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EFFECTS OF SOCIAL MEDIA USE ON THE ACADEMIC PERFORMANCE OF STUDENTS OF PUBLIC TERTIARY INSTITUTIONS IN GHANA

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DECLARATION

I hereby declare with sincerity that this thesis is the result of my own original work under the supervision of Dr. Musah Adams and Dr. Ebenezer Ankrah from the Department of Information Studies, University of Ghana, Legon.

This work has not been presented for another degree elsewhere except references to other works which have been duly acknowledged.

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DEDICATION

I dedicate this work to my family whose encouragement and prayers helped me to accomplish this work successfully.

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My profound gratitude to Almighty God, the Alpha and Omega, whose blessing gave me the strength, knowledge and perseverance to commence and complete this work successfully.

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TABLE OF CONTENTS

CHAPTER SIX: SUMMARY OF FINDINGS, CONCLUSION RECOMMENDATIONS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

FOMO	-	Fear of Missing Out
GPA	-	Grade Point Average
ISTE	-	International Society for Technology Education
NCA	-	National Communication Authority
PDA	-	Personal Digital Assistant
PNDC	-	Provisional National Defence Council
SLT	-	Social Learning Theory
SNS	-	Social Networking Sites
UAE	-	United Arab Emirates
UCC	-	University of Cape Coast
UEW	-	University of Education, Winneba
USA	-	United States of America

ABSTRACT

Social media has become ubiquitous in today's globalized world as a result of its valuable role in communication and information sharing. It appeals to people from all walks of life, particularly students, for a variety of purposes irrespective of some negative effects that their use may have on their academic performance. This study investigated the effects of social media use on the academic performance of students of public tertiary institutions in Ghana, with University of Education, Winneba (UEW) and University of Cape Coast (UCC) selected for case study. The study investigated social media platforms and their usage among students, the reasons or purposes for students' use of social media, the time students spent on social media and the amount of time they spent studying, students' GPA and the number of social media platforms they subscribed to, the difference in social media usage rate in terms of faculties and the effects of social media use on students' academic performance.

The theoretical frameworks adopted for the study were Bandura's Social Learning Theory and Katz's Uses and Gratification Theory. Using a survey research methodology, a sample size of 400 Level 300 students were selected, out of which 390 (97.5%) responded to the questionnaire that were used to collect data. Stratified random sampling technique was used to select respondents from three faculties in each university - Social Sciences, Sciences and Education. Data was analysed using SPSS, while some hypotheses were tested using chi-square to find out relationships among variables.

The study revealed that all the students who participated were social media users and there was no significant difference in social media usage rate in terms of faculties. Also, the time students spent on social media affected the amount of time they spent studying. Furthermore, the findings showed

that the number of social media platforms subscribed to did not affect students' GPA, while the amount of time spent on social media platforms did not affect students' academic performance.

The study recommended to university management the integration of topics on the pros and cons of social media use in the classroom in various courses of study by instructors and implementers, restriction of social media use during class sessions by students, and provision of facilities that support the use of technology including social media. It also recommended to students to allot quality time for studies and use of social media for the right purposes, especially their academic studies.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The information revolution is making significant impact in all spheres of our lives. It offers easy approach to methods and means of doing things. Massive transformation is experienced in terms of communication and interactions between individuals, organisations and groups of people all over the world. Our current means of communication and information sharing can never be compared to what it used to be some years back. In fact, it would sound mythical and incredible to envisage or forecast the likely existence or usage of the instant messaging or information sharing techniques we are enjoying today. This is due to the fact that some of the information sharing techniques available some few decades ago which included telegrams, postal services, landline telephone calls, etc. were relatively costly, quite cumbersome or time consuming, and also unreliable. Technological advancement, especially social media, is the order of the day and serves as an antidote to the challenges associated with the former means of communication and information sharing. Recent statistics indicate that over two-thirds (2/3), that is 66.7% of internet users and about one-third (1/3), 33.3% of the world's population are social media sites users (Kemp, 2017a, b).

According to Leyrer-Jackson and Wilson (2018), social media are "websites and technological applications that allow its users to share content and/or to participate in social networking". Social media has become ubiquitous, providing some means and enhancement of learning for users irrespective of time and location (Yang, 2006). Social media has impacted greatly how

organizations, institutions of higher learning, individuals and communities interact or engage each other. Social media are of six main types: "collaborative project (Xiang and Gretzel, 2010; Choe et al. 2016), blogs and microblogs (e.g. Twitter), content communities (e.g. YouTube), social networking platforms (e.g. Facebook), virtual game worlds (e.g. World of Warcraft), as well as virtual social worlds (e.g. Second Life)".

According to Bamigboye and Olusesan (2017), "Social Media activities include; bloggings, picture-sharing, v logs, wall-postings, e-mailing, instant messaging, music-sharing, crowd sourcing and voice over IP, to name a few". "It is a platform used for communication through mobile phones, smart phones, palm tops and handheld devices, computers, tablet PCs, laptops, desktops, iPad, iPod, Blackberry and Android on social network sites as Facebook, Twitter, 2go, google+, flicker (Kietzmann, 2011)". Blogging includes some of the popular social media sites making a lot of meaningful impact so far as professional and personal relationships are concerned. One of the major characteristics of the young generation of today is the creation of blogs, tools for transmitting files and sharing media, podcasts, wikis, etc. which has changed students' interactions and relations with instructors and also pedagogical processes (Bharucha, 2018).

The youth of today are fond of taking digital images of themselves with their mobile devices called "selfies". They are caught up with the craze of sharing memorable images of themselves. Capturing an image of one's self guarantees a place in history for the individual especially when the individual is in a fashionable clothing or apparel, partaking in an exercise or occasion, in an interesting or historic environment, etc. Many also take selfies in the midst of accomplishing

some daunting tasks, in class, worship centres, among others. These images are mostly shared on social media (Shah and Tewari, 2016; Jain and Mavani, 2017).

As of October 2018, some of the famous social media sites with their respective active users were Facebook (2.23 billion), YouTube (1.90 billion), WhatsApp (1.50 billion), Facebook messenger (1.30 billion), WeChat (1.058 billion), Instagram (1 billion) active users, etc. (Statista, 2018). According to statistics of the world's internet usage, there were 4,208,571,287 estimated internet users in the world, with 55.1% penetration rate as of 30th June, 2018. Also, Africa's population in 2018 was estimated to be 1,287,914,329 of which 464,923,169 used the internet. The continent's penetration rate was 36.1%. By December 31st 2017, Facebook users worldwide numbered 2,119,060,152 while that of Africa was 177,005,700. Users of internet in Ghana as of December 2017 were 10,110,000 with 34.3% internet penetration. Again, 4,900,000 out of the aggregate internet users in Ghana used Facebook (Internet World Statistics, 2018).

The National Communication Authority (NCA) of Ghana reported that subscribers of mobile data in Ghana has increased tremendously with a 75.54% penetration rate. As of the end of July 2018, mobile data subscriber base appreciated to 22,044,592 (NCA, 2018). The consequences of the statistics is that the number of people that subscribe to the internet and possess or use mobile devices will keep increasing, resulting in increase in mobile data subscription. That will in turn translate into more people joining the use of social media worldwide day by day.

