidoo, 2011).

Several cases of such phonological lexicalization occur in the data. Such examples are listed and interpreted below:

Phonological Lexicalized Letters	Represented Word	Transcription of Represented Word
C	See	/si:/
Y	Why	/waɪ /
Z	Is	/iz/
U	You	/juː /
R	Are	/ɑ ː /
N	And	/ænd/
B	Be	/biː /

The second of such phonological lexicalization is the use of numbers to represent words. From the data it is realized that, principally, it is the single Arabic numerals that are used to represent words because of the shared similarity in their pronunciation with the pronunciation of the words they represent. This is illustrated below:

65. whc

Whc **1** did u take

Which NUM did you take

Which one did you take?

66. whc

Did u buy d buk **4** me

Did you buy the book NUM me

Did you buy the book for me?

67. whc

He z **2** intelligent

He is NUM intelligent

He is too intelligent

In the sentence (65) where '1' is used to represent 'one', it is realized that the pronunciation of the number '1' transcribed as /wæn/ is the same as the pronunciation of the word 'one' transcribed as /wæn/. In sentence (66), the number '4' transcribed as /fɔ :/ is used to represent the word 'for' which is transcribed as /fɔ / because of the similarity in pronunciation. The same can be said of the use of the number '2', transcribed as /twʊ /, to represent the word 'to' which is transcribed as /tʊ / in sentence (67).

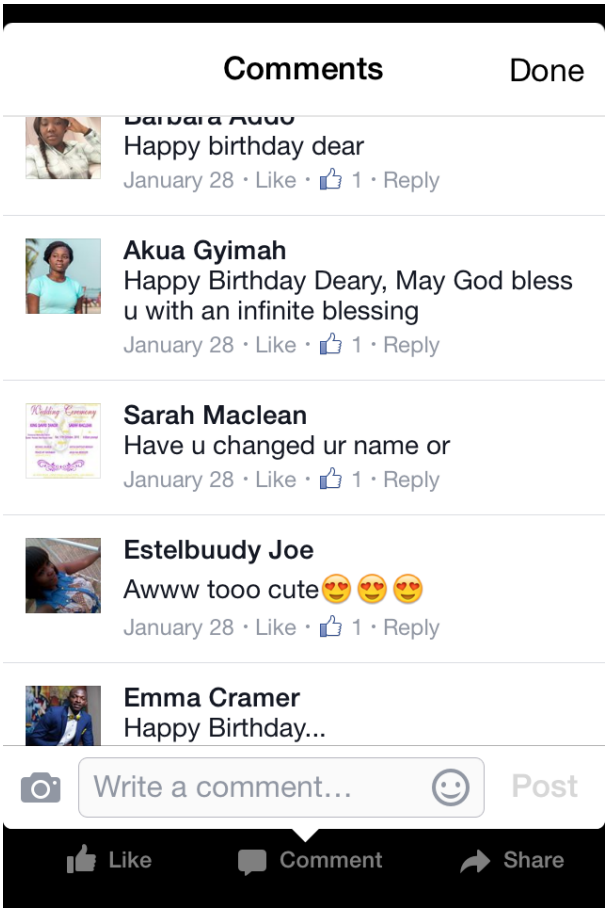
Other examples of this feature found in the data are listed and interpreted below:

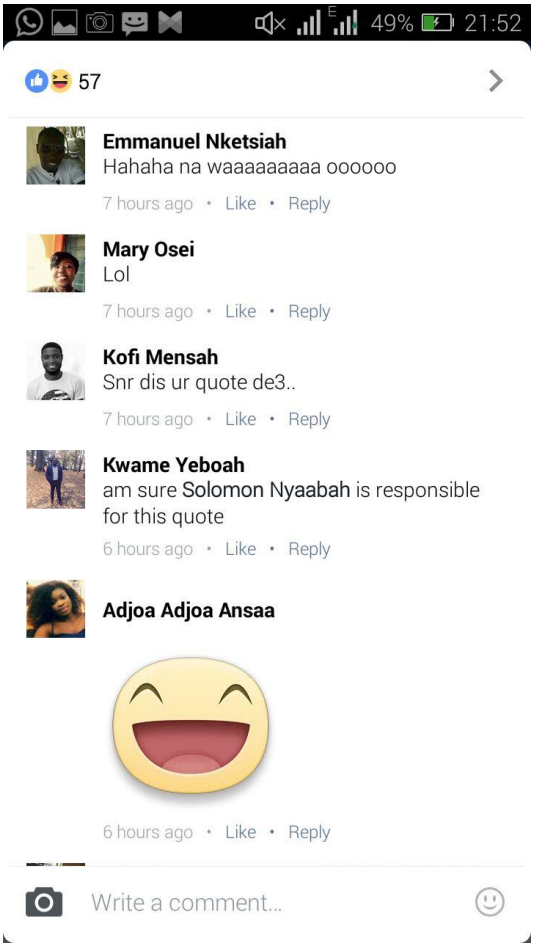
Phonological Lexicalized numbers	Word context	Word represented	Transcription of Represented Word
8	L8	Late	/leit/
9	9t	Night	/nait/
2	29t	Tonight	/tʊ nait/
4	B4	Before	/ bɪ ˈ fɔ ː /

