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ANALYSIS OF THE DYNAMISM OF THE USE OF MOBILE PHONE COMMUINATION PLATFORMS IN SHAPING COMMUNICATION IN THE MILITARY USING THE GHANA ARMED FORCES IN BURMA CAMP AS A CASE STUDY

BY

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DECLARATION

I hereby declare that, this dissertation is entirely my original work and has not been submitted either in part or whole for the award of a degree at the Ghana Institute of Journalism or any other institution, except for situations of references, where due acknowledgement was made.

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SUPERVISOR'S DECLARATION

I hereby declare that the preparation of this dissertation was supervised by me in accordance with the guidelines of supervision of dissertation laid down by School of Graduate Studies and Research, Ghana Institute of Journalism.

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DEDICATION

"To God be the glory, great things He has done." I dedicate this literary work to the memories of my lovely parents, Deladem Komla Geni and Esther Ivy Ama Geni.

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ABSTRACT

Since the evolution of mobile phone communication platforms coupled with the development of the internet, communication continues to witness dynamic developments in every facet of human life. The advancement in new media and communication devices has proven very crucial in providing significant changes in human, institutions and organisation communications. Against the background of restriction in communication in the security services globally and the growing phenomenon of changes in mobile phone communication platforms, this study ascertains and analyses the dynamism of mobile phone communication platforms usage and the extent to which it has contributed in shaping official communication in the Ghana Armed Forces. This study deployed both primary and secondary sources as well as adopted the quantitative method with the use of survey questionnaire to collect data from personnel in SIC Departments (Administrative Wing, Air Operation Wing, Engineering Wing, Supply Management, Education Directorate and Logistics Department) of the Ghana Armed Forces. Findings of this study revealed although the effects of the dynamism of mobile phone communication platforms on communication in the GAF were both positive and negative that the dynamism in mobile phones has hugely affected official communication positively in the Ghana Armed Forces., this study concludes that the dynamism of mobile phones has significant positive effects on communication in the GAF, it recommends that the use of mobile phone communication platforms by the Ghana Armed Forces should be encouraged as it facilitates easy and fast sharing of information and storage of data.

Keywords: Dynamism of Mobile Phone Communication platform; Ghana Armed Forces; Effective information sharing; Positive and Negative effects of Mobile Phone Communication

CHAPTER 1

GENERAL OVERVIEW AND BACKGROUND TO THE STUDY

1.1 Introduction

Communication has come a long way since Alexander Graham Bell made the first phone call in 1876. In recent times, the phone can be carried around which allows for constant communication in ways that Bell probably never considered in his wildest dreams (Gardner, 2019).

Following the invention of wired telephone by Graham, telephone wires were installed in many countries, with vast network of wires which meant that telephones could be installed nearly anywhere. But these landlines called for phones to be in fixed locations. For the next 115 years, phone communication typically meant you had to go to your phone. Whether at home, at work, or in public, your phone could travel only as far as the cord could take you. Many companies tried to translate the technology into portable phones. It was not until 1973 that a Motorola researcher used cellular-based technology to make the first such call (Gardner, 2019).

Moreover, Gardner (2019) argues that the foremost first generation (1G) analogue cellular network arrived in Tokyo in 1979, and spread to several countries in Europe in 1981. It was not exactly private; anyone with a scanner could eavesdrop. But mobile phones had arrived and in 1983, Motorola released its phone into the marketplace. It provided up to 30 minutes talk time and cost $3,995, Goodwin (2019). The first 2G cellular networks arose in the 1990s, along with digital transmission. Digital quickly outpaced analogue, because it provided improved security and faster connections. The first text messages were on 2G, which allowed for basic Short Message Service (SMS) communication.

Meanwhile, the first text message was sent in 1993 in Finland (Bensko-Ha, 2009). That same year, the first smartphone was launched. Made by IBM, it was called the IBM Simon. This personal communicator, as it was called, sold for $899 with a two-year contract, or $1,099, without a contract. It had a calendar, address book, clock, notepad, keyboard, and touchscreen and email capability (Gardner, 2019). With more and more people getting cellular-based phones, people became more connected. As the millennium approached, so many people had mobile phones that had second generation (2G) networks (Gardner, 2019).

Accordingly, the first, third generation (3G) network started in Tokyo in 2001. This meant that not only could people call, send emails and check the internet with their phones; they could also stream videos and music. Research in Motion's BlackBerry updated the fast-improving flip-phone screens. Clear, colour pictures made phone screens in the BlackBerry and other flip-phones more appealing (Gardner, 2019).

More so, the BlackBerry 7270, with Wi-Fi, introduced in 2005, made it possible to connect to the internet via Wi-Fi in homes, offices and other public places. The BlackBerry became a vital part of communication for many businessmen and women in the middle of the first decade of the 21st century (Gardner, 2019).

In 2007, Apple introduced the iPhone and suddenly, smartphone communication provided a much larger screen, with a keyboard that only appeared when you needed it. The touchscreen came out later in 2007. With all these developments, a Virginia Tech study of coffee shop users showed a shift in communication. It noted that, most people kept their phones in front of them while sitting at the table, and checked them every three to five minutes (Gardener, 2019).

To Gardner (2019), a study conducted on Samsung showed that business leaders or companies usually gained an average of 58 minutes of work time each day to smartphone use consequently, productivity went up by 34%. Some of this is because of applications. Slack, an app that allows people to communicate quickly and waste less time is one productivity boost, Gardener (2019). Like the television in the 1950s and the Internet in the 1990s, mobile telephony has emerged as one of the defining communication technologies of our time (Castells et al. 2007). Mobile subscriptions are well into the billions worldwide and growing (International Telecommunication Union, ITU, 2007).

McLuhan (1962, 1964) argued that characteristics of communication technologies shape cognition and social organization. Castells (2000) supports this assertion, noting that, information and communication technologies of the 1980s and 1990s nourished a shift in social organization characterized by decentralized, flexible, network nodes based on shared interests rather than shared geographic space. Similar to McLuhan's characterization of the mass age, Castells described this pervasive shift in social order as the rise of a new network society (2000).

Drawing on the works of McLuhan and Castells, Campbell & Park (2008) extended the line of thinking by arguing that we have entered a new personal age of communication technologies. In the view of Campbell & Park (2008), communication technologies predominant in today's society, particularly mobile telephony, are characteristically personal in nature. Furthermore, the personal nature of technologies such as mobile telephony serves as a useful framework for understanding the social consequences that come out of their adoption and use (Campbell and Park, 2008).

Interestingly, Campbell and Park (2008) explained that mobile phones are unique from most other interactive media because they can be worn on the body. Laptops are portable, as are mobile phones, but there is an important distinction to be made between portability and wear-ability. Both offer increased flexibility in where and when one can connect with others; however, the latter affords communication while physically in motion, which contributes to the personalization of the mobile telephony. This is backed by Vincent (2005) who opined that, the very act of using a mobile phone involves the simultaneous engagement with more senses than we use for other computational devices as we simultaneously touch, hear and see via the mobile phone in order to keep in touch with our buddies.

In their seminal research on the functional uses of the technology, Ling and Yttri (1999, 2002); Ling 2004) identified some primary categories for mobile phone use. Two of their categories depict new forms of coordination: micro- and hyper-coordination. Micro-coordination entails instrumental uses of the mobile phone, such as coordinating basic logistics, redirecting trips that are already under way, or making plans with others entirely 'on the fly'. Hyper-coordination refers to the expressive and relational dimensions of mobile communication, such as chatting with family members or occasionally checking in with friends via text messaging.

As a result of these technological advancements in mobile telephony, there has been an increase in the ability of individuals to access, collect, and transmit information (Ling and Yttri, 1999, 2002; Ling 2004). Undeniably, these changes are not far away from the military. To function effectively, military command and control depends on a complex communication network of equipment, personnel, and communication protocols to relay information among forces. Military communication; the transmission of information from reconnaissance and other units in contact with the enemy and the means for exercising command by the transmission of orders

and instructions of commanders to their subordinates. As such, it comprises all means of transmitting messages, orders, and reports, both in the field and at sea and between headquarters and distant installations or ships. Military communications also involves all aspects of communications, or conveyance of information, by armed forces (Ling and Yttri, 1999, 2002; Ling 2004).

Later, Sir Home Popham increased the effectiveness of ship-to-ship communication by improved methods of fag signalling, Back and Thompson (2019). With modern technologies, including mobile phones, the command, control and communications and intelligence in the military has certainly had some impact. In the modern world, most nations attempt to minimize the risk of war caused by miscommunication or inadequate communication. As a result, military communication is intense and complicated, and often motivates the development of advanced technology for remote systems such as satellites and aircraft, both manned and unmanned, as well as computers, which calls for a research.

Against the backdrop of the technological advancement globally of which Ghana is no exception. This study aimed at underscoring the extent to which continues enhancement in mobile telephony is shaping communication in the military sector albeit the strict communication structure and information management in the military. The simultaneous existence of communication restrictions and liberalization of or allowance of the engagement of mobile phone in communication activities in the military activities in otherwise prohibition environment has therefore given impetus to conducting an empirical study on the dynamism of mobile phone communication usage and the promotion of the shaping of communication

activities in the military or security forces in Ghana (which comprises of the Army, Navy and the Air Force).

1.2. Statement of Problem

The improvement in mobile phones usage in shaping communication activities in the military, particularly in Ghana Armed Forces has come with great concern if not ironical. The simultaneous existence of communication restrictions and liberalization of the use of mobile phones (otherwise a serious prohibition) in the military communication environment coupled with the success story of the mobile phone usage in shaping communication networks and activities in the Ghana Armed Forces require empirical enquiry.

Back and Thompson (2019) alluded to the fact above when they put forward that, military messengers have been employed in war since ancient times as a valuable means of communication. They also mention that, to maintain contact with their homelands during their far-flung campaigns and to transmit messages with surprising speed. Drums, horns, flags, and riders on horseback were some of the early methods the military used to send messages over distances. Alexander, Hannibal, and Caesar each developed an elaborate system of relays by which messages were carried from one messenger post to another. Before the end of the 18th century European armies used the visual telegraph system devised by Claude Chappe, employing semaphore towers or poles with movable arms. The Prussian army in 1833 assigned such visual telegraph duties to engineer troops.

There has been a point of departure from the traditional mediums of communication in the military and the contemporary ways, for instance, the global tactical military communications market, which comprises airborne, naval, man-portable, vehicular and stationary, is set to see

substantial growth over the decades of its existence (GlobalData Report, 2014). In a market analysis by the firm, for example, by the end of 2028, the sector would have been expected to worth $151bn globally. This growth is probably driven largely by demand for man-portable innovations, which account for more than a third of the market (38%). Consequently, this is likely to have effect on the communication in the military.

It is worth noting that the Ghana Armed Forces (GAF) the unified armed force of Ghana, consisting of the Army, Navy, and Ghana Air Force was formed in 1957, when the country gained independence. The GAF are supervised by the Ghanaian Ministry of Defence. The GAF has the president of the country as the Commander-in-Chief, who doubles as the supreme military commander of the President's Own Guard Regiment (POGR) and of the Border Guard Unit (BGU). The supervision of the Ghana Armed Forces (GAF) is managed by the Minister of Defence and the Chief of Defence Staff (Buabeng 2019).

Ghana Armed Forces (GAF) therefore has undergone a lot of changes over the years with advancement in modern Communication Information Systems (CIS) to knit together to ensure effective planning, decision-making and command and control (C2) (Buabeng 2019). The changes, in the view of Buabeng (2019) have affected personnel, equipment, internal and external operations and C2. The drive to reform in the GAF gave birth to the establishment of the Department of Defence Communication and Information Systems (DCIS) to achieve coherence and end-to-end management of CIS. Although his study opined that, GAF lag behind in CIS adoption and the effective use of appropriate technologies due to challenges of finance, untrained staff and inadequate infrastructure, it also maintained that the adoption of DCIS in the GAF has enhanced delivery of defence operations.

This corroborated Jumia Report (2018), (an Africa's leading E-commerce Company on the Ghanaian Mobile Sector) which revealed that the country is one of Africa's largest mobile markets, with about 34.57 million subscribers and a penetration rate of 119%. This is primarily a result of many people using two or more sim cards. Thus, due to people using different phones which allow for the use of more than one sim card, they are able to subscribe to multiple sim cards of the same network or other networks (Buabeng 2019). .