Social media enable students to acquire the requisite skills, broaden their horizon and impact positively on individuals' sociability required for maximum participation in learning

environment (Bamigboye and Olusesan, 2017). The category of people that has the highest rate of social media technologies usage are undoubtedly students of higher learning institutions. Majority of university students today are very conversant with and addictive to social media. Social media are usually used for learning, research and other educational or academic purposes (Junco, 2012), as well as for leisure purposes (Dhume, Pattenshetti, Kamble and Prasad, 2012; Tess, 2013). It brings about the ease of learning, sharing of ideas and experiences (Sanni, Awoleye, Egbetokun and Siyanbola, 2009). Also students use social media to express their grievances or lodge complaints to authorities or management, for quick access to information, etc. (Xia, 2013). Social media fosters collaborative learning. It also offers several learning options or avenues including videos, chats, blogs, among others (Bharucha, 2018). Aside the recreational and social purposes for which people use social media, it is also been used as a tool for planning of lessons by instructors. "Forty-one percent of college-level instructors use social media as a teaching tool (Seaman and Tinti-Kane, 2013) and 30% of instructors use social media as a communication tool with their students (Blankenship, 2011)."

Social media enhances dialogue and facilitates real-time communication (Seltzer and Mitrook 2007). The National Survey of Student Engagement (2014) states that social media usage brings about cooperation and sharing of thoughts by instructors which results in positive student participation in learning environments. However, the distractive aspect of social media on students should also be taken into consideration. When students are distracted by the use of social media, they mostly "seek help from peers and instructors to compensate for class and study time lost to social media" (The National Survey of Student Engagement, 2014, p. 16).

Several studies have reported the negative effect of social media use by students. Some of which include low grade point average (GPA), distraction or "continual partial attention'' to learning, especially on the weaker students, incorrect grammar and wrong spelling (Junco and Cotton, 2013; Anderson, Hatakka, Gronlund and Wiklund, 2014; Vishwanath, 2015; Rambe and Nel, 2015). The use of social media in education is also reported to be superficial in learning, having adverse effect on many students' creativity and ability to think on their own due to their over-reliance on the internet as they seek "easy and quick answer'' by copying and pasting (Bharucha, 2018).

Some studies have established that students of tertiary or public tertiary institutions in Ghana are not left out in the use of social media (Apeanti and Danso, 2014; Yeboah and Ewur, 2014; Antiri, 2016; Buer, Owusu-Ansah and Acquah, 2016; Kolan and Dzandza, 2018; Asiedu and Badu, 2018) etc. According to definitions.net, "a public university is a university that is predominantly funded by public means through a national or subnational government, as opposed to private universities". Public universities are also mostly established by the government. Public universities in Ghana include the following: University of Ghana (UG); Kwame Nkrumah University of Science and Technology (KNUST); University of Cape Coast (UCC); University of Education, Winneba (UEW); Ghana Institute of Management and Public Administration (GIMPA) and University for Development Studies (UDS). Others are University of Professional Studies, Accra (UPSA); University of Health and Allied Sciences (UHAS), University of Mines and Technology (UMAT) and University of Energy and Natural Resources (UENR).

1.2 Statement of the Problem

The amount of time the average technology user today spends each week viewing the media could be compared to what a permanent staff spends on his/her job (Lei, 2009). At the workplaces and offices, it is common to see people busily exchanging messages or interacting on Facebook or WhatsApping, reading news and watching videos on YouTube while they have important tasks to execute (Ng, Shao and Liu, 2016). In this case, precious office hours are lost, having negative effect on productivity.

Many young people today have developed much interest in and often unable to detach their social lives from social media use, and this is not really healthy. In their quest to have interesting self-taken pictures or images called 'selfies' captured and shared on social media, many risk their lives taking such pictures in very dangerous situations or poses. Some even die in the process. The Journal of Family Medical Sciences reported a study which revealed that about 259 persons lost their lives in the course of taking selfies. The selfie mortalities happened between October 2011 and November 2017 (Criss, 2018).

Students in colleges and universities are not left out in the use of technology, especially social media. Facebook and WhatsApp accounts are created by various classes, groups or associations on campus to communicate with members, for announcements, reminders for assignments, postponement or cancellation of class hours from lecturers, etc. It is also used for sharing of ideas, making and maintaining friendship as well as constantly staying connected to family members. Some students also learn from tutorials on various topics or subjects on YouTube. It is worthy to note that students' addiction to social media distracts and negatively affect their

studies or learning habits (Firat, 2017). Some students seem to be inseparable from social media or mobile phones as they are often seen busily fidgeting with their phones or interacting on social media (Facebooking or WhatsApping) in class while lecturers are busily teaching.

According to Wang, Chen and Liang (2011), sixty-eight percent (68%) of college students spent 6 hours or more using social media on daily basis. This is twofold the amount of time the average year-one college student spends learning, which is two to three hours every day, as disclosed by The National Survey of Student Engagement (2014). The much time spent on technologies has "fundamentally altered how they approach learning" (Lei, 2009, p. 88). In such situations, it becomes difficult to grasp the concepts or salient points being highlighted and therefore affects the comprehensibility by students of some important concepts or topics. The likelihood of negatively affecting students' academic performances could be high. Furthermore, many students use social media all the time, including late in the night, thereby denying them quality sleeping or resting hours and adding more stress to their academic lives. Inability to strike a balance between studying and recreational hours could be suicidal to academic work. Moreover, social media platforms created for academic purposes and sharing of ideas could also be perverted for private or personal conversations or discussions leading to invasion of privacy by peer students or some instructors. It is imperative for much attention to be paid to social media use in the classroom (Elavsky, 2013). For the sake of the education of the technologically-minded generation of today, it is necessary for research to be carried out on the implications of using social media for education (Shaltry, Henriksen, Wu and Dickson, 2013; Hung and Yuen, 2010).

Several studies have been conducted on the effects of social media on students in the world, Africa and in Ghana as well. Despite the fact that University of Education, Winneba, and University of Cape Coast are committed to education provision, with the mission of producing professional and quality teachers for education and also supporting educational policies and research, most of the research carried out concerning tertiary students' social media use in Ghana do not involve the two institutions. Although Apeanti and Danso (2014) researched on students' use of social media, the focus was on the sandwich students of UEW, while the study by Buer, Owusu-Ansah and Acquah (2016) was limited to only Facebook use among students of UEW. Also, the study of Antiri (2016) on the impact of social media focused only on the psychology students of UCC. It is against this backdrop that the researcher conducted the study on the effects of social media use on the academic performance of students of UEW and UCC.

1.3 Purpose of the Study

The purpose of this study was to find out how students use social media and also determine whether their use has any effects on their academic performance.

1.4 Objectives of the Study

The specific objectives of the study were:

1. To identify social media platforms and their usage by the students of UEW & UCC.
2. To ascertain the reasons or purposes for the students' use of social media.
3. To determine amount of time the students spend on social media and the amount of time they spend studying.
4. To find out students' Grade Point Average (GPA) and the number of social media platforms they subscribe to.
5. To examine and compare social media usage rates across faculties.
6. To explore the effects of social media use on students' academic performance.