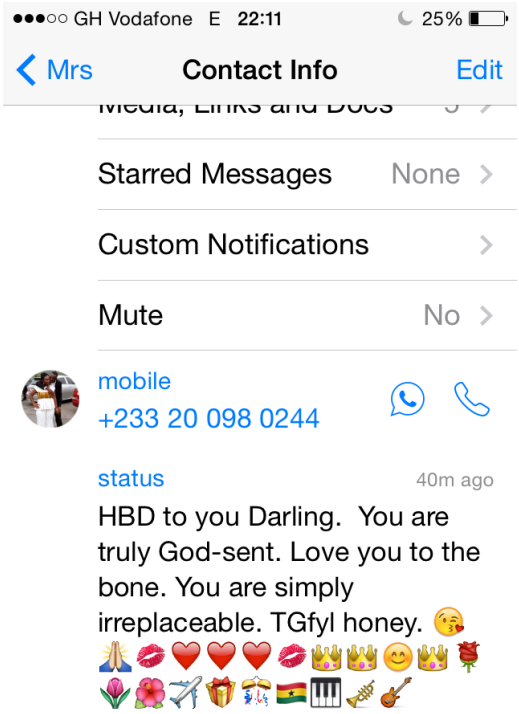
4.5.2 PICTOGRAM

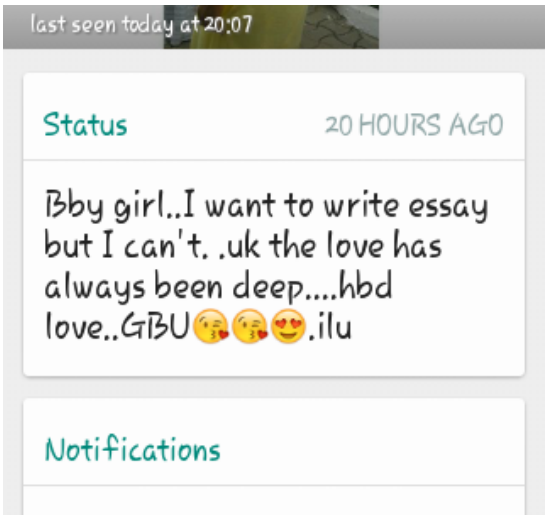
A pictogram could also be defined as a symbol or picture which represents a word or idea. Emoticons fall under this category. In the data, users used a lot of emoticons in their communication. It must be stated that of all the three media, it is in WhatsApp that the use of emoticons is really expressed. Although it is used in Facebook, its use is limited and as far as SMS is concerned, the use of emoticons is very limited. In fact, no emoticon appeared in the SMS data collected by this researcher.

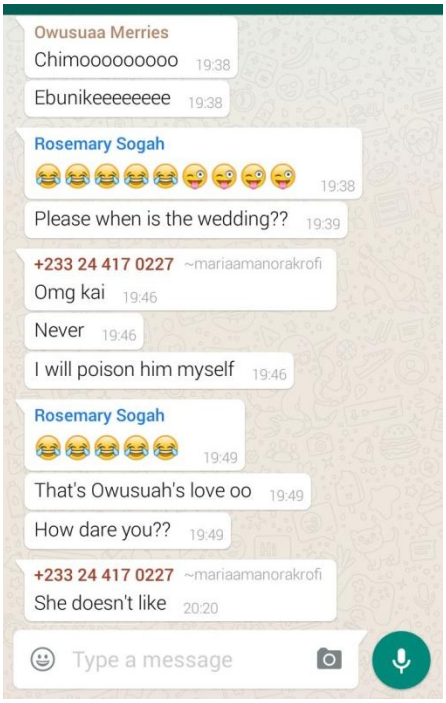
Users used emoticons to express all kinds of emotions and state of being. From happiness to sadness, love to hatred, anger among others.











The screen shots above exemplify the use of emoticons in Facebook and WhatsApp respectively. Users have utilized them to refer to various moods and states.

4.6 BORROWINGS AND PARALINGUISTIC

4.6.1 BORROWINGS

Borrowing is one of the fruitful word formation processes in language. Crystal (1991:41) considers this as "linguistic forms taken over by one language or dialect from another." Hoffer (2002), on the other hand, considers borrowing as the process of importing linguistic items from one linguistic system into another. It is a process that occurs anytime two cultures are in contact over a period of time. Users who engage in borrowings transport linguistic items from one language to the other to fulfill a linguistic need. They have done so to achieve particular effects as far as speech is concerned.

Amuzu (2009) reports that borrowings may occur in two forms: Loan words and Loan shifts.

Several of these cases of borrowings were observed in the data. Such examples are indicated below.

4.6.1.1 PURE LOAN WORDS

This type of borrowing is referred to as pure loan words where words from another language is borrowed into another language but retains their forms and meanings.

In examples 68, 69 and 70, some borrowed words are used in them. The words are of Akan and Igbo origins

68. Nwhc

Boy, I c u **ts3**

Boy, I see you AKAN (long)

Boy, it's been long I saw you

69. Fcb

This one **dierrr** I chop hot

This one AKAN(expressing shock or emphasis) I chop hot

As for this one, I am hot

70. Nwhc

O: **Chimooooo**

(Nigerian word, a form of exclamation which means 'my God)

P: **Ebunikeeee**

(Nigerian word a form of exclamation which literally means 'don't kill me oooo')

I am sorry

Forgive me

O: Hmmmmmmmm

4.6.1.2 LOAN BLENDS

According to Amuzu (2009) loan words can also occur as loan blends, which involves a combination of native and foreign morphemes to form words. In the data, a few of such cases were found. These are identified in examples 71 and 72 below.

71. I'm still **diding**

    I'm still AKAN (eat) + continuous (-ing)

    I am still eating

72. Hahhaha…she is **shiiing** d song

    Hahhaha…she is AKAN (burn) + continuous (-ing) the song

    Laughter! She is singing badly

In examples 71 and 72, the Akan words "didi" which means "eat" and "shɪ " which means "burn" are used with the continuous tense indicator "-ing" in the borrrowings.