Additionally, the Jumia Report (2018) indicated that nearly one-third of the country's population (10.11million) are active internet users and this corroborated Zaney's (2019) assertion that the number of users of mobile phones in the country has increased exponentially and in proportion with the level of communication among the populace of which the personnel of the Ghana Armed Forces are no exception.

In the meantime, the monopoly enjoyed by nation-states and institutions over information as an element of power has rapidly lost as technology improved and as the means to transmit that information became smaller, faster, cheaper and, consequently, ubiquitous (Buabeng 2019). .

As already indicated, although scholarly studies on the evolution of mobile telephony have revealed significantly, its effects in many sectors, for instance; *Smith (2016), Impact of Mobile Technology in Business Communication, Dahal (2013) Mobile Communication and its Adverse Effects, and Smith (2012), the Impact of Mobile Phones on People's Lives* among others, and that volume of literatures have attested to the fact of the growing changes in the use of mobile telephony in both private and cooperate organisations and its effects on people's lives, nonetheless, little or scanty empirical studies have been conducted on the effects of the use of mobile phone communication platforms in the Ghana Armed Forces communication activities,

and hence a study of the dynamism of the use of mobile phone platforms, particularly in Ghana is much desired.

Notwithstanding, increase in the use of mobile phones as well as an increase in information flow continues to change communication among individuals and institutions (both public and private) of which personnel of the Ghana Armed Forces are no exception. With the growing spate of technological advancement, mobile phone manufacturing companies continue to improving upon the devices they produce unto the market. These phones also come with enhanced features which shapes user communication. Against the backdrop of the advent of mobile telecommunication technologies, including smartphones which enhances communication in every facet of life, it is important to highlight the significance the dynamism that comes with mobile phones has on the communication of the Ghana Armed Forces, amidst the stringent rules with regards to their code of communication.

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1.3. Research Objectives

This study has a two-fold objectives; namely; main and specific. The main objective is to ascertain and analyse the kind of mobile phone communication platforms the Ghana Armed Forces used in communicating their official activities; however, specifically, this study aims at;

1) Ascertaining the kind of mobile phone communication platforms that the Ghana Armed Forces use in communicating their official activities.
2) Investigating the dynamism of the state of mobile phone communication platforms used by the Ghana Armed Forces in communicating their official activities.

3) Analysing the dynamism of the mobile phone communication platform and discuss the extent to which the use of such mobile phone communication platforms have significantly shaped and/or is shaping communication in the Ghana Armed Forces.

1.4 Research Questions

There have been growing concerns about the significant contributions of the use of mobile phone communication platforms by the Ghana Armed Forces in shaping communication of official activities among the rank and files of the Ghana Armed Forces. Some of the frequently asked questions which serve as guide to achieving the stated objectives of this study as are follows:

1) Do the Ghana Armed Forces use any mobile phone communication platforms? If they use any, which mobile phone communication platform do they use in communicating their official activities in the Ghana Armed Forces?
2) How dynamic is the state of mobile phone communication platform used in the Ghana Armed Forces?
3) To what extent is the dynamism of the mobile phone communication platforms used by the Ghana Armed Forces contributing in shaping the communication of activities in the Ghana Armed Forces?

1.5 Significance of the Study

With the increasing pace of advancements in the communication industry and new developments in mobile phones, there is the need to examine the impact the use of such devices has on human life. Knowing the form of restrictions in the Armed Forces and the way in which mobile phones have greatly affected human communication, this study will help in underscoring the current form of communication in the Army. It will thus, put into perspective,

how the use of mobile phones is having influence in communication in the Ghana Armed Forces. This will then help in rethinking and making decisions as to the way in which communication in the Army could be enhanced owing to the wave of developments that comes with the use of mobile phones in communication. The study will also add to the body of knowledge in the mobile phone and communication industry, and also provide a foundation upon which further research could be done.

1.6 Scope of the Study

This study focuses on the mobile phone usage and the extent to which it is shaping communication activities in the security sector or the military, particularly, the Ghana Armed Forces. Broadly, this study delves into mobile phone usage in the country, and narrowed down to the country's military service sector, and explore and analyse the impact the dynamism of mobile phone has had on the communication of the military. Specifically, this study emphasises on the Ghana Armed Forces, particularly, for data collection and for the purpose of analysing findings of the study in a precise context.

1.7 Organisation of the Study

This study is structured to in five (5) chapters. The First chapter deals with the general overview and background to the study, Introduction, statement of problem research objectives, research questions, Significance of study, Scope of the study. And the organization of the study. Chapter Two reviews the empirical related and relevant literatures to contextualise the study, drawing from the works of others in relation to the study topic, theoretical foundation, which will provide theories that best underpins the study, basic assumptions, conceptual framework, operational definition of some key terms in the study, relevant of the study and conclusion.

The Third Chapter provides the methodology which includes methods, research design, population and sample size, sampling technique, sources of data collection and data collection instruments, and techniques of data processing and analysis. The Fourth Chapter, the penultimate chapter deals with analysis and discussions of key findings while the Final Chapter, chapter five summarizes the key findings, draw conclusions and make some recommendations for further studies and praxis.

CHAPTER 2

LITERATURE REVIEW

2.0. Introduction

Evidence shows that literatures on the mobile telephony communication globally and Ghana in particular is copious *(Smith, 2016;, Impact of Mobile Technology in Business Communication, Dahal, 2013 Mobile Communication and its Adverse Effects, and Smith, 2012) and hence t*his chapter reviews the related and relevant literatures on the dynamism of mobile phones in shaping communication in the Ghana Armed Forces, drawing on works from different perspectives.

Meanwhile, the review provides the analysis of the theoretical foundation, conceptual framework and the operational definitions of terms to ensure the contextualization of terms and to elucidate readers better and proper understanding of terms and concepts, relevance of the study as well as drawing conclusion to reflect the knowledge gap which this study seeks to bridge.

2.1.0 Theoretical Framework

As already indicated in the introduction, this section provides an analysis of the theoretical underpinnings of the dynamism of the mobile phone communication and extent to which it contributes to enhancing telecommunication activities and information management in the security services in general and particularly, in the Ghana Armed Forces. This study deploy merging media and Public Relations practice, Diffusion of Innovation, Uses and Gratification and Social Cohesion and Maintenance Theories in relation to the problem under review.

Thus, this study's theories intended to elucidate the comprehensibility of the use of mobile telephony in shaping communication activities of the Ghana Armed Forces, its dynamics challenges and Critical Success Factors is subsumed under the rubric of Advanced

Technological Theory (ATT) (Yasuharu (2003) and Bawumia (2007) and Mass media theories example of which have been mentioned above.

2.1.1 Advanced Technological Theory

Critical information have been provided by Yasuharu (2003) and Bawumia (2007) about the benefit of mobile telephony usage in communication and information management system in their scholarly articles, nonetheless, little attention or scanty information exists to explain the dynamism or the rationale behind how the use of mobile telephony in a rather contradictory manner in an environment such as the military sectors where there exist a simultaneous restriction of communication and liberalization of mobile telephone usage in shaping communication activities.

Meanwhile the advanced Technology Model or theory states that the mobile telephony system provides a more convenient and/or ease access to information shortly and conveniently and that it is very fast in terms of transmission or dissemination of information, handling of delicate information, usage and maintenance and/or transportation of mobile phones as well as less costly due to the economies of scale coupled with several opportunity cost of advantages, resulting from keen competition.

Accordingly, the dynamism of the use of mobile phone in communication in the military sectors is positively shaping military service delivery channels, minimizing communication challenges and increasingly yielding Critical Success Factors and hence mobile telephony communication dynamics has come to occupy centre stage of the discourse on use and shaping of communication activities in the Ghana Armed Forces. This study therefore presents the following hypothetical statement.

2.1.2. Mass Communication Theories

This section of the study provides highlight of theories which underscores the usage of mobile phones. Theory is a model or framework for observation and understanding, which shapes both what we see and how we see it. Theory is a system of interconnected abstractions or ideas that condenses and organises knowledge about the world, Sunday (2017). Theory allows the researcher to make links between the abstract and the concrete; the theoretical and the empirical; thought statements and observational statements etc. Pearce (2013) contended that, there are a number of communication theories that could be used for studies of mobiles in developing contexts. However, this study will make use of the Diffusion of innovation, uses and gratification and Social cohesion and maintenance theories, to put into context, the use of mobile phones among individuals.

2.1.3 Diffusion of innovation

This is the theory of how, why, and at what rate new ideas and technology spread through social systems (Rogers, 2003). An extensive body of research has brought about considerable theoretical development and empirical support for Rogers' work. A number of studies have used diffusion as a theoretical orientation for mobile phone adoption. One illustrative example is Wei's (2006) finding that the desire to be seen as Western was a motivation for use of pagers and mobile phones in China. This research not only extended diffusion theory to China but also moved beyond demographic variables to lifestyle variables as predictors. Diffusion of innovation is a natural fit for studies of mobile media and communication in developing countries because of its demonstrated utility for studying technology in such environments as well as its application at both the individual and societal level. Thus, diffusion of innovation can aid understanding in the often misunderstood individual–society interactions in developing countries

2.1.4. Uses and gratifications

The study of media choice of the mobile phone and other information communication technologies is sometimes examined from a uses and gratifications perspective. This approach is concerned with establishing the linkages between the kinds of motivations an individual might have for media. It has been used to study needs and gratifications in mobile phones (Leung & Wei, 2000; Wei, 2008). This perspective can be well-used in mobile media and communication studies in developing countries. Assumptions about motivations for use in different environments can produce erroneous conclusions. Thus, uses and gratifications could be a base for further investigation without presuppositions

2.1.5. Social cohesion and maintenance

Mobile phones can affect social ties and cohesion. Through small rituals enabled by mobiles throughout the day, individuals maintain social cohesion that was not possible before (Ling, 2004, 2008; Rice & Hagen, 2010). Mobiles can intensify social cohesion in developing countries (Pertierra, 2007; Tenhunen, 2008). And social cohesion explains high adoption of mobile phones in Ghana (Slater & Kwami, 2005) and Armenia (Pearce, 2011). Slater and Kwami's (2005) study of Ghanaian mobile phone users is illuminating in terms of social maintenance. Ghanaians use mobiles to reproduce, manage, and reduce the costs of relational obligations. More studies exploring social cohesion and maintenance can be useful for scholars for mobile media and communication more broadly. As social connections are essential to survival in developing countries (Pearce, 2011), understanding social connection and cohesion via mobiles in such a context is an important contribution (Horst & Miller, 2006; Pearce, 2012).

2.2. Basic Assumption

The guiding basic assumption of this study is that the use of mobile telephony in the military environment where there is simultaneous existence of strict restriction in communication and liberalization of the use of mobile phone in communication activities of the Ghana Armed Forces (albeit restriction) is positively shaping communication and hence mobile phone has been referred to by this study as the Critical Success Factor. In the literature review section, this Critical Success factors would be discussed in detailed.

2.3.0 Review of Related and Relevant Empirical Studies

This section appraises previous scholarly researches or studies. Literature review is a body of text that aims to review the critical points of current knowledge on a particular topic. Its ultimate goal is to bring the reader up to date with current literatures on the topic and forms the basis for another goal, such as the justification for future research in the area. The review of the literature is structured in the following thematic: Journeying through the times of mobile telephony in Ghana; **the role of smartphones in shaping modern battle, fresh outlook on Military smartphones, the security implications of ubiquitous social media as well as mobile phones and location based information sharing.**

In what follows, the journeying through the times of mobile telephony in Ghana is appraised.

2.3.1 Journeying through the times of mobile telephony in Ghana

Ghana‘s telephony journey can be traced as far back as the late 1800s to the British, the then colonial masters of Ghana (Ayensu, 2003; Addy-Nayo, 2001; Allotey & Akorli, (n.d)) in Asante (2014). In the early days (1881), they introduced telephone lines into a few sectors like the postal services. Forty-seven years, later, the technology was increasingly being used by other service industries apart from the principal post offices. Allotey and Akorli (n.d.)

chronicles Ghana‘s early telecommunication history in their paper Telecommunication in Ghana (http://www.vii.org/papers/ghana.htm). They placed this history into four key categories: Precolonial, Colonial, Postcolonial, and the present era. In their expose they identified that the first telegraph line in the then Gold Coast was a ten-mile link installed in 1881 between the castle of the colony‘s then governor in Cape Coast and Elmina.