1.4.1 Research Hypotheses

1. The amount of time students spend on social media will affect the amount of time they spend studying.
2. The number of social media platforms or websites subscribe to by students will affect their GPA.
3. The extent or manner of social media use will affect students' GPA or academic performance.

1.5 Theoretical Framework

According to Grant and Osanloo (2014), theoretical framework is "the blueprint or guide for a research". "It is a framework based on an existing theory in a field of inquiry that is related and/or reflects the hypothesis of a study" (Adom, Hussein and Adu-Agyem, 2018). The Social Learning Theory (SLT) of Bandura as well as the Uses and Gratification Theory (U&G) of Katz were adopted for this research. The theories were applied to the two main facets or characteristics of the study, specifically academic performance (resultants of learning or learning effects) and competition (social media and academic activities).

The Social Learning Theory (SLT) was proposed by Bandura (1986) to elucidate or expound behavioural changes that take place due to social actors' influences (Fulk, 1993). The theory stipulates that people often explore the resultant effects of various sources of information before partaking in an activity in order to predict the outcome and help in decision making (Lu, Guo, Lu and Gupta, 2018). According to the theory, there is some sort of reciprocity between human behaviour and cognitive, behavioural and environmental influences. It serves as a link between behaviourist and cognitive learning theories because it includes memory, motivation and attention (Bandura, 1977).

Bandura (1977) posits that three factors, including peers, learners and situations are likely to militate against the learning outcomes of individuals. Ainin, Naqshbandi, Moghavvemi and Jaafar (2015) indicate that the Social Learning Theory explains how people's learning and behavioural patterns are affected by cognitive and environmental influences. Yu, Tian, Vogel and Kwok (2010) state that according to the Social Learning Theory, learning is social process

initiated and regulated by individuals through which people actively construct knowledge by acquisition, generation and structuring of information.

Per Bandura's (1977) SLT, the learning outcomes (academic performance) of students are affected by the students' choice of situation (social media use) and peers (friends and followers online). This agrees with Ainin et al. (2015) that people's learning and behavioural patterns are affected by cognitive and environmental influences. People's behavioural consequences are influenced by their interactions with their environment. "Therefore, when students interact with peers on social media platforms through observations, interactions and other activities, these may result in a behavioural outcome which might affect the academic performance positively or negatively" (Mingle and Adams, 2015).

Moreover, the Uses and Gratification Theory of Katz et al. (1974) deals with the other facet of this research which posits that individuals' selection of media is particularly dependent on the ability to satisfy their needs. The media therefore contest with other sources of information for individuals' satiation or satisfaction. The U&G theory is regarded as the most suitable or appropriate for the evaluation of more interactive systems including social media use (Froget, Baghestan, and Asfaranjan, 2013; Xu, Ryan, Prybutok and Wen, 2012; Lee and Ma, 2012). Again, Lariscy, Tinkham and Sweetser (2011) are of the view that individuals select media that fulfill their needs leading to satisfaction or full gratification. They therefore derive different satisfactions from the use of social media including improvement of social knowledge, ideas and problems sharing, demonstration of affection, sociability, following of trends and fashion, etc. Ajzen and Fishbein (1980) and Fishbein and Ajzen (1975) state that attitude is an individual's manner of response, whether favourable or unfavourable to an object or behaviour.

Attitude has been a major determinant in most studies about information system (IS) literature concerning system's usage behaviours (Al-Jabri and Roztocki, 2015). Therefore the attitude of students towards social media use may affect the amount of time spent on the various platforms as well as their manner of use. This is likely to affect their concentration or attention, academic performance, etc. Therefore, students' academic performance is as a result of the rivalry between social media use and academic work. The amount of time students spend on social media platforms as against the time they allot for their studies has implications (positive or negative) on their learning outcomes (Mingle and Adams, 2015).

1.6 Scope

The study covered two public universities in Ghana, namely, University of Education, Winneba (UEW) and University of Cape Coast (UCC). Both universities are located in the Central Region of Ghana. They are among the top universities in Ghana, placing third (3^{rd}) and fourth (4^{th}) respectively, behind University of Ghana and Kwame Nkrumah University of Science and Technology, out of the sixty-six (66) identified Ghanaian higher-education institutions in the 2018 Ghana university ranking. These universities were also chosen because of their size and relatively high student enrollment. The researcher therefore sought to investigate or assess the effect social media use has had on the third year students because the researcher thought it expedient to examine their experiences over the three-year period on campus (from Level 100 to Level 300).

1.7 Significance of the Study

The research has several significances which include informing implementers or instructors to integrate topics on the pros and cons of social media use.

It will afford university management the opportunity to appreciate the effects of social media use on the students' academic performance and serve as a blueprint for regulating students' use of social media (especially in class).

The study will inform the government and university authorities of the need to make facilities available, e.g. Internet, Wi-Fi connectivity, etc. to support social media usage.

Finally, it will also draw students' attention to the need for responsible use of social media in order not to distract or impact negatively on their academic work.

1.8 Setting / Research Environment

The study covered two (2) public universities in Ghana, namely, University of Education, Winneba (UEW) and University of Cape Coast (UCC). They are both located in the Central Region of Ghana and among the top ranked universities in Ghana.

1.8.1 University of Education, Winneba (UEW)

The University of Education, Winneba, is one of the most popular public universities in Ghana, particularly noted for teacher education and education related matters. UEW was to complement the efforts of University of Cape Coast in teaching and learning. It was established to produce competent professional teachers to conduct relevant research to aid knowledge dissemination, educational policy formulation and educational development. In September 1992, the University

was established under PNDC Law as a University College. It was upgraded to a fully-fledged university status on May 14th, 2004 by the University of Education Act, Act 672 and to provide for related matters. It is now an autonomous institution making significant impact in the educational development of Ghana. UEW has four (4) satellite campuses at Winneba (Central Region); Kumasi (College of Technology Education), Mampong (College of Agriculture Education) (both in the Ashanti Region), and Ajumako (School of Languages), (Central Region).

1.8.2 University of Cape Coast (UCC)

The University of Cape Coast is one of the oldest and most famous public universities in Ghana. It was mandated to train graduate professional teachers for teaching and learning, especially in second cycle institutions. In October 1962, it was established as a University College with some affiliation to University of Ghana. The University College became a fully-fledged university with the powers to confer its own degrees, diplomas and certificates by an Act of Parliament – The University of Cape Coast Act, 1971 [Act 390] on 1st October, 1971. Subsequently, it was backed by the University of Cape Coast Law, 1992 [PNDC Law 278]. UCC was established to address the challenge of inadequate skilled personnel to manage affairs in the educational sector of the country. It was mandated to produce quality and professional teachers and staff to run the educational system at the various educational levels of the country at the time. With the introduction of various academic programmes and expansion of faculties, the University is currently contributing immensely to national development in diverse ways. UCC is located five kilometers west of Cape Coast operating at both the Old and New Sites, Southern and Northern Campuses respectively.

1.9 Ethical Considerations

Research ethics requires researchers to adhere to some acceptable principles and norms involved in the conduct of research at the various stages. It ensures that researchers are honest and treat participants of a study with all forms of respect and confidentiality (Punch and Oancea, 2014; Gravetter and Forzano, 2006). For this study, the researcher took an introductory letter from the Department of Information Studies, University of Ghana. Individuals who participated in the study were not subjected to any undue pressure to get involved. The intention and nature of the study was explained to them in order to participate voluntarily. They were assured of confidentiality as they responded to the questionnaire and that at each step in the research study, ethical consideration was paramount. All the sources used for the study were also acknowledged. Also, the University of Ghana research ethics was adhered to.