Interestingly, the researcher found an acronym "mdfskkk" which, according to the participants, was created from words in the Akan language. It was explained by participants as **M**e – I, **D**a – Sleeping, **F**em- Floor, **S**re – Laughing, **K**wa – Sound of the Laughter (Onomatopoeic), **K**wa - Sound of the Laughter (Onomatopoeic). This "Mdfskkk", as used, is literally the equivalence of ROFL (Rolling on the Floor and Laughing)

4.6.2 PARALINGUISTC

Roach et al (1998) defines paralinguistic features as those used intentionally by speakers to indicate voice quality and vocal effects like laughing, sobbing, whispering, emotions and attitudes. A lot of paralinguistic features were present in the data. Users used a lot of lexical items in their sentences to depict their emotions and state. Such features also go further to show the closeness of communication in CMC to speech

Some of these found are “hehehehe” and “hahaha” to depict the sound of their laughter; “oooh” “hmmmm” and “eiiiiii” to depict their sighs and exclamations, “Mtchewww” and “eiwwwwww” to depict disgust or annoyance.

4.7 NEOLOGISMS, COINAGES OR NOVELTIES

Usevičs (2008) defines neologism as a word, a term, or a phrase that has been recently created (or coined) often to apply to new concepts, to synthesize pre-existing concepts, or to make older terminology sound more contemporary. Neologisms are especially useful in denominating inventions, new phenomena, or old ideas that have taken on a new cultural context. Mostly, neologisms are catchy and are mostly used in the media or used by product owners.

The aspect of his definition that deals with making ‘older terminologies sound more contemporary’ is the basis of this researcher’s discussion in this category. Most of the terminologies that were found in the data were old terminologies that have been ‘rebranded’ to appear trendy and catchy. Crystal (2008) is of the opinion that there are some structures that could be described as genuine novelties and that these structures form a kind of language play, which brings the creativity of the texter to bare.

Examples of words that could be considered in this category are identified in examples 73 to 78.

73. whs

My **phresh** moms … who born me + emoticon. Make Baba God continue dey bless you …

My fresh moms … who born me + emoticon. May Baba God continue to bless you…

My fresh mothers … who gave to me + emoticon. May Baba God continue to bless you…

74. whc

I saw u with a **gal**

I saw you with a girl

I saw you with a girl

75. whhc

Missing u wouldn't be **inaf** of a sentence

Missing you wouldn't be enough of a sentence

Missing you would not be enough of a sentence

76. whc

nufin much sis dufie pls wnt a nice lace style

Nothing much sister Dufie please want a nice lace style

Nothing much sister Dufie, please I want a nice lace style

77. whc

ohh **rili** that's so nice so hw am I going to see her nd thank her

ohh really that's so nice how am I going to see her and thank her

Ohh really, that is so nice. How am I going to see her and thank her?

78. whc

bois dey talk

Boys can talk

You boys can talk

Other examples found in the data are listed below.

Acronym	**Meaning**
Ayt	Alright
Nys	Nice
Hun	Honey (pet name)
Tot	Thought
Fon	Phone
Seesta	Sister
Beta	Better
Halla	Call
Fin	Thing
Mandae	Monday
Welkies	Welcome
Aba	About

4.8 DIFFERENT REALISATIONS OF THE SAME WORD

Since there is no standardization as far as word formation in CMC is concerned, there are several realizations of some words in different forms. Users represented words and structures according to their creative ability and their context (knowledge and related issues). There are therefore words that had more than one form of representation. Some instances as found by the researcher in the data are identified in the examples below.

79. Jst/Jux/Jx/jix - Just

i. whs **jst**

jst sm few dayz 2 our day

Just some few days to our day

It is just some few days to our day

ii. Wch **jux**

U **jux** dey der n hype her

you just dey there and hype her

You just be there and hype her.

iii. whc **jx**

you **jx** have to pray for patience with me

You just have to pray for patience with me

You just have to pray for patience with me

iv. Whc **jix**

‘ I **jix** knw he will always hv a special place in ma life

I just know he will always have a special place in my life

I just know he will always have a special place in my life.

80. Pls/Plz - Please

i. Wch **Pls**

‘Gm hope u gud. **Pls** u bring today’

Good morning. Hope you good. Please, you bring it

Good morning. I hope you are good? Please, did you bring it?

ii. Whc **Plz**

‘y n from whr **plz**’

Why and from where please

Why, and from where, please?

81. bro/bruv = brother

i. whc **bro**

Ur **bro** responded willing to help

Your brother responded willing to help

Your brother responded that he was willing to help.

ii. whc **bruv**

great day **bruv**

Great day brother

Have a great day brother

82. Whn/wen

i. whc **wen**

so **wen** dey ask wat do u tel dem.

So when they ask what do you tell them

So when they ask you, what do you tell them?

ii. whs **whn**

chldrn **whn** dey bcom of age…

Children when they become of age…

Children when they become of age…

Different representations of same word	**Original word**
tx/tnx/tanx/tenk/thx/tanks/thanx/tnks/tenkew	Thank you
Wit/Wid /wv	With
Abt/aba	About
Ave/av/v	Have
de/d/da	The
n/nd	And

Dis/dx	This
Hbd/HBD/hapi bday	Happy Birthday
Ryt/r8	Right
Sis/sist	Sister
Gnyte/gdnyte/g9t	Good Night
k/kk	Okay

What is clear, from the data, was that despite the different realizations of the same words, there was no confusion about the meaning of the various lexical items as all communicators assigned the same meaning to these forms.