This was later extended to the Christiansburg Castle in Accra and extended further to Aburi 26 miles outside Accra. Soon (1887- 1889) noted that, these lines were extended to cover Accra, Prampram, Winneba, Saltpond, Sekondi, Ankobra, Dixcove and Shama as well as all colonial castles, fort towns and commercial ports and 68 fishing centres Asante (2014).

Historically, the Yaa Asantewa war between 1900 and 1901 witnessed how this new communications technology was influential in winning the war for the colonial masters. This influenced the locals to believe that the telegraph lines carried some magical powers that enhanced the Europeans to win wars in Ghana.

As a result, the locals resorted to cutting them down. The colonial governors realizing this entrusted their safety and security to the tribal chiefs in 1886 by rewarding chiefs handsomely for reporting any damage done to the lines. In response to the desire to expand and improve communications in the southern part of Ghana, the first manual telephone exchange with 70 lines was installed in Accra in 1892.

This was increased with 13 additional lines in Cape Coast with a second manual exchange in 1904. During the British colonial rule there was the penchant for facilitating economic social and political administration of the colony consequently, when the Ashantis were brought under colonial rule the telegraph lines were extended to the Ashanti Kingdom and beyond.

Allotey and Akorli (n.d.), further showed that by the end of 1912 close to 1,500 miles of telegraph lines had been constructed to link 48 telegraph offices throughout the Gold Coast.

After the development of the first backbone of the main trunk telephone routes (Accra-Takoradi, Accra-Kumasi, KumasiTakoradi and Kumasi to Tamale) in 1920, by 1930 the number of exchange lines had grown to 1,560 connecting the Coastal, Central and Northern Regions.

However, the 1940s global economic depression due to the Second World War affected the expansion and growth in the telecommunications sector. As a result, no additions were made to the lines until the 1950s when 200 lines were installed to replace the manual ones mounted some six decades earlier with the installation of automatic telephone exchange, Asante (2014). This affected the trunk lines across the country as they also saw an upgrade through the installation of a 48 and 12 channel VHF network.

Things changed drastically soon after Ghana‘s independence in 1957. The release and implementation of Ghana‘s first seven-year development plan under the Nkrumah government, hastened the completion of a second new automatic exchange in Accra, which increased the telephone subscription to 16,000 while 32,000 rotary-type telephones were in use in Ghana by the end of 1963.

Asante (2014) also stated that, during that same period, telephony services were extended to other parts of Ghana when new manual exchanges were installed at Cantoments, Accra, Swedru, Koforidua, Ho, Tamale, Sunyani and Kumasi. These were the Strowger and Philip UR 49 switch exchanges.

In the early days, the Public Works Department was initially responsible for the management of Ghana‘s telecommunication. As a result of the enactment of the Post Office Ordinance in 1886, it was later transferred to the Post Office. This changed during the Postcolonial period when that responsibility was transferred to the government‘s Post and Telecommunications Department until 1970s. When the National Redemption Council Decree No. 311 declared the

Post and Telecommunication Department a public corporation it paved the way for a new chapter to develop in Ghana‘s telecommunications system. The department was placed under the authority of the then Ministry of Transport and communication, now Ministry of Communication, which was responsible for policy formulation and the control of Ghana‘s telecommunications sector. Under the instrument of incorporation, the now defunct Post and Telecommunication Corporation (P & T) was administered by a board of directors who functioned as the corporation‘s governing body.

This instrument helped define the administrative structure as well as the operational running of the corporation. For the first time the corporation had a director general who was accountable to the board of directors and also responsible for the organization, maintenance, and development of all the corporation‘s services both domestic and international as well as the determination of financial policies.

The director general also ensured that government policies on telecommunication were implemented and that rules and regulations governing the various services as well as international conventions were correctly interpreted and acted upon. He was assisted by two deputies - the deputy director general for engineering and the deputy director general for posts.

According to Addy-Nayo (2001) in 1994 the then Ghana government decided to deregulate the country‘s telecommunications sector. This led the Government to launch a five-year comprehensive restructuring of the industry known as the “Accelerated Development Program 1994-2000 (ADP 2000).”

A policy was formulated with the assistance of the World Bank, consultants and other stakeholders. This policy among others aimed to: achieve a density between 1.5 and 2.5 lines per 100 people; improve public access in rural and urban areas, through the provision of payphone facilities (public and private); expand the coverage of mobile services; promote

Ghanaian ownership and control of telecommunications companies; and retain an overall public regulatory control of the sector through the creation of a single agency: The National Communications Authority (NCA). The ADP adopted the following strategies to achieve the above-stated policy objectives: the authorisation of two national network operators: Ghana Telecom and a new independent operator; support of new financing: arrangements which promote investment in new telecommunications infrastructure throughout the country; and privatisation of Ghana Telecom through the sale of a strategic stake to an international operating company combined with measures to broaden share ownership in Ghana.

The implementation of the Accelerated Development Program (ADP) led to the break-up of the Ghana Posts and Telecommunications Corporation and the institution of Ghana Telecom on 15th June, 1995. Addy-Nayo (2001) further adds that in December 1996, Ghana Telecom privatised its main line operations by awarding a Malaysian-led Consortium (Telecom Malaysia) a 30 per cent stake in the state company with full management control for USD 38 million.

As part of the ADP reforms, Addy-Nayo (2001) pointed out that an African Communications Group, led by Western Wireless Company (based in Cambridge, Mass., USA) and Ghana National Petroleum Company, won the bid as the second telephone network operator with an offer of USD 10.1 million. The consortium, which traded under the name (WESTEL), planned to invest between USD 40 million and USD 70 million over a period of five years from its incorporation in the 1996. However, by 1999 WESTEL was still struggling to make significant headway, and Ghana Telecom was suffering from underinvestment. Addy-Nayo reports that Ghana Telecom's profit before tax declined from 26.13 per cent in 1995 to a low of negative 1.94 per cent in 1999 whilst total borrowings grew from 53 per cent in 1995 to 79 per cent in 1999. This contributed to the corporation‘s decision to venture into mobile telephony. This

gave birth to their flagship mobile phone subsidiary called Onetouch in 2000. However, poor delivery of service badly crippled the company and government was increasingly forced to sell its stake in the company. Between 1994 and 2009 governments stake in Ghana Telecom reduced from 100% to 30% in the process changing hands from a full Malaysian management control to Telenor of Norway and finally to Vodafone. On July 3, 2008, the Government of Ghana announced the sale of 70% share to Vodafone for the purpose of making the company more profitable. The mid 1980's saw the landline telephone appearing in richest Ghanaian homes. This was so because it served as a status symbol for them.

The introduction of phone booths in the early 90s as well as the mobile phone moved landline telephone access from the houses of the rich to the larger poor populace thereby increasingly bridging the telecommunication gap between the rich and the poor. According to Ayensu (2003), the emergence of phone booths in Ghana was very exciting. They initially came out in the early 1990's: during that period there were very few of them and they were very costly. However, as technology improved, different companies figured out different ways to make it financially feasible for the average Ghanaian to use a phone booth.

The adoption of a prepaid calling card system led to a 275.78% rise in public payphones in Ghana between 1997 and 1998 (ITU, 2000). Mobitel‘s introduction of the mobile phone in 1992 changed the dynamics between landline and wireless phones; in that year alone 19,000 Ghanaians owned a mobile phone (Ghanaweb, 2007). Ghana is one of the few African countries with a vastly liberalised telecom market. This process began in 1996 when Ghana Telecom- a state monopoly was privatised with the objective of increasing telephone coverage in the country through mainly private sector participation.

However, it must be noted that liberalisation of the telecom industry was in line with a broader government objective of liberalizing the entire ICT sector. The benefits of this policy were easy

to appreciate; ICTs could reduce transaction costs in the economy, facilitate trade and economic activities as space and distance become compressed through the provision of information and communication at low cost. Since the liberalisation of the ICT sector, there has been a phenomenal increase in private participation in the telecom industry particularly in the mobile sector.

From 1996 to 2000, the mobile phone industry grew significantly. Although at the end of 2000, the national penetration rate was 1.6%; with mobile phones at 0.5% and fixed telephony at 1.1%, at the second quarter of 2007 the national penetration rate stood at 32.2% with mobile and fixed telephony going for 30.3% and 1.9% respectively (NCA, 2007). Indeed, there are international reports that show that, as at 2006 there were 5.207 million mobile phone subscribers-at a point when the national penetration rate was 25% (CIA, 2007). This, according to the National Communication Authority, further rose to 7.2 million subscribers by the end of the fourth quarter of the year 2007 (NCA, 2008).

However, the 2010 Ghana population Census put the individual ownership of mobile phone, irrespective of the number of handsets owned, at 47% of Ghana‘s population aged 12 years and above. A closer look at the same census confirmed significant regional differences with only Greater Accra (74%) and Ashanti Region (56%) recording more than the national population owning mobile phones. Despite its widespread nature, mobile phone ownership is more predominant amongst Ghanaian urban dwellers than rural folks (Ghana Statistical Service, 2012). Mobile phones have been great for people on an individual level, because it allows individuals to stay in touch with family and friends all over the world. Businesses are also benefiting because they can get information from one point to another with superior ease recognizing the limited availability of landlines. Fixed telephone lines, albeit highly

inadequate, have traditionally been the main direct medium of communication between individuals who are separated by space. In Ghana, fixed line penetration was about 284,721 in 2011 (www.itu.int/ITU-D/ICT 2012). Although, fixed line tariffs remain the lowest in the country, they are out-dated and unreliable, a factor that contributes significantly to the popularity of mobile phones, the subscription of which is currently hovering around 21,166,000 amounting to about 90 per cent of the population having access to mobile telephony. The high mobile penetration level can partly be attributed to the fact that fixed lines provision is limited to the urban areas, particularly the two major cities: Accra-Tema and Kumasi and the other regional capitals.

However, fixed line infrastructure as indicated above is antiquated and unreliable. Ghana seems to have leap frogged from a situation of highly inadequate or absent fixed lines into the mobile telephony era. The high penetration can also be attributed to the functionality of the mobile phone: it is easy to use and there is no literacy barrier for its basic function: communication. Unlike the internet, both literate and illiterate members of society can use it and as new mobile phone manufacturers China and Korea entered the market with their new products, mobile phone prices have declined considerably such that they are no longer considered a luxury.

2.3.2. Brief History of the Ghana Armed Forces

The Ghana Armed Forces (GAF) is the unified armed force of Ghana, consisting of the Army, Navy, and Ghana Air Force, formed in 1957, when the country gained independence. The GAF are supervised by the Ghanaian Ministry of Defence. The GAF has the president of the country as the Commander-in-Chief, who doubles as the supreme military commander of the President's Own Guard Regiment (POGR) and of the Border Guard Unit (BGU). The supervision of the Ghana Armed Forces (GAF) is managed by the Minister of

Defence and the Chief of Defence Staff. From 1966, the GAF was extensively involved in politics, mounting several coups. On 24th February, 1966, the military embarked on what is termed as *"Operation Cold Chop"* coup led by General Akwasi Afrifa and Joseph Ankrah of the National Liberation Council, which saw the overthrow of the then Prime Minister, Dr. Kwame Nkrumah while he was out of the country.

According to Handley and Mills (2001), increasing centralisation, of power by Nkrumah; widespread economic malaise, ethnic division in the armed forces, intra-military grievances including the establishment of a rival presidential regiment, and shifting international ties, led to the success of military coups in the region." The GAF's second coup took place in 1972, after the reinstated civilian government cut military privileges and started changing the leadership of the army's combat units. Lieutenant Colonel Ignatius Kutu Acheampong (temporary commander of the First Brigade around Accra) led the bloodless 1972 Ghanaian coup d'état that ended the Second Republic in January 1972. The National Redemption Council was then formed with Acheampong becoming head of state, and the NRC ruled from 1972 to 1975.

