UNIVERSITY OF EDUCATION, WINNEBA

DIGITAL INEQUALITIES AND NEW MEDIA TECHNOLOGY USAGE AMONG GRADUATE STUDENTS: A STUDY OF FOUR DEPARTMENTS IN THE UNIVERSITY OF EDUCATION, WINNEBA

ARABA TAWIAH OCRAN

A dissertation in the Department of Communication and Media Studies, Faculty of Foreign Languages Education and Communication, submitted to the School of Graduate Studies in partial fulfilment

of the requirements for the award of the degree of Master of Philosophy (Business Communication) in the University of Education, Winneba

SEPTEMBER, 2019

DECLARATION

STUDENT'S DECLARATION

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

SIGNATURE: ……..

DATE: ……..

SUPERVISOR'S DECLARATION

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

NAME OF SUPERVISOR: ……

SIGNATURE: ……

DATE: ……

DEDICATION

This work is dedicated to my father, Mr. Samuel Kweku Ocran and my mother Madam Cynthia Esi Brew Oppong.

ACKNOWLEDGEMENTS

First, I would like to sincerely thank the Lord Almighty for the guidance and protection throughout my graduate school education. My heart felt gratitude goes to my lecturer, adviser, and supervisor, Prof. Andy Ofori-Birikorang for his hard work and confidence in me during the two years of graduate studies. Your ability to see the bigger picture has helped in shaping this thesis. God richly bless you.

I want to acknowledge the contribution of my Husband, Nana Kofi Duku-Coleman, for the financial support and Love which contributed immensely to the success of this project. My heartfelt gratitude goes to my lovely siblings, Ama, Kwame, Ekow and Kwesi Ocran for their constant support and guidelines during my study. Many thanks to Mr. Kwesi Aggrey, Dr. Wornyo, Prof. Tim Acquah-Hayford, Ms. Joyce Mensah, Dr. Mavis Amo-Mensah, Mr. Asare Okae-Anti, Dr. Hinneh Kusi, Dr. Christine Hammond, Ms. Abena Abokoma Asemanyi and Dr. (Mrs.) Gifty Tetteh for their support and guidance throughout my stay at the Department of Communication and Media Studies, University of Education, Winneba. Special thanks go to informants from the Departments of Communication and Media Studies, French, English and Applied Linguistics for their invaluable contribution to my thesis. To the 2019 CoMSSA 11 batch especially, Ebenezer Nyamekye Nkrumah, Richmond Asiamah Yeboah and Jenak Vance-Gadagbui, I am eternally grateful for all the support.

TABLE OF CONTENTS

LITERATURE REVIEW

RESEARCH METHODOLOGY

FINDINGS AND DISCUSSIONS

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

This study investigated how graduate students in the four Dpartments of Faculty of Foreign Languages Education and Communication (FFLEC) use new media technologies. The students were purposively sampled from the four Departments in FFLEC and interviewed. The study adopted the Unified Theory of Acceptance and Use of Technology (UTAUT) and Technology Appropriation Model to properly contextualize the research. The graduate students were of the view that the social connection provided by an information system is moderated by the relationship between digital usage and access by students. The study also revealed that due to the amount of information provided online, the phenomenon of digital inequality as a result of degree of usage was experienced differently; younger students users of social media share a lot about themselves in their interaction than older graduate students. It was further found that students from the Communication and Media Studies Department appropriate new media technologies for activities such as research, personal communication and commercial transaction while students from the Departments of English Education, French Education and Applied Linguistics mainly use it for personal communication and other social interactions including social media. The study recommends further studies in new media usage in the curricular to help understand the new media culture, and the inequalities that arise through usage.

CHAPTER ONE

INTRODUCTION

1.1 The Era of the Digital World

The world is in the midst of a digital revolution. We are in the era where the dawn of the internet has given rise to an array of new digital hardware and software changing the world. We live in a society invaded by the digital, whereby our actions are frequently mediated by digital tools, and the objects we encounter are shaped by digital interventions (Shear & Knobel, 2008). Although, the digital network was initially a tool to achieve faster and more efficient activities that we already performed, it has enabled activities such as globalization which was previously considered unimaginable, to become a reality with digital platforms.

According to Lessig (2010), if you create any piece of content and upload it to a digital network a copy of that content will become immediately transmissible to anyone else in the world with internet access. He further notes that digital networks are used to transmit 0's and 1's but these codes are transmissible through applications. These applications are software programmes which decode 0's and 1's bits into information we can understand.

The digital world (DW) comprises too many fields of social, political and economic, groups where each has its own cultural elements and management traditions (Uzun, 2015). This is because the digital offers many more

opportunities such as the mass user-generated content the new technologies produce. Some digital technologies include computers, mobiles phones, and other internet enabled devices. Also, digital gadgets such as desktop computer has expanded to laptops and smart phones.

In Africa, digitization was fully in operation in the late 90s where prepaid mobile phone offered the ground for ICT (Huet, 2018). Huet (2018) noted further that the 2000s saw the arrival of mobile payments and the 2010s lightweight versions of social media sites such as Facebook texts among others. Digitization has changed how we conduct our business, tell our stories and engage customers today with its enormous potential. Therefore, the operation and use of digitization is essential in the era of new technologies. Digital literacy is required in the digital environment, this goes beyond the ability to use and operate digital devices.

Digital literacy according to Gilster (1997) is the large variety of complex cognitive, motor, sociological, and emotional skills users need to function effectively in the digital environment. In this context however, the use of digital tools and the operation of digital devices require the use of digital reproduction to create new, meaningful materials from existing ones; evaluate the quality and validity of information and have a mature and realistic understanding of the "rules" that prevail in the cyberspace (Esget-Alkalai, 2004).

1.1.2 Digital inequalities (divide) and new media technology use

The digital divide affords an opportunity to identify the inequalities between the technological haves and have-nots (Wei & Hindman, 2011). This is understood as the inequalities in access to and use of information and communication technologies, primarily the internet. Selwyn (2004) defined digital divide as a gap between those who have access to digital technologies and those who do not. In the beginning, many users believed the internet would enhance equality of access to information by reducing cost but the digital divide focused on inequality in access to and use of digital technologies (Bucy, 2000; Hargittai & Hinnant, 2008; Norris, 2001; van Djik, 2002). The widespread of the internet in the world today, has suggested a conceptual shift of the digital divide from material access to actual use (Gunkel, 2003; Livingstone & Helsper, 2007; Selwyn, 2004).

However, it was observed that some people used internet more than others; and that those with higher access to the internet also had access to education, income and other resources. (Benton 1998; Bucy 2000; Hoffman & Novak, 1998, 1999; Strover 1999).

Digital inequality, refers to inequality in the access and use of information and communication technologies (DiMaggio, Hargittai, Celeste & Shafer, 2004). This is because when one is able to access the technology, the social media tools used by an individual the ways and outcome of its use are granted by a set of digital divide. Digital inequalities are evident in terms of socio-

economic status, social class, race, gender, geography, age and educational background (Helsper & Eynon, 2009; Jones & Fox, 2009). In terms of social networking for instance, Hargittai (2008) corroborates this and notes that in the US, college students' preferences for an application such as Facebook as opposed to MySpace appears to be patterned consistently along the lines of social class and educational background. This is supported by Selwyn (2012) who suggests that social media use is not the equitable and democratic activity that, it is often portrayed to be.

Knowledge gain is a critical form of social inclusion associated with differential media use (Wei & Hindman, 2011). This is as a result of the unequal distribution of knowledge where the information disseminated within a social system, people with higher socio-economic state tend to acquire this information faster than people with lower socio-economic status (Jones & Fox, 2009).

1.1.3 The emergence of new media technologies

New media came to the fore after the development of web 2.0 technologies (Friedman & Friedman, 2008). The use of the word "new" implies a time factor (Friedman & Friedman, 2008) and using the term "media in transition" to describe a period of time of the emergent of a medium as oppose to the old media (Gitelman & Pingree, 2003). Friedman and Friedman (2008) further observe that the term media today refers to the technology that is the

medium of communication. The term 'new media' is used ubiquitously in many different ways. Chun and Keenan (2006) assert that the term 'new media' came into prominence in the mid 1990's. As traditional media practitioners deploy new media as means of reaching larger target audience, new media also gives the opportunity for ordinary citizens to create content, either newsworthy or trivial and publish via the internet.

Manovich (2002) defined new media as cultural objects "which use digital computer technology for distribution and exhibition" (p.19). Although new media and social media have been used interchangeably over the years, Penn (2016) asserts that social media is a subset of new media. He continues by sharing the basic characteristics that distinguish social media from new media, in that though both media platforms were created out of the web 2.0 innovation, what makes social media a distinct category in new media is their interactive nature. While new media technologies cover blogs, YouTube, streaming, wikipedia and eBooks, social media consists of applications such as Facebook, Twitter, Instagram, Snapchat, Imo and many others.

Kaplan and Haenlein (2012) defined social media as "a group of internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of user-generated content (p. 61)." In other words, social media is a form of new media. Even though both media landscapes permit subscribers to create user-generated content (the main characteristics of web 2.0) for publication

(O'Reilly, 2005), the instant messaging option is normally absent in new media applications making social media a more interactive media landscape than that of the new media. This assertion corroborates the concise definition of social media by Safko (2010) which suggests that social media is the media most people subscribe to, in order to be social. Human's instinctive nature of connecting with other humans has converged with the evolution of smart phones, creating a virtual social atmosphere (Owusu-Ansah, 2018).

The evolution of social media cuts across all facets of society with both positive and negative impact (Mingle & Adams, 2015). Further, Mingle and Adams argue that social media comes in an era that has changed and impacted on communication, learning, research and education. Ellison and Boyd (2007) note that one of the most important ways by which the society is connected is through social media (well-known as social networking sites). Social media is giving meaning to how individuals create ties with one another as well as facilitate how relationships between an individual and organizations are formed. Through several platforms such as blogs, portals, forum, galleries, Ellison and Boyd (2007) aver that users can connect with each other thereby creating an online community through new media platforms. This community progresses into communities in the cyberspace through connection with each other. This, Ellison and Boyd assert that it becomes a utility of people with similar interests to connect with each other, creating new relationships as well as expanding existing social networks.

Gone are the days when one could only be known by another through just physical contact. Today, anyone can sit in the comfort of his/her home alone and yet get to interact with other people regardless of their geographical locations and language barrier (Ryan, 2011). In fact, this means people can sit in their homes and interact with others and vice versa. This was not the case in the era of traditional media. Though, the telephone preceeded social/new media, one could not interact with more than one person at a time. Again, people used letters and telegram which took longer time for a message to reach intended audience and feedback received. For the traditional media, one had to be physically present as a participant of a media channel before information processes could be achieved. For instance, there was no way a president's speech could get to the masses without someone from the presidency coming into direct contact with a particular media company. Social media has afforded presidents to sit right in their offices and disseminate information to any part of the world. All that is required is a smart phone and a social media-networking site. Similarly, individuals can create and disseminate information globally by just a click on a button and access to the Internet. Mutethia (2013) observes that social media acceptance has lately registered upsurge in numbers. In August 2016, statistics from internetlivestats.com a global data on internet website indicated that there were over 3.4billion internet users with over 1.3 billion internet traffic daily.

These statistics suggest that 734 million users out of the 3.4 billion internet users use at least one social networking site (ComScore world, 2016).

1.1.4 Digital technology use in higher education

Digital technologies denote a wide range of technologies, tools, services and applications using various types of hardware and software (Rice, 2003). In higher education, digital technologies offer opportunities that facilitate blended, online and mobile learning. This, as Rice observes, includes the use of personal computers, digital television, radio, mobile phones and robots among others. Technological lag between higher education and the rest of society can be traced back to the introduction of film and radio in the 20th century (Selwyn, 2009). However, there is a new generation of students entering institutions of higher education who are already immersed into information communication technology (ICT) and have technological skills as well as a new set of cognitive capacities (Howe & Strauss, 2000; Oblinger & Oblinger, 2005; Prensky, 2001; Tapscott, 1998).

Institutions of higher learning across the globe are making digital technologies one of the main priorities in higher education development plan. Dunlop and Kling (1996) note that using technologies in class serves as an appealing factor for universities to attract potential students. Digital technology affordances in education, as concurs Beebe (2004), has paved ways for new pedagogical approaches in that students play a more active role than before including how people communicate and learn in an electronic

environment. Rumanyika and Galan (2015) add that higher institutions of learning use digital technologies for developing course materials; delivering and sharing content; communication between students, lecturers and the outside world; creation and delivery of presentation and lectures; academic research; administrative support and student enrollment. Similarly, a study by Moya et. al. (2011), also indicated that student learning outcome improves when digital technologies are used in the teaching and learning process. Conversely, Stantchev et al. (2014), found the use of digital technologies in resource constrained higher institutions of learning as a challenge. This was supported by Oye et al. (2011), who found barriers to the use of digital technologies. They averred that socio-economic status, technological conditions, high cost, lack of a systematic approach to teaching and learning, awareness and attitudes towards digital technologies, administrative and technical support and limited infrastructure resulted in the decreased usage of digital technology tools in higher education.

Every new generation of students may differ in their digital affinity and usage of ICT since they might have grown up with different kinds of technology. For instance, when it comes to differences in the usage of ICT in higher education, two groups of people come to the fore namely: Digital Natives and Digital Immigrants (Wilms et. al., 2017). According to Prensky (2000), Digital Native and Digital Immigrants are the difference between

individuals that grew up using "new" technology their whole lives and individuals that adopted the "new" technology at a later point in their life.

A number of studies have been conducted on the usage of technology by students. According to Kvavik (2005), students possess unprecedented levels of skill with information technology; they think about and use technology very differently from earlier student cohorts. Guo and Tan (2007) adds that the motive of using computer mediated communication tools by university students is to be interpersonal/social utility, convenience and information seeking. Similarly, a study by Stevens, Guo and Li (2014), indicated that using technology mediated learning platforms in higher education helps accessibility, information seeking, interaction and the managing of content.

1.1.5 The emergence of digital inequalities in university environment: Access versus usage

Social scientists and policy makers began worrying about inequality in Internet access as early as 1995 (Anderson, Bikson, Law & Mitchell, 1995) when just three percent of Americans had ever used the World Wide Web (Pew Center, 1995). During the last decades, millions of people have gained access to computers and other digital technologies. This is as a result of the rapidly closing digital divide of access. Tuomi (2000) infers "never in the human history have there been so many people with access to computers, digital networks and electronic communication technologies" (p.1). As the

internet reached most parts of the world, the original access inequality (divide) is gradually fading for a new form of digital divide known as the usage gap to emerge (Wei, 2012). Selwyn (2004) argues on a practical level that access to a personal computer does not guarantee a connection to the internet. He, however, contends that access to ICT certainly leads to use of ICT. Access and ability to use are two different issues with the digital divide (DiMaggio, Hargittai, Celeste & Shafer, 2004; Hargaittai, 2003a; Latimer, 2001; Stanley, 2003). As an information based society, "access to information technology and the ability to use it has become part of the toolkit to participate and prosper" (Servon & Nelson, 2001, p.279).

A number of studies have been conducted on what students do online. For instance, a study in the US by Gordon, Juang and Syed (2007) found college students' use the internet for information seeking, meeting new people, distraction, coping and email. These suggest that even though in the US College students have access to the internet, using the internet for coping purposes related to depression, social anxiety, and family cohesion more than just frequency of use. This means that students go online to increase their self-confidence. The presence of the digital divide looms large over any discussion of the potential benefits of internet in higher education in relation to well-being. According to van Dijk (2005), there would be "usage gap" between those who use digital technology for work and entertainment and those who use it largely for education.

1.2 Statement of the Problem

The advent of media technology has promoted communication and information sharing (Junco, Helbergert & Loken, 2011), and has become necessary in the academic settings to promote student engagement and facilitate better student learning (Kabilan, Ahmad, & Abidin, 2010). Increasingly, new media and its available content and applications are used in communication with family and friends, entertain and to release boredom, and also plan activities and companionship among others. What is significant is that, it appears students all over the world have embraced new media technology and it has become a major part of their everyday lives. However, it is contrarily idealistic to imagine new media technology usage as providing a level playing field for all (Selwyn, 2009). Also, there are variations in the purposes for which people use the technology. This inequality in the usage of the media technology presents itself as a phenomenon that occurs among graduate students in their use of the technology in an African academic environment. Nonetheless, there appears to be minimal empirical study and documentation on how digital inequality arises as a result of usage more than of access particularly in the Ghanaian context.