4.9 CODESWITCHING

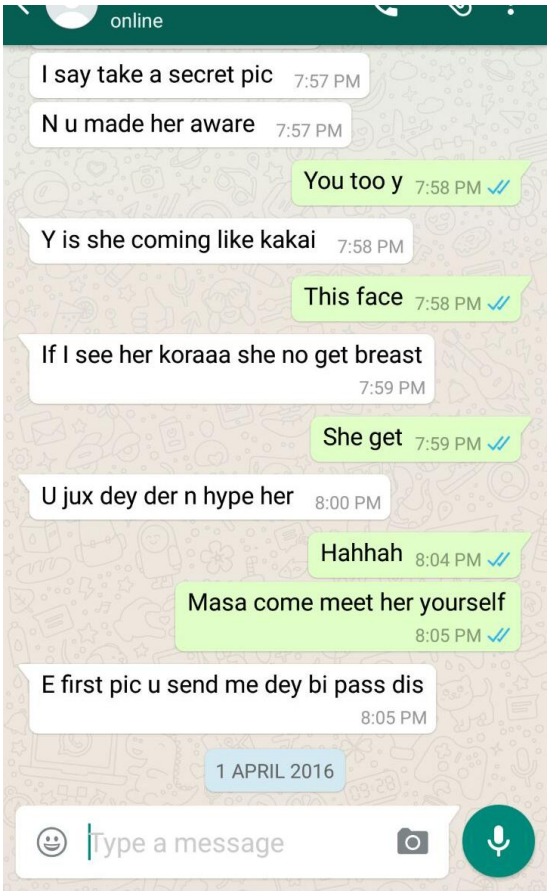
According to Baron (2003) most people find written language on the internet more like speech than writing. This is confirmed in the data. Most users interspersed their communication with words and structures from their local language, especially the Akan language. The use of the Akan language presupposes that both communication partners were proficient in the Akan language. This style of communication could be described as Code Switching. According to Marco Hamam (2014), Code Switching concerns mainly spoken language although it can be found in written texts. She defines Code Switching within the verbal interaction as the functional transition from a linguistic system (language) to another. There were several instances in the data when users switched from English to Twi and back. In some instances, it

was the interspersion of one word. In other instances sentences were interspersed into the conversation.

The chat below depicts the interspersion of sentences in a chat

In the chat above the user asks his communication partner '3te s3n?' (How are you?) and he responds 'Adom' (Grace) and then the user replies 'y3da Awurade ase' (We thank the Lord). The communication partner switches to English and asks 'U'? and then the user replies in Twi 'mpompo ab) me' (I have a boil). There is a brief switch of code from English to Twi.

There were instances where words were used instead of sentences as exemplified in the chat below:



In the chat above the user intersperses his chat with words like 'kakai' and 'koraa'. These are Twi words which mean 'beast' and 'even' respectively.

4.10 DISCOURSE MARKERS

A lot of discourse markers were found in the data. Discourse markers are words or phrases that function within the linguistic system to establish relationships between topics or grammatical units in discourse (as with the use of words like because, so, then). (Brinton, 1996). They also serve pragmatic functions and could be used by a speaker to comment on the state of understanding of information about to be expressed (with phrases such as like, you know); they

may also be used to express a change of state (oh;Heritage, 1984) or for subtle commentary by the speaker suggesting that ‘‘what seems to be the most relevant context is not appropriate’’ (Jucker, 1993: 438). According to Sun (2013), discourse markers are traditionally restricted to speech. Structures used in this manner are devoid of semantic content in and of themselves and are dependent on the local context and sequence of talk for their interpretation.

Discourse markers do not always have meanings that can be found in the dictionary. However, they do have certain functions, some of the functions are to organise what is said (in terms of starting and ending a conversation), ordering what is said and monitoring what is said. Discourse Markers could even serve as responses among others.

Some of the discourse markers found in the data are “oooh”, “hmmmm”, “eiiiiii”, “Mtchewww”, “eiwwwwww” among others. Some users also verbalised their laughter. Examples found in the data are “hehehehe”, “hahaha” to depict the sound of their laughter.

4.11 DISCUSSION OF RESULT

4.11.1 COMPARING THE THREE MEDIA

Comparing the data from the three media, it is evident that apart from the nature of CMC which serves as a determining factor in the choice of some of the word formation processes observed, the distinctive writing styles of users play an important role in the structures employed. While some users chose to communicate in Standard English, irrespective of the media, others also chose to communicate in words that may be considered as non-standard in formal writing. In fact, there are those who communicated in Standard English, even when their communication partners did otherwise.

Again, one would assume that since Facebook and WhatsApp chats gave people enough room to type users (communicators) would type out their words in standard form. However, it is rather on these platforms that users explored the various kinds of word formation processes (intentionally or unintentionally).

In fact, with SMS where users were limited to only 160 characters, most of the users used little of such processes. The predominant word formation processes used in the SMS are acronymy, elision and clipping.

The use of emoticons was mostly limited to Facebook and WhatsApp. Facebook and WhatsApp were popular among the participants. The reason being that technology has advanced and these two seem to be the trend currently. Again, both WhatsApp and Facebook possess enhanced features than SMS. The developers are always updating these applications hence making them trendy and modern. SMS on the other hand, does not have most of the enhanced features of both WhatsApp and Facebook. Again, the cost of the two media is relatively cheaper compared to SMS. The two media also allow users enough space to type whatever they want to type. It must however be stated that WhatsApp status has a word limit of 139 characters.

It was observed in the data that the word limitation nature of WhatsApp status made some participants compress all they wanted to post hence stretching their creative ability; thus in most of the statuses, participants employed a lot of word formation processes. As far as WhatsApp chats and Facebook chats were concerned users had enough space to type any length of message they wanted to yet it is in the chats on these media that they put on their creative caps and employed the CMC language to the full.