Handley and Mills (2001) explained that, resort to illiberal practices by Busia, economic collapse, reduction in political support and political in-fighting, removal of military perks and ethnic military tension was the cause of the coup 1972 coup. Again, Handley and Mills (2001) mentioned that, intolerable economic situation, widespread corruption, restoration of military public image led to another coup involving the military on 1978. Thus, the Supreme Military Council (SMC II) officers forced Acheampong to resign, replacing him with Lt. Gen. Akuffo. Just when the country had scheduled to return to civilian rule, a group of young armed forces officers, led by Flight Lieutenant Jerry Rawlings organised another coup. According to Handley and Mills (2001), failure of economic and military reforms, widespread corruption,

and restoration of military image accounted for this coup. The Armed Forces Revolutionary Council, was put in place which governed until September 1979. However, in 1981, Rawlings deposed the new civilian government again, in the 1981 Ghanaian coup d'état. This coup, according to Handley and Mills (2001) was as a result of unimaginative and cautious economic reforms, reports of corruption, food shortages, enforced retirement of Rawlings from the military, and shifting international alliances.

This time Rawlings established the Provisional National Defence Council. The PNDC remained in government until January 7, 1993. In the last years of the PNDC, Jerry Rawlings assumed civilian status; he was elected as a civilian President in 1993 and continued as President until 2001. The Armed Forces' first external operation was the United Nations Operation in the Congo in the early 1960s, then the GAF training of Rhodesian guerrillas. The GAF operated in the Balkans, including the Kosovo war, with the GAF external operations within Africa including the Rwandan genocide (UNAMIR) which in his book Shake Hands with the Devil, Canadian Forces commander Romeo Dallaire gave the GA (Ghana Army) soldiers high praise for their work during the civil and conflict, and Liberia civil war paving way for the Accra Comprehensive Peace Agreement among others. Operations in Asia have included Iran and Iraq in the Iran–Iraq War, Kuwait and Lebanon civil war among others

2.3.3 Mobile Telephony Explained

The term ‘mobile’ has been applied to technologies as early as papyrus, when the written word became transportable across a broad geographic space. Today we typically tend to attribute the word to digital devices such as ‘mobile’ phones, GPS units, tablet computers, and gaming systems” (Farman, 2012). The idea, therefore, that mobile technologies are new is therefore myopic. In Howard Rheingold’s book on pervasive computing, *Smart Mobs,* he describes an

observation he had in Japan that changed his views on mobile technologies: “The first signs of the next shift began to reveal themselves to me on a spring afternoon. That was when I began to notice people on the streets of Tokyo staring at their mobile phones instead of talking to them. This shift from using a mobile device as a voice communication medium toward usages that focus on data (including internet access, GPS information and text messaging) heralds an era of what many have termed pervasive computing. The culture of pervasive computing is characterized by the ubiquity of digital technologies woven into the fabric of daily life, typically so integrated that we are often rarely aware of the extent of its integration” (Farman, 2012)

2.3.4 The role of Smartphones in Shaping Modern Battle

Mobile phone technology, according to experts, have huge potentials to transform security operations in the military, provided the mobile phones are designed and utilized in a way that are relevant to the activities of security forces. In as much as they have great potentials, they are likely to pose significant threats in a military setting to individuals and squadrons. Smart phone already occupies critical positions in the lives of civilians. They provide information and services at one’s request and provide the medium for people to be connected together. Recent advances in communication technology now allow the integration of unique technologies such as wireless sensor networks, machine to machine communication, cloud computing and mobile phone applications to take place on a single smartphone device, making life much easier for people. With the help of the right application and a smartphone, people can now operate and transact business operations from the comfort of their homes. Mobile phones allow people access to news, entertainment and social media communities wherever they find themselves.

According to LTC Ernest Wong, the Deputy Director of Research at Army Cyber Institute, "the smartphone has become so ubiquitous and prominent due to three critical an interrelated factors: connectivity (its ability to connect and link into shared network), adaptability (its ability to have tailored applications users find most appealing or useful), and convergence (its ability to replace a number of single-purpose devices). These three factors shape how future armies will leverage smartphones technology to gain decisive advantages in tomorrow's wars. Ernest Wong believes "digital soldiers leveraging military smartphones tailor them to their missions and rely upon a network of experts who serve as their reach back support". He explains further that "the connectivity feature of mobile phones which allows them to be connected to shared networks permit armies to gain real-time intelligence and situational awareness".

Historically, armies gained intelligence through the use of scouts and sensors, which often limited in number. "With military smartphones, soldiers on the battlefield no longer rely exclusively on their military's own reconnaissance systems; soldiers are able to link into and leverage all existing surveillance systems on the battlefield, ideally tapping into those that belong to the enemy" (Wong, 2016). Military's use of smart mobile phones will provide superior situational awareness and intelligence to security agencies. "Military smartphone enabled network centric army possess decided advantage, (Wong, 2016).

Furthermore, the adaptability feature of smartphone permits armies to conduct military operations with smaller footprints that take advantage of near real-time analysis and support. (Wong, 2016). Smartphones have" tailorable applications which enable soldiers to objectively calculate what package is needed to successfully accomplish an object as well as expertly request the whole host of military options available, including the delivery of smart bombs,

drone strike, naval gunfire, airstrike, air force interdiction sortie, insertion of military strike team, or humanitarian relief package" (Wong, 2016).

Mobile phones inarguably provide soldiers with applications tailored to suit security agency's environment and operations that not only assist with decision making. In this digital age, soldiers leveraging on military customized smartphones, "tailor them to meet their mission demands and rely on a network of experts who serve as their intelligence support" (Wong, 2016). The integration Smartphones and accompanying software applications, the feature which Wong terms convergence, is reducing significantly the need for large standing armies. These large numbers have been, rather, are being replaced by organizations networked for improved efficiency. For example, "when military smartphones allow soldiers to deploy for operations or encounter threats or situations that exceed their capabilities, their reach back support would have already coordinated a reinforcement package on their behalf or other available aid in their vicinity or queued for long-range support that can assist from afar, such as from an aircraft, ship or even space-based platform" (Wong, 2016)" throughout history, successful armies have anticipated the future, adapted and capitalized upon opportunities. Due to the advantages provided by their connectivity, adaptability and convergence, mobile phones are already making significant changes in civilian lives. Armies of the future that take advantage of mobile phone innovations will change the face of war and reshape the modern battlefield into one that befit the information age.

2.3.5 Fresh Outlook on Military Smartphones

The American Defense Ministry made a remarkable shift in its approach towards the use of mobile phones in the US Military because they were looking to their upgrade their mediums of communications used by their soldiers in their lines of duty; something portable, easy to carry,

easy to use and suitable for their kind of work. “Rather than reinvent the wheel, they explored ways in which they could use existing consumer devices for military purposes. Thus, they settled on a Smartphone” (Gallagher, 2015). “One benefit being experienced is the way that mobile technology has replaced cumbersome paper-based processes. The use of ‘mobile phone’ devices has allowed C-17 pilot to ditch the 14kg cases full of documents they used to have to lug around them” (Gallagher, 2015). “The US Military is creating its own military app store. One of the key technologies used in the apps on offer is GPS capabilities of a smartphone. On a battlefield, it allows a commander to monitor in real-time the movement and location of soldiers, to instantly update and alter their objectives. It makes the phones an invaluable tool which removes the need for paper maps and intelligence reports. So the brick sized radios still in use by soldiers are set to be consigned to a military museum. What they’re more likely to be using is an and Android device such as a Samsung Galaxy” (Gallagher, 2015)

2.3.6 The Security Implications of Ubiquitous Social Media

Social media have become some of the most dominant features on the Internet during the growth of the interactive (Web 2.0) Internet. Social media can be described as a website that not only provides information, but interacts with you while it is giving you that information. Examples would include; Myspace, Facebook, LinkedIn, Foursquare and Twitter or any other site that allows users to share personal information. In a traditional web site, the content is delivered to the end user but they are not allowed to update or participate in the creation of the content on the web site. In social media, people are communicating, sharing, networking and interacting with others. The social networking website, Facebook, has had phenomenal growth and has overtaken Google’s popularity among US Internet users. Facebook’s membership has more than doubled in the past year, passing the 200 million mark last April and 400 million in February. Industry data shows it has scored more visits on its home page than Google. "In a

sign that the web is becoming more sociable than searchable, research firm Hitwise said that Facebook and Google accounted for 14% of all US Internet traffic. Facebook's home page recorded 7.07% of traffic and Google's 7.03%. Internet users worldwide spent more than 5.5 hours a month on social networking sites such as Facebook and Twitter in December 2009, an 82% increase over the previous year, according to the Nielsen Company research firm" (Nuttall & Gelles, 2010).

2.3.7 Mobile phones and Location based information sharing

"Location based information sharing has become very popular recently and if used carefully can be very helpful tool for users. For example, Google Maps has a feature called Latitude, which allows user to see the location of their family or friends in real time, provided the other party agrees to share their information. The benefits are obvious in certain situations, such as parents wanting to keep track of where their children are at any given time" (Farman, 2012)**.** McCabe as cited by Farman (2012) explains that, "On Twitter a new feature has the option of including your location when the user tweets using a tracking tool they can turn on or off. When activated, tweets link to Google map of the area the user is in" (Farman, 2012). McCabbe believes this feature makes it useful for anyone looking for real-time information.

2.4. Operational Definitions of Terms

Mobile Phone:

Dynamism:

Communication:

Military:

Ghana Armed Forces:

Smartphones:

2.5 Relevance of the Study

This study would enhance readers understanding of the current discourse on the dynamism of the use of mobile telephony in shaping communication activities in the military sector in general and Ghana Armed Forces' communication and information management in particular. It would help readers to know and appreciate the success story of the use of mobile telephony as an effective medium of communicating military activities (albeit) simultaneous existence of strict adherence to communication restrictions and liberalization of mobile phone usage. It will help military officers and personnel to appreciate that effective communication in times of battle is primarily driven by mobile telephony, and that military sector should always improve mobile phone networks for better and proper communication. It will also help to boost readers understanding that the affective or calculative commitment in terms of information management in times of battle is more important, a military base should either build more direct networks with mobile phone providers or competitors.

This study provides an insight into the drivers of communication loyalty using a combination of survey data from personnel of the Ghana Armed Forces. It contributes to the understanding of effective communication and information management literatures in the following important ways. The study provides knowledge about the competing effects of mobile communication channels satisfaction, affective commitment, and calculative commitment on military personnel responsiveness which can help security service providers and ensure loyalty decisions. It also demonstrates the importance of controlling and release of prior loyalty information when predicting battle. It explores the potential for different precipitating measures to moderate the effect of communication loyalty. The study could also be useful to the individual security firms on crucial success factors that influence their communication loyalty in the security sector. Furthermore, the study provides insightful details on how military sector could structure their communication service policies to enhance compliance while at the

same time allowing a room for liberalism for the purpose of loyalty and compliance. The study can also be used as a point of reference for future research that will focus on factors contributing to the success of mobile phone communication in the Ghana Armed Forces and other sectors providing security services.

2.6. Conclusion

This study has succeeded in providing an analysis of the theoretical foundation underpinning the study under review, it explored the basic assumption, examined some conceptual framework for the analysis of the dynamism of the use of mobile telephony in shaping communication in the security sector, precisely, the Ghana Armed Forces in Ghana, operationalized the concepts to provide context specific, discussed the relevance or importance of the study and then, identified and explained the knowledge gaps that the dynamism of the use of mobile phone in shaping communication and information management in the security sector, particularly, the Ghana Armed Forces has received less attention and/or little attention has been paid to the empirical study of the effectiveness of the use of mobile phone as a change agent in the military communication activities in Ghana which this study seeks to bridge.

CHAPTER 3

METHODOLOGY

3.0 Introduction

This chapter deals with the protocols to follow in gathering data, for the purposes of analysis to achieve the objectives of the study. Research methodology is a systematic way to solve a problem. It is a science of studying how research is to be carried out. Thus, the research methodology offers procedures by which researchers go about their work of describing, explaining and predicting phenomena. Essentially, research methodology is concerned with explaining the rationale for the particular study, which method is most appropriate, the types of data to collect, and the particular technique for data analysis (Chinnathambi, Philominathan and Rajasekar, 2006).

In what follows, this section of the study discusses the research method, research design, population and sample size, sampling techniques, research instruments, and procedures for data collection, as well as the data analysis process.