There have been a lot of studies on new media technology use by students in general and in higher education in particular (example Ezeah, Asogwa & Edogor, 2013; Apeanti & Danso, 2014). Some of these studies found interpersonal/social utility, convenience and information seeking,

accessibility, interaction and the managing of content as a motivation for using technology or computer mediated communication tools (Guo & Tan, 2007, Stevens, Guo & Li, 2014). Other studies such as Ezeah, Asogwa and Edogor (2013) discussed students use of new media. Ezeah, Asogwa and Edogor (2013)'s study found that students use social media for entertainment, education/information; discuss national issues; engage in cybercrimes; and, expose themselves to pornography, thereby, reducing the time they devote to their studies. Apeanti and Danso (2014) revealed that students are highly aware of social media and some have accounts on Facebook, Twitter, and YouTube among others. The students access these social media platforms mainly on laptops/PCs and smart phones. Again, students use social media frequently to connect with old friends and family members, share learning materials and while away time.

Selwyn (2009) states that even when one is able to access technology, the types of social media tool used by an individual; the ways in which they are used; and the outcomes that accrue are all comprised by a set of second-order digital divides. Studies on digital inequalities have been conducted in relation to social media (internet-based application) use as most researchers (e.g. McNicol & Aillerie, 2007) consider the phenomenon as "socio-economic and class based". Duncan, Ellison, Lamps, Lenhart and Madden (2017) used online surveys to conduct research on adult internet users. They engaged 1,597 respondents who were over 18 years of age. Duncan et. al.,

(2017) indicated that LinkedIn and Twitter were particularly popular among college-educated users and people with higher levels of household income, unlike Facebook and Instagram. The use of digital media technology is common in academic environment. A survey study conducted in the US by Roberts and Rees (2014) among college students found that 66% of the respondents used a mobile device while in lectures, and that laptops were mostly used for non-academic purposes. Similarly, Roberts and Rees' (2014) study showed students media multitasking habits in their own personal study environments, where students spent an average of less than six minutes on one task before switching to another task. These were observed to be technological distractions such as social media and texting. None of the studies has investigated the phenomenon of digital inequality as self-inflicted canker that pervades among people with higher education and as an issue of usage (that is due to a lack of use) rather than access.

Few studies have interrogated media technology use among exclusively graduate students. The study seeks to interrogate digital inequality as a phenomenon that occurs among graduate students in their use of the technology in an African academic environment. More, especially the study interrogates how digital inequality arises as a result of usage more than of access.

Building on the emerging concept of digital inequalities and media technology, few studies have been conducted in this critical area using a

qualitative approach. By investigating this phenomenon, the experiences of the students of the four departments in the Faculty of Foreign Languages Education and Communication, University of Education, Winneba (UEW) pertaining to factors that account for the use of media technology would emerge. Also, it is important to examine the phenomenon of digital inequality as a consequence of the degree of usage of new media technology by graduate students.

This study aims at contributing to an in-depth understanding of digital inequalities and new media technology phenomenon in the Ghanaian context and an African academic environment through a qualitative approach. The study will focus on graduate students in the four Departments in the Faculty of Foreign Languages Education and Communication, University of Education, Winneba.

1.3 Research Objectives

This study seeks to achieve the following objectives:

1. To investigate factors that account for the use of new media technology among graduate students in the Faculty of Foreign Languages Education and Communication.
2. To examine the phenomenon of digital inequality as a consequence of the degree of usage among graduate students in the Faculty of Foreign Languages Education and Communication.

3. To conduct a ranking analysis of the usage of new media technology by graduate students among the four departments in the Faculty of Foreign Languages Education and Communication.

1.4 Research Questions

1. What are the factors that account for the use of new media technology by graduate students in the Faculty of Foreign Languages Education and Communication?
2. How does the issue of usage of new media technology account for the phenomenon of digital inequality among graduate students in the Faculty of Foreign Languages Education and Communication?
3. How do the cohorts of graduate students belonging to each department in the Faculty of Foreign Languages Education and Communication rank in their usage of new media technology?

1.5 Significance of Study

The study sought to investigate four departments in the Faculty of Foreign Languages Education and Communication, UEW graduate students' factors that account for their use of new media technology. The findings of the study will certainly add to the current discourse on new media technology usage among students. It will not only enrich scarce literature on digital inequality and social media usage among graduate students as opposed to access but

will also fill the academic gap inherent within the broader discourse in the world at large.

Beyond this, the findings of the study will be a reference document for studies on digital inequalities of usage of social/new media technology by a higher group of students who have access and students in general. It will also inform policies on introduction of social/new media technology use into the educational processes and practices in the Ghanaian Educational system.

1.6 Delimitation

This study would focus on examining the experiences of graduate students in their usage of social/new media technology. However, the research is limited to the Ghanaian context to study four departments in the Faculty of Foreign Languages Education and Communication, UEW. The study examined the phenomenon of digital inequality as a consequence of the degree of usage among graduate students in the Faculty. For the study, the researcher examined four departments in the Faculty of Foreign Languages Education and Communication and Media Studies, UEW comprising: French, English, Applied Linguistic and Communication and Media Studies. The graduate students of the four departments in the Faculty of Foreign Languages Education and Communication were selected because of the relevance of social/new media technology usage in teaching and learning in the Department. Their selection enabled the researcher to collect credible and reliable information on their experiences as a result of the new media use.

1.7 Organization of the study

The study is organized into five chapters. Chapter one discusses the background of the study, the objectives, research questions, significance of the study, delimitations, and the organization of the study. Chapter two reviewed related literature and discusses the theories necessary to situate the research within a certain context. The third chapter discusses the methods and procedure for data collection and analysis. Specifically, the research approach, research design, population, sample and sampling technique, data collection instruments, data collection procedure and method of data analysis were discussed. Chapter five summarizes the findings arising out of the study, draws conclusions and makes recommendations for further studies.

1.8 Summary

Chapter one provides a general background of the study where relevant issues were introduced and discussed. It stressed on the ubiquitous nature of technological tools that have become part of our everyday lives today. Further, it touches on the era of digital world, which is the advent of the internet. It emphasized the difference between social media and new media which are both innovations succeeding the internet. It mentions clearly the interactive nature of social media, making it possible for people to communicate with others all over the world without necessarily coming into direct physical contact with them.

Also, the chapter highlights the concept of digital inequality (divide) and social/new media technology use (as well as computers and the internet in general) and it preceding web 2.0, stating some of its (social media) functions and how both famous and non-famous people use it for their gratification.

The statement of problem confirms that most scholars have focused on the areas of use, adoption and awareness of social/new media in education over the past decade; however, studies on digital inequality and usage of social media technology as a phenomenon that occurs among graduate students in their use of the media technology especially in Ghana are scarce.

Also, the objectives that guided the study and the research questions that the study aimed to answer were outlined. Finally, the significance of the study, delimitation and the organization of the study were also stated.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter reviews the related literature relevant to the study. Also discussed in this chapter are central issues in general, namely, an overview of new media and its use, and students/faculty use of new media. The chapter further discusses the theories that underlie the study and their relevance to the study.

2.1 Digital Inequalities (Divide)

Selwyn (2004) defined digital divide as a gap between those who have access to digital technologies and those who do not. This affords an opportunity to identify the inequalities between the technological haves and have-nots (Wei & Hindman, 2011). DiMaggio, Hargittai, Celeste and Shafer (2004) also hold that Digital Inequality refers to unequal access and use of information and communication technologies. Many scholars, according to Wei (2012), focused on the factors of the digital divide in demonstrating the magnitude and interpreting the nature. These include *age* (DiMaggio et al., 2004), race and ethnicity (Hoffman, Novak & Schlosser, 2000), education (Latimer, 2009), socio-economic status (McLaren & Zappal`a, 2002), geography (Sylvester & McGlynn, 2010), culture (Drori & Jang, 2003), and international disparities (Guill´en & Su´arez, 2005).

Jung et. al. (2001), Lenhart (2002) and Hsieh et al., (2008) submit that digital inequality is considered a socio-economic inequality that focuses on income and education as key factors in clarifying use and non-use of ICT. In essence, digital inequality is patterned on the lines of the socio-economically advantaged and the disadvantaged.

Zillien (2006) states that people with higher status use better technical equipment. This explains better high-status people's usage of digital technologies. In a contemporary African institution of higher learning environment, though there is access to technology leading to equality, its usage will nonetheless depend on further dispositions (Schulz-Schaeffer, 2004, p. 62). In view of this, not only the access to technology, but the usage should be considered when distinguishing the status of inequalities with respect to technology.

2.2 New Media Technology

Chun and Keenan (2006) assert that the term "*new media*" came into prominence in the mid 1990's taking the place of "*multi-media*" in the field of business and art. They further contend that the term "*new media*" has been used since the 1960s, when it rose with dotcom mania, cyberspace, and interactive television. The ubiquitous nature of new media has given rise to

varied understanding of the concept and many researchers have come up with their own explanations of what new media is.

Friedman and Friedman (2008) assert that the term media today refers to the technology, that is, the medium of communication. Manovich (2001) is of the view that new media revolution has shifted all culture to computer-mediated forms of production, distribution, and communication. This notion corresponds with the term Web 2.0 as a *'read-write web'* or *'web of people'* (Choudhury, 2014). In essence, Web 2.0 consists of technologies which allow individuals to collaborate, create, share, distribute, and edit online content and in effect, communicate digital media content both locally and globally (Croteau & Hoynes, 2015; Johnson, 2017).

Chun and Keenan (2006) indicate that new media depends heavily on computerization, but, new media is not "*digital media*". They further explained that new media is not the digitized forms of other media such as photography, video and text, but to some extent an interactive medium or form of distribution as independent as the information it relayed. Wardrip-Fruin and Monfort (2003), however, disagree with this assertion. They contend that computation may be key to new media, but computation does not automatically lead to new media or to software. Hagen (2008) argues that the computer as we know emerged as a media machine because of language-based software.

New media has so many uses and has been employed differently by different people for specific purposes. Lievrouw and Livingstone (2002) note that new media gives users "the means to generate, seek and share content" (p.9). In other words, those who patronise new media technologies are 'users' of the technologies as they use online databases, enter chat rooms, surf the web, do online shopping, and write emails among others. At the core of new media technologies are, therefore, technologies that have the properties of "convergence, digital networking, global reach, interactivity and many-to-many communication" (p.15), and its use has created "a media form which has allowed its users to be the producers as well as consumers of content" (Flew, 2005, p.15).

2.3 Types of new media tools used in higher education

Research shows that there are different types of new media technologies used in learning, information seeking and dissemination. Each new media tool has various functions and characteristics. The new media tools used by many educators, researchers, and scholars to enhance students' learning experiences include wikis, blogs, podcasts, email, website, social media and file-sharing systems (Agarwal, 2011; Bosman & Zagenczyk, 2011; Dillion et al., 2007; Lui, 2010; McNaughtet et al., 2011; Tay & Allen, 2011).

Wikis

Wikis are information resources that require limited knowledge of text formatting (Agarwal, 2011; Bosman & Zagenczyk, 2011; Dillion et al., 2007; Lui, 2010; McNaughtet et al., 2011; Tay & Allen, 2011). In the context of higher education, wikis are new media technology used to enhance the learning experiences of students. Students contribute to wikis and edit others' contributions. Faculty on another hand use wiki in instruction (Agarwal, 2011, p. 43). The changes made is maintained on a wiki, and both students and instructors can go back and review previous versions (Agarwal, 2011, p. 43).

Blogs

A blog is a social media tool useful for instruction (Dillion et al., 2007; Lui, 2010; McNaughtet et al., 2011). According to Agarwal (2011), blogs are collations of original articles that are organized in reversed chronological order. Blog posts are popular social media tools. In higher education for instance, students use blog posts to express themselves, share information, discuss topics, and interact with other students by creating links to other postings or blogs and adding comments to posts (Agarwal, p. 41). In support of Agarwal's (2011) assertion, Purchase and Letch (2011) aver that blogs enhance the learning experiences of students in university settings (p. 204).

Website

A website is a virtual window into how an institution or organization and a person operates (Osunade & Ogundele, 2012). Websites have different purposes or uses. The value attached to a website is reflected in the operation and content. Osunade and Ogundele (2012) indicated that website for institutions such as higher education provides information to users such as staff, prospective students and students, and allows interaction with the institution through feedback. For the purpose of learning website is used for online surveys.

Email

According to Kooti et. al. (2015), email, also known as electronic mail, is a computer-mediated communication tool essential for social interaction. Many people use email within organizations to exchange information and coordinate action. It is also used for personal reason by ordinary people to converse with friends and family. In essence, email is used both on personal and professional levels. Students in higher education as information users, will depend heavily on emails as a source of communication (Alsmadi & Alhami, 2015).

Social media

The evolution of social media has cut across all facets of society with its positive and negative impact (Mingle & Adams, 2015). Social media has changed and impacted on communication, learning, research and education in general. One of the most important ways in which society is now connected is through social media (well-known as social networking sites). Social media is giving meaning to how individuals create ties with each other as well as how the relationships between an individual and organizations that serve them are formed.

Ellison & Boyd (2007) refer to social networking sites (SNS) as web-based services that allow individuals to construct a public or semi-public profile within a bounded system, share a connection, view and cross-list their relationship with others within the system.

Social media platforms both on the web and mobile applications are classified according to their functions such as blogs (blogger, word press), intranets, podcasts, video sharing (YouTube), photo sharing (Flickr, Instagram), social network (Facebook, My Space), wikis (Wikipedia), microblogging (Twitter), video conferencing, instant message chats (WhatsApp, 2go), and book marking sites (Delicious, Digg) among others (Hearn et. al., 2008; Matthews, 2010).

2.4 New Media Usage in Higher Education

Mcquail (2010) extricates social media from the traditional mass media and notes that "traditional mass communication was essentially one-directional; but the new forms of communication are essentially interactive" (p.39). The interactive characteristic of new media confers an unprecedented popularity on them (Ezeah, Asogwa & Edogor, 2013).

Through a quantitative research method, Sponcil and Gitimu (2013) explored the use of social media among students attending mid-western university in the US. They conducted a survey with 96 undergraduate students using a convenient and stratified sample. The findings of Sponcil and Gitimu (2013) revealed that students of higher education used at least one form of social networking website for entertainment, education/information, companionship, communicate with family and friends among others. Social media tools such as Facebook and Twitter were the most popular tools used. However, of the 97 students surveyed, 74 representing 77% prefer face-to-face communication over communication via the internet Sponcil & Gitimu, 2013, p. 8).

Utilitarian factors also have a positive influence on higher education students desire to use new media technologies. This however, influences collaboration activities as posit Salehan et al. (2017). For example, some users post personal information and others professional knowledge and experience on Facebook and WhatsApp status (Kane, 2011). They were of

the view that new media technologies can be used as a reference source and a problem-solving tool for it users (Salehan et al, 2017; Ardichvili et al., 2003).

Many higher education students use new media technologies because of social motivation. Rosli et al. (2016) avers that social motivation result from gaining social benefits and maintain social interaction with other users. This is because some student wants to use same media technology as used by their friends and those with similar or shared interest.

Similarly, Apeanti and Danso (2014) examined social media use among university students in Ghana. They employed a quantitative survey with 311 sandwich students as respondents. Apeanti and Danso (2014) sought to find out the use of social media tools such as slideshare, LinkedIn, Hi5, Flickr, Blogs, Facebook, Twitter, and YouTube use by the students. The findings indicated that in higher education, social media is important because student use it in finding new friends, obtaining or sharing learning materials, receiving update of events, and for posting of information (Apeanti & Danso, 2014, p.5).

Chen and Bryer (2011) also explored the role of social media tools in higher education in the United States. Their study revealed that faculty members in higher education used social media tools for academic, professional, personal and research purposes (p:99). They also found that, LinkedIn and Facebook were the most popular tools used. However, tools such as Blogs,

audio/video conferencing management systems (Blackboard), SecondLife, and Wikis were used in teaching (Chen & Bryer, 2011, p:99). This was also consistent with a study by Salvation and Adzharuddin (2014) among Malaysia students. They discovered that teachers share course related materials with their students and create student groups to collaborate on projects and communicate with their fellow lecturers from other universities through social networking sites that facilitate teaching and learning processes to enhance academic performance.

2.5 New media use as instructional technology in higher education

A study by Selwyn (2009) showed that many educators in higher education are of the view that social media tools can used by learners in their studies. According to Selwyn (2009) social media tools such as MySpace and Facebook have been the subject of debate in higher education institutions (p.159). Through an in-depth qualitative case study, Selwyn (2009) investigated the activities on the Facebook wall of 909 undergraduate students at a university in the United Kingdom. The study found that students used social media tools to critique events and experiences, by exchanging factual or logistical information, by assessing requirements and by giving moral support (Selwyn, 2009, p. 187). Similar to Selwyn's (2009) findings, Agarwal (2011) also found "collective learning, participation, collaboration and communication" (p. 48). The study outlined social media

tools such as blogs, wikis, Twitter among others as used by educators. In a qualitative case study of 18 students, Agarwal (2011) evaluated the class who were organised into 9 pairs with specific rubrics: one by instructors and the other by peers.