1.10 Organization of Chapters

The study is organized under six chapters.

Chapter one deals with the introduction to the study. These include background to the study, statement of the problem, purpose of the study, objectives, theoretical framework, scope, significance of the study, research setting or environment and the description of chapters.

Chapter two covers the review of relevant literature for the study. Literature is reviewed in relation to the objectives of the study.

Chapter three highlights the research methodology adopted for the study. These include the research design, selection of research setting (case), population and sample size, sampling technique, instrumentation, mode of data collection and ethical considerations.

Chapter four covers the data analysis and presentation of findings.

Chapter five deals with the discussion of the findings. The discussion is based on the findings of the study and in relation to the objectives.

Chapter six, the final chapter, deals with the summary of findings, conclusion and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Creswell (2014) defines literature review as "a written summary of journal articles, books, and other documents that describes the past and current state of information on the topic of your research study. It organizes the literature into subtopics, and documents the need for a proposed study. In the most rigorous form of research, educators base this review mainly on research reported in journal articles. A good review, however, might also contain other information drawn from conference papers, books, and government documents".

Bryman (2012) indicates that the existing literature constitutes an important aspect in all research. When a topic or issue of interest is alighted upon, further reading is done to determine a number of things. It is essential to find out:

- The already existing knowledge about the topic;
- The theories and concepts applied to the topic;
- The applied research methods to the topic;
- The existing controversies about the topic and how it is studied;
- The key individuals who have contributed to research on the topic.

According to Creswell (2014), the literature review accomplishes several purposes:

- It enables the reader to know the outcomes of other similar works in relation to what is being investigated.
- It enables a study to be related to prevailing discussion or knowledge, addresses shortfalls and enables further enquiries to be done on existing works.
- It provides a model for revealing the importance of a study as well as a standard to compare the results with other findings.

For this study, relevant literature on social media use and academic performance was reviewed. The literature in relation to the objectives was organized under the following headings:

2.2 Social media

2.3 Evolution and use of social media networks worldwide

2.3.1 History and development of social media networks

2.3.2 Current social media networks and number of active users

2.3.3 Current data on social media use worldwide

2.4 Social media use behaviours

2.4.1 Social media and sleep deprivation among students

2.4.2 Use of social media and selfies among students

2.4.3 Students' selfie use / selfie culture

2.4.4 Selfie-related problems / accidental deaths

2.5 Social media and education

2.2 Social Media

According to Leyrer-Jackson and Wilson (2018), social media are "websites and technological applications that allow its users to share content and/or to participate in social networking". According to Feuls, Fieseler and Suphan (2014), some of the web services that can be categorized as social media include "wikis, forums, multimedia platforms (YouTube, Flickr), blogs (word press), microblogs (Twitter), social games, social networking sites (Facebook), and instant messaging". According to DePietro (2013), "social media are all about connecting individuals to communities of people who have elected to become part of that network, because these individuals want to engage as much as possible and as often as possible with that network".

Bamigboye and Olusesan (2017) also define social media as "internet-based applications which are built on the technological foundations of Web 2.0 allows for collaborations, exchanging of user-owned contents and ideas". One of the most popular channels of communication and social interaction worldwide with ubiquitous access currently is social media (Gotti, 2016). "Social

media activities include; bloggings, picture-sharing, v logs, wall postings, emailing, instant messaging, music sharing, crowd sourcing and voice over IP, to name a few" (Bamigboye and Olusesan, 2017). Social media is currently the most preferred means through which individuals, businesses, family and friends, organisations, institutions and especially students interact and share information without distance barriers (Asare-Donkoh, 2018). Social media enhances knowledge and skills sharing, group interactions and collaborative learning among students.

Web 2.0 or Social Networking Sites (SNSs) are other terms for social media. In the year 2004, Tim O'Reilly was the first to use the term "Web 2.0". O'Reilly (2005) as cited in Lwoga (2014) defines Web 2.0 as "network platform, spanning all connected devices". Boyd and Ellison (2007) also state that "social networking sites are web-based services that allow individuals to construct a public or semi-public profile within a bounded system, articulate a list of other users with whom they share a connection, and view and traverse their list of connections and those made by others within the system".

With Facebook for instance, a subscriber of the social network establishes friendship with another person, the new friend links up the member to many other friends for online engagement. There is therefore an endless growth of friends which becomes cyclical as one becomes connected to the friends of his friend(s). Social media makes use of digital platforms to facilitate dialogue, creation of contents (visual and textual) and sharing of information among members in the virtual communities (Freberg, 2012).

According to Marion and Omotayo (2011), “Facebook is a great way to meet friends and keep up on what they are doing. Once you add a friend to your Facebook friend list, you will always know when they are adding things to their blog or updating their profile”. Aside the fact that social network sites enable people to link up with unknown individuals, users are also able to express themselves and exhibit their connectedness socially. Among the important technical features of SNSs are profiles that exhibit registered members of a network. Profile pages enable one to “type oneself into being” (Sunden, 2003, p. 3). A person becomes a member of a social network site by signing up to the platform which includes the provision of biographic information such as location, profession, age, educational background, interests, “about me”, etc. There is also the possibility for users to upload their profile pictures and change them as often as one wishes on most of the platforms. The labels for the relationship with others depending on website include “Fans”, “Contacts” and “Friends”.

2.3 Evolution and Use of Social Media Networks Worldwide

2.3.1 History and Development of Social Media Networks

Some accounts exist concerning the history and development of social media. Kaplan and Haenlein (2010) disclose that in 1979, a worldwide discussion system called Usenet had been created by two people from Duke University called Tom Truscott and Jim Ellis that enabled users of internet share public messages. However, the evolution of social media is traced to about 20 years earlier when Open Diary, created by Bruce and Susan Abelson as one of the first social network platforms that connected writers of online diary into one community. An associated term which goes with social media is ‘weblog’, which was first used at the time Open Diary was founded, but was condensed to “blog” by one blogger to “we blog”, albeit in jest about a year

later (Kaplan and Haenlein, 2010, p. 60). According to Kaplan and Haenlein (2010), the increased accessibility of the internet made the concept very common resulting in the emergence of MySpace in 2003 and Facebook in 2004, bringing forth the current term Social Media. The term social media therefore became popular in 2005 and it is used to describe a variety of media creations by end-users. Social media include Twitter, Facebook, YouTube, Instagram, WhatsApp, MySpace, etc. (Kaplan and Haenlein, 2010).