As stated by Baron (2003), most people liken written language on the internet to speech more than writing. Speech is fast and requires immediate answers. This probably explains why users,

in their quest to be fast and produce answers, employ some of these word formation processes. Nonverbal cues, slang, contractions (truncations) among others are all features of speech. Most of the words in the data that had undergone one formation process or the other could be described as slang or truncations and thus regarded as informal and unacceptable as far as writing is concerned.

The practice of giving one word answers, another feature of speech, is evident in the data collected. The chat below exemplifies this one word answer feature. This goes further to buttress the assertion that internet writing is more like speech than writing

19:54:48: D: Hi sis

19:55:22: A: Hi

19:55:35: D: Hw 're u

19:55:42: D: Nd mum

19:55:44: A: Good

19:55:47: A: U?

19:56:12: D: Same by his grace

Again, Both paralinguistic and extra linguistic features were evident in the three media. It must however be stated that the use of these two features were exploited most in Facebook and WhatsApp than in SMS.

4.11.2 UNRAVELLING CMC THROUGH COT

COT espouses that the naming act is not a purely linguistic act rather it relies heavily on factors such as human knowledge, human cognitive abilities, experiences as well as human imagination among others. This assertion is evident in all the processes that were identified in the data.

Most coiners/users represented words with portions of the words that mattered most to them as far as pronunciation, spelling, easy identification and most importantly, meaning were concerned. These are evident in processes such as clipping, elision and the omission of vowels and consonants. For example under clipping, users represented "brother: with "bro' because that is the portion of the word that is easily identifiable and leaves other users with little or no room for ambiguity. Other examples are: "morrow" for "tomorrow", 'esp" for "especially", "sis" for "sister", "pic" for "picture', "nt" for" not", "wrk" for "work", "abt" for "about", "ltr" for "later" among others.

The concept of easy identification and understanding runs through the process of reduction where phrases and sentences are reduced to words. Some examples from the data are "dunno" for "I don't know", "ders" for "there is", "dats" for "that is" among others.

It was established that some users employed letters or numbers or combined both letters and numbers to represent words. They did that because of the shared relativity or phonetic association in the pronunciations of the representing letter or number and the represented lexical item, hence, granting letters and numbers lexical status based on phonological consideration. This is possible because the users possess some knowledge on the phonetic association between the letters and the numbers hence their ability to transfer such knowledge in the formation of words.

Some examples gleaned from the data are:

1. Did u buy d buk 4 me

   Did you buy the book NUM me

   Did you buy the book for me?

2. He z 2 intelligent

   He is NUM intelligent

   He is too intelligent

'4' and '2' are used to represent 'for' and 'too' in the examples above respectively. This has been done because of the similarity in pronunciation.

Other users also transferred their knowledge of verbs and their endings in the English language to some local words.

Example

1. I'm still diding

   I'm still AKAN (eat) + continuous (-ing)

   I am still eating

In the example above, the Akan word "didi" which means "eat" is used with the continuous tense indicator "-ing" in the sentence. This goes further to underscore the fact that the naming act relies on the intellectual capacity of the user. The creativity of users are evident in all the instances above.

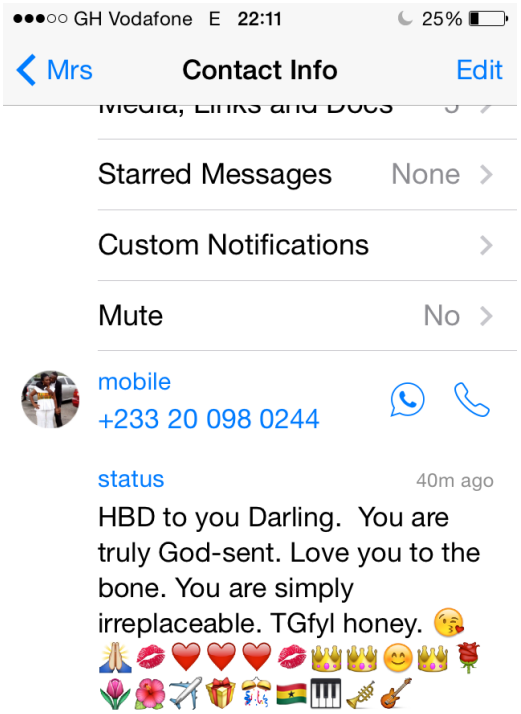
Other examples that underscore the assertion that naming in CMC relies on factors such as the knowledge of the users, their experiences, cognitive abilities and human imagination among others abound in the data.

Under Neologisms, Coinages or Novelties, users fully expressed themselves by engaging in a play of language to create new words. Users simply 'rebranded' older terminologies to make them contemporary.

Examples are "phresh" for "fresh", "gal" for "girl", "inaf" for "enough" among others.

The linkage between linguistic and extra linguistic phenomenon is also conspicuous in the data. Users were able to satisfy their psychological need of self-expression by employing both linguistic and extra linguistic elements. This was mainly done through smileys and objects that expressed their emotions and feelings among others.

Some of such instances in the data can be found in the chats below:



Users also verbalized their sighs and laughter. Examples found in the data are "hehehehe", "hahaha" to depict the sound of their laughter; "oooh" "hmmmm" and "eiiiiii" to depict their sighs and exclamations, "Mtchewww" and "eiwwwwww" to depict disgust or annoyance among others.