A number of researchers have found various benefits of the use of new media in education in general. Asad, Mamun and Clement (2012) indicated that students are able to exchange assignments, resources and discussions on academic work and other issues on social networks. This is made possible because students leverage on the interactive nature of new media. This is unlike the one-way communication that characterized "pre-internet news when people tuned in to events happening around the world through 24-hour television news channels" (Alejandro, 2010, p.5). Yunus, Nordin, Salehi, and Salehi (2013) also observed that students gained more vocabulary and improved their writing skills as a result of their participation on social networks such as Facebook and Twitter. This corroborates Alejandro's (2010) view that social media users are active producers and consumers of news content.

Adding another dimension to the new media use as instructional technology in higher education, Apeanti and Danso (2014) also note that students believe it would be fun for their lecturers to use social media. The students also assert that their grades would be better if they could contact lectures through social media and lecturers could hold lectures using social media.

From these findings, we can see that the use of new media as instructional technology in higher education is making inroads into the educational arena for faculty and staff. Staffs need to be trained on special skills and practical experiences in order to maximize the impact of social media in higher educational institutions (Martin & Samuels, 2012).

2.6 Digital Inequality (Divide) and New Media Technology Usage

Mossberger, Tolbert, and Stansbury (2003) suggests that to get a better grasp of digital divide, one must consider the fact that it include a multidimensional aspects of the social inequalities in the new media age: ‘‘an access divide, a skills divide, an economic opportunity divide, and a democratic divide” (p. 2). Also Selwyn (2004) supporting Mossberger, Tolbert, and Stansbury’s (2003) arguments that digital divide in the new media age is multidimensional. He asserts that digital divide is a gap between those who have access to digital technologies and those who do not. Selwyn (2004) contends that this gap is understood as the inequalities in access to and use of information and communication technologies, generally the internet (Selwyn, 2004). Therefore, digital divide can be considered as attitudes towards technology, access, skills and types of usage (McNicol & Aillerie, 2007). Conversely, Schradie (2011) argues that digital inequality has moved from the divide of computer ownership to inequalities in access and use of different digital technologies.

Duncan et al. (2014), in a survey in 2014, found that LinkedIn and Twitter were popular among college-educated users and those with higher levels of household income. However, they acknowledge it was not the same for other sites such as Facebook and Instagram. Similarly, Hindman (2009) found links between blogging and socio-economic class. In addition, the most widely read blogs in political arena are run by people who have attended an institution of higher education (Hindman, 2009).

2.7 Theoretical Framework

According to Littlejohn and Foss (2009) a theory provides a philosophical construct that is consistent with a representation of a subject. They argue further that theories are complex experiences reduced into manageable set of concepts and prepositions for easy understanding. Mutethia (2013), citing Mugenda and Mugenda (1999), is of the view that theories provide constructs that underpins a certain concept. In this sense, theories provide a framework or model that explain and make sense of the data collected.

This study adopted two theories: Unified Theory of Acceptance and Use of Technology (UTAUT) and Technology Appropriation Model. UTAUT is a theory which explains why some people are more or less likely to adopt and use a particular information technology and Technology Appropriation Model (TAM) which deals with the acceptance and the application of

technological tools by the user, particularly in the use of Web 2.0 applications.

2.7.1 Unified Theory of Acceptance and Use of Technology (UTAUT)

The Unified Theory of Acceptance and Use of Technology (UTAUT) was developed by Venkatesh, Morris, Davis, and Davis in 2003. It is one of the theories of technology acceptance and use models which explains motivations to accept and use a range of technologies. Williams, Rana and Dwivedi (2015) postulates that UTAUT is the review and integration of eight dominant theories and models, namely: the Theory of Reasoned Action (TRA), the Technology Acceptance Model (TAM), the Motivational model, the Theory of Planned Behaviour (TPB), a combined TBP/TAM, the Model of PC Utilization, Innovation Diffusion Theory (IDT), and Social Cognitive Theory (SCT). They aver that the unified model was developed to harmonize and also bring together alternative views on user and innovation acceptance. The UTAUT according to Venkatesh, Morris, Davis, and Davis (2003) is premised on four main constructs: *performance expectancy, effort expectancy, social influence and facilitating conditions* regarded as determinants of behavioural intention. These constructs are moderated by *gender, age, experience, and voluntariness of use* (Ventatesh et. al., 2003). The theory helps to explain and assess an individual's intention to use a specific system which influences on acceptance in any context (Williams et.

al., 2015). Therefore, the actual usage of a technology system is influenced by user's intention to use the information technology (Ventakesh et al., 2003).

Gruzd, Staves and Wilk (2012) citing Ventakesh et al. (2003)'s four main construct of UTAUT are of the view that *performance expectancy* is "the degree to which an individual believes that using the system will help him or her to attain gains in job performance" (p.447). For instance, in an organisation, the usefulness of a specific technology may improve an employee's performance on an assigned task which may lead to a reward. Within new media circles, users may be encouraged to use platforms such as social media, email, and blog among others, to help them meet their objectives. Similarly, students in higher education may be encouraged to use new media technology because it enhances their academic studies. In essence, each new media technology offers users certain services, tools and applications needed to enhance output. Thus, *performance expectancy* is the benefit derived from using a technology.

Effort expectancy is the level of ease related with the use of a system. This is to say that the degree to which an individual believes that little effort will be incurred using a system. According to Davis, Bagozzi and Warshaw (1989), *effort expectancy* suggests the extent an innovation is perceived not to be difficult to learn, understand and or operate. In essence, the effort an

individual will employ in a course of action will involve minimum effort. By extension, a new media technology user will be more appreciative of the minimum or least effort required to make use of the applications, learn features and perform other new-media-related activities, such as uploading and sharing video (Rauniar, Rawski, Yang & Johnson, 2014). That is, the user may access a site because of its ease of use.

Social influence is the level to which an individual comprehend that an important others think he or she should use a new system. In essence, a user's intention to use and use of new media technologies may be because a tool was recommended by other colleagues. On the other hand, social influence may have effect on behavioural intention rather than on the actual use of new media (Gruzd, Staves & Wilk, 2012). For example, in higher education environment students would be influenced to use a particular system if their colleagues whom they perceive important recommend that they use a particular new media although they may not necessarily stay with the tool.

Studies on social and new media usage by individuals and organisations have adopted the UTAUT to predict users' behavioural intentions and actual user behaviours in adopting information technology. It appears that a number of these studies are quantitative in nature and this is premised on the fact that Venkatesh et. al. (2003) built the model on hypothetical predictions of the behavioural intention for individuals' use of a particular technology. For

example, Onyebuchi (2009), quantitatively used the UTAUT to explore social media usage among scholars for educational purpose. Again, Jayakananthan and Jeyaraj (2019) examined the behavioural intention to utilize electronic information resources among 208 postgraduate students of a Sri Lanka University using quantitative approach.

Gruzd, Staves and Wilk (2012), in their qualitative study of how and why scholars use social media for communication and information dissemination, adopted the UTAUT to examine the factors that influence intention to use of social media by scholars. Despite the quantitative foundations and applications of the UTAUT, some qualitative studies have adopted the model to explain the behavioural intention behind audience's use of social and new media platforms. The use of UTAUT therefore helps in identifying and exploring a wide range of possible factors that may influence why and how graduate students use a new media technology, in this case, students of a higher educational institution's perceived usefulness and ease of new media technology usage.

Flowing from this, the current study qualitatively examines how graduate students of four departments in the Faculty of Foreign Languages Education and Communication of University of Education, Winneba-Ghana are using new media technologies for information seeking. The conceptual foundations of the Unified Theory of Acceptance and Use of Technology (UTAUT) is used to explain the factors that account for their use of new

media technologies or web 2.0 platforms for information seeking and how such usage contributes to inequalities in the uses and appropriation of new media technology.

2.7.2 Relevance of UTAUT to the current study

In new media technology, the UTAUT has been used in many studies to explain and conceptualise users' social media habits as well as the behavioural intention for their adoption of these interactive platforms for use. For instance, Hanson et al. (2011), used the UTAUT to examine factors that determine social media use and acceptance among health educators. They assessed the four construct of UTAUT as well as intention to use them for health promotion. The actual use of social media for personal and organizational purposes were also assessed. This is because these constructs influence intention to use a technology and the actual usage of a technology are moderated by gender, age, experience and voluntariness of use.

The conceptualization of the UTAUT in the Hanson et. al. (2011) study makes the model significant to the current study. This is because the model will help to examine the factors that account for graduate students' use of new media for information seeking and dissemination. It will also help to specify how these factors explain the use of new media in information seeking and dissemination processes. The model will also help to examine how the four construct of UTAUT – *performance expectancy, effort*

expectancy, social influence and facilitating conditions – come to bear on the intentions of graduate students' use of new media technologies for information seeking and dissemination processes.

2.8 Technology Appropriation Model (TaM)

In today's information communication and technology, there is a developing research field focused on the adoption and use of new information communication technologies. Wertsch (1998) describes appropriation as the act of taking something that belongs to another and making it one's own. In the field of technology, Bar, Pisani and Weber (2007) posit that the appropriation of technology is defined as the process of interacting with technology and modifying both the manner in which the technology is used, and the social framework within which it is used. MacKay and Gillespie (1992) earlier emphasized that appropriation of technology is a *subjective social activity* because "people are not merely malleable subjects who submit to the dictates of a technology...they are active, creative and expressive – albeit socially situated – subjects" (p. 698). They argued further that, innovations are not always a linear process, since "people may reject technologies, redefine their functional purpose, customize or even invest symbolic meanings to them" (MacKay & Gillespie, 1992). Additionally, MacKay and Gillespie (1992) observed that, appropriation does not precisely

relate to the features of a technology, but the structures a technology brings or changes as individuals use it.

DeSanctis and Poole (1994) argue that appropriation of a technology is an ongoing practice whereby people interact with technology and then actively select structures of use from a larger set of possibilities. Thus, appropriation occurs at the intersection of technical design and social structures. Overdijk and Diggelen (2006) contend that the concept implies a process of social construction in which the actions and thoughts of the technology users are shaped through the use of the technology, while at the same time the meaning and effects of the technology are shaped through the users' actions.

Similarly, Sey (2011) notes that the user appropriation of technology may not only lead to dramatic or mild deviations from the original purpose of the technology and bring about significant structural change to the technology itself but may also change the way the organisation or the individual operates. Thus, in her view, technology appropriation is a two-way affair.

2.8.1 Relevance of TaM to the Current study

The Technology Appropriation Model (TaM) has been used in a number of studies to examine mobile technologies use in the everyday lives of young people in their social, leisure, work and study worlds. For example, Carroll et al. (2001) examined young people's use of mobile technologies as well as

their perceptions and attitudes to mobile technologies and describe some of the factors that attract young people to use mobile technologies.

Carroll et al. (2001) argues that "appropriation describes the way that users not only adopt technology but also shape it to their needs and situations of use. This is because the process of appropriation within the wider process of designing, adapting and using technology" (p. 8).

Carroll et al. (2001)'s paper, raises the importance of examining how graduate students are appropriating new media technologies. The rationale is to use TaM to explain the phenomenon of new media technologies in information seeking and dissemination in an evolving technological world.

2.9 Summary

The chapter set out to review related works on digital inequalities (divide), new media evolution, types new media used by students and faculty with most of the literature coming from the West. However, minimal literature exists on the subject within the African context and particularly in Ghana. From the literature available, there seems to be a number of students in the world who have access and use new media in learning, information seeking and dissemination purposes. However, the debate has been whether the degree of usage and appropriation of new media technologies by graduate students for information seeking and dissemination purposes as a

consequence of digital inequality would be apparent. The next chapter discusses the data collection methodology and analysis.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter seeks to examine the systematic procedure and methods that the researcher went through to collect and analyze data to answer the following research questions:

1. What are the factors that account for the use of new media technology by graduate students in the Faculty of Foreign Languages Education and Communication?
2. How does the issue of usage of new media technology account for the phenomenon of digital inequality among graduate students in the Faculty of Foreign Languages Education and Communication?
3. How do the cohorts of graduate students belonging to each department in the Faculty of Foreign Languages Education and Communication rank in their usage of new media technology?

3.1 Research Approach

The research approach is qualitative. In qualitative approach to research, knowledge claims are based on the constructivist perspectives or different meanings of individual experiences (Creswell, 2006). Lindlof and Taylor (2012) opine that qualitative studies interpret the qualities of social phenomena rather than predict relations between predefined variables. This

is in tandem with Amaratunga et al. (2002) that qualitative research approaches concentrate mainly on words and observations to express reality, and describe people and research phenomena in natural situations instead of statistically testing variables.

The current study seeks to examine and investigate factors that account for the use of new media technology and how the issue of usage of new media technology account for the phenomenon of digital inequality by graduate students of the four departments in the Faculty of Foreign Languages Education and Communication. The data collected from participants was inductively analyzed from particulars of the general themes, meanings were ascribed and the researcher made interpretations based on the data (Creswell. 2014).

Also, the phenomenon of digital inequality (divide) is better examined using this approach so as to understand and reveal meanings that are attached to experiences of the students who use new media technology. This is supported by Hancock (2002)'s assertion that, qualitative research is concerned with opinions, experiences and feelings of individuals generating subjective data. It predisposes that, qualitative study describes social phenomena naturally and the research has no influence whatsoever on its occurrence.

Snelson (2016) observes that majority of social media research is based on quantitative approaches. He further indicated that minimal research exists on qualitative or mixed methods within this field of study. However, the value of using qualitative approach far outweighs quantitative studies.

3.2 Research Design

Research design according to Creswell (2014) is defined as the strategy, plan and structure a researcher adopts to help him/her achieve the objective of the study. Further, he argues that the selection of a research design is mostly dependent on the nature of the research problem being addressed, the researchers' personal experiences and the audience for the study. To Burns and Grove (2013), research design is a procedure in which a study is based which ensures control of factors that may interfere with the validity of the study.

There are several designs in every research approach; some examples of designs in the qualitative approach are phenomenology, ethnography, case study, narrative research among others. In this study, I employed the case study design.

3.2.1 Case Study

Case study is defined by Yin (2009) as a research design that facilitates thorough investigation in a real-life contemporary phenomenon in its natural

context. A case study according to Harling (2012), involves a collection of in-depth understanding of a program, an event, an activity or an individual. Furthermore, case study synthesizes the multiple data sources into one meaningful finding (Hancock & Algozinne, 2006).

Gustafsson (2017) and Hamel (1993) describe case study as an intensive study which examines complex phenomena about a person, a group of people or a unit, in the natural setting to increase understanding of them and aim to generalize over several units. Zainal (2007) earlier indicated that a case study research design mostly selects small geographical area or very limited number of individuals as the subjects of study. In support, per my operationalization of graduate students in the four departments in the Faculty of Foreign Languages Education and Communication as per Zainal's (2007) I selected *nineteen* students so as to gain in-depth understanding of the phenomenon (Yin, 2012).

In line with Yin (2009), I chose case study because the topic of 'digital inequalities' is a contemporary phenomenon (Armelin, 2012). Again, new media technology is a contemporary media platform, and to consolidate it all, data were gathered in the natural context of the participants. Furthermore, data was also examined in a specific context, which is digital inequalities and new media technology to be precise.

Significantly, a breakdown of the 'case study' indicates case and study, revealing how case study embodies an in-depth study of a phenomenon.

A case is defined by Stake (2000) as a "qualitative strategy in which the researcher studies an institution (as a whole or department), a programme, a responsibility, a collection or a population" (p.23). In view of this, the research studied the inequalities that pervade among people with higher education as an issue of usage (that is due to a lack of use) rather than access. The impact of case study is that it is able to capture and explore the complexity of phenomenon for a better understanding (Muijs, 2004). This implies that a case study seeks to elicit answers to open-ended questions, preferably from those experiencing the phenomenon. Therefore, case study best suits my topic because my motive to investigate not only what accounts for the use of new media technology by graduate students but how the issues of usage account for digital inequalities comparatively among the four departments in the faculty.

Another objective of a case study, according to Cousin (2006), is not to analyse specific cases but rather to serve as a good way to define cases and their setting which eventually aids in understanding them. Yin (2003) posits that there are basically two types of case studies: single case studies and multiple case studies. He further states that when a study involves more than one instance, a multiple case study is required.

Secondly, he notes that when a study looks at an aspect of a phenomenon it is referred to as a single case study. Since cases may involve an institution, individuals, or a programme. My research centers around four departments who share one thing in common – graduate students in the same faculty. Studying the single phenomenon of graduate students within a single context (University of Education, Winneba) lends my research to a single case study per the definition by Yin (2003). Again, the case is unique in the sense that, though it is common for graduate students to use new media technologies, the phenomenon of digital inequality as a result of usage has not been well documented and interpreted in existing literature.

3.3 Sampling Technique

In research process, sampling is an important technique that enhances the quality of inferences made by the researcher stemming from the underlying findings. Sampling is the process of picking a subgroup for a study (Kusi, 2012). He further explained that sampling is necessary because it is usually unrealistic to examine the entire population in a study (Kusi, 2012). According to Daymon and Holloway (2010), sampling strategy is a decision on what data to access and the particular place or site that data can be accessed in order to achieve one's objective of study. They aver that qualitative research sampling is seldom probabilistic or random but instead, they are often purposeful. This is because, data to be sampled is selected

based participants direct relationship to the purpose of the work. In view of this, the term purposive or purposeful sampling was applied.