3.1. Methods

This study deployed the descriptive and analytic research methods viz, Qualitative and Quantitative methods in gathering information from the study areas. As already indicated in the introduction, the description will focus on research philosophy, research design, and research population, sampling method, data collection techniques made up of both secondary and primary source, data analysis, scope, limitations and significance of the study. As already indicated this study deployed mixed methods. Quantitative research focuses on gathering numerical data and generalizing it across groups of people or to explain a particular phenomenon. Quantitative methods emphasize objective measurements and the statistical, mathematical, or numerical analysis of data collected through polls, questionnaires, and

surveys, or by manipulating pre-existing statistical data using computational techniques, Babbie (2010). The data is usually gathered using structured research instruments. The overarching aim of a quantitative research study is to classify features, count them, and construct statistical models in an attempt to explain what is observed. This study will follow this principle of quantitative method and describe the data which will be collected and make meaning from them using tables and graphs. The results are based on larger sample sizes that are representative of the population. Quantitative research methods provide clearly defined research question to which objective answers are sought. The research study can usually be replicated or repeated, given its high reliability.

With quantitative research design, the study can be used to generalize concepts more widely, predict future results, or investigate causal relationships, McNabb (2008) & Brains et al (2011). This is because, usually, a carefully selected sample is used to represent the population of the study and also determine relations between variables. In quantitative research design too, researcher uses tools, such as questionnaires or computer software, to collect numerical data.

Thus the methodology in any research gives sufficient information for an investigator to make estimate of the reliability and validity of the methods used to explain whether the dynamism of the use of mobile phone really helps in shaping the communication activities in the Ghana Armed Forces in any positive ways.

3.2 .0 Research Process

3.2.1 Research Philosophy

From the research process, the study adopts the research philosophy of realism. Saunders et al. (2003, p. 84) explains the philosophy of realism as “the belief that a reality exists, that is independent of human thoughts and beliefs. They indicate that a large scale of social forces and processes exist, and these do affect people. However, people are not necessarily aware of the existence of such influences on their interpretations and behaviors (Saunders **Ct** al., 2003, p.84). Adopting a realist philosophy, the approach from which the research was conducted was determined.

3.2.2 Research Design

Research designs provide the blueprint for researchers to find answers to research questions. Research designs are plans and the procedures for research that span the decisions from broad assumptions to detailed methods of data collection and analysis, Creswell (2009). This plan involves several decisions, and they need not be taken in the order in which they make sense to the researcher and the order of their presentation for the study.

Creswell (2009) expressed that, research design is underpin by two main parts; philosophical worldviews and methods. Creswell (2009) put forward that, “two important components in each definition (of a research design) are that the approach to research involves philosophical assumptions as well as distinct methods or procedures. In the view of Creswell (2009), when researchers provide philosophical assumptions to their study, it helps in explaining “why they chose qualitative, quantitative or mixed methods approaches for their research.” A worldview refers to "a basic set of beliefs that guide action" (Guba. 1990, p. 17).

Creswell (2009) sees worldviews as" a general orientation about the world and the nature of research that a researcher holds." There are four different worldviews as put forward by Creswell (2009): post-positivism, constructivism, and advocacy/participatory and pragmatism. This study is quantitative in nature and will therefore be supported by the post-positivism worldview. Otherwise known as the scientific method or positivist research or empirical science, the post-positivism holds a deterministic philosophy in which causes probably determine effects or outcomes. Thus, the problems studied by post-positivists reflect the need to identify and assess the causes that influence outcomes.

It is also reductionistic in that the intent is to reduce the ideas into a small, discrete set of ideas to test, such as the variables that comprise hypotheses and research questions. With this philosophical worldview, developing numeric measures of observations and studying the behaviour of individuals becomes paramount, Creswell (2009). The post-positivist worldview is employs theories. According to Creswell (2009), the post-positivist tradition comes from 19th-century writers, such as Comte, Mill. Durkheim, Newton, and Locke (Smith, 1983), and it has been also articulated by writers such as Phillips and Burbules (2000). Phillips and Burbules (2000), espouse the following as the key assumptions of the post-positivist worldview;

1) Knowledge is conjectural (and anti-foundational) - absolute truth can never be found. Thus, evidence established in research is always imperfect and fallible. It is for this reason that researchers state that they do not prove a hypothesis; instead, they indicate a failure to reject the hypothesis.
2) Research is the process of making claims and then refining or abandoning some of them for other claims more strongly warranted. Most quantitative research, for example, starts with the test of a theory.

3) Data, evidence, and rational considerations shape knowledge. In practice, the researcher collects information on instruments based on measures completed by the participants or by observations recorded by the researcher.
4) Research seeks to develop relevant, true statements, ones that can serve to explain the situation of concern or that describe the causal relationships of interest. In quantitative studies, researchers advance the relationship among variables and pose this in terms of questions or hypotheses.
5) Being objective is an essential aspect of competent inquiry; researchers must examine methods and conclusions for bias. For example, standard of validity and reliability are important in quantitative research.

There are many designs available to researchers in their efforts to understand, describe, and explain human behaviour and other phenomena and the processes that underlie them. Some methods rely on observational techniques. Other approaches involve interactions between the researcher and the individuals who are being studied-ranging from a series of simple questions to extensive, in-depth interviews-to well-controlled experiments. Meanwhile, the three main categories of psychological research are descriptive, correlational, and experimental research (lumenlearning.com). Descriptive research is a research design type that is used to provide a snapshot of the current state of affairs. Correlational research design is used to discover relationships among variables and to allow the prediction of future events from present knowledge. Experimental on the other hand is a form of research design in which initial equivalence among research participants in more than one group is created, followed by a manipulation of a given experience for these groups and a measurement of the influence of the manipulation. This study will employ the descriptive research design. This research design type is "aimed at casting light on current issues or problems through a process of data collection that enables them to describe the situation more completely than was possible without employing

this method (research-methodology.net).” In its essence, descriptive studies are used to describe various aspects of the phenomenon. Descriptive research it involves collections of quantitative information that can be tabulated along a continuum in numerical form, such as scores on a test or the number of times a person chooses to use a-certain feature of a multimedia program. Descriptive research involves gathering data that describe events and then organizes, tabulates, depicts, and describes the data collection (Glass & Hopkins, 1984). It often uses visual aids such as graphs and charts to aid the reader in understanding the data distribution. Descriptive research design provides a relatively complete picture of what is occurring at a given time and also allows the development of questions for further study.

3.4 Population and Sample Size

Population is the broader group of people to whom you intend to generalize the results of your study. The population for a study is that group (usually of people) about whom we want to draw conclusions (Babbie, 2013). Ideally, gathering data from all the elements of analysis would be best for a research. In this manner, the researcher has better and deeper understanding of the phenomenon and the subject under study. The entire element of analysis for a study is what is termed as the population. However, collecting and analyzing all the available evidence when conducting research is not always possible, Croucher & Cronn-Mills (2015). Against this backdrop, a smaller group within the population is chosen in order to make claims about the larger group. This is accentuated by Croucher & Cronn-Mills (2015), who noted that, for social scientific (mainly quantitative) researchers, the purpose of sampling is to create an objective sample that best represents the population so one can make generalizations about the population from the sample. The population for this study will comprise of personnel from the Ghana Armed Forces. Meanwhile, due to lack of finance, time constraint and the inability to reach all

personnel in the Ghana Armed Forces, 150 personnel within the Ghana Armed Forces in Accra will be selected as the sample for the study.

3.5 Sampling Technique

Sampling refers to the selection made once the researcher has established the population from whom they will contact a group of respondents; the size and composition of the sample relates to the aims and objectives of the inquiry. Sampling is also "the process of selecting a number of individuals for a study in such a way that the individuals represent the population from where they were selected" (Ahmed et al, 2014). Through sampling you only make an estimate about the actual situation prevalent in the total population from which the sample is drawn. This study will make use of a probability sampling method. Probability sampling provides a random choice of individuals for the sample, where each person in the population has an equal chance of being selected.

The reason for the adoption of a probability sampling is offered by Babbie (2013), who expressed that, "when researchers want precise, statistical descriptions of large populations, they turn to probability sampling." This research will employ a simple random probability sampling as the technique for sampling. Simple Random sample is a type of sample in which the researcher uses a random number table or similar mathematical random process so that each sampling element in the population will have an equal probability of being selected, Neuman (2014). Simple random sampling adopts the principle of randomisation. This way, every subject or unit in the population has an equal chance of being selected in the sample and all combinations must be equally probable. With the use of the simple random sampling technique, respondents from various departments within the Ghana Armed Forces in various garrisons in Accra will be selected for the purpose of data collection.

3.6 Sources of data collection

Data will be collected from two main sources; primary and tertiary. Primary sources of data will be those sources that the researchers will collect field data from directly and in their raw state for data analysis purposes. Tertiary data sources are those existing, treated and analysed data that will give insight to the topic under study. Kumar (2011) explained that, "primary sources are those where you or someone else collects information from respondents for the specific purpose for which a study is undertaken." The primary sources of data for this study will be from personnel of the Ghana Armed Forces in Accra, which will be collected through the use of questionnaires. But, there are instances that the information required is already available in other sources such as journals, previous reports, censuses and the researcher would have to extract that information for the specific purpose of the study. This type of data which already exists but you extract for the purpose of your study is called secondary data.

3.7 Data Collection Instruments

Data collection is described as the "process of gathering and measuring information on variables of interest, in an established systematic fashion that enables one to answer queries, stated research questions, test hypotheses, and evaluate outcomes." Data collection aids in the search for answers and resolutions, facilitates and improves decision-making processes, and the quality of the decisions made, and improves quality of expected results or output, Anastasia (2017). This study will be survey inclined. According to Creswell (2009), a survey design provides a quantitative or numeric description of trends, attitudes, or opinions of a population by studying a sample of that population. From sample results, the researcher generalizes or makes claims about the population. Due to its quantitative inclination, this study will therefore, make use of questionnaires as the main tool for collecting data from the target sample

3.8 Data processing and Analysis Technique

When data collected is left in its raw state, no meaning can be made out of it. To this end, it is important for data collected to be treated, analysed and interpreted for meanings to be drawn from it. Data collected ceases to be meaningful when it is left in its raw state. This implies that, data becomes useful when it undergoes processing; where it is organized, structured and given context through analysis and interpretation. Processing data gives it meaning and effectively turn it into information that will eventually be of great use to those who need it. After the collection of data from the field, the data will be subjected with processing, where the data will be coded for easy input into the computer assisted program, Statistical Package for the Social Sciences (SPSS). Through SPSS, the data will be transformed into graphs and tables, and then, be described and interpreted with respect to the stated objectives of the study.

3.9 Limitations of the study

The major challenge which characterised this study was inadequate literature in the field of study. In the course of the research, literature on mobile phone usage in the security services, particularly, the Army and by extension, the Ghana Armed Forces was limited. This in turn affected the scope of the study and discussions thereof.

3.10 Challenges and Ethical Issues

Due to the fact that the target population were army officers of different status, the researcher needed ethical clearing before she could undertake the research. Though the researcher had an ethical clearance from the school, officers in higher ranks were still to be consulted and sought permission before they granted or allowed me to interview them. This caused the researcher lots of stress and also wasted much time and hence the delay in submitting the work to my supervisor for assessment.