4.12 SUMMARY OF CHAPTER

The chapter has presented the analysis and findings of the word formation processes in the three types of media that were chosen. The processes present were stated and discussed. Other observations in the data were also highlighted and discussed. A comparison of data from the three types of media was also presented

CHAPTER FIVE

SUMMARY, SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION

5.0 INTRODUCTION

Chapter four presented the analysis and discussion of the word formation processes present in the data. This chapter presents the summary, findings and conclusion of the analysis.

5.1 SUMMARY

The preoccupation of this research was to investigate the word formation processes employed in Computer Mediated Communication (CMC) in Ghana. There are a lot of word formation processes in the English language. New words come into the language often. Such new words mostly come about to fulfill a functional need.

Computer Mediated Communication, as defined by Stasser (1992), is a process by which a group of social actors in a given situation negotiate the meaning of the various situations which arise between them. In CMC, context and actors are very important. The study established that both actors and context are constant variables in CMC, however, meaning is dependent on the type of context and the category of actors involved. Meaning is therefore not universal as stipulated by Crystal (2005), Herring (2012) and Okeke and Obasi (2014). The analysis of data confirms the contextual nature of CMC as seen in Chapter four.

Data from the two types of CMC (Synchronous and Asynchronous) were used in the analysis. The commonest format of CMC, which is the phone (smart phone) and the computer, were, used in the collection of data for analysis. The screen shot technology which could be described as a picture taken of one's computer or phone's desktop, was the main medium for data collection.

5.2 SUMMARY OF FINDINGS

5.2.1 TYPES OF WORD FORMATION PROCESSES OBSERVED.

After analyzing the data gathered, the processes that were observed were clipping, elision, reduction, acronymy, logograms and pictograms, coinages, borrowings and different realisations of the same word.

Out of the four types of clipping, three were established in the data. These are back clipping, fore clipping and middle clipping. Back clipping and fore clipping were used by users more than Middle Clipping.

Three types of omissions were also observed in the data: omission of vowels, omission of consonants and omission of both consonants and vowels. The most used type of elision among the data collected is the omission of vowels. The omission of vowels are used more because determining the meaning of a word with a missing vowel is easier than that of a consonant. With the omission of consonants, most of the consonants that were omitted are final consonants that did not need much thinking to identify what the item represented. Since technology is associated with speed, users, in their communication, aim at speed and comfortability, while some other speakers used the reduction process to form new words.

From the data, it was also seen that some words had more than one form of representation. Two reasons could account for these. They could be allormorphs of the words or secondly, the different realisations could be as a result of the non-stardardisation of the words in CMC. Users

are not inhibited by any social rule neither are they subjected to any criticism or control, hence, they are at liberty to explore with words and use the forms that suit them

Acronymy, another process of word formation was also evident in the data collected. Two types of acronymy exist: those that can be pronounced as a word and those that are pronounced as sequences of letters. All the two types of acronymy were present in the data gathered by this researcher, however the second type seem to outnumber the first.

Older terminologies were also repackaged to make them appear trendy and catchy. These words are novel in form but the ideas presented are old. Again, since users are not inhibited by any rule, they are at liberty to explore and be creative.

Logograms or logographs are graphic units, parts of words or even noises associated with actions that are used to represent words. In this category, letters that share phonetic similarity with the most sonorant sound of a word were found. The second form is the use of numbers to represent words. These are numbers that share similarity in pronunciation with the pronunciation of the words they represent.

Pictograms, which could be defined as a symbol or picture, which represents a word or idea, were also found. These are represented by emoticons. Such emoticons express gestures, emotions and state of being

According to Baron (2003), most people find written language on the internet more like speech than writing. This is evident in the data that was gathered as some people used words that were borrowed from their local languages and even typed out their sighs and sounds of their laughter as words in the course of their communication. The borrowings that were found are Akan and Nigerian terminologies. An acronym in the Akan language was also found in the data.

5.2.2 COMPARISON OF THE THREE MEDIA

Comparing the data from the three media, it is evident that style plays an important role in the formation processes. Irrespective of the media, some people communicated in Standard English. In fact there, are those who communicated in Standard English, even when their communication partners did otherwise.

Again, even though SMS limited people as far as space for formation is concerned, most SMS users employed minimum formation processes. On the contrary, in Facebook and WhatsApp where users have much space to write, it is rather in these media that users employed various forms of word formation processes. More processes were thus found in Facebook and WhatsApp than in SMS. The few who used them were probably communicating with their partners on official basis or they are people who are simply not comfortable with the Facebook and WhatsApp technology. Some of the users of SMS also said they did not have the skill to form some of the words employed in CMC and that they find it difficult getting the thrust of messages in which such words have been employed.

5.2.3 THE INFLUENCE OF SPACE ON THE CHOSEN MEDIA

As far as the chosen media is concerned, space has not got much influence on the formation processes. It is rather the nature of the media and the need for speed that pushes users to be creative in their communication. Some users were of the view that, users (communication partners) have short attention span and do not have time to read lengthy posts and comments. It is therefore not surprising that more processes were found in Facebook and WhasApp than SMS. It must be noted that, with the advent of novel forms of communication, most people rarely use the SMS.

5.3 CONCLUSION

While people use technology to enhance their lives, a lot of things happen to the language which they use in their communication. Whether consciously or unconsciously, the morphology, phonology and the syntax of language are affected. This study has looked at an aspect of the morphology of the English language and how it has been affected by CMC. While studying the word formation processes as far as CMC is concerned, a lot of interesting findings were made. The fascinating finding is that, CMC, has given English Language users new ways of expressing themselves in terms of style, its nature also challenges users to be creative. As Crystal (2005) puts it, this creative way of exploring the English language was largely lost in the 18th Century when Standard English was established.