Creswell (2008) describes purposive sampling as a qualitative study where researchers intentionally select individuals and sites to learn or understand the central phenomenon. He further notes that the standard for choosing participants and sites is whether they are 'information rich'. In relation to this, Patton (2002) also purport that purposive sampling is where participants, setting and other sampling units are selected based on criteria that are of interest to the researcher. Thus, purposive sampling is applied when the researcher's selection of participants, site and other sampling units for the study are selected based on a criteria that has direct bearing on the work. Bernard (2002) defined purposive sampling as a non-random technique where the researcher decides what needs to be known and sets out to find persons who can participate in the study and are willing to provide information by virtue of knowledge experience. Crewell (2013) also posits that purposive sampling is a form of non-probability sampling where the selection of sites or participants that will help the researcher understand the problem and the research question.

Per the objectives of the study, four (4) departments in the Faculty of Foreign Languages Education and Communication were purposively sampled for the study. Also purposive sampling was adopted to identify graduate students who understood the phenomena under study and were ready to help with the

research. In line with Patton's (2002) position on purposive sampling, I this strategy to enable me describe what the study demanded based on a criterion that has direct bearing on the work. Also, I purposively sampled participants who have been in the four department for not less than two (2) years and who could help me to understand the phenomena under study. Finally, for rich and in-depth knowledge into the phenomena under study, I purposively sampled participants who were available and had the knowledge experience to provide information needed in achieving the research objectives as espoused by Daymon and Holloway (2010).

3.4 Data Collection Method

The nature of qualitative research is to gain knowledge about an individual or a group of individuals in their social context. This normally compels qualitative researchers to employ interview as their main source of data collection (Hox & Boeije, 2005). Also, researchers usually select persons for interview if their experiences are central to the research problem. This is due to their skill, expertise or knowledge of the problem and can answer the critical questions and satisfy the objectives of the research (Lindlof & Taylor, 2002). Daymon and Holloway (2010) support this by professing that interview is the most popular method used in qualitative research. In line with this, I employed interview as a data collection method to aid me in

gathering data for analysis. The data was collected within a period of twelve months, from February, 2018 to January, 2019.

3.4.1 Interviews

Woods (2011) posit that the traditional task for a qualitative researcher to gain subjective knowledge about a phenomenon is to encourage interviews. Interviews are a major source of data in qualitative research and also enable the researcher explore participants' perspectives and perceptions (Daymon & Holloway, 2010). This current study employed interview as the data collection method. The interview created a platform for the graduate students to articulate freely their opinions and experiences on the current topic of study.

Creswell (2014) stipulates that interviews are conversations that are held face-to-face or sometimes telephone mediated between the researcher and participants, or when researchers engage in focus group interviews with six to eight members in each group. These interviews normally involve unstructured and are generally open-ended questions that are few in number and it is intended to elicit views and opinions from the participants. Lindlof and Taylor (2002) also postulate that interviews are an important feature of qualitative research as they help to understand the social actor's experiences and perspective through stories, accounts, and explanations. Researchers usually select persons for interviews only if their experiences are central to

the research problem in some way, especially due to their skill, expertise or hold a wealth of knowledge that can answer the critical questions and satisfy the objectives of the research (Lindlof & Taylor, 2002).

Owing to these assertions, the current study employed in-depth interviews to enable me access firsthand information on the experiences of the participants. The interviews were conducted among graduate students of the four Departments in the Faculty of Foreign Languages Education and Communication. The interview was to investigate and analyse factors that account for the use of new media technology and examine the phenomenon of digital inequality as a consequence of the degree of usage of new media technology. The knowledge, position and wealth of information that participants possess placed them at the heart of the research and put them in the right position to answer the various questions fundamental to meeting the objectives of the study. To have a better discussion on the topic, a semi-structured interview which is usually involved open ended questions guided the interview. This format of interview gave me the opportunity to follow up on interesting developments and allow interviewees to elaborate on various issues. As discussed by Braun and Clarke (2013), semi-structured has a prepared step-by-step questions, however, there is greater flexibility and freedom on the part of both interviewers and interviewees in terms of planning, implementing and organiszing the interview content and question.

Aside the semi-structured interview with open ended questions, a structured interview question schedule was also adopted for research question three (3) of this study. According to Kusi (2012), a structured interview is a technique used to gather data for qualitative study. However, the interview questions were pre-determined, leaving the interviewer little or no chance to divert from. Cohen and Manson (1994) also described structured interview as one in which the content and procedures are organized in advance leaving the interviewer little freedom to make modifications to the interview question. Daymon and Holloway (2010) postulate that structured interviews tend to be rigorous and therefore impede the flexibility in qualitative interviewing. Kusi (2012) adds that when questions in the schedule are structured it means the interviewees can be presented with almost the same questions. I used Google Form template for the structured interviews by sending participants an email and a link.

3.5 Data Collection Procedure

The researcher used more than one method of interviewing to gather data. These were structured and semi-structured interview sessions. Semi-structured interview was used to answer research questions (RQ) 1 and 2. Wragg (2002) describes this method as one that allows interviewer to ask initial questions, followed by probes meant to seek clarification of issues raised. The method allowed participants some degree of comfort to provide

detailed and exhaustive answers to the questions where they can. I adopted face-to-face and over the telephone format for the semi-structured interviews. A recorder and my smart phone (Samsung J7 Prime) was used to record as a primary tool in collecting data for each meeting. Also, notes were taken in the course of the interview. This was to help in capturing themes and major issues arising out of the interviews and participants were made to listen to a play-back of the interview in order to be sure of the responses they had given. However, for the interviews conducted over the phone, the non-verbal cues were unrecognized. For flexibility and openness purposes, all the interviews were conducted in English. Recorded responses were transcribed and grouped into themes for analysis.

The face-to-face interviews lasted between ten (10) to twenty (20) minutes and were characterised by unstructured questions meant to prompt opinions from the participants (Creswell, 2014). But the over the phone interviews lasted between fifteen (15) to thirty (30) minutes. This was as a result of unstable mobile network. Sometimes, I had to end and pause the interview session for a while when the network was not allowing the flow of conversation. These breaks usually lasted not more than five (5) minutes for the interview session to continue. The interviews were transcribed and analysed.

The structured interview was to answer research question 3. Prior to the study, an exploratory study carried out among some graduate students of University of Education, Winneba indicated that students in the Faculty of Foreign Languages Education and Communication access the internet more regularly than students in the other faculties. As a result, I designed a structured questionnaire schedule using a Google Form. The online survey was available between March 11 and April 22, 2019. This is because the research question 3 sought to rank graduate students in the four departments and their usage of new media technology. I first created the questions on Word Document which was proofread by my supervisor to ensure proper wording of each question. I went to forms.google.com in my laptop browser and selected a button to create a form, then I entered the questions. After getting my questionnaire kind of schedule, I selected the "Make a copy" tab and I made copies making four (4) different forms but the same questions for the four departments. I used the "Send" button to allow me accept responses from participants and this will allow a link to be created for the schedule. The link for each department was sent to course representatives of the four departments (French, English, Communication and Media, and Applied Linguistics). It would also allow six ways to share the form to your participants including: Email, a link, an embed code, Facebook, Twitter among others. This allowed me to easily reach a large number of graduate students across the four (4) departments. Responses received were viewed

in either summary of all the responses of each department or each individual respondent in a department response. Data were finally transferred in a spreadsheet format using Statistical Package for Social Sciences (SPSS) to produce descriptive statistics. This enabled the research to code the data and categorized thematically.

3.6 Data Analysis Method

3.6.1 Thematic Analysis

According to Braun and Clark (2006), thematic analysis method of data analysis is "a method of identifying, analyzing, and reporting patterns (themes) within data. It minimally organizes and describes your data set in (rich) detail" (p.6). It is used to analyse classifications and present themes (patterns) that relate to the data (Boyatzis, 1998). Miles and Huberman (1994) contend that this can be done by coding and categorizing data into themes. The process includes coding, categorisation and noting patterns in order to provide a relationship between the variables and factors in order to create a reasonable and logical chain of evidence. In relation to the current study and the data collected for all my research questions, I categorized the data into themes. I coded the various interviews conducted with graduate students from all the four (4) departments. I noted the issues that run through the interviews and the structured questions and categorized them under various themes. I used the inductive type of thematic analysis as suggested

by Braun and Clark (2006) where the researcher does not fit the data into any form of preconceived analysis or pre-existing coding frame. I further interpreted the findings using theories to draw meanings from responses from informants. Direct quotes were also used to support the discussions and interpretations.

3.6.2 Descriptive Statistics

According to Klazema (2004) descriptive statistics involves gathering data that describe events by the use of visual aids such as graphs and chats to aid the reader understand the data distribution. Knupfer and McLellan (1996) posit that descriptive statistics may be qualitative or quantitative.

However, in qualitative research, Knupfer and McLellan (1996) are of the view that descriptive statistical tools are employed to reduce data into manageable form, especially in cases where the raw data gathered are large and there is the need to establish patterns of occurrence and distribution such as this study.

The data from the study, were descriptively represented. I used descriptive statistics as a way of describing the features of the data in my study by outlining the data with graphics to illustrate the data. This concurs Becker (1990)'s assertion that advocated for representing figures in a more graphical manner to aid interpretation. The data from the study, were descriptively represented. I used descriptive statistics as a way of describing the features of the data in my study by outlining the data with graphics to illustrate the data. This concurs Becker (1990)'s assertion that advocated for representing figures in a more graphical manner to aid interpretation. As a result, this study examines the phenomenon of digital inequality as a consequence of the degree of usage of new media technology by graduate student used descriptive data in the form of tables, infograph and bar graphs to represent data gathered from conducting structured questionnaire survey among graduate students of the four departments in the Faculty of Foreign Languages Education and Communication Education. Patterns of observations were noted, categorized, tallied and represented on the tables and graphs using the Statistical Package for Social Sciences (SPSS) software to outline the data with graphics. The researcher used comparative frequency distribution tables. The comparative frequency distribution tables were used to compare data from graduate students belonging to the four (4) departments in their usage of new media technology. This was to ensure comparative

descriptive analysis of how students in the four department in the faculty are using new media for information seeking and dissemination. The same data was also represented on bar graphs to provide a pictorial view of the compared frequencies. In all, the frequency tables contained categories, frequencies and percentages.

3.7 Ethical issues

Ethical principles must be adhered to in any kind of research in order to reduce or avoid harm altogether (Mashud, 20017). In that, anyone involved in the research procedure must unanimously strike a balance between risks and benefits. Halai (2006) concurs that good research is a moral and ethical task and the researcher should be concerned about ensuring that the interests of a study's participants are not compromised in any way. In tandem with this, Halai (2006) postulates three critical ethical issues researchers must observe in the course of their study. They are informed and voluntary consent; confidentiality of information shared; and anonymity of research participants and no harm to participants. The current study made a great attempt at complying with these ethical principles in order to ensure high standards. For the informed and voluntary consent, the researcher informed the participants in the various departments about the purpose of the study. This was done, through the submission of introductory letters for approval to collect data. The participants were made aware of the fact that a google form which constitute research

question three (3) would be sent to them to complete through their emails and whatsapp and so they were informed and they voluntary provided their details to enable the researcher carried out the study. The participants in the four departments were notified that the study is purely for academic purposes and that participation was voluntary. Participants were also furnished with soft copies of the interview guide for their perusal ahead of the scheduled interviews. participants were also informed that the interview would be recorded on tapes. The tapes were played back to participants to ascertain the information they had provided.

3.8 Summary

This chapter provides a detailed process and procedure for data collection and analysis. The study, which is qualitative, is a single case study of four departments in the Faculty of Foreign Languages Education and Communication. The data collection instrument used was interview. The information collected were analysed using thematic and descriptive methods while key ethical issues related to the study were presented. The chapter that follows presents an analysis of the data gathered and discusses the findings.

CHAPTER FOUR

FINDINGS AND DISCUSSIONS

4.0 Introduction

This study set out to investigate the factors that account for the use of new media technology for information seeking and dissemination of the four department in the faculty of Foreign Languages Education and Communication – French, English, Applied Linguistics and Communication and Media Studies. It also examines the issue of digital inequalities arising out of the usage of new media technology. This chapter discusses the findings of the study, using the methods specified in the previous chapter. The study combined descriptive and thematic analysis to discuss the data gathered. Along with the relevant theories and related literature, factors that account for the use of new media by students in the Departments of French, English, Applied Linguistics and Communication and Media Studies emerged. The researcher used specific codes to label participants for the purposes of ensuring participants' anonymity. The following are the codes for each participant: R1E (Respondent 1, English Department); R2E (Respondent 2, English Department); R3E (Respondent 3, English Department); R1F (Respondent 1, French Department); R2F (Respondent 2, French Department); R3F (Respondent 3, French); R1L (Respondent 1,

Applied Linguistics); R2L (Respondent 2, Applied Linguistics); R3L (Respondent 3, Applied Linguistics); R1C (Respondent 1, Communication Studies); R2C (Respondent 2, Communication Studies); R3C (Respondent 3, Communication Studies).

The research questions that guided data collection and analysis are:

RQ1. What are the factors that account for the use of new media technology by graduate students in the Faculty of Foreign Languages Education and Communication?

RQ2. How does the issue of usage of new media technology account for the phenomenon of digital inequality among graduate students in the Faculty of Foreign Languages Education and Communication?

RQ3. How do the cohort of graduate students belonging to each department in the Faculty of Foreign Languages Education and Communication rank in their usage of new media technology?

4.1 RQ1. What are the factors that account for the use of new media technology by graduate students in the Faculty of Foreign Languages Education and Communication?

The introduction of computers and the internet in the early 1990s brought about the greatest change in information dissemination in history (Guo-Ming, 2012). Guo-Ming (2012) is of the conviction that the change in the communication medium has significantly affected humans' perception of the media. The reachability of digital media can now extend to all people instead of limited audience (Harvey, 1990).

Chen (2007) notes that the impact of digital or new media technology on human society is demonstrated in the aspects of cognition, social effect, and a new form of aesthetics. Cognitively, new media influences the way people use media. Socially, it is allowing audiences to access and create messages they wish to produce (Olason & Pollard, 2004). On the other hand, visually, new media brings a new form of appealing view such as "interactivity, manipulation, and the repurposing of content across media and deliberately creating a virtual experience, and sample as a means of generating new content" (Chen, 2007, p.95). As a result, this research question sought to investigate the factors that account for the use of new media platforms for information seeking and dissemination purposes in the sampled departments - French, English, Applied Linguistics and Communication and Media Studies. The responses from participants were categorized into themes.

4.1.1 Technological factors

Technological factors are some of the characteristics to consider in usage of new media technology. These factors include the *efficiency, familiarity, ubiquity and interactivity* of the media.

Interactivity

The study revealed that graduate students of the four departments: French, English, Applied Linguistics and Communication and Media Studies, use new media technologies because the technology allows them to interact with the interface. Respondent 2 from Applied Linguistics (R2L) provides an example of the interactive nature of new media which allows students to connect with other students and those in the same course in the following words:

> *I use Facebook to stay in touch with course mates and build professional relationships…I use my timeline and I get instant feedback on the information I want (*R2L).

This interactivity is fostered by the instantaneous characteristics of new media notifications; this allows students to keep themselves up to date with what is happening. A respondent from Communication and Media Studies (R1C) also spells out how one gets notified instantaneously:

> *You can choose to be notified when there's anything new shared, so you do not miss any information…the notification sometimes pops on the phone screen* (R1C).

It was also revealed that the features of new media as opposed to traditional media which lacks this interactivity software due to the static nature of

traditional media's access to information. Respondent 1 of French Department explained that:

> *Though we get information from TV, I do not think…you can interact as quickly as Facebook or WhatsApp (Personal interview, 2019).*

Familiarity

The data revealed that students at the graduate school were already familiar with some new media technologies, especially social media before enrolling in the university. They use social media to contact their friends and classmates. A respondent from the English Department (R2E) explains:

> *I've been using social media especially Facebook before I entered the university…most of my friends and classmates use Facebook" (*R2E).

Similarly, Respondent 3 from Applied Linguistics Department (R3L) also indicated that:

> *"I'm acquainted with WhatsApp and use it…I participate in WhatsApp groups of my class"* (R3L).

The reason is that they do not have to learn anything new before being able to use social media. This was revealed by Respondent 3 of Communication and Media Studies R3C revealed:

> *"I'll rather use social network that I already know, I do not have to learn anything new" (*R3C*)*

It was revealed that graduate students found it easy retrieving information online. Respondent 3 Applied Linguistics R3L stated that:

> *"It is easy to type out a message rather than like…telling it to someone else and so on" (*R3L).