CHAPTER 4

ANALYSIS OF THE DYNAMISM OF THE USE OF MOBILE PHONE COMMUINATION PLATFORMS IN SHAPING COMMUNICATION IN THE MILITARY USING THE GHANA ARMED FORCES IN BURMA CAMP AS A CASE STUDY

4.0 Introduction

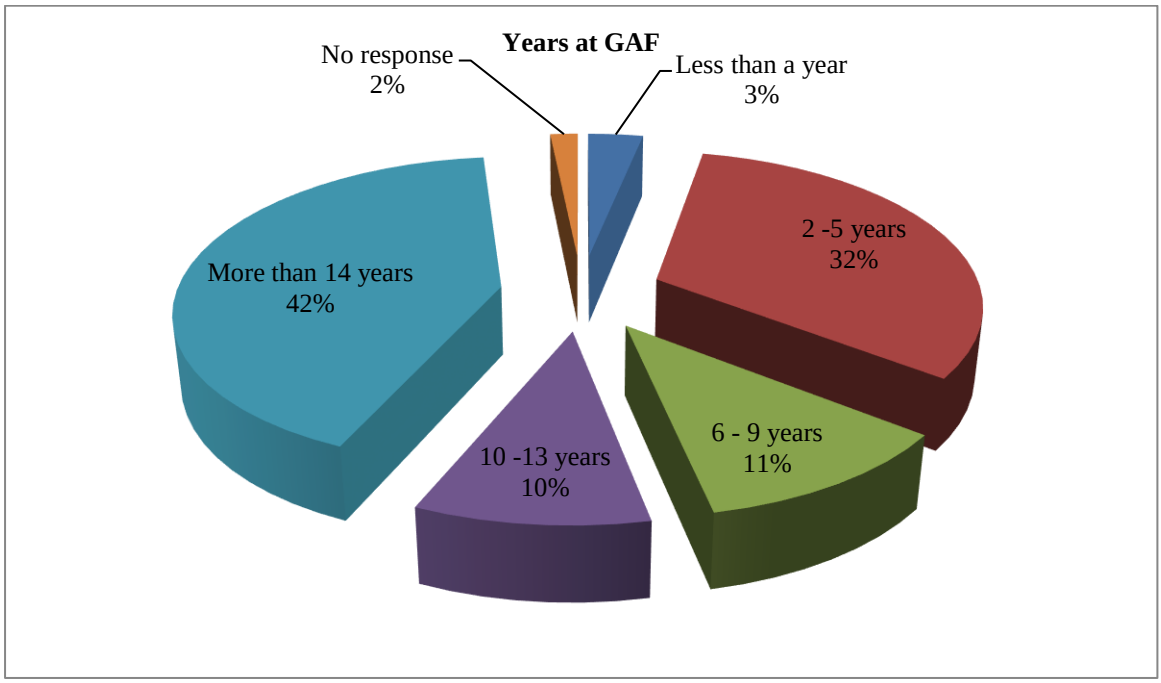
This chapter focuses on the analyses and discussions of key findings gathered through the use of sets of questionnaires. The first part provides the analysis of the biographic data of the respondents as well as the responses received both in the form of survey questionnaire and from the interviews. The second part focuses on the discussions of findings deriving from the analysis of the responses of the respondents' mobile phone access and use dynamics while the latter parts of the chapter focuses on presenting data regarding the effects of mobile phone use on the communication of respondents. Data analysis was presented in simple frequency distribution tables and graphical charts.

4.1. 0. Analysis of Key Findings

4.1. 1 Biographic Data

This subsection of the study provides analysis of background data from respondents. It will comprise of the number of years' officers have spent at the Ghana Armed Forces (GAF) and the departments they belong to.

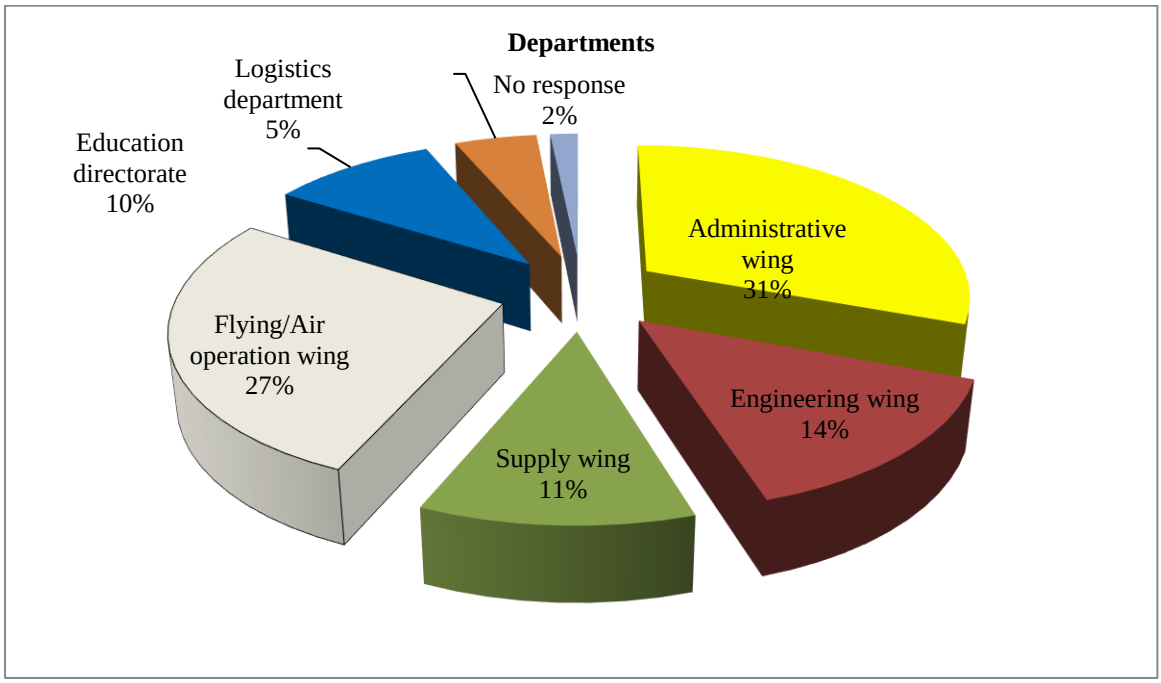
Figure 1: Number of years that officers have spent at the GAF



Source: Field data, 2019

From figure 1, it can be deduced that, majority of the respondents (42%) have spent more than 14 years working with the Ghana Armed Forces. This is followed by respondents who have worked with GAF for between 2 to 5 years. While 11% of the respondents have spent from 6 to 9 years at GAF, 10% of the respondents have already spent a decade to 13 years with the security institution. Just 3% of the respondents are yet to complete a year's stay since they were recruited.

Figure 2: Departments of Army Personnel



Source: field data, 2019.

Figure 2 above shows the distribution of the various departments where respondents work in under the GAF. The figure indicates that 31% of the respondents work under the administrative wing of the GAF. This is closely followed by the number of respondents who work under the air operation wing. The data gathered further indicates that 14% of the respondents worked under the engineering wing while 11% of the respondents are into supply management. The data gathered further shows that unlike most institutions where supply management and logistics are seen as a single department, the story is not so in the case of the GAF. The logistics department is separate from the operations of the supply wing of the institution. Meanwhile, 10% of the respondents mentioned that, they are with the education directorate of the Ghana Armed Forces. The data gathered shows that 5% of the respondents worked under the logistics department.

4.3 The use of Mobile Phones by Army Personnel

In this section, analysis of data on the usage of mobile phones in the line of work among personnel in the Ghana Armed Forces will be presented. It will include analysis of data on the use of by personnel, mobile phones being used by personnel belonging to the GAF, and the use of any other mobile phone aside that which belongs to the GAF. It will also provide analysis of data on number of phones owned, form of communication engaged in by officers and restrictions on communication in the Army

Table 1: Do you use of mobile phone in your line of work?

Do you use mobile phone in your line of work?	Frequency	Percentage
Yes	57	92
No	4	6
No response	1	2
Total	**62**	**100**

Source: field data, 2019.

Table 1 above indicates the frequency distribution of respondents' use of mobile phones in their line work at the Ghana Armed Forces. The data gathered shows that majority of the respondents (92%) use mobile phones in their line of work. This means that for every 10 respondents sampled there is a 92% chance that at least 9 of them would use mobile phones in their line of work. While 6% of the respondents do not use mobile phones, 1 respondent failed to answer to the question.

Table 2: Does the phone you use in the line of work belongs to the GAF

Does the phone you use in the line of work belong to the GAF?	Frequency	Percentage
Yes	19	30
No	42	68
No response	1	2

Total		

Source: field data, 2019

Table 2 shows the frequency distribution of the ownership of mobile phones of the various respondents. The table thus analyses whether the mobile phones used belong to the individual respondents or to the GAF. The data gathered shows that more than half of mobile phones used by the respondents were owned personally and did not belong to the GAF. This means that even though most respondents used mobile phones to discharge duties at the GAF (refer to table 1), 68% of these respondents used mobile phones that did not belong to the GAF while 30% were owned by the national security institution.

Table 3: Do you use any other phone aside the one that belongs to GAF

Do you use any other phone aside the one that belongs to GAF?	Frequency	Percentage
Yes	25	40
No	14	23
No response	23	37
Total	**62**	**100**

Source: field data, 2019.

Table 3 shows the frequency distribution of personal mobile phone used by personnel of the Ghana Armed Force other than phones provided the by the institution itself. As displayed in table 3, an appreciable number (40%, out of the 62) personnel indicated that they use other mobile phones aside the ones which belongs to GAF. Of the same 62 respondents, 23% mentioned that, they do not use any other mobile phone aside the ones provided by GAF. Interestingly, 37% which only 3% less than the personnel who noted, they use other mobile phones aside those provided by GAF did not make any response.

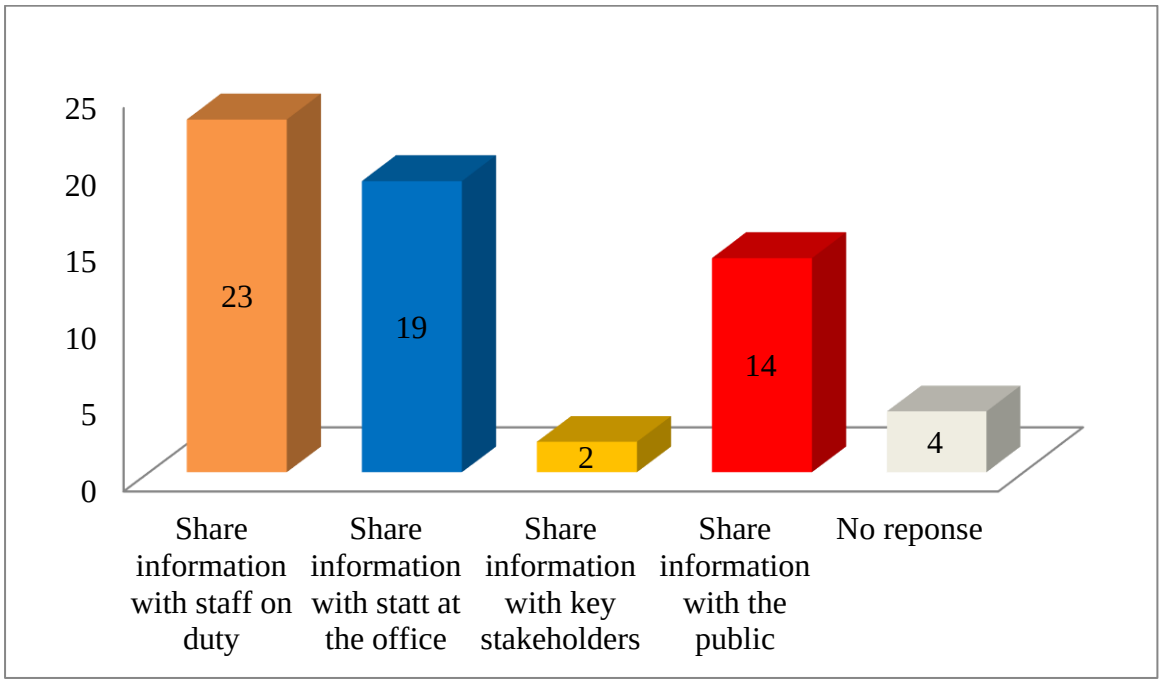
Table 4: Number of phones owned by Respondents

How many phones do you own?	Frequency	Percentage
One	42	68
Two	19	30
Three	1	2
Total	**62**	**100**

Source: Field data, 2019.

The table above shows the number of mobile phones owned by the various respondents who use personal mobile phones in line of their duties at the GAF. The data above shows that, a sixth (60%) of the 62 respondents who use personal mobile phones own a single phone. 30% of these respondents own two mobile phones while 2% representing a single individual owns three mobile phones.

Figure 3: Form of communication engaged in by officers



Source: Field data, 2019.

Figure 3 presents data on the kind of communication that personnel in the Ghana Armed Forces (GAF) engage in with the use of mobile phones and its accompanying new media and communication platforms. The data above indicates that, four forms of communication ensue among personnel in the GAF. Meanwhile, many of the respondents mentioned that, they use mobile phones to *share information with staff on duty*. Out of the 62 respondents, 23 mentioned sharing of information with staff, with nearly the same number, 19, indicating that they use mobile phones to *share information with staff at the office.* Fourteen respondents also expressed that they use mobile phones to *share information with the public*. Only 2 respondents stated, they use mobile phones to *share information with key stakeholders* of GAF.