The analysis done in the study affirms the assertions by Pavol Stekauer in his Cognitive Onomasiological Theory (COT). The active involvement of users in the naming process and the fact that these words respond to real naming demands of the coiners/users of the CMC community are confirmed in the analysis. The need for users to satisfy their psychological need of self-expression is also affirmed in the analysis. It can therefore be concluded from the analysis that, word formation under COT is about composing and not decomposing.

5.4 SUGGESTIONS FOR FURTHER RESEARCH

Many areas of research abound as far as CMC and language are concerned. Efforts should be made to standardize language as far as CMC is concerned. This is because there are times some users do not understand the language their communicators use. For example in the data used for

this study, a user had to ask the person she was communicating with what a particular acronym meant.

Again standardization will rule out some of the inconsistencies associated with communication as far as CMC is concerned. It was realized, while collecting the data, that some people are inconsistent with a particular word in a single chat. For example, in a WhatsApp chat, the communicator writes ‘doin’ for ‘doing’ and in the same chat the same communicator writes ‘duin’ for the same word ‘doing’. Standardisation will curb some of these inconsistencies.

In addition, since an acronym in the Akan language was found, it will be interesting to find out what other acronyms exist in other languages. A database of such acronyms could be built by language researchers. Background check on the group in whose chat the researcher got the *mdfskkk* acronym revealed that most of the members of the group are Akan speakers. By inference, it is possible that there are other local abbreviations employed by speakers of other languages and it will be worth while researching into such an area.

Some English words were given different meanings. For example, 'rough' was used to mean differently from what exists in the dictionary. It will be interesting to find out how many English words are used this way as far as CMC is concerned.

A critic al study of the data also reveals words that are peculiar to Ghanaian phonology. Some of these words are 'dasor' for 'that is all', 'Mandae' for 'Monday', 'tenkew' for 'thank you' among others. There are words like 'bro' that are peculiar to African Americans. There are also other words that are part of Standard English and there are also words that are international and therefore have become conventional. It will be interesting to study how these areas play out on a larger scale in CMC.

5.5 RECOMMENDATION

CMC is a novel area, which is fast growing. Because it is technologically based, its dynamics change often. More and more people are being drawn into the bracket of technology users. The advent of technology has also changed the trends of literacy such that it is no longer

> "the ability to take advantage of the literacy potential inherent in any single, static, technology of literacy (e.g., traditional print technology), but rather by a larger mindset and the ability to continuously adapt to the new literacies required by the new technologies that rapidly and continuously spread on the internet" (Cairo et al 2008:5).

Language experts must therefore study the effects of technology on language and adopt new ways of presenting language (in all spheres) in the face of technology.

5.6 SUMMARY OF CHAPTER

This chapter has presented the findings of the analysis on the word formation processes in CMC in Ghana. It has given insight into the way forward, made recommendation and spelt out some suggested areas for further research as far as language research on CMC is concerned.

BIBLIOGRAPHY

Adejumo, A. & Osunbade, N. (2014). A Practical Approach To Word Formation Processes in English. *International Journal of Research in Humanities, Arts and Literature*, 2(11), pp. 49-58.

Amer, A. (2006). *The use of computer mediated communication for increasing motivation and improving acquisition of English as a foreign language in high school*. A dissertation submitted for the degree of Doctor of Philosophy Department of Information Science Ph.D. Thesis Submitted to the Senate of Bar-Ilan University Ramat-Gan, Israel.

Androutsopoulos, J. (2006). Introduction: Sociolinguistics and computer-mediated communication. *Journal of Sociolinguistics*. 10 (4). Pp. 419 – 438.

Anglozof.com (2007). *Word formation*. Retrieved September 24, 2015 from http://www.anglozof.com/linguistics/word-formation.htm

Barnhart, R. K. (1995). Some thoughts about neologisms before starting BDNE IV. In *Dictionaries. Journal of the Dictionary Society of North America*. pp. 51-64.

Baron, N. S. (2003). The language of the internet. In Ali Farghali, (Ed.). *The Stanford handbook for language engineers*. Stanford: CSLI.

Brinton, L. J. (1996). *Pragmatic markers in English*. Berlin: Mouton de Gruyter.

Brown, B. B. (2007). *SMS: The short message service*. Retrieved November 2, 2015 from http://uncw.edu/itsd/documents/computer-sms_pdf.pdf

Bubas, G. (2001). Computer mediated communication theories and phenomena: Factors that

influence collaboration over the internet. *3rd CARNet Users Conference*, Zagreb. Retrieved November 13, 2015 from http://cuc.carnet.hr/cuc2001/papers/b1.pdf

Carlson, R. (2002). Dialogsystem. Retrieved November 13, 2015 from http://www.speech.kth.se/~rolf/gslt/GSLT021023_dialog.pdf

Clark, E. V. & Berma, R. A. (1984). Structure and use in the acquisition of word formation. *Language*, 60(3), pp. 542-590.

Creswell J. W., & Clark, V. P. (2004). *Principles of qualitative research: Designing a qualitative study*. Retrieved October 24, 25 from https://www.andrews.edu/leaderpart/roundtable/2004/workshops/2b/au-qual-071504-jwc-vpc.pdf

Crystal, D. (2005). The scope of internet linguistics. Retrieved October 13, 2015 from http://www.davidcrystal.com/DCarticles/Internet2.pdf

Crystal, D. (2008). Txtng the gr8 db8. Oxford: Oxford University Press.

Coiro, J., Knobel, M., Lankshear, C. & Leu, D.J. (Eds). (2008). *Handbook of research on newliteracies*. Mahwah, NJ: Lawrence Erlbaum.