Boyd and Ellison (2007), per the definition of SNSs posit that the first acknowledged social networking platform was established in 1997 known as SixDegrees.Com which enabled Friends listing and profiles creation by its members. However, browsing through Friend lists on SixDegrees became possible in 1998. SixDegrees became attractive to millions of users because they were able to link up and send messages to others but the service tumbled in 2000. The founder of SixDegrees retrospectively remarked that the service "was simply ahead of its time" (A. Weinreich, personal communication, July 11, 2007). As individuals kept developing interest in the Internet, majority had no online followers or friends and therefore were not happy about the low level of engagement on the network after accepting Friend requests. Others also tried to avoid getting into contact with unknown persons on the network. However, between 1997 and 2001, several community tools supported the linking up of profiles and online friends. BlackPlanet, AsianAvenue and MiGente made it possible for members on the network to create several profiles including professional, personal, dating, etc. and gave them the opportunity to interact with Friends without prior approval for such associations (O. Wasow, personal communication, August 16, 2007). LiveJournal which listed one-directional connections on user pages was launched just afterwards in 1999, with the creator suspecting that he made these Friends after instant messaging buddy lists (B. Fitzpatrick, personal communication, June 15,

2007). It was possible for people to mark others as Friends in order to follow their journals and also manage privacy settings. Cyworld, which was the Korean virtual worlds site began in 1999 and became independent of these other sites because in 2001, there was the addition of SNS features. Also, in 2000, the Swedish web community LunarStorm metamorphosed as an SNS containing Friends lists, guestbooks, and diary pages (D. Skog, personal communication, September 24, 2007).

The next batch of SNSs started when Ryze.com was launched in 2001 to help people enhance their business networks. The founder of Ryze declared that he first introduced the site to his friends who were mainly members of the San Francisco business and technology community, including the entrepreneurs and investors behind many future SNSs (A. Scott, personal communication, June 14, 2007). In particular, the people behind Ryze, Tribe.net, LinkedIn, and Friendster were tightly linked up together personally and professionally. They were of the firm belief that they could offer the needed support to each other without any rivalry (Festa, 2003). In the end, Ryze never had mass popularity, Tribe.net grew to attract an enthusiastic niche user base, LinkedIn became a powerful business service, and Friendster became the most significant, if only as "one of the biggest disappointments in Internet history" (Chafkin, 2007, p. 1).

According to Miller et al. (2016), the history of social media can be traced to the launch and success of the platform called Cyworld in Korea in 1999. The platform became ubiquitous, that is present everywhere in Korea and was used by the young people. However, Cyworld achieved universal usage by the younger generation of Korea by 2005. Cyworld operated in a friendship manner akin to show their traditional kinship systems operated in Korea. By agreeing to become

a Cy-ilchon (a very close relation), one was bound or required to comment on each other in a manner that promoted or enkindled kin relationships. This accounted for the popularity and success of the Cyworld platform in Korea and nowhere else. Facebook has however, replaced Cyworld in Korea.

Friendster, which began in US in 2002, was also one of the early successful platforms. It became prominent in Southeast Asia and re-established in Malasia after it was purchased by a Malasian business. Also, Google developed Orkut, which became very popular in Brazil and India. The QQ platform which was founded in 1999 as an instant messaging service, is arguably the most established social media platform in China. The QQ platform offers more interactivity and greater participation among the populace than the other Western social media platforms. In North America, MySpace which was founded in 2003, was widely embraced and used by the teenagers from 2004 and became more useful for its music orientation or specialization. Another site which was purposely for re-uniting friends and loved ones was Friends Reunited which stared in 1999. In 2003, the site that provided the opportunity for linking up or connecting business partners and professionals, called LinkedIn, also emerged in the scene. Recently, some of the sites commonly used by young people include Instagram, which was founded in 2010, Snapchat, founded in 2011. However, Facebook which used to appeal to the younger ones has now become of greater interest to an older base, helping the fast spread of Twitter which was founded in 2006. WhatsApp and WeChat were also founded in 2009 and 2011 respectively.

2.3.2 Current Social Media Networks and Number of Active Users

Some of the most famous social network sites worldwide, as of April 2019, ranked by number of active users included the following:

- Facebook (2.320 billion) active users
- YouTube (1.900 billion) active users
- WhatsApp (1.600 billion) active users
- Facebook Messenger (1.300 billion) active users
- WeChat (1.098 billion) active users
- Instagram (1.000 billion) active users
- QQ (807 million) active users
- QZone (532 million) active users
- Reddit (330 million) active users
- Twitter (330 million) active users
- LinkedIn (303 million) active users
- Skype (300 million) active users
- Snapchat (287 million) active users
- Viber (260 million) active users
- Pinterest (250 million) active users

Source: Statista, 2019

2.3.3 Current Data on Social Media Use Worldwide

The number of social media users worldwide keep rising day by day. According to Data Reportal (2019), out of the total world population of 7.676 billion as of January 2019, 3.484 billion (45.4%) were active social media users. A significant number of the population, 3.256 billion

(42.4%) were mobile social media users, that is they accessed social media on mobile devices anywhere, and anytime. Internet users were 4.388 billion (57.2%). Also, social media penetration in January 2019 based on active users of the top social networks in each country compared to total population, United Arab Emirates (U.A.E.) had the highest penetration of 99%, followed by Taiwan 89%, South Korea 85% and Singapore 79%. China had a penetration rate of 71% while USA and UK had 70% and 67% respectively. In Africa, Egypt and South Africa had the highest social media penetration of 40% each, followed by Ghana 19%, Kenya 16% and Nigeria 12%. The report also indicated that the worldwide social media penetration was 45%.

On the average amount of time per day spent using social media via any device, in hours and minutes, according to Data Reportal (January 2019), Philippines spent the most hours, four hours and twelve minutes (04:12) per day, followed by Brazil, three hours and thirty-four minutes (03:34); Colombia, three hours and thirty-one minutes (03:31); Indonesia, three hours and twenty-six minutes (03:26) and Argentina, three hours and eighteen minutes (03:18). Japan spent the least time of thirty-six minutes (00:36) per day. In Africa, Nigeria spent the most hours on social media, three hours and seventeen minutes (03:17) per day; followed by Ghana, three hours and seven minutes (03:07); Egypt, three hours and four minutes (03:04); South Africa, two hours and forty-eight minutes (02:48); Kenya, two hours and forty-seven minutes (02:47) and Morocco, two hours and thirty-three minutes (02:33). However, the average time per day spent using social media worldwide was two hours and sixteen minutes (02:16).

According to a Pew Research Center survey of adults in USA by Smith and Anderson (2018), Facebook and YouTube were the most used by a majority of US adults. Also, younger Americans (especially between 18-24 years) overwhelmingly embraced a variety of platforms and used them

frequently. The survey indicated that about 78% of 18 to 24-year olds used Snapchat, and a significant majority of these users 71% visited the platform a number of times daily. Also, 71% of Americans in this age group (18-24) used Instagram and also about half, 45% used Twitter. Again, about three quarters (3/4) of U.S. adults and 94% of 18-24 year-olds used the video-sharing site YouTube. The survey also reported that social media use differed by age. About 88% of 18-29 year olds used any form of social media. That share fell to 78% among those ages of 30-49, to 64% among those ages 50-64 and to 37% among Americans 65 and older. According to the Pew Research Center's social media use in 2018, there were differences in the use of various social media platforms within the young adult population as well. It indicated that Americans between the ages of 18-24 were more likely to use platforms such as Snapchat, Instagram and Twitter even when compared with those in their mid-to late-20s. Aside the fact that Facebook was the most popular social media site, the frequency of use of Facebook was high. Fully 74% of Facebook users said they visited the site every day, while half, 51% said they did several times per day.