Efficiency

It was found that new media is useful for interaction because it allowed students to work in groups without physically meeting and keeping others posted with progress. Respondent 1 French R1F explained:

> *"Facebook or WhatsApp messenger applications are more convenient to work in groups…without having to meet" (*R1F*).*

New media is useful, for instance, if for some reason, it is difficult for group members to meet in-person for discussion on an assignment, the effectiveness of new media for collaboration affords students the opportunity to form groups online. A respondent from English R2E indicated:

> *"Sometimes it is very difficult to meet your group individually due to the intensive nature of the studies…the only way is to form group on social media" (*R2E*).*

Students also indicated that social media is useful for instant messaging especially to coordinate group work than email. Respondent 3, French R3F revealed:

> *Less time spent on conversation…the instant messaging feature is effective for quick access to information... (*R3F*).*

Ubiquity

The students indicated that new media is readily available and easily accessible wherever you are. A respondent from Communication R2C indicated that:

> *It is accessible at all times and everywhere I find myself since i am having a phone with me all the time…that's the more reason why i use new media (R1E)*

There are built-in applications that generate instant notifications regardless of the location of the user such applications makes social media usage more ubiquitous. Respondent 1 from English R1E revealed:

> *When you have the new media apps already installed on your phone…it is accessible wherever you are (*R1E*).*

On the other hand, graduate students indicated that ubiquity is an attractive characteristic of new media and without it; they will not use it as often as they do. Respondent 1 of Communication R1C revealed:

> *It is accessible at all times since I am having a phone with me all the time…that's the more reason why I use new media (*R1C*).*

4.1.2 Social motivations

Social influence

Respondents reported that since everyone wants to be up to date on what is happening and nobody would like to feel left out, new media has become a trend and therefore influences everyone. A respondent from Applied Linguistics *(*R2L) noted that:

> *"New media puts all the pressure on you to use it also so that you do not feel left out or isolated" (*R3L*).*

It was found that when one does not fit into the trend, for example, using phones which are not compatible with apps, it is difficult to catch up. This is

because as graduate students, they want to get along with their course mates since some of the group works are coordinated through social media. Respondent 2 Communication R2C explained:

> *It is really difficult to get along…if you don't have a smart phone, now my entire friends are using it so am getting one soon (*R2C*).*

Graduate students from the four departments acknowledged that if someone is using a particular social media application, his or her acquaintances may be encouraged to use the same application in order to be able to contact the individual. Respondent 2 French R2F revealed:

> *"If everybody is using it then I should use it too otherwise I cannot reach them my course mates and be part of the class WhatsApp page (*R2F*).*

4.1.3 University Management Impact

Department sharing information

This sub-factor was evident in all the interviews. One student stated that the department acts as a mediator between the university management and the students. Where information such as up-coming university events are distributed to students on the department's social media pages. Respondent from French R3F indicated:

> *In our department, we have a social media page managed by the Administrator of the department…he publishes the up-coming events of the department such as Master thesis defense and public lecture among others (*R3F*).*

The study revealed that their Department's social media page is interactive and they give useful information. Respondent 3 English R3E revealed:

> *Information shared on the department's Facebook page is relevant and important for their studies (*R3E*).*

4.1.4 Utilitarian factors

Collaboration

Interviewees indicated that using new media such as social media makes it easy for them to collaborate since they use Facebook and WhatsApp groups for group work and research. A respondent from Applied Linguistics, R1L, explained:

> *On Facebook, there is a Sudanese researchers' initiative which is a big group on Facebook where a lot of students from Ghana including myself who have interest in research and academia come together (R1L)*

Respondents also mentioned that Facebook Messenger, Viber, and WhatsApp are the social media tools commonly used for collaborations. Again, social media is used as brainstorming and idea generation platforms. Respondent 2 for English mentioned that:

> *You can post your thoughts and ideas of what to bring up during the meeting (R2E).*

Access to Information

A respondent from Communication, R3C, mentioned that websites such Google easily keeps her updated and helps her to get more knowledgeable

and information relating to her research and study area. She concluded by saying:

> *Google has become the main tool for me to get access to education material or articles (*R3C*).*

Similarly, respondent 1 Communication, R1C, also indicated that:

> *I was searching for something on PR and I found someone had shared on Facebook a link to a blog developed by student in Italy where scholarly articles are published (*R1C *).*

Interaction

Students believe that new media technology, especially, social media is designed to facilitate communication. A respondent from English, R2E, explain that:

> *I think given the name "social" and "media" it is the internet best means for people to communicate and interact (*R2E*).*

It is also considered as a communication means which is good to keep students connected. In a related response, a respondent from Communication, R3C, indicated that:

*It is the connection of the medium which enables communication…I use video chat on WhatsApp to socialize thereby building relationships with friends (*R3C).

Another, respondent described the medium as a virtual interaction medium:

> *It is a medium…to interact virtually with people who are distant away as if they are right in front of you (R2F).*

4.2.1 Technological Factors

The study shows that graduate students from the four departments in the Faculty of Foreign Languages Education and Communication consider the technological characteristics of a new media technology before usage. The data showed certain technological characteristics. These factors are *familiarity, ubiquity, efficiency* and *interactivity.* This confirms Mbodila et al.'s (2014) suggestion that familiarity with a technology results in its usage by users. Many of the respondents reported to have used new media tool before enrolling on the graduate program and, in essence, its suggest that new media can be used for studying in the classroom. Again, considering the fact that graduate students are naturally familiar with new media, graduate schools should use new media to complement the traditional classroom teaching and learning to make students comfortable.

The finding also suggested that ubiquity and interactivity are significant factors when it comes to new media usage. Respondent indicated that these features make them readily use new media. This finding is consistent with Osatuyi & Passerini, (2016) who stated that new media technology has become readily available and accessible. As a result, it has created an environment where graduate students can ask quick questions and also make clarifications. This was confirmed by respondents that new media provides applications and has features for mobile devices which allows them to get instant notifications, regardless of their location, provided they had internet

connection. As suggested by Osatuyi and Passerini (2016), the ubiquity and the high interactivity of new media enables or fosters shared mental models among students and positively impact their academic performance. Kietzmann et al. (2011) avers that, to engage in real-time – users of a platforms should offer a presence or status line indicator through which users can contact each other and interact. Therefore, the ubiquitous and the interactive nature of new media affords the presence where users can contact in real time everywhere.

Theoretically, the findings are consistent with Performance expectancy, a key construct of the Unified Theory of Acceptance and Use of Technology (UTAUT) by Ventakesh et al. (2003). Performance expectancy is the degree to which an individual believes that using a system will help him or her to attain gains in job performance. For the four departments - French, English, Applied Linguistics and Communication they are motivated to use new media technology because, the technological characteristics help to enhance their output in the classroom.

4.2.2 Social Motivation

The findings confirmed that social influence accounts for graduate students' desire to use new media. Respondents stated that, they were attracted to new media because they do not want to be isolated from especially academic groups and want to be up to date with their course mates. This finding is

consistent with Rosli et al. (2016) who found that social influence has an effect on students' motivation to use new media. In effect, we found that graduates use new media frequently for academic purposes. For instance, many of the respondents reported the creation of private social media (WhatsApp) groups for group works and collaboration. It was also evident that individuals did not have an alternative than to use the same social media application used by their group. Also, the finding suggested that if a student does not comply with *social media requirements* of the group, they find it difficult to get along with members of the group and be up to date. This means that the main influence of the use of some of the new and social media that respondents used was their class groups and they use those media because they want to be up to date with whatever information is being shared on those platforms which may be related to their academic progress.

It was found that social motivation has a strong influence on graduate students' decision of using new media because it allows them to turn formal relations into friendships. This encourages emergence of academic solidarity, consistent with Salehan et al.'s (2017) suggestion that social media strengthens the linkages of social connections. Graduate students saw an opportunity for academic collaboration in the future as a result of the strengthening of the social connections because during group work, when they are allowed to form groups, they choose to work with their close friends.

These findings are consistent with the Social influence construct of the Unified Theory of Acceptance and Use of Technology (UTAUT) posited by Ventakesh et al. (2003). Social influence is the level to which an individual comprehends that an important others think he or she should use the same system as the individual is using. The four Departments – French, English, Applied Linguistics and Communication and Media Studies - students are motivated to use new media technology because of the social connection that new media provides.

4.2.3 University Management Impact

The study found that graduate students were motivated to use new media technology because their department share information through them and lecturers use the medium to interact with them. This finding is in line with Oppici et al., (2014)'s findings that new media technology usage is influential in academic environment. Again, the findings revealed that, some departments have a department Facebook, WhatsApp, Twitter among others, where news, updates and upcoming events are shared to make students follow the page and keep themselves updated with happenings in the department. More specifically, these departments use social media to post Conferences, Thesis defense sessions, and Department Week Celebrations. However, despite this, some graduate students were of the view that their departments were not making full use of their social media pages and opine

that they can do better. This is because, for instance, when they go on the department's Facebook page and ask questions, they do not get answers in real-time and therefore their department's pages are not interactive enough. The findings is consistent with the Performance expectancy construct of the Unified Theory of Acceptance and Use of Technology (UTAUT) posited by Ventakesh et. al. (2003). Performance expectancy is the degree to which an individual believes that using the system will help him or her to attain gains in job performance. For the four departments – French, English, Applied Linguistics and Communication - they are motivated to use new media technology generally and for academic work because the university supports its use and their Departments share information on the medium to keep student updated on happenings in the Department. Students are encouraged to follow the department platforms on social media to help enhance their studies.

4.2.4 Utilitarian factors

The study found collaboration as a utility motivation to use new media. Due to the collaborative nature of new media websites, they are suitable for group base tasks. The findings show that WhatsApp groups are not only used within one class of students. For example, some WhatsApp groups are made up of graduate students at different levels, junior level students engaged senior level students as a way to get advice. This conveys the understanding

of social media as collaborative and its contribution to the academic experience of students. It was further found that Facebook Messenger and WhatsApp are the most commonly used social media applications when it comes to social media collaboration as suggested by Nandez & Borrego (2013).

The findings also revealed that graduate students used WhatsApp groups to undertake group work and assignments in line with Nandez and Borrego (2013) and Guto (2017)'s claim that social media could be employed by students to solve and discuss academic work.

For the purposes of academic work, higher education students generally source and consume information. The study found that students source for direct or indirect information on new media platforms. For instance, a respondent from Communication and Media Studies revealed "I was searching for something on PR and I found someone has a link to a blog developed by one student in Italy". This is direct information seeking and it is in line with Alhazim and Rahman's (2014) claim that social media is being used by student because of its valuable content.

New media has also created a virtual world where students easily interact and communicate with each other without being physically present. Al-Zedjali et al. (2014) claimed that new media is suitable for scholarly communication and academic interaction. Kietzmann et al. (2011) aver that the utilitarian motivation factor of interaction is directly related to the

technological factor, because it is the features of the new media that allow communication in the first place.

The findings are consistent with the Performance expectancy construct of the Unified Theory of Acceptance and Use of Technology (UTAUT) by Ventakesh et al. (2003). Performance expectancy is the degree to which an individual believes that using the system will help him or her to attain gains in job performance. For the four departments – French, English, Applied Linguistics and Communication and Media Studies- they are motivated to use new media technology because of the usefulness of the technology and its ability to form groups to improve the performance of group based task. Graduate students use new media technology because it enhances their academic work since they collaborate through it to undertake group work among others.

4.3.0 RQ2. How does the issue of usage of new media technology account for the phenomenon of digital inequality among graduate students in the Faculty of Foreign Languages Education and Communication?

Responses from participants were categorized into themes based on the forms of inequality in technology use as captured in definitions provided by scholars such as Pearce and Rice (2013); Jones and Fox (2009); Helsper and

Eynon (2009); and van Dijk (2005). The forms are *socio-economic (class/status), race, age* and *skill.*

4.3.1 Socioeconomic inequality

It was found that some graduate students in the Departments of French, English, Communication and Applied Linguistics are not socioeconomically disadvantaged in relation to the type of technology, specifically hardware, software and online activities such as content. The issue of socioeconomic status ranges from quality of technology related resources such as hardware and software, whose usage implication is the use of different devices and extent of usage:

> *I use an iPhone so I buy every app that I use on the phone. Unlike android phones which work with free app on play store and sometimes already installed apps (R1L).*

Similarly, respondent 3 from the English Department also provides a classic case on different activities and device in relation to content:

> *I use Facebook, WhatsApp, Twitter and Instagram…but I spend a lot of time on Twitter and Instagram specifically because of my business. I have a lot of followers whom I sell to online… (R2C).*

On the other hand, a respondent from the Communication and Media Studies Department made a profound revelation about the type of apps used and the engagement:

> *I use Facebook, WhatsApp, Twitter and Instagram. But I spend a lot of time on Twitter and Instagram because of my*

> *followers…I spend say 7 hours a day on these two accounts. I use them for social interaction and personal development. A lot of post I make relate to my area of specialisation (R2C).*

This confirms DiMaggio et. al. (2004) who noted that socioeconomic status influences the level and quality of technology related resources such as hardware, software, and skill. And it is similar to Wei (2009) who also found that users with higher socioeconomic status tend to use blog in a more informational way, in the form of filter blogs, and have stronger social influence than those socio-economically disadvantaged. The kinds of devices used by respondents affirm Zillien (2006) who states that people with high status use better technical equipment in digital technology usage. An iPhone for instance is an expensive technology and assumed to be superior in terms of quality, therefore, anyone who is able to afford it is definitely socioeconomically advantaged rather than disadvantaged. The ways respondents use these technologies are also dependent on their socioeconomic status. This is because those who have higher socioeconomic status have more prospect when they go online and have more sophisticated and comprehensive use of the internet than those socioeconomically disadvantaged. It is not a problem therefore that the underprivileged use the Internet for amusement and communication alone.

4.3.2 Skill inequality

This has to do with the problem of lack of skills to manage and the capacity to work with hardware and software. DiMaggio et al. (2004) aver that access and ability are two unequal issues within the digital divide. The study found lack of operational skill such as the ability to find, select and process information in specific new media technology using the internet. A respondent expressed lack of operational skills for some of the new media platforms:

> *I was born before computer so I am now familiarising myself with the new media…especially WhatsApp due to my class WhatsApp group page... It's really challenging. Sometimes I hear the information was put on the class page but I can't see it…" (R2C)*

This finding appears to support DiMaggio et al.'s (2004) claim that skills can affect web use and user benefit from a medium. This is because users who do not have the skill or ability view the internet as overwhelming with too much information and may also find navigation too difficult (Zulman, Kirch, Zheng & Ann, 2011). A respondent from Communication and Media Studies who has the skills to use Instagram in a more expressive way contended that, it is beneficial for marketing:

> *Aside schooling, I am also a musician…I use both Facebook and Instagram a lot. I practically live there. I have linked both accounts. If I post on Facebook…it automatically appears on Instagram, where I have most followers. Using Instagram has also given me a lot of business opportunities (R1C).*

This finding is consistent with Correa (2015) who stated that "more educated and skilful individuals tend to use social media in more expressive and beneficial ways than lower educated and less skilful people" (p.287). This has expanded how they incorporate the internet into their daily lives. Similarly, a respondent (R2L) also revealed that:

> *I use social media especially as a communication tool to disseminate information (R2L).*

4.3.3 Age inequality

Different online activities among graduate students especially use of new media technology was inconsistent among age groups. The findings revealed that the hours spent on new media especially social media among older (between the ages of 25 to 35years) respondents were less than those of the younger (between the ages of 36 to 50years) respondents. The older respondents also had fewer social media accounts. Some respondents revealed that:

> *I started using new media platforms way before I came to the University…I started using Facebook since 2011. All my friends are also on Facebook so these days there is no need of meeting physically. I think its great to be born in this era… (R1C).*

Similarly, another respondent revealed:

> *I have never been on any of these platforms…I only started using it during my graduate programme. Currently, I am only trying my hands with their WhatsApp…sometimes I have to ask the young ones to come and help me use Whatsapp (R2F).*

On the other hand, some of the younger users like to use some new media tools compared to others:

> *I prefer instant messaging and internet calls. I use Facebook Messenger, WhatsApp Messenger, Gmail and all a lot of the time to make calls. Most of my contacts are on there and so I find it convenient to use (R2L).*

The internet use patterns of the older users (between the ages of 36 to 50years) differ from their younger (between the ages of 25 t0 35years) peers. While younger users have extensive experience, the older users tended to have narrow experiences. Haight, Quan-Haase, and Corbett (2014) aver that older users are less likely to have social media accounts though they have started using social networking sites. This is because when they use social media tools such as Facebook, they share less and are less emotional in their interaction unlike their younger peers who share a lot and sometimes open up a lot about themselves in their interaction (Van House, 2015).