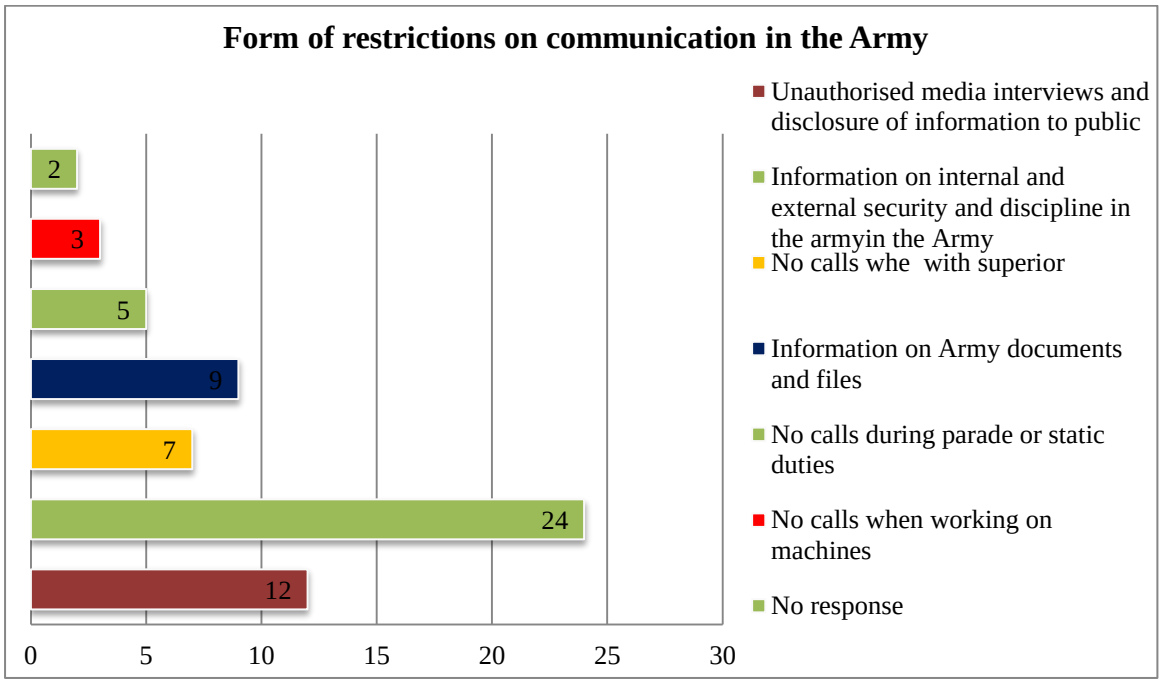
Table 5: Restrictions on communication in the Army

Are there restrictions on communication in the Army	Frequency	Percentage
Yes	39	63
No	8	13
Not that I know of	15	24
Total	**62**	**100**

Source: Field data, 2019.

Table 5 indicates respondents' perception as whether there are restrictions on communication within the army. The table shows that 62 respondents responded to the question. This represents the total number of respondents who use mobile phones in their line of work. The data gathered shows that 63% (representing more than half) of the respondents believed there are restrictions on communication within the GAF. Just 13% however believed that communication within the Ghana Armed forces is not restricted in any way. The data also presents that, 24% of the respondents did not know of any form of restrictions and thus could not tell whether the national security service restricted communication or not.

Figure 4: Forms of restrictions on communication in the Army



Source: Field data, 2019.

The figure above indicates the various forms of restrictions respondents believed to be existents within the GAF. The figure shows that there are seven main forms of communication restriction within the GAF. The various forms of restrictions include no calls when working on machines, no calls during parade, no calls regarding army documents, no calls with superiors, no calls regarding internal army issues and unauthorized media interviews. The data gathered show that close to a quarter of the respondents (24%) believed that they were not allowed to engage in mobile phone communication during parade or static duties. Also, 12% of the respondents revealed that they were not allowed to communicate with media houses in the form of granting interviews of any kind unless specifically instructed to. Hence, respondents' communication with the media is restricted. Furthermore, the data gathered indicates that, respondents are not allowed to share information regarding documents within the GAF. It is essential to note that, 3% of the respondents indicated that they were not allowed to use mobile phones to communicate while working on machines. Also, the data gathered indicates that 7% of the

respondents were not restricted from using mobile phones to communicate with their superiors while on duty.

4.4 Access to internet enabled mobile phones among personnel in the Ghana Armed Forces

Table 6: Access to internet enabled phone

Do you have an internet enabled phone?	Frequency	Percentage
Yes	58	94
No	4	6
Total	**62**	**100**

Source: Field data, 2019.

Table 6 above indicates respondents' access internet enabled mobile phones. The table as can be seen presents that, 62 respondents responded to the question. The table illustrates that, majority of the respondents used mobile phones that could access the internet. While this is representing by a majority 94%, just 6% of the respondents used mobile phones that could not access the internet.

Table 7: Usage of internet enabled mobile phones by Army officers

Do you use an internet enabled phone in your line of work?	Frequency	Percentage
Yes	50	81
No	10	16
No response	2	3
Total	**62**	**100**

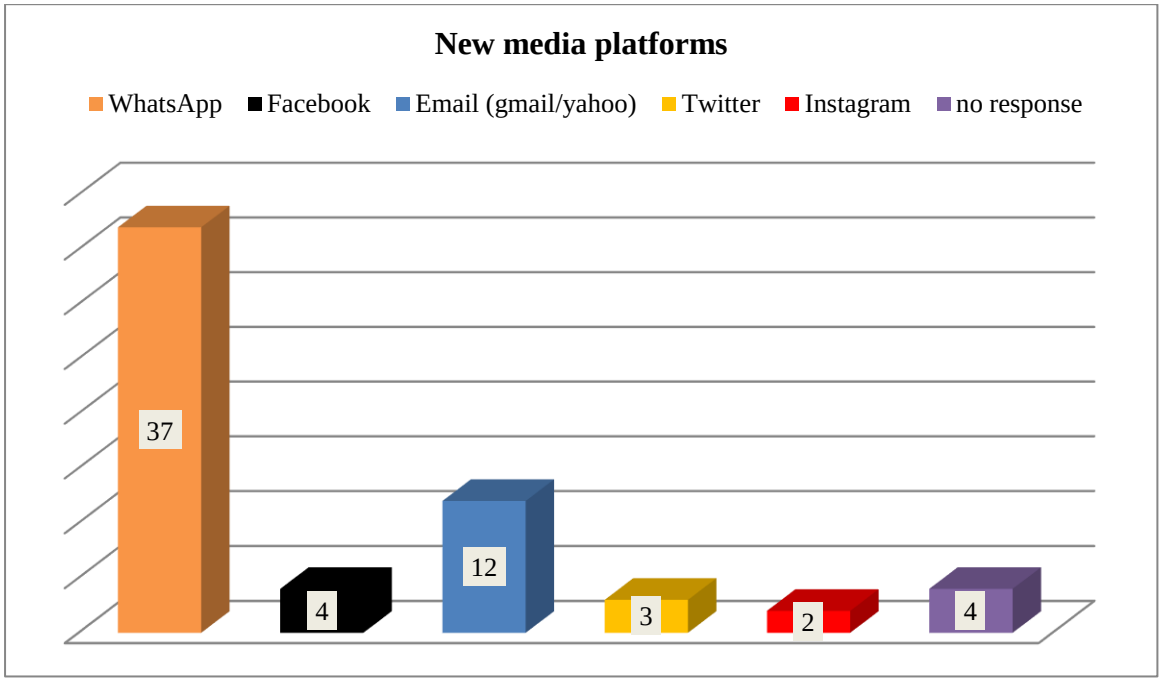
Source: Field data, 2019.

Table 7 presents a frequency distribution table that shows respondents' usage of internet enabled mobile phone in their line of work. The data indicates that out of the 62 respondents, 81% used mobile phones that are internet enabled in their line of duty. This means that majority of the army officers sampled for the study used internet enabled mobile phones while discharging their duties. Furthermore, the table indicates that 16% of the respondents do not use internet enabled phones in their line of duty.

4.5 New media platforms for communication by Army officers

As part of the objectives, this study set out to know the new media platforms that personnel in the Ghana Armed Forces use in their communications, be it at the office or on the field. This section therefore presents the analysis of data in that regards.

Figure 5: New media platforms for communication by Army officers



Source: Field data, 2019.

The figure above shows the various new media platforms that respondents use to communicate. The figure indicates that respondents use five (5) main new media channels to communicate. These include WhatsApp, Face-Book, E-mail (Gmail/yahoo), twitter, and Instagram. From figure 5, it is deduced that, most of the respondents, represented as 37% of the total respondents used WhatsApp as new media communication tool. This is followed by using e-mails. The data gathered that 12% of respondents used e-mails (google-mails/yahoo mails) to communicate while 4% used Face-Book. Furthermore, the data revealed that 3% of the respondents used twitter while 2% used Instagram.

4.6 Effects of mobile phones in communication in the Ghana Armed Forces.

This section of the study is dedicated to analysis of data on the effects of mobile phone on communication in the Ghana Armed Forces.

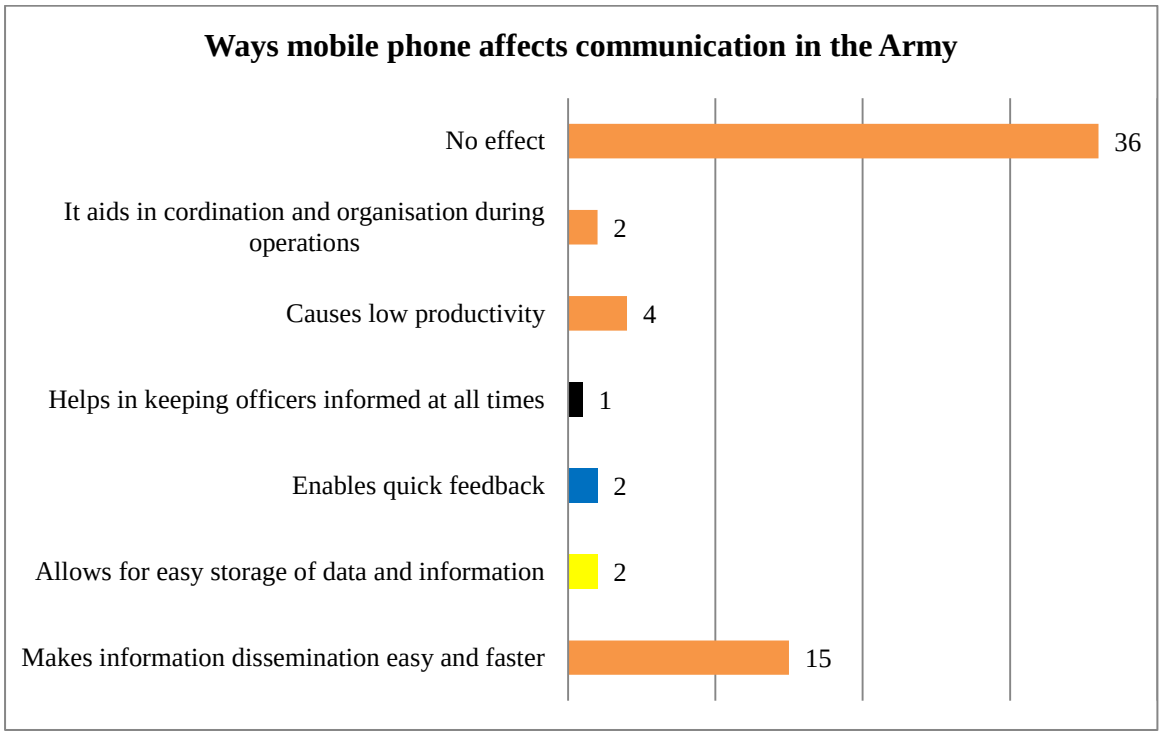
Table 8: Has the use of mobile phones affected communication in your line of work?

Has the use of mobile phones affected communication in your line of work?	Frequency	Percentage
Yes	25	40
No	36	58
No response	1	2
Total	**62**	**100**

Source: Field data, 2019.