2.4 Social Media Use Behaviours

2.4.1 Social Media and Sleep Deprivation among Students

Research indicates that social media usage is responsible for denying or depriving some youth of quality sleep. According to Power, Taylor and Horton (2017), some youth use social media often in the night and it affects their quality of sleep as they go to school tired. The authors continue that females are more caught up in the phenomenon as compared to males. The Center for Disease Control and Prevention (2013) defines insufficient quantity of sleep as "less than seven hours of sleep per night". Recent studies indicate that the use of social media contributes

greatly to low sleep quality or sleep disruption (Levenson, Shensa, Sidani, Colditz and Primack, 2016), as excessive Facebook checking also deprives many of quality sleep (Mark, Wang, Niiya and Reich, 2016). A study by Garett, Liu and Young (2018) reported that students who tweeted more frequently late at night (2:00 am – 6:00 am) during the weekdays had their sleep quality disrupted significantly, while those who tweeted more frequently late in the nights during weekends had no significant effect on their sleep quality. Mark et al. (2016) reported that constant or very frequent checking of Facebook status has a negative effect on the quality of sleep. The average adult needs approximately eight (8) or more hours of sleep in order to function properly (National Sleep Foundation, 2013). Sleep deprivation affects the 'academic, social, physical and emotional functioning' including impaired memory, mood-related problems, stress-related issues, etc. (Adams, Williford, Vaccaro, Kisler, Francis and Newman, 2017).

One other aspect or important factor that acts as a reason for sleep deprivation among students is termed the 'fear of missing out' or 'FoMO'. According to Przybylski, Murayama, DeHaan and Gladwell (2013), FoMO is "a pervasive apprehension that a more exciting or interesting event is taking place elsewhere". They tend to have the feeling that they are missing out on important social events or happenings around and therefore constantly stay connected on social media websites in order to keep abreast of latest developments. In their quest to be abreast of current happenings around, many students engage in several activities at the same time such as using smartphones or emails while listening to or downloading music, playing video games, etc. even when studying or engaging in academic activities (McMahon and Pospisil, 2005).

Alt (2015) has established the prevalence of the FoMO phenomenon indicating that most young adults have reportedly confirmed having that experience. According to Przybylski et al. (2013), Facebook users are more caught up with the phenomenon (FoMO) as they are more likely to use Facebook before retiring to bed at night and just after rising from bed in the morning which results in inadequate or insufficient sleep. A study by Adams, Williford, Vaccaro, Kisler, Francis and Newman (2017) found that majority of students reported going to bed very late at night and others being restless in bed because of their use of social media in order to remain connected with their colleagues on campus, and also their family and friends at home. However, inadequate sleep as a result of academic or homework was cited by very few students. A good night sleep was sacrificed for socializing and homework when they were hard-pressed for time. Some also put their cell phones very close by them when they went to bed at night in order to wake up regularly to check messages or updates from social media platforms as a result of their desire to be social and also for the fear of missing out on latest events or news.

2.4.2 Use of Social Media and Selfies among Students

The young generation of today, especially students, have developed an indescribable interest in sharing interesting stuff on social media, especially selfies (Shah and Tewari, 2016). A selfie is basically a self-taken portrait or image of oneself with a cell phone or smart phone. Shah and Tewari (2016) define a selfie as "a digital self-portrait that is aided by the technological explosion of front-facing mobile cameras, photo-editing software and multiple social media platforms". Also, the Urban Dictionary (2005) defined it as "self-portraits taken by teen girls". Some of the etymology of the term relate to body parts such as 'helfie' (picture of hair), 'legsie' (showing legs that are outstretched), 'welfie' (pictures taken while working out), 'healthies'

(fitness selfies) (Oxford University Press, 2013). Other selfie types are 'usie' (involving two people, mostly a couple), 'felfies' (selfie of a farmer), and among several others (Fausing, 2014). It is mostly driven by the desire to capture and share memorable or interesting images with others when one is wearing a fashionable clothing, finds himself or herself in a beautiful environment, interesting scene, partaking in a captivating activity, etc.

Selfies are mostly taken by students on college campuses with relish as they raise their mobile phones or digital cameras with their hands and capture their self-portraits often with smiles and in fascinating poses. The action is routine on campuses, but becomes intensified during inter-college programmes and other special functions (Shah and Tewari, 2016). Selfies have apparently become some of the popular forms of self-expression and ego satisfying exercise among the current youth akin to looking at a mirror (Jain and Mavani, 2017; Yongjun, Jung-Ah, Eunice and Sejung, 2016). Some of the social media platforms where selfies are mostly shared include Facebook, Twitter, Instagram and Pinterest. According to Pew Research Center, approximately "55% of all millennial (reaching adulthood around year 2000) have shared a selfie" (Paul, 2014). According to Souza et al. (2015), Google reported that about 24 billion selfies were uploaded to Google photos in 2015, while the number of selfies posted on Instagram increased by 900 times between 2012 and 2014.

According to Buffardi and Campbell (2008) and Tewari and Pathak (2015), there is some relationship between social media usage and narcissism (an exceptional interest in and admiration for oneself). Most social media users often photoshop (use computer software to digitally modify an image) their pictures in order to appear desirable than they really are and post

them or use them as their digital profiles (DPs) on social media platforms for positive feedback from friends and followers (Marwick, 2015). Selfie sharing and posting is noted to contribute to self-awareness and enhanced self-image especially among college students. This is because silence on posts and negative comments are indications of some defects while positive comments and the number of likes received connote positive images and enhances one's self-esteem (Kasch, 2013).

The selfie craze is a widespread phenomenon worldwide, enjoyed mostly by the youth irrespective of their statuses, be it a celebrity or a common person. As a result, Twitter declared 2014 as the "Year of the Selfie" (Mike, 2014). The youth's preference for and the large scale possession of smartphones has made this possible. Some of the motivation behind the sharing of selfies on social media include positive comments, likes and other remarks from friends and followers mostly for the lonely ones (Trudy and Leane, 2016). Other motivations include "attention seeking, communication, archiving and entertainment" (Yongjun, Jung-Ah, Eunice, and Sejung, 2016).

It is worthy to note that most cell phones or smartphones manufactured these days have high quality cameras or standard mega pixels which attract the youth due to the suitability for selfie-taking. They mostly have front and back cameras with the front cameras purposely for selfies. The cell phones are also compatible and have applications or software that support social media usage. Shah and Tewari (2016) state that Flickr, the photo sharing network, first used the term 'selfy' around 2004 in the description of digital pictures captured by oneself.