Davis, B. & Thiede, R. (2000). Writing into change: style shifting in asynchronous electronic discourse. In M. Warschauer & R. Kern (Eds.). *Network-based Language Teaching: Concepts and Practice*(pp. 87–120). Cambridge, UK: Cambridge University Press.

Dako, K. (2002). *Student Pidgin (SP): the language of the educated male elite*. *IAS Research Review*, *18*(2), pp. 53-62.

December, J. (1997). Notes on defining of computer-mediated communication. *Computer Mediated Communication Magazine*, 3, p. 1.

Delahunty, G. P., & Garvey, J. J. (2010). *The English language: From sound to sense.* Colorado: The WAC Clearinghouse.

Dix, A., Finlay, J., Abowd, G. & Beale, R. (1993). *Human-computer interaction*. New York: Prentice Hall.

Dokulil, M. (1968). Zur Frage der Konversion und verwandter Wortbildungsvorgänge und–beziehungen. *Travaux linguistiques de Prague*, 3, pp. 215-239.

Gumperz, J. J. (1968). The speech community. *International Encyclopedia of the Social Sciences* (pp. 381-386). New York: Macmillan.

Haddon, L. (2015). Social media and youth. *The International Encyclopedia of Digital Communication and Society*, 1, pp. 1-9.

Halle, M. (1973). Prolegomena to a theory of word formation. *Linguistic Inquiry*, 4(1), pp. 3-16

Herring, C. A. (2012). Grammar and electronic communication. In C. Chapelle (Ed.), *Encyclopedia of Applied Linguistics*. Hoboken, NJ: Wiley-Blackwell.

Heritage, J. (1984). A Change of State Token and Aspects of Its Sequential Placement. In J. M. Atkinson and J. Heritage (Eds.), *Structures of Social Action* (pp. 299-345). Cambridge: Cambridge University Press.

Huber, M. (1999). *Ghanaian Pidgin English in its West African context*. Amsterdam: John Benjamins Publishing.

Jacobson, D. (2007). Interpreting instant messaging: Context and meaning in computer-mediated communication. *Journal of Anthropological Research*, 63(3), pp. 359-381.

Jones, S. G. (Ed.) (1995*). CyberSociety: Computer-mediated communication and community.*

Thousand Oaks, CA: Sage.

Jucker, A. H. (1993). The discourse marker well: A relevance-theoretical account. *Journal of pragmatics*, *19*(5), pp. 435-452.

Kačmárová, A. (2005) Internet chatting inside out. *SKASE Journal of theoretical linguistics*, 2(1), pp. 55 – 83.

Kittredge, R. & Lehrberger, J. (Eds.) (1982). *Sublanguage: Studies of language in restricted semantic domains*. Berlin/ New York: W. de Gruyter.

Koch, P. (2001). Lexical typology. Language typology and language universals. An international handbook. Berlin/New York.

Lakoff, G. (1971). *On syntactic irregularity*. New York: Holt, Rinehart and Winston.

Madden, M., Lenhart, A., Cortesi, S. Gasser, U., Duggan, M., Smith A. and Beaton, M. (2013). Teens, social media and privacy. Washington, DC: Pew Internet and American Life Project.

Okeke, C. O., & Obasi, G. T. (2014). Word formation processes in Nigerian short-message service. *Theory and Practice in Language Studies*, 4(11). Pp. 2215 – 2222.

Plester, B., Wood, C., & Joshi, P. (2009). Exploring the relationship between children's knowledge of text message abbreviations and school literacy outcomes. *British Journal of Developmental Psychology*, 27, pp. 145-161.

Pennanen, E. (1972). Current views of word-formation. *Neuphilologische Mitteilungen*, 73(3), pp. 292-308.

Plag, I. (2002). *Word-formation in English*. Cambridge University Press.

Plag, I. (2012). *Introduction to Linguistics*. Cambridge: Cambridge University Press.

Quirk, R., Greenbaum, S., Leech, G., & Svartvik, J. (1985). *A Comprehensive Grammar of the English Language.* London: Longman.

Roach, P., Stibbard, R., Osborne, J., Arnfield S., & Setter, J. (1998). Transcription of prosodic and paralinguistic features of emotional speech. *Journal of the International Phonetic Association,* 28, pp. 83-94.

Sekyi-Baidoo, Y. 2011. *Ghanaian Pidgin English, Sentence Type and Structure*. Lambert Academic Publishing

Stasser, G, (1992). Pooling of unshared information during group discussion. In S. Worchell, W. Wood, & J.A. Simpson (eds.), *Group processes and productivity* (pp.48-67). Newbury Park, CA: Sage.

Štekauer, P. (1996). *A theory of conversion in English*. Peter Lang Pub Inc

Štekauer, P. (1998). *An onomasiological theory of English word-formation*. John Benjamins Publishing Company

Štekauer, P. (2001). *Fundamental principles of an onomasiological theory of English word-formation*. Onomasiology Online, 2, 1-42.

Sproull, L. & Kiesler, S. (1991). *Connections: New ways of working in the networked organizations*. Cambridge, MA: MIT Press.

Sun, W. (2013). The importance of discourse markers in English learning and teaching. *Theory and Practice in Language Studies*, *3*(11), pp. 21-36.

Thurlow, C., Lengel, L., & Tomic, A. (2004). *Computer mediated communication: Social interaction and the internet*. London: Sage Publications.

Usevičs, S. (2008*). Neologisms in British newspapers*. Latvia: Daugavpils University.

Zapata, A. A. (2008). Semantic Relationships. *Inglés* IV. Retrieved November 23, 2015 from http://webdelprofesor.ula.ve/humanidades/azapata/materias/english_4/unit_1_semantic_relationships.pdf