Table 8 above presents respondents' perception on whether mobile phone use has affected communication in their line of work. The data gathered indicates that more than half of the respondents who use mobile phones believed using mobile phones has not affected their communication in their line of work. Inversely, the data gathered indicates that, 40% of the respondents believed the use of mobile phones when on duty has effects on their communication.

Figure 6: Ways mobile phone affects communication in the Army



Source: Field data, 2019.

Figure 6 indicates the various effects of mobile phones on communication in the army. The data gathered shows that there are six (6) main effects of mobile phone use on communication. Furthermore, the data gathered indicates that there exist both positive effects and negative effectives of mobile phone use on communication. The data shows that the main negative effect of using mobile phones for communication within the Ghana Armed Forces. The data identified that mobile phone use as a medium for communication caused low productivity. This assertion is supported by 4% of respondents who perceived mobile phone use had effects on communication. However, 15% of the respondents perceived that the use of mobile phones as communication mediums while on duty makes information dissemination faster and easier. Hence, with a relatively larger part of the respondents believed that the use of mobile phones while on duty had a positive effect on communication during work.

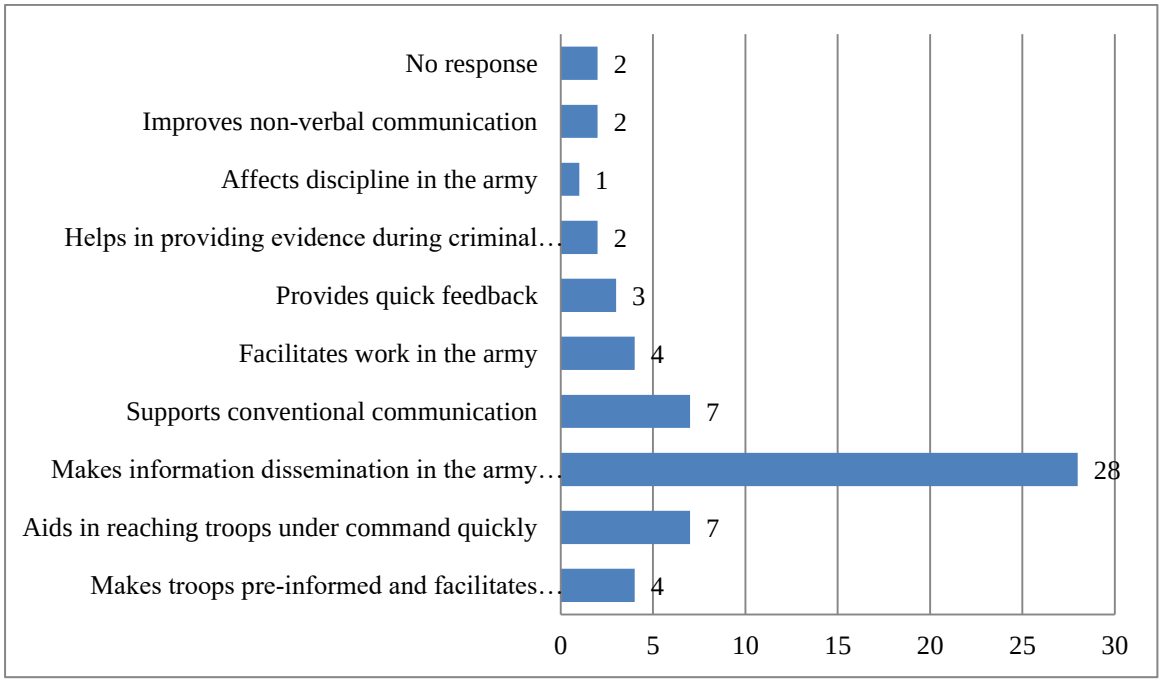
Additionally, 2% of the respondents each believed that mobile phone's use within the GAF, aids in co-ordination and organization during the forces' operations; allows for quick feedback;

as well as data and information storage. To add to these, the data gathered found that 1% of the respondents believed the effect has mainly got to do with mobile phones serving as a means of keeping officers well and promptly informed. It is worth to note that although a number of effects were identified by the personnel to have come from the use of mobile phones on communication in the Army, more than half of the respondents (32 out of the 62 respondents) mentioned that, mobile phones has not affected their communication in the Army in anyway.

4.7 Dynamism in mobile phone in shaping communication the Army

This section presents data and analysis thereof, on one of the objectives for this study. Thus, the dynamism in mobile phone in shaping communication the Ghana Armed Forces.

Figure 7: Mobile phone dynamism in shaping communication in the Army



Source: Field data. 2019.

The data in Figure 7 speaks to the dynamism of mobile phones in shaping communication in the Army. Respondents were asked to state the way mobile phone dynamism is shaping communication in the Army. Responses from the were categorised into 10 ideas. Nonetheless, 46% of the respondents indicated that, the dynamism of mobile phones "Makes information

dissemination in the army fast, easy and better." This was the highest response and was stated by nearly half of the 62 respondents. The implication is that, in the view of many of the respondents the major way by which the dynamism of mobile phone shapes communication is that, it enables quick information dissemination and feedback. Out of the 62 respondents, 12% indicated that, mobile phone dynamism "Supports conventional communication" in the Army. Likewise, another 12% noted that mobile phone dynamism "Aids in reaching troops under command quickly." Again, in the view of 7% of the 62 respondents, as a result of mobile phone dynamism troops are pre-informed and facilitates operations on the field. The same number of respondents (7%), mobile phone dynamism "Facilitates work in the army."

Moreover, 5% mentioned that, as a result of mobile phone dynamism, quick feedback is provided among personnel in the Army. According to 3% of the Army officers, mobile phone dynamism "Helps in providing evidence during criminal incidences," with the same number of respondents (3%) expressing that, mobile phone dynamism "Improves non-verbal communication." However, 2% were of the view that, mobile phone dynamism "Affects discipline in the army." The remaining 3% of the respondents did not respond to the question.

CHAPTER 5

SUMMARYOF KEY FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

In chapters 1,2,3 and 4, this study diagnosed the research problem and provided some prognosis in chapter 4 in order to suggest appropriate prescription to address the research problem here in chapter 5. It is the final chapter of the study, as such it provides a summary of the major findings from the data analysed, conclusion and also put forward suggestions to key stakeholders which the study covers as well as areas for further research.

5.2 Summary of key Findings

One of the objectives of the research was to find out the state of mobile phone usage among personnel in the Army. It came out that, majority of the personnel in the Ghana Armed Forces (GAF) use mobile phone. Furthermore, the study found that, many of the personnel use mobile phones which belongs to them, with few indicating that the mobile phones they use belongs to the GAF.

The study also found that, personnel in the GAF use a number of new media platforms for communication, two platforms: WhatsApp and Email (Gmail and Email) are the two main new media platforms that personnel use for communication purposes.

The study equally established that, the dynamism of mobile phones has tremendously shaped communication in the Ghana Armed Force. Significantly, the dynamism of mobile phones has led to easy and fast communication among personnel of the Ghana Armed Force, both administrative wise and on the field, during operations. More so, some effects were realised to have been on communication in the Ghana Armed Forces as a result of the dynamism in mobile

phone usage. The effects were both positive and negative, nonetheless, the positive effects far outweighed the negative effects of mobile phones dynamism in the GAF communications.

5.3 Conclusions

Advances in new media and communication technology in the last few years has seen a revolution in the way people share information through among themselves, whether its organisational of family oriented. As the world advances, so do new forms of communication technology and platforms emerge. This is also coupled with the consumption of mobile devices and services which has been a revolutionary catalyst over the last two decades, leading to cheap communications networks and the development of increasing capable mobile phone devices. Growing alongside new categories of consumer electronics is a fundamental shift in the way people do business, share information and ideas and how they interact with one another in many organisations and institutions of which the security services and for that matter, the Ghana Armed Forces is no exception. Again, mobile devices such as smartphones and tablets have changed people communicate, access data, capture data, use data and interact with the world around us.

It is in the light of these evolution in mobile telephony and new media and communication devices and platforms as well as the restrictions in communication in the security services that warranted the study of the dynamism in mobile phones in shaping communication in the Ghana Armed Forces. The study observed that changes in mobile technology has considerably been shaping communication in the GAF. For this reason, it is important for new mechanisms and rules to be adopted in the Army regarding the use of mobile phones and its accompanying new communication platforms, as such devices and platforms facilitates communication in the offices and during operations.

5.4 Recommendations

The study found that, truly, the dynamism in mobile phone coupled with advancement in new communication technology has significantly shaped communication in the Ghanaian Army. For this reason, it is recommended that, the Army reflect on its communication restrictions, by rethinking, retooling, and reshaping its communication apparatus.

Studies should be conducted on the effective and efficient use of mobile phones in the Ghana Armed Forces. This recommendation comes in the light of findings that, the dynamism in mobile telephony, accompanied with new media platforms is shaping communication in the Army.

Studies can be extended beyond Accra to establish the dynamism of mobile phones in the GAF from a broader perspective. This study's population and for that matter, the sample was drawn from personnel in the Army, stationed at various offices in Greater Accra, which is the country's Regional Capital. It will therefore be prudent that, studies be extended to other parts of the country to underscore the phenomenon from a broader perspective.

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APPENDIX

QUESTIONNAIRE FOR PERSONNEL OF THE GHANA ARMED FORCES

Dear Respondent,

I am a student of the Ghana Institute of Journalism pursuing a Master of Arts Degree in Public Relations. As part of a semester program, I am carrying out a mini research on "**The dynamism of the use of mobile phones in shaping communication in the Ghana Armed Forces.**"

I hereby seek your assistance to complete the study by partaking in this survey. You are assured that; your identity and responses will be treated with utmost confidentiality.

This questionnaire is in four sections: the first part will collect background data, the second section will collect data on the state of mobile phone usage in the Ghana Armed Forces, while the third section will collect data on mobile phone platforms that the Ghana Armed Forces use in communication. The fourth section will collect data on the dynamism of mobile phone usage in shaping communication in the Ghana Armed Forces.

Kindly read the questions carefully and provide answers to them appropriately.

Section A: Background data

1. How long have you been in the Ghana Armed Forces?

a. Less than a year

b. 2 – 5 years

c. 6 – 9 years

d. 10 – 13 years

e. More than 14 years

2. Which department are you in the Ghana Armed Forces? **Please write the answer in the space provided.**

…….....

Section B: State of mobile phone usage in the Ghana Armed Forces

3. Do you use phone in your line of work?

a. Yes

b. No

4. Does the phone you use in your line of work belong to the Armed Forces?

a. Yes, the phone belongs to the Ghana Armed Forces

b. No, it is my personal phone

5. Do you have any other phone aside the one that belongs to the Army?

a. Yes

b. No

6. What kind of mobile phone do you have?

a. Android

b. Apple

c. Other, specify……

7. How many mobile phones do you own?

a. 1

b. 2

c. 3

d. More than 4

8. What kind of communication do you usually use the phone to do?

a. Share information with staff on duty outside the office

b. Share information with staff at the office

c. Share information with key stakeholders, including government officials and agencies

d. Share information with the public

9. Are there restrictions in communication in the Army?

a. Yes

b. No

c. Not that I know of

10. If there are restrictions in communication in the Army, what form of restriction is it? **Please write the answer in the spaces provided.**

……

……

……....

11. Why are there restrictions in communication in the Army? **Please write the answer in the spaces provided.**

……

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……....

12. Do you have an internet enabled mobile phone?

a. Yes

b. No

13. If you have an internet enabled mobile phone, do you use it in your line of work?

a. Yes

b. No

Section C: Mobile phone platforms that the Ghana Armed Forces use in communication

14. Which of the following platforms do you in communication considering the current advancement in the mobile telephony space?

a. WhatsApp

b. Facebook

c. Email (gmail, yahoo)

d. Twitter

e. Other, specify……...

Section D: The dynamism of mobile phone usage in shaping communication in the Ghana Armed Forces

15. Has the use of personal mobile phones affected the communication in your line of work?

a. Yes

b. No

16. In what way has the use of mobile phones affected communication in your line of work?

Please write the answer in the spaces provided.

……

……

…….....

17. How is the dynamism of mobile phone shaping communication in the Ghana Army?

Please write the answer in the spaces provided.

……

……

…….....