A younger respondent revealed how easy it is to use new media tools for online shopping:

> *I spend a lot of time online aside studies and searching for research information, I search for products and services online because there are a lot of information available online. I find online shopping convenient and easy to go about without having to go out to the shops physically (R1E).*

But an older adult revealed using online shopping much less:

> *I have shopped online before but I don't do much because I search for fewer products because of the overwhelming nature of information that I usually come across online. So am cautious (R2C).*

The above findings are consistent with Sorce, Perotti and Warrick's (2005) assertion that online shoppers who are older adults tend to search for fewer products but their younger counterparts search for more although in the end they purchased the same amount. This presupposes that the age inequality is a phenomenon that is experienced among the older respondents in the study because of their low rate of usage and they being overwhelmed by the amount of information provided online.

4.4.0 RQ3. How do the cohort of graduate students belonging to each department in the Faculty of Foreign Languages Education and Communication rank in their usage of new media technology?

This research question sought to rank the usage of new media technologies among students in the four Departments. Responses from participants were categorized into themes based on the media technology, devices and forms of usage of new media technologies.

4.4.1 Type of new media technology Used

Table 1: Frequency Distribution of Media Technology Used by Participants (Graduate Students) of the Four Departments.

	New Media				
Departments	**Email**	**Blog**	**Social Media**	**Wiki**	**Website**
Communication and Media Studies	4	2	4	2	3
App. Linguistics	4	1	3	2	2
French	4	1	3	1	2
English	3	0	3	1	0
Total	**15**	**4**	**13**	**6**	**7**
Percentage (%)	**93.75**	**25**	**81.25**	**37.5**	**43.75**

Source: Field Data, 2019

Table 1 shows a ranking of the types of new media technology used by students from the Departments of English, French, Communication and Media Studies and Applied Linguistics for information seeking and dissemination. This is a multiple response question and as such respondents were asked to choose as many options as it applied to them. The result therefore is based on responses. It was found that cumulatively, Email was the most dominant new media technology used by respondents. Overall

93.75% of responses attributed to Email, a little over eighty percent (81.25%) use Social media, 43.75% Website, and 37.5% Wiki. The use of Blogs registered the least usage of less than ten percent (25%).

Ranking their usage in the Departments specifically, all four (4) respondents representing 100% of the respondents in the Communication and Media Studies, French and Applied Linguistics respectively used Emails while only 3 respondents representing 75% of the respondents in the English Department indicated they use Email.

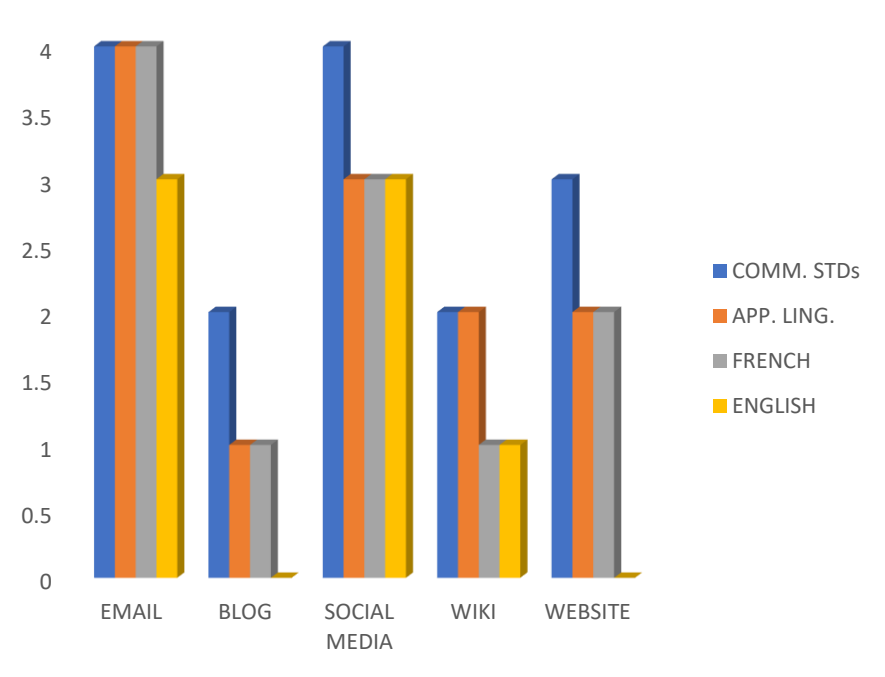
Social media (Facebook, Twitter and Instagram) is used by all four (4) respondents representing 100% of the responses from the Department of Communication and Media Studies but only 3 respondents each representing 75% of the responses from the three other Departments use social media.

Unlike Email and Social media which recorded some departments having all four respondents using them representing 100% usage, Website use was the next highest representing 75% of respondent in the Department Communication and Media Studies. French and Applied Linguistics had 2 users each representing 50% of the respondents respectively with no respondent in English indicating they used Website.

Wiki is used by two (2) respondents each representing 50% of responses from the Communication and Media Studies and Applied Linguistics Departments respectively. Only 1 respondent each representing 25% of the responses from the French and English Departments indicated they used

Wiki for information seeking and dissemination. Consistent with the overall usage of new media technology among Graduate students, Blog received the least usage among the four departments in the Faculty of Foreign Languages Education and Communication. Similar to the usage of all the various new media technology, Communication and Media Studies had the highest number of Blog users (2) representing 50% of the respondents, followed by French and Applied Linguistics with 1 user each representing 25% of the respondents and English Department recording no users. The data is illustrated in the bar graph below:

Figure 1: Ranking Frequency Distribution of New Media Technology Used By Participant (Graduate Students) of the Four Departments



4.4.2 Types of Devices Used

Table 2: Ranking Frequency Distribution of Device Used By The (Participants) Graduate Students Of The Four Departments.

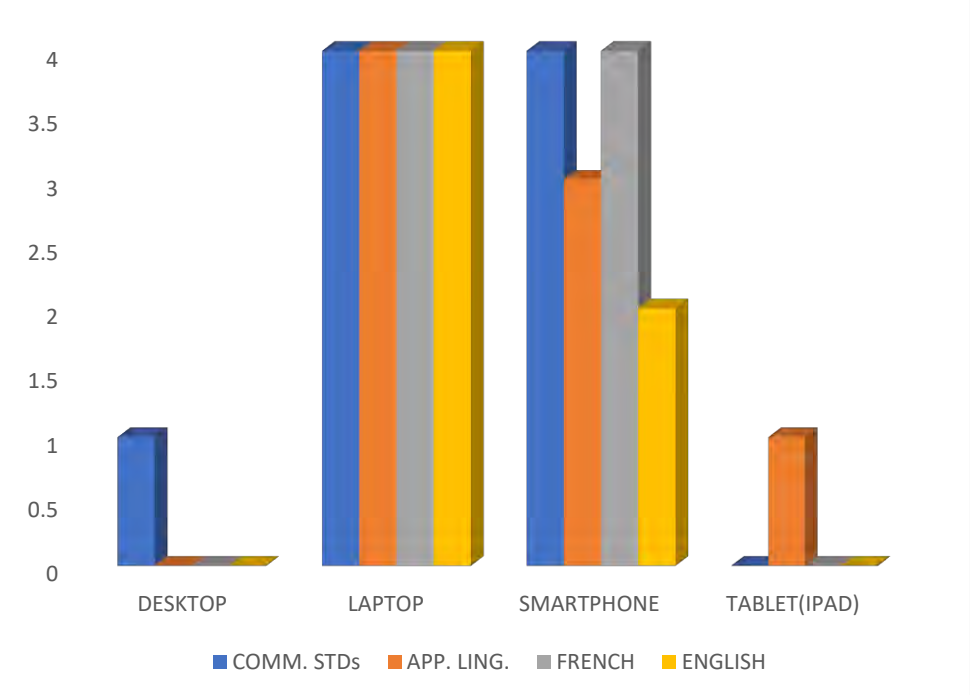
	Device Used			
Departments	**Desktop**	**Laptop**	**Smart Phone**	**Tablet (iPad)**
Communication and Media Studies	1	4	4	0
App. Linguistics	0	4	3	1
French	0	4	4	0
English	0	4	2	0
Total	**1**	**16**	**13**	**1**
Percentage (%)	**6.25**	**100**	**81.25**	**6.25**

Source: Field Data, 2019

Table 2 presents results of the devices used in accessing new media technology by Graduates students of Faculty of Foreign Languages Education and Communication. It is also a multiple response question. All the respondents in the four departments use Laptops which constitute 100% usage of laptop by all the participants, Smartphones use constitute 100% usage by all the respondents in French and Communication and Media Studies while only 3 respondents from Applied Linguistics representing 75% of usage of Smartphones while 2 respondents which constitute 50% of Smartphone use were from the English Department. One respondent from

the Communication and Media Studies Department which constitute 25% uses Desktop. Tablet (iPad) is also used by only 1 respondent representing 25% of Tablet (iPad) use by students of the Applied Linguistics Department. In all, for the Faculty Cumulatively Laptop usage was the highest recording 100%, followed by Smartphone with 81.25% usage. Desktop and Tablet were the least used devices with 6.25% respectively. The data is illustrated in the bar graph below:

Figure 2: Ranking Frequency Distribution of Device Used by The Graduate Students Of The Four Departments



4.4.3 Forms of New Media Technology Usage

Table 3: Ranking Frequency Distribution of Forms of Usage By Participants (Graduate Students) of the Four Department.

	Forms of Usage					
Dept.	**Research (Study)**	**Social Interaction (social Media)**	**Blogging**	**Interpersonal Communication**	**Commercial Transaction**	**Gaming**
Com. Stds.	4	4	0	4	1	1
App. Ling.	4	2	1	2	1	0
French	3	2	0	2	0	1
English	4	2	0	1	1	0
Total	**15**	**10**	**1**	**9**	**3**	**2**
Percentage	**93.75**	**62.5**	**6.25**	**56.25**	**18.75**	**12.5**

Source: Field Data, 2019

Table 3 presents results of the forms of new media technology usage by Graduates of Faculty of Foreign Languages Education and Communication. It is a multiple response question.

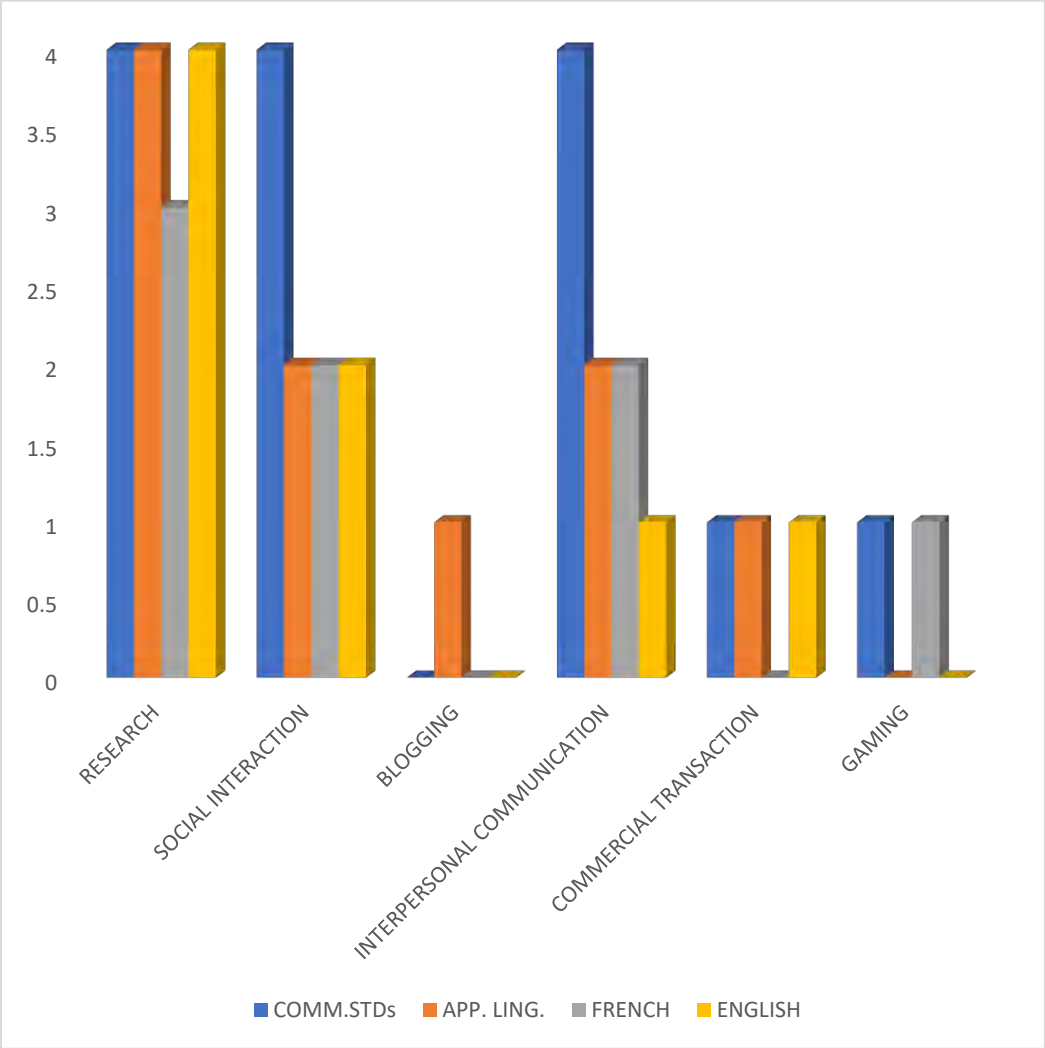
In all, for the Faculty Cumulatively the use of new media technology for research purposes was most dominant recording 93.75%, followed by social interaction with 62.5% and interpersonal communication 56.25%. Commercial transaction registered 18.75% while a little over ten percent which constitute 12.5% of respondents uses new media technologies for gaming. The least form of new media technology usage among Graduate students is Blogging which recorded 6.25%.

For research purposes all four (4) respondents each from three departments representing 100% indicated they use new media technologies for research while 3 respondents which constitute 75% of participants from French Department had indicated they use new media technologies for research. All the respondents in Communication and Media Studies Department indicated they use new media technologies for social interaction while English, French and Applied Linguistics had 2 respondents indicating they used new media technologies for social interaction purposes. For interpersonal communication purposes it usage, was found that all the respondents in the Communication and Media Studies Department used new media technologies for interpersonal communication. French and Applied Linguistics Departments had 2 respondents indicating they used new media technologies for interpersonal Communication while English Department had only 1 respondent who uses new media technologies for interpersonal Communication. English, Communication and Media Studies and Applied Linguistics had 1 respondent each indicating they used new media technologies for commercial transaction purposes. French Department however, had no respondent who uses new media technologies for commercial transaction.

For gaming purposes, it was found that Communication and Media Studies and French Departments had 1 respondent each who uses new media

technologies for gaming while English and Applied Linguistics Departments had no respondent who uses new media technologies for Gaming. Applied Linguistics Department had only 1 respondent who uses new media technologies for Blogging but, English, French and Communication and Media Studies Departments had no respondent who uses new media technologies for Blogging purposes. The data is illustrated in the bar graph below:

Figure 3: Ranking Frequency Distribution of Forms of Usage By Participants (Graduate Students) of the Four Department.



This implies that most of the graduate students of the four departments use new media technology for mainly *research, communication and social interaction (social media).* What this means is that cumulatively, all the four department in the faculty appropriate new media technologies on a larger

scale to disseminate and seek information. This revelation is in tandem with the Technology Appropriation Model (TAM) by Mackay and Gillespie (1992) which states that appropriation does not precisely relate to the features of a technology, but the structures a technology brings or changes as individuals use it.

4.5 Summary

This chapter presented the findings and discussions of the research questions. The study sought to investigate the factors that account for the use of new media technology, examine the phenomenon of digital inequality as a consequence of the degree of usage and conducted a ranking comparative analysis of the usage of new media technology among graduate students in the Faculty of Foreign Language Education and Communication. The study found that graduate students consider Technological factors, Social motivations and Utilitarian factors to use a new media technology. This finding is in line with Unified Theory of Acceptance and Use of Technology (UTAUT) by Venkatesh, Morris, Davis and Davis (2003) which stipulates motivations to accept and use a range of technologies. While this is the case, it appears that the four departments are in similar but varied ways using new media technology and their applications for information seeking and dissemination. While Communication and Media Studies students appear to appropriate new media technology for a variety of activities such as research,

blogging, communication, commercial transaction and social interaction (social media), Applied Linguistics and French departments appear to restrict themselves to mainly research, communication and social interaction (social media). However, English department appears to do little in terms of appropriating new media technology. Again, Communication Studies students appears to have moved beyond the use Smart Phone and Laptop and use Desktop and Tablet as compared to the Applied Linguistics, English, and French departments to broaden the scope of information seeking dissemination.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a summary of all the important issues that were raised in the study, draws conclusions and makes recommendations on digital inequality and new media technology use. The chapter also provides suggestions for further research.