According to Selfie City (2014), women take more selfies than men and there is statistical confirmation that selfies are 'a young people's sport' with the average age being 23.7 years and also describing it as a 'universal phenomenon'. Selfies have been a form of mobilizing people to support a common cause or stand behind people to fight some injustice against others or expressing their displeasure over some issues on social media. According to Jaleel (2015), the selfie of a mother breastfeeding a baby was deleted by Facebook on the basis of going contrary to its nudity rules, because they frowned on obscene contents on their site. The agitation by breastfeeding mothers to distinguish breasts from obscenity by posting their breastfeeding selfies on Facebook caused Facebook to reverse their earlier stance, because Facebook considered the showing of breasts by breastfeeding mothers in the course of breastfeeding their babies as obscenity. The Irish Cancer Society also launched a campaign to draw people's attention to cancer and requested people to post selfies about their hair, whether good or bad hair day selfies. This means people were requested to take and post selfies on days or moments that their hair looked unkempt and not well cared for. Others were made to post selfies with no facial makeups on social media which became very helpful by raising funds to support the cause (Irish Examiner, 2014). Most of the youth, especially university students worldwide are actively involved in the taking and sharing of selfies on social media for a variety of reasons such as seeking attention, communication, showing off, etc. (Trudy and Leane, 2016; Yongjun, Jung-Ah, Eunice and Sejung, 2016).

2.4.3 Students' Selfie Use / Selfie Culture

A study was carried out in India by Shah and Tewari (2016) with 11 graduate students pursuing master's degree in Management (both 1st and 2nd year students) on their motives for taking and

sharing selfies. The respondents were of the average age of 23.5 years. The data was collected through Focus Group Discussion (FGD) with semi-structured and open-ended questions on their usage and reasons for selfies. The results revealed that all the participants of the study were fervent advocates of selfies and took them almost every day, from 20-40 selfies in a week, to 60-70 clicks in a day during special occasions. There were days when students stayed away from selfies for several reasons. They included being hard-pressed for time and looking quite unkempt, such as 'A bad hair day' for the females and 'Unshaven days' for the male participants. Other reasons assigned for no selfie days were 'assignment submission deadlines were close', 'exams', 'running out battery', etc., although the main reason was the students' physical appearance.

The participants of the FGD also disclosed that they used selfies in almost all aspects of their lives such as going out with friends, at famous food joints, in the classroom, on their way home, undertaking trips, getting gifts, etc. Students took selfies during lecture lessons either as a skill or an act of defiance. They refrained from taking selfies in the 'morning' due to their haste to get to campus on time. Other forms of their selfie use was using the front-facing cameras as mirrors to check how they were looking in the absence of mirrors, 'food selfie' whenever they went outside to eat better food than what they ate at the hostel. Other types of selfies included 'belfie' (selfie of the belly), 'mirror selfie', 'sun-kissed selfie', 'prop selfie', 'pout selfie', 'hidden selfie' and 'crazy face selfie'. According to the study, the selfie sharing pattern was dependent on three main factors; the audience, personality of the user and also the social media platform. Snapchat, WhatsApp and Instagram ranked first, second and third respectively as the students' favourite selfie sharing social media sites, while Facebook ranked fourth. This was as a result of the fact that Facebook was too open to the public compared to the other preferred platforms, especially Snapchat which automatically deletes pictures of the users within a period of time. Also, because

Facebook is more public, the students wanted to conceal their private college life from their parents and other known elders.

The study also revealed that the major reason for the students' selfie culture was convenience, due to the ease and suitability of clicking pictures of oneself countlessly. Control was the other reason indicated because students had control of the number of pictures and the kind of perfect pictures they always wanted. Self-image (getting the 'right click' or the desired angles and effects and sharing it on social media sites instantly), speed (clicking and sharing selfies with loved ones within the shortest possible time) were also cited. According to the participants of the study, they also took selfies mostly to boast about many things, actions or occurrences such as the acquisition of a new electronic device, car, bicycle and even a new or stylish haircut. They could not avoid showing off during special occasions, in a new or strikingly strange place, having a good time, etc. The other motives were having fun which was a form of bonding and staying connected as well as having good memories and storing interesting times.

The researchers highlighted some of the importance of the study as aiding policy-makers and decision-makers (especially in India) to formulate policies regarding cyber-related measures. They suggested the use of more selfies and self-expressive individuals instead of celebrities by companies as marketing tools and strategies to create a connection with actuality in order to leave long lasting impressions in the minds of young college students. Selfie culture could also be used with social messages such as the consequences of drug abuse, reckless driving, domestic violence, etc. in order to raise awareness and confront these social problems with students leading the campaigns.

2.4.4 Selfie-Related Problems / Accidental Deaths

The 'selfie obsession' is reported to result in eating disorders among some teenagers in their quest to look physically appealing and likeable (Bray, 2015). Some even resort to plastic surgery as a result (FlorCruz, 2014). Gemma and Kerry (2014) reported one of the worst incidents or cases of bizarre selfie addiction where a teenager from Britain used to capture over 200 pictures in one day, undergone a self-imposed house arrest or confinement for six months. He lost 30 pounds of weight and became a school dropout. He attempted to commit suicide as a result of the lack of opportunity to take selfies but was unsuccessful. Fox and Rooney (2013) also reported of narcissism and psychopathy associated with posting of more pictures, measuring psychopathy in terms of "lack of empathy and impulsive behaviour, while editing pictures was associated with narcissism". Some cases of narcissism and psychopathy had to do with cases of a teenager who took a selfie with a victim he murdered and posted the gruesome picture on social media, as well as snapshots of sexual assault shared on social media by the perpetrators (Kohn, 2015).

The manner in which today's youth post selfies and also chat on social media is becoming increasingly worrying. Aside the distractions that it causes to students' academic work and other associated challenges, most students carry on that practice into their professional or working lives by exhibiting such behaviours (taking selfies as well as chatting on social media) in their workplaces. This is because the practice often results in poor attitudes towards work by some employees in various workplaces, causing the loss of precious office hours and negatively affecting their productive output. It was therefore not out of place when the Head of Local Government Service in Ghana, Nana Ato Arthur, admonished staff of the Metropolitan, Municipal and District Assemblies (MMDAs) to desist from the practice (as reported in Daily

Graphic, March 28, 2019, p. 17) saying "You come to the office and even though you have been assigned work to do, you are always on your phone doing social media. The selfies must stop. There is time for everything. Let us have time for the office work" (Tawiah, 2019).

It is interesting to note that many deaths have occurred worldwide among the youth in the course of taking selfies, mostly involving students. According to Donna (2014), "If smartphones were ponds, a large portion of our population would have already drowned". This is because many young people have died while taking selfies. The deaths occur as a result of the dangerous situations, poses and the extremes by which the selfies are taken. They often risk their lives by throwing all caution into the air. According to Jain and Mavani (2017), selfie related-death or mortality is "an accidental death that is precipitated by the process of self-photography and occurs just before, during or just after the process typically by a cell phone". Lamba et al. (2017) define selfie-related casualty or dangerous selfie as "a casualty to an individual or group of people that may occur while the individual(s) attempts to take a selfie".

According to Jain and Mavani (2017), 75 people (involving 52 incidents) died while taking selfies from March 2014 to June 2016. Out of the 52 incidents of the selfie-related deaths that occurred within the period, 32 of the incidents (61.5%) involved students/student tourists. Also, out of the 75 victims, 44 (58.7%) were students, including 33 males and 11 females. The selfie deaths occurred worldwide, including Africa, specifically South Africa, where a 21 year old female student tourist fell from hill to death in January 2015. The victims had a mean age of 23.3, ranging from 14 to 66 years, with three-quarters (3/4) of the deaths involving the younger generation of less than 25 years.

The death of a Lebanese in January 2014 who was killed by a car bomb just after posing for a selfie sparked a reaction by others by uploading their own selfies with the hashtag #Not A Martyr# (John, 2016). According to Jain and Mavani (2017), the most affected countries were India, Russia and USA. Among the causes of the deaths were falling down, drowning and rail accidents in the order of frequency, with other causes being road traffic and air accidents, animal attack, gun shots and grenade. Also among the victims, over half were students, some were visitors for the place and about one-tenth (1/10) were tourists of other nationalities. Females are fond of selfie taking as compared to males but the higher risks taken by the latter is the reason for their higher rate of selfie mortalities (Amandeep, Stale, Torbjorn, and Cecilie, 2016).

The high incidence of selfie deaths in India, according to Jain and Mavani (2017) has prompted government officials to declare 16 'No Selfie Zones' nationwide where selfie takers are warned using lifeguards and large signs (Agence France Presse in Mumbai, 2016). Russia has also launched a similar campaign including slogans like 'A cool selfie could cost you your life' and 'A selfie with a weapon kills' (AFP, 2015). The Journal of Family Medical Sciences reported a study which revealed that about 259 persons lost their lives in the course of taking selfies. The selfie mortalities happened between October 2011 and November 2017 (Criss, 2018). The study went on to say that many of the selfie deaths are not reported.

2.5 Social Media and Education

2.5.1 Educational Use of Social Media

The European Commission (2008) sought the incorporation of educational technology at all levels of education which made many universities make a lot of strides to equip new students or empower them technologically for Citizenship 2.0., that is legitimacy and prevalence of dual citizenship where students in foreign countries are granted citizenship (Almerich, Díaz-García, Cebrián & Suárez, 2018). This is to foster participation and the training of professionals, and also commit to democratic developments and human rights. The use of technology has therefore become an issue of great concern to researchers, with social media taking centre stage or leading the way. The usage of mobile technological devices is increasingly becoming indispensable in our higher educational settings or institutions (Qi, 2019). According to Kobus, Rietveld, and Ommeren (2013), most of Dutch university students possess at least a mobile device. EDUCAUSE Center for Analysis and Research reported that 86% of US undergraduate students owned smartphones in 2014; out of which 15% were inseparable from their devices to the extent that they "could not live without" them (Dahlstrom and Bichsel, 2014; Smith, 2015).

Social media has become an important resource in the day to day activities of university students including learning. It is therefore not surprising that the current generation is called "millennials", "net savvy", "digital natives", or "net students" who have developed a very strong liking for technology and technological gadgets as compared to the former means of teaching and learning (Hess and Shrum, 2011; Shittu, Basha, Abdul-Rahman and Ahmad, 2011). The use of social media as a tool for teaching in universities encourages students' participation, collaborative teaching, and enhances communication and interaction in the area of knowledge

impartation and pedagogical process (Mostafa, 2015). The interactive nature of social media fosters informal learning by students which in turn aids their formal learning methods (Cao and Hong, 2011). Social media provides a lot of opportunities by facilitating information exchange between people, formation of online communities and enhancing interactions (Dragseth, 2019). Such opportunities enable high students' engagements, linkages between colleagues and interest groups, and also among students and instructors (Evans, 2014; Lovejoy and Saxton, 2012). Social media interactivity brings about easy classroom participation and enhances collaborative learning which is proven to be more beneficial as compared to individual learning and an improvement in student academic outcome (Glazier, 2016).

According to Mergel (2012) and Eikenberry (2012), the integration of social media into course design affords students the opportunity to gain practical experiences and become successful in their search for jobs later in life, aside their previous personal social media experiences before their enrollment in colleges. There are however, some serious risks associated with social media use in the classroom such as abuse and privacy invasions. The risks become greater if students are oblivious of the proper application of privacy settings on the websites to forestall or avert invasions on their privacy (Dragseth, 2019). Therefore, students would need to be sensitized on its proper use for their protection, such as the opening of accounts purposely for courses other than their personal accounts. According to Mao (2014), despite the fact that social media was originally meant for personal use instead of educational, the integration of technology into a course is possible and necessary, so long as it relates to the technology.

2.5.2 Roles of Social Media in Academic Activities

Some research have brought to light some major roles social media plays in the academic activities of tertiary education, including communication with teachers/instructors, and discussions and sharing of information. Stanciu, Mihai and Aleca (2012) reported that most tertiary education students, 62.0% communicate with their teachers through social media while a few, 25% indicated that social media had no bearing on their academics. However, the study by Lim, Agostinho, Harper and Chicharo (2014) reported that about 90% of students in Malasia used social media for academic activities including "assignments/project collaboration discussions", followed by "sharing of documents", "communication", "knowledge/information sharing", "activities/event updates" and "sourcing for information" in the order of frequency. The study also added that teachers/instructors were also not left out in the use of technology for teaching and learning.

Piotrowski (2015) reporting on the content analysis of eleven research studies carried out earlier indicated that 55% of business students and business faculty members at West Florida University in USA derived positive outcomes with the application of social media to teaching. Also, 30 per cent reported both positive and negative outcomes with the application of social media to learning while two studies also had negative experiences so far as the educational use of social media was concerned. Dogoriti, Pang and Anderson (2014) carried out a study which revealed that there were a lot of gains integrating social media and learning management systems for teaching and learning because 75% of the students confirmed that "social networking sites help students to strengthen English skills and 69% indicated that social networking sites can enhance the learning process among students.

In Nigeria, a study by Fasae and Adegbilero-Iwari (2016) reported that 65.2% of the respondents indicated that they used social media only "for sharing academic events with my peers", 34.1% also responded that they used it "for submitting assignments" while 9.4% used social media "to interact and exchange ideas with my lecturers". The study also revealed that despite the fact that Google+ was the most helpful platform for students' learning, Facebook was most used by the respondents. Also in Nigeria, social media was found to be an effective tool in teaching and learning, helps to improve skills and experiences of school teachers in their use of technology and instructional techniques, improve children's attitudes and abilities and as collaborative teaching and learning tools (Wickramanayake and Jika, 2018).

2.6 Students' Use of Social Media

2.6.1 Social Media Use among Secondary Level Students

Several studies indicate that social media use is prevalent among middle, high and secondary school students. According to a report by Pew Research Center's Internet and American Life Project (2013) on social media usage by teens, between 2006 and 2012, 802 (95%) of teens within the ages of 12-17 used the Internet. Eight out of ten teens used some kind of social media, mostly Facebook and Twitter, with 77% and 24% respectively. Also, 94% of the teens indicated they had Facebook profiles while 81% reported using Facebook very often. One in four teens had a profile or account on Twitter and 11% had profiles or accounts on Instagram. Again, the statistics of the Pew Research Center (2015) indicated that 1,060 of the youth, 71% from 13-17 years of age used Facebook, followed by Instagram 52%, Snapchat 41%, Twitter 33%, Google+ 33%, Vine 24% and Tumbler 14%. Also, some of the students indicated that they used two or more social media sites (Lenhart, Duggan, Perrin, Stepler, Raine and Parker, 2015).

According to Madden et al. (2013), 94% older teens vs. 82% of younger teens shared photos of themselves on their profile, 76% vs 56% shared their school name, 66% vs 50% shared their relationship status, and 23% vs 11% also shared their cell phone