5.2 Summary

The study sought to investigate the factors that account for graduate students in the Faculty of Foreign Languages Education and Communication use of new media technology as well as examine the phenomenon of digital inequality as a consequence of usage and conduct a comparative analysis of the usage of new media technology for information seeking and dissemination purposes. Data was drawn specifically from interviews and through survey questionnaire. The Unified Theory of Acceptance and Use of Technology (UTAUT) and the Technology Appropriation Model (TaM) formed the theoretical foundation and undertone of the study and particularly helped to properly contextualize the research.

The importance of the study was defined as it will add up to the limited literature on digital inequality and new media technology use and will serve as a stepping stone for future researchers who would delve more into the new

media technology usage and digital inequality on various platforms. The study was limited to graduate students only and four departments – English, French, Applied Linguistics and Communication Studies. The study further reviewed relevant literature on digital inequality (divide), digital technology, emergence of new media, new media usage in higher education, types new media tools used in higher education and digital inequality and new media technology.

Through a qualitative case study and through interviews and qualitative survey questionnaire, the study investigated the factors that motivate them to use new media technology and the degree of usage as a consequence of digital inequality as well as compare their usage. These data collection method and instrument gave me the opportunity to examine deeper into the phenomenon in a natural setting. Thematic analysis was adopted in analysing the data that was collected.

5.3 Conclusion

The objectives of the study were to investigate what account for graduate students use of new media technology for information seeking and dissemination as well as examine the phenomenon of digital inequality as a consequence of usage and conduct a comparative ranking of the of usage of new media technology among graduate students in the four departments. The following conclusions were drawn based on the outcome of the study.

The first research question which aimed at investigating what account for graduate students use of new media technology for information seeking and dissemination revealed that graduate students consider Technological factors, Social motivations and Utilitarian factors to use a new media technology It was established that all the graduate students consider these factors before using new media technology because it is easy to use and also as graduate students they are familiar with new media technologies. They are also motivated to use it for academic purposes and want to be up to date with information. Also they are motivated to use new media technologies because their department use it to share information and is supported by the university. However, the students also think their departments are not making full use of the technology.

Relating research question one with Unified Theory of Acceptance and Use of Technology (UTAUT) by Venkatesh, Morris, Davis and Davis (2003) which stipulates motivations to accept and use a range of technologies. One of the constructs of the theory Social influence revealed that the four departments – French, English, Applied Linguistics and Communication students are motivated to use new media technology because of the social connection that the system provides. Another construct Performance expectancy revealed that they are motivated to use new media technology for academic work because the university supports its use.

The research question two examined the phenomenon of digital inequality as a consequence of the degree of usage of new media technology. Out of the forms digital inequality as presented by Pearce and Rice (2013); Jones & Fox (2009); Helsper & Eynon (2009); and van Dijk (2005), it was revealed that the usage of new media technology among graduate students account for the issue of digital inequality such as *socio-economic (class/status), race, age* and *skill*. With the socio-economic (class/status), it came up that graduate students in the four departments are not socioeconomically disadvantaged in relation to the type of technology, specifically hardware and software and online activities they engage with such as content. This finding from the research were in tandem with Zillien (2006) who states that people with high status use better technical equipment in digital technology usage. Furthemore, the skill inequality also revealed lack of operational skill and the ability to find, select and process information on specific new media technology using the internet among some of the graduate students but those who are skillful tend to use new media technology in a more expressive and beneficial ways. Another form of digital inequality that came up in the research was age inequality among younger and older graduate students; the study revealed that the hours spent on new media technology especially social media among older graduate students were less than the hours spent by the younger graduate students. Also, while younger users have extensive experience, the older users tended to have narrow experiences. This is

because age inequality is a phenomenon that is experienced among the older graduate students because of their low rate of usage of new media technology and they being overwhelmed by the amount of information provided online. Finally, research question three conducted a comparative analysis of the usage of new media technology among the graduate students in the four departments. When the respondents completed the online survey, it emerged that the four departments are in similar but varied ways using new media technology and their applications for information seeking and dissemination. While Communication Studies students appears to appropriate new media technologies for a variety of activities such as research, blogging, communication, commercial transaction and social interaction (social media), Applied Linguistics and French departments appears to restrict itself to mainly research, personal communication and social interaction (social media), however, English department appears to do little in terms of appropriating new media technology. Again, Communication Studies students appears to have moved beyond the use of Smart Phone and Laptop and use Desktop and Tablet as compared to the Applied Linguistics, English, and French departments to broaden the scope of information seeking dissemination.

5.4 Limitations

The goal to meet the deadlines of the research placed some limitations on the study. I noticed that some participants were not available because after the first year which is course work for most graduate students, for the second year, they are usually not available on campus so I had to reduce the sample size from thirty-two to sixteen. I also had a lot of difficulties reaching the graduate students to interview but with much effort, I was able to interview all the sixteen participants. Due to time constraint on my part, I had to make do with phone interviews with some participants who had agreed earlier to grant interview but due to other circumstances they were unavailable so I had the opportunity to conduct a phone interview.

Though, data were collected from all the sixteen graduate students, the face-to-face interview of some of the participants allowed for more follows questions due to the non-verbal cues portrayed by most of the participant unlike those interviewed on phone.

These limitations did not, however, affect the credibility and reliability of the study but they rather gave implications for further studies to be conducted in the area. Nonetheless, the researcher gathered enough data over the six-month period which provided useful information on what account for graduate students use of new media technology and the phenomenon of digital inequality as a consequence of degree of usage in information seeking and dissemination purposes.

Again, it was difficult getting literature on new media technology use among graduate students in Ghana and even within the African context. Most of the literature reviewed were situated within the Western context. This due to the fact that, generally, there have been minimal studies on graduate students and new media technology use within the African context. The researcher therefore situated much of the analysis within the framework of literature from the West. It is hoped that this study will contribute to the minimal literature on the use of new media technology among graduate students within the African and Ghanaian contexts.

5.5 Recommendation

The following recommendations are made based on the research questions and objectives, findings, discussions and conclusions that were derived from the study.

Departments in the faculty should make good use of new media technology owing to the university support factor that account for their use of new media. From the study, it came to light that some department are not making full use of their new media platforms as students are constantly online seeking information and other things. Though, some departments are harnessing the prospects of new media, others however, are not updating their department social media pages.

The study also recommends that graduate students who are older and have not adopted new media for information seeking should do so in order to broaden their scope to become active producers and consumers of online news content, dissemination and public engagement. It has become evident that new media has the potential to establish contact with lecturers and even hold lectures online and improve writing skills of students.

5.6 Suggestions for further studies

In view of the challenges I had while reviewing literature and collecting data for the study, I make the following suggestions for future researchers.

Future researchers should widen the period beyond six months, especially for the survey questionnaire. This will ensure data adequacy and help the researcher incorporate changing trends within the online space and how graduate students are adapting to these developments in their information seeking and dissemination processes.

A similar work can be done by taking a larger number thereby expanding the scope from a single case study to a multiple case study by including more faculties within the university and extending the period of study in order to get enough time to interview more students to gain detailed information on their motivations to use new media technology.

Again, future researchers may adopt the ethnographic approach to study how graduate students are using new media technology for information seeking

and dissemination. This approach will enable the researcher study new media practices within classroom, using a variety of methods such as focus group interviews, participant observation and cyber ethnography. It will enable the researcher better understand the new media culture and instructional technology within these contexts.

REFERENCES

Adzharuddin, N. A., Ramly, N. M., & Ismail, S. (2014). Do you want to get Healthier with Facebook?. *International Journal of Business, Humanities and Technology, 4(5).*

Agarwal, N. (2011). Collective learning: An integrated use of social media in learning environment In Social media tools and platforms in learning environments (pp. 37-51). Springer, Berlin, Heidelberg.

Allen, M. (2009). Tim O'Reilly and Web 2.0: The economics of memetic liberty and control. *Communication, Politics & Culture, 42(2), 6.*

Alejandro, J. (2010). Journalism in the age of social media. Reuters Institute Fellowship Paper, 5.

Alsmadi, I., & Alhami, I. (2015). Clustering and classification of email contents. *Journal of King Saud University-Computer and Information Sciences, 27(1), 46-57.*

Al Zadjali, Z. A., Bashir, H. A., & Maqrashi, A. A. (2014). Factors causing project cost overrun in the telecommunications industry in Oman. *International Journal of Information Technology Project Management (IJITPM),* 5(3), 84-95.

Amaratunga, D., Baldry, D., Sarshar, M., & Newton, R. (2002). Quantitative and qualitative research in the built environment: application of "mixed" research approach. Work study, 51(1), 17-31.

Anderson, C. M., & Martin, M. M. (1995). Communication motives of assertive and responsive communicators. *Communication Research Reports,* 12(2), 186-191.

Apeanti, W. O., & Danso, E. D. (2014). Students' use of social media in higher education in Ghana. *Innovative Journal,* 3(1), 3-9.

Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Management Science,* 35(8), 982-1003.

Braun, V. & Clarke, V. (2013). Successful qualitative research: A practical guide for beginners. London: Sage publications.

Beebe, S. A. (2007). What do communication trainers do? *Communication Education,* 56(2), 249-254.

Beebe, M. A. (2004). Impact of ICT revolution on the African academic landscape. In CODESRIA, *Conference on Electronic Publishing and Dissemination,* (pp.1–2). Dakar. Retrieve from https://www.codesria.org/IMG/pdf/

Benton Foundation (1998). Losing ground bit by bit: Low-Income Communities in the information age. Washington DC: Benton Foundation and National Urban League.

Bernard, H. R. (2002). Research methods in anthropology: Qualitative and quantitative methods (3rd ed.). CA. Alta Mira Press.

Boyd, D. M., & Ellison, N. B. (2007). Social network sites: Definition, history, and scholarship. *Journal of Computer-mediated Communication*, 13(1), 210-230.

Bosman, L., & Zagenczyk, T. (2011). Revitalize your teaching: Creative approaches to applying social media in the classroom. In Social media tools and platforms in learning environments (pp. 3-15). Springer, Berlin, Heidelberg.

Boyatzis, R. E. (1998). Transforming qualitative information: Thematic analysis and code development. Thousand Oaks, CA: Sage.

Chen, B., & Bryer, T. (2012). Investigating instructional strategies for using social media in formal and informal learning. *The International Review of Research in Open and Distributed Learning,* 13(1), 87-104.

Chen, G. M. (2007). Media (Literacy) education in the United States. *China Media Research,* 3(3), 2007, 87-103.

Chun, W.H.K and Keenan, T. (2006). New media, Old media: A history and theory reader. London: Routledge.

Cohen, L., Manion, L., & Morrison, K. (1994). Educational research methodology. Athens: Metaixmio.

Creswell, J. W. (2014). *Research Design Qualitative, Quantitative and Mixed Methods Approaches* (4th ed.). Thousand Oaks, CA: Sage Publications.

Daymon, C., & Holloway, I. (2010). Qualitative research methods in public relations and marketing communications. London: Routledge.

DeSanctis, G., & Poole, M. S. (1994). Capturing the complexity in advanced technology use: Adaptive structuration theory. *Organization Science,* 5(2), 121-147.

DiMaggio, P., Hargittai, E., Celeste, C., & Shafer, S. (2004). Digital inequality: From unequal access to differentiated us in social inequality (pp. 355-400), Russell Sage Foundation.

Drori, G. S., & Jang, Y. S. (2003). The global digital divide: A sociological assessment of trends and causes. *Social Science Computer Review,* 21(2), 144-161.

Evans, C., Hackney, R., Rauniar, R., Rawski, G., Yang, J., & Johnson, B. (2014). Technology acceptance model (TAM) and social media usage: an empirical study on Facebook. *Journal of Enterprise Information Management,*27(1), 6-30.

Ezeah, G. H., Asogwa, C. E., & Edogor, I. O. (2013). Social media use among students of universities in South-East Nigeria. IOSR *Journal of Humanities and Social Science,* 16(3), 23-32

Flew, T. (2010). Comparative communication research: Australian and New Zealand communication research in an international context. *Media International Australia,* 136(1), 5-12.

Foth, M., Klaebe, H. G., & Hearn, G. N. (2008). The role of new media and digital narratives in urban planning and community development. *Body, Space & Technology,* 7(2).

Gitelman, L., & Pingree, G. B. (2003). What's new about new media. *New media,* 1740-1915.

Glass, G. V., & Hopkins, K. D. (1984). Inferences about the difference between means. *Statistical methods in education and psychology*, 230-232.

Gordon, C. F., Juang, L. P., & Syed, M. (2007). Internet use and well-being among college students: Beyond frequency of use. *Journal of College Student Development,* 48(6), 674-688.

Grove, S. K., Burns, N., & Gray, J. R. (2013). The practice of nursing research. Appraisal, synthesis and generation of evidence (7th ed.).

St Louis: Elsevier Saunders.

Gunkel, D. J. (2003). Second thoughts: toward a critique of the digital divide. *New media & society,* 5(4), 499-522.

Guillén, M. F., & Suárez, S. L. (2005). Explaining the global digital divide: Economic, political and sociological drivers of cross-national Internet use. *Social Forces,* 84(2), 681-708.

Guo, Z., & Tan, F. B. (2007). Determining University Students' Motivations for Using Computer–Mediated Communication Technologies. In PACIS 2007 Proceedings, 28.

Gustafsson, J. (2017). Single case studies vs. multiple case studies: A comparative study. Los Angeles. Sage publication.

Habibu, T., Abdullah-Al-Mamun, M., & Clement, C. (2012). Difficulties faced by teachers in using ICT in teaching-learning at technical and higher educational institutions of Uganda. *International Journal of Engineering,* 1(7), 1-10.

Hagen, O. (2008). Seduced by their proactive image? On using auto communication to enhance CSR. *Corporate Reputation Review,* 11(2), 130-144.

Haight, M., Quan-Haase, A., & Corbett, B. A. (2014). Revisiting the digital divide in Canada: The impact of demographic factors on access to the internet, level of online activity, and social networking site usage. *Information, Communication & Society,* 17(4), 503-519.

Hamel, J., Dufour, S., & Fortin, D. (1993). Case study methods (Vol. 32). Sage.

Hancock, D. R., & Algozzine, B. (2006). Doing case study research: A practical guide for beginning researchers. Columbia University, NY: Teachers College.

Hancok, R. (2002). Constructivist methodologies in technology integration. *Tecnología Comunicación educativas,* 36, 19-30.

Hargittai, E., & Hinnant, A. (2008). Digital inequality: Differences in young adults' use of the Internet. *Communication research,* 35(5), 602-621.

Hargittai, E. (2010). Digital natives? Variation in internet skills and uses among members of the "next generation". *Sociological inquiry,* 80(1), 92-113.

Harvey, L. (1990). *Critical social research* (Vol. 21). Unwin Hyman.

Hindman, D. B. (2009). Mass media flow and differential distribution of politically disputed beliefs: The belief gap hypothesis. *Journalism & Mass Communication Quarterly,* 86(4), 790-808.

Hoffman, D. L., & Novak, T. P. (1998). Bridging the Digital Divide: The Impact of Race on Computer Access and Internet Use. *Journal of Science,* 280(5362), 390.

Hoffman, D. L., Novak, T. P., & Peralta, M. A. (1999). Information privacy in the market space: Implications for the commercial uses of anonymity on the Web. *The Information Society,* 15(2), 129-139.

Hoffman, D. L., Novak, T. P., & Schlosser, A. (2000). The evolution of the digital divide: How gaps in Internet access may impact electronic commerce. *Journal of computer-mediated communication,* 5(3), JCMC534.

Howe, N., & Strauss, W. (2000). Millennials rising: The next great generation. Vintage.

Hox, J. J., & Boeije, H. R. (2005). Data collection, primary versus secondary. *Encyclopedia of Social Measurement,* 1, 593.

Huberman, A. M., & Miles, M. B. (1994). Data management and analysis methods. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of Qualitative Research,* (pp. 428-444). Thousand Oaks, CA, US: Sage Publications, Inc.

Jayakananthan, M., & Jeyaraj, W. J. (2019). Behavioural aspects of postgraduate students in using electronic information resources at the library Eastern University, Sri Lanka. *Journal of the University Librarians Association,* 22(1).

Johnson, M. J. (2017). The rise of the citizen author: Writing within social media. *Publishing Research Quarterly,* 33(2), 131-146.

Jones, S., & Fox, S. (2009). Generations online in 2009 (pp. 1-9). Washington, DC: Pew Internet & American Life Project.

Junco, R., Heiberger, G., & Loken, E. (2011). The effect of Twitter on

college student engagement and grades. *Journal of computer assisted learning,* 27(2), 119-132.

Jung, J.-Y., Qiu, J. L., & Kim, Y.-C. (2001). Internet connectedness and inequality: Beyond the "divide." *Communication Research, 28*, 507-535.

Kabilan, M. K., Ahmad, N., & Abidin, M. J. Z. (2010). Facebook: An online environment for learning of English in institutions of higher education?. *The Internet and higher education,* 13(4), 179-187.

Kaplan, A. M., & Haenlein, M. (2012). The Britney Spears universe: Social media and viral marketing at its best. *Business Horizons,* 55(1), 27-31.

King, W. R., & Teo, T. S. (1996). Key dimensions of facilitators and inhibitors for the strategic use of information technology. *Journal of Management Information Systems,* 12(4), 35-53.

Kietzmann, J. H., Hermkens, K., McCarthy, I. P., & Silvestre, B. S. (2011). Social media? Get serious! Understanding the functional building blocks of social media. *Business horizons,* 54(3), 241-251.

Klazema, A. (2014). Qualitative Vs. Quantitative Research: What's the Difference?

Knupfer, N. N., & McLellan, H. (1996). Descriptive research methodologies. In D. H. Jonassen (Eds.), *Handbook of research for educational communications and technology,* (1196–1212). New York: Macmillan.

Kooti, F., Aiello, L. M., Grbovic, M., Lerman, K., & Mantrach, A. (2015). Evolution of conversations in the age of email overload. In Proceedings of the 24th International Conference on World Wide Web (pp. 603-613). *International World Wide Web Conferences Steering Committee*.

Kusi, H. (2012). Doing qualitative research: A guide for researchers. Accra: Emmpong Press. PMid, 22299616.

Lam, P., McNaught, C., Lee, J., & Chan, M. (2014). Disciplinary difference in students' use of technology, experience in using eLearning strategies and perceptions towards eLearning. *Computers & Education,* 73, 111-120.

Latimer, C. P. (2001). The digital divide: Understanding and addressing the challenge. *New York State Forum for Information Resource Management,* Rockefeller Institute of Government.

Latimer, C. (2009). Understanding the complexity of the digital divide in relation to the quality of House campaign websites in the United States. *New Media & Society,* 11(6), 1023-1040.

Lenhart, A., Rainie, L., Fox, S., Horrigan, J., & Spooner, T. (2000).*Who's not online: 57% of those without Internet access say they do not plan to log on*. Retrieved May *20*, 2018, from http://www.pewinternet.org

Lievrouw, L. A., & Livingstone, S. (Eds.). (2002). Handbook of new media: Social shaping and consequences of ICTs. Sage.

Lindlof, T. R., & Taylor, B. C. (2017). Qualitative communication research methods. Sage Publications.

Littlejohn, S. W., & Foss, K. A. (2009). Encyclopedia of communication theory (Vol. 1). Sage Publications.

Liu, Y. (2010). Social media tools as a learning resource. *Journal of Educational Technology Development and Exchange* (JETDE), 3(1), 8.

Livingstone, S., & Helsper, E. (2007). Gradations in digital inclusion: Children, young people and the digital divide. *New media & society,* 9(4), 671-696.

Mackay, H., & Gillespie, G. (1992). Extending the Social Shaping of Technology Approach: Ideology and Appropriation. *Social Studies of Science,* 22, 685–716.

Marshall, C., & Rossman, G. B. (1995). Data collection methods. Designing qualitative research, 2(8).

Matthews, L. (2010). Social media and the evolution of corporate communications. *The Elon Journal of Undergraduate Research in Communications,* 1(1), 17-23.

McLaren, J., & Zappala, G. (2002). The 'digital divide' among financially

disadvantaged families in Australia. *First Monday*, 7(11).

McNicol, S., & Aillerie, K. (2017). Digital inequalities and social media: experiences of young people in Chile. *Information and Learning Science,* 118(7/8), 372-384.

McQuail, D. (2010). McQuail's Mass Communication Theory. Sage publications.

Mingle, J., & Adams, M. (2015). Social media network participation and academic performance in senior high schools in Ghana. *Library Philosophy and Practice,* 1.

Mossberger, K., Tolbert, C. J., & Stansbury, M. (2003). Virtual inequality: Beyond the digital divide. George Town University Press.

Moya, P. M. (2011). Who we are and from where we speak. Transmodernity: *Journal of Peripheral Cultural Production of the Luso-Hispanic World,* 1(2).

Mugenda, O. M. (1979). Mugenda (1999), Research Methods: Quantitative and qualitative approaches. Nairobi Acts Press.

Muijs, D. (2004). Introduction to quantitative research. In: Doing quantitative research in education with SPSS (pp. 1-12). London: Sage Publications Ltd.

Nández, G., & Borrego, Á. (2013). Use of social networks for academic purposes: a case study. *The electronic library,* 31(6), 781-791.

Norris, P. (2001). Digital divide: Civic engagement, information poverty, and the Internet worldwide. Cambridge University Press.

Oblinger, D., & Oblinger, J. (2005). Is it age or IT: First steps toward understanding the next generation. *Educating the next generation,* 2(1-2), 20.

Onyebuchi, E. E. (2009). Making sense of web 2.0 technology: do European students use the social media applications for educational goals? Master Degree in Communication Studies, Faculty of Behavioral Science, University of Tennessee.

Oppici, F., Basso, S., & De Martin, J. C. (2014, May). How Do Universities Use Social Media? An Empirical Survey of Italian Academic Institutions. In Conference for E-Democracy and Open Government (p. 179).

Osatuyi, B., & Passerini, K. (2016). Twittermania: Understanding how social media technologies impact engagement and academic performance of a new generation of learners. *CAIS,* 39, 23.

Osunade, O., & Ogundele, C. O. (2012). Valuation of the university of Ibadan website using webometric ranking parameters. *Transnational Journal of Science and Technology,* 2(3), 66-78.

Overdijk, M., & Van Diggelen, W. (2006). Technology appropriation in face-to-face collaborative learning. In Innovative approaches for learning and knowledge sharing, EC-TEL 2006 Workshops Proceedings (pp. 89-96).

Oye, N. D., Iahad, N. A., & Rabin, Z. A. (2011). A model of ICT acceptance and use for teachers in higher education institutions. *International Journal of Computer Science & Communication Networks,* 1(1), 22-40.

Parker, B. J., & Plank, R. E. (2000). A uses and gratifications perspective on the Internet as a new information source. *American Business Review,* 18(2), 43.

Payton, M. E.,Greenstone, M. H., & Schenker, N. (2003). Overlapping confidence intervals or standard error intervals: what do they mean in terms of statistical significance? *Journal of Insect Science*, 3(1).

Penn, C. S. (2016) What's the difference between old media and new media. Retrieved from: http://www.christopherspenn.com.

Pew Health Professions Commission. (1995). Critical challenges: revitalizing the health professions for the twenty-first century: the third report of the Pew Health Professions Commission. Pew Health Professions Commission, Center for the Health Professions, Univ. of California, San Francisco.

Pearce, K. E., & Rice, R. E. (2013). Digital divides from access to activities: Comparing mobile and personal computer Internet users. *Journal of communication,* 63(4), 721-744.

Prensky, M. (2007). How to teach with technology: Keeping both teachers and students comfortable in an era of exponential change. *Emerging technologies for learning,* 2(4), 40-46.

Purchase, S., & Letch, N. (2011). Social capital in electronic networks of practice: An analysis of university blogging communities. In Social Media Tools and Platforms in Learning Environments (pp. 203-218). Springer, Berlin, Heidelberg.

Rice, M. F. (2003). Information and communication technologies and the global digital divide: Technology transfer, development, and least developing countries. *Comparative Technology Transfer and Society,* 1(1), 72-88.

Roberts, N., & Rees, M. (2014). Student use of mobile devices in university lectures. *Australasian Journal of Educational Technology,* 30(4).

Rosli, M. S., Saleh, N. S., Aris, B., Ahmad, M. H., Sejzi, A. A., & Shamsudin, N. A. (2016). E-Learning and Social Media Motivation Factor Model. *International Education Studies,* 9(1), 20-30.

Rumanyika, J. D., & Galan, R. M. (2015). Challenges for teaching and learning information and communication technology courses in higher learning institutions in Tanzania: A review.

Ryan, R. P., & Dow, J. M. (2011). Communication with a growing family: diffusible signal factor (DSF) signaling in bacteria. *Trends In Microbiology,* 19(3), 145-152.

Safko, L. (2010). The social media bible: tactics, tools, and strategies for business success. John Wiley & Sons.

Salehan, M., Kim, D. J., & Kim, C. (2017). Use of online social networking services from a theoretical perspective of the motivation-participation-performance framework. *Journal of the Association for Information Systems,* 18(2), 141.

Schradie, J. (2011). The digital production gap: The digital divide and Web 2.0 collide. *Poetics,* 39(2), 145-168.

Selwyn, N. (2004). Reconsidering political and popular understandings of the digital divide. *New media & society*, 6(3), 341-362.

Selwyn, N. (2009, July). The digital native–myth and reality. In Aslib proceedings (pp. 364-379). Emerald Group Publishing Limited.

Selwyn, N. (2012). Social media in higher education. The Europa world of learning, 1, 1-10.

Servon, L. J., & Nelson, M. K. (2001). Community technology centers: narrowing the digital divide in low-income, urban communities. *Journal of Urban Affairs,* 23(3-4), 279-290.

Sey, A. (2011). 'We use it different, different': Making sense of trends in mobile phone use in Ghana. *New Media & Society,* 13(3), 375-390.

Snelson, C. L. (2016). Qualitative and mixed methods social media research: A review of the literature. *International Journal of Qualitative Methods,* 15(1), 1609406915624574.

Sorce, P., Perotti, V., & Widrick, S. (2005). Attitude and age differences in online buying. *International Journal of Retail & Distribution Management,* 33(2), 122-132.

Sponcil, M., & Gitimu, P. (2013). Use of social media by college students: Relationship to communication and self-concept. *Journal of Technology Research,* 4, 1.

Stake, J. E. (2000). The uneasy case for adverse possession. Georgetown Law Journal, 89, 2419.

Stanley, R. P. (2006). U.S. Patent No. 7,000,126. Washington, DC: U.S. Patent and Trademark Office.

Stantchev, V., Colomo-Palacios, R., Soto-Acosta, P., & Misra, S. (2014). Learning management systems and cloud file hosting services: A study on students' acceptance. *Computers in Human Behavior,* 31, 612-619.

Strover, S., & Berquist, L. (1999). Telecommunications infrastructure development: The evolving state and city role in the United States. Cities in the Global Information Society: An International Perspective, University of Newcastle, Newcastle upon Tyne, 22-24.

Sylvester, D. E., & McGlynn, A. J. (2010). The digital divide, political participation, and place. *Social Science Computer Review,* 28(1), 64-74.

s

Takhteyev, Y., Gruzd, A., & Wellman, B. (2012). Geography of Twitter networks. *Social networks,* 34(1), 73-81.

Tay, E., & Allen, M. (2011). Designing social media into university learning: technology of collaboration or collaboration for technology?.

Educational Media International, 48(3), 151-163.

Tuomi, J. (2005). System and method for managing a network to sustain the quality of voice over internet protocol communications.

Van Dijk, T. A. (2002). Media contents: The interdisciplinary study of news as discourse. In a handbook of qualitative methodologies for mass communication research (pp. 122-134). Routledge.

Van Dijk, T. A. (2006). Discourse and manipulation. *Discourse & Society,* 17(3), 359-383.

Van Dijk, J. A. (2005). The deepening divide: Inequality in the information society. Sage Publications.

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly,* 425-478.

Wardrip-Fruin, N., & Montfort, N. (Eds.). (2003). The NewMediaReader. MIT Press.

Wei, H., Xiao-Pu, H., Tao, Z., & Bing-Hong, W. (2009). Heavy-tailed statistics in short-message communication. *Chinese Physics Letters,* 26(2), 028902.

Wei, L., & Hindman, D. B. (2011). Does the digital divide matter more? Comparing the effects of new media and old media use on the education-based knowledge gap. *Mass Communication and Society,* 14(2), 216-235.

Wei, Y. (2012). Social media peer communication and impacts on purchase intentions: A consumer socialization framework. *Journal of Interactive Marketing,* 26(4), 198-208.

Williams, M. D., Rana, N. P., & Dwivedi, Y. K. (2015). The unified theory of acceptance and use of technology (UTAUT): a literature review. *Journal of Enterprise Information Management,* 28(3), 443-488.

Woods, M. (2011). Interviewing for research and analysing qualitative data: An overview. New Zealand; Massey University Press.

Wragg, T. (2002). Interviewing. research methods in educational leadership and management, (pp. 143-158).

Yin, R.K. (2009). Case study research: Design and methods (2nd Ed.). London: Sage Publications.

Yin, R. K. (2003). Design and methods. Case study research, 3.

Yin, G. (2012). Clinical trial design: Bayesian and frequentist adaptive methods (Vol. 876). John Wiley & Sons.

Yunus, M. M., Nordin, N., Salehi, H., Embi, M. A., & Salehi, Z. (2013). The use of information and communication technology (ICT) in teaching ESL Writing Skills. *English Language Teaching,* 6(7), 1-8.

Zainal, Z. (2007). Case study as a research method. *Journal of Kemanusiaan,* 5(1).

Zillien, N., & Hargittai, E. (2009). Digital distinction: Status-specific types of internet usage. *Social Science Quarterly,* 90(2), 274-291.

APPENDIX I

INTERVIEW QUESTION GUIDE FOR PARTICIPANTS

1. What new media platforms do you use?
2. How do you access new media technology? (device used)
3. What do you use new media for? (What purpose)
4. What would you consider in choosing and using of Q1?
5. How much time do you spend on new media technologies?
6. Do you think the type of new media you use accounts for inequalities?
7. How is this (Q6) experienced?
8. How does the use of new media site influence your academic performance?
   b) Do you get information regarding your academic work in new media technology use?

APPENDIX II

QUALITATIVE QUESTIONNAIRE FOR RESEARCH QUESTION 3

1. OBJECTIVE

The primary aim of this questionnaire is to assess usage of new media technology; their nature of use and preferences for adopting a particular new media technology as oppose to the other for information seeking. The questionnaire shall be completed through a convenient sample of students from the four departments in the Faculty of Foreign Languages Education and Communication, University of Education, Winneba.

2. PRIVACY

Protecting the privacy of the respondent is important and as such, all personal information will be kept confidential and used only for research purposes.

Please respond to all the questions by following the instructions.

3. BACKGROUND INFORMATION

1. Name of Department:

_____

2. Gender: □ Female □ Male

3. Your age group:

□ Below 20 □ 21-25 □ 26-30 □ 31-35 □ 36-40 □ 41 and above

4. Year of study:

□ Year 1 □ Year 2 □ Year 3

5. Do you have a physical or learning disability that requires accessible or adaptive technologies

□ No

□ Yes, I have one or more physical disabilities that require accessible or adaptive

technologies

□ Yes, I have one or more learning disabilities that require accessible or adaptive

technologies

□ Yes, I have both physical and learning disabilities that require accessible or adaptive

Technologies

4. **INTERNET ACCESS AND USE**

Please tick (√) where applicable.

6. Where do you access the Internet?

□ Home □ Office □ Campus □ Do not access

Other(State it)……

7. You have Internet access through?

□ Wifi □ Mobile phone □ Broad Band

Other (State it)……

8. Do you get Wi-Fi/wireless Internet connectivity on campus?

□ Yes □ No

9. Where do you get access to Internet in your university/institution?

□ Lecture rooms □ Library □ Hostels

□ Seminar rooms □ Students' common rooms □ Open areas

Other (State it)……

10. Which device do you use most frequently to access the Internet?

□ Smartphone □ Tablet or iPad □ Laptop □ Desktop computer

11. I use the Internet:

□ Daily □ Alternate days □ Once a week

□ Irregularly □ Rarely □ Never

12. What do you use the internet for?

□ research □ social media □ blogging

□ commercial transaction/gaming

Other (State it)……

5.ACCESS TO AND USE OF DIGITAL TECHNOLOGIES

Please tick (√) where applicable.

13. Do you own any of these devices?

Desktop computer □

Laptop □

Smartphone □

Tablet device (e.g. iPad) □

Other (State it)……

14. Do you have access to any of these devices at your university?

Desktop computer □

Laptop □

Smartphone □

Tablet device (e.g. iPad) □

Other (State it)……..

6. USE OF NEW MEDIA TECHNOLOGIES

15. What new media technology do you use?

□ Email □ Blog □ Social media

□Wiki □ Web site

Other (State it)……

16. On average, how much time do you spend on new media technologies (e.g. email, blog, wiki etc.) daily?

□ 1 hour □ 1-2 hours □ 3-5 hours

□ 6-7 hours □ Do not use daily

17. If you use social media in (14), which social media platforms do you use?

□ Facebook □ Twitter □ WhatsApp

□YouTube □ Instagram □ LinkedIn

Other (State it)……

18. How frequently do you update your status on social media?

□ Several times a day □ Once a day □ Once a week

□ Once a fortnight □ Not very frequently □ Not at all

19. On average, how much time do you spend on social media daily?

□ 1 hour □ 1-2 hours □ 3-5 hours □ 6-7 hours □ Do not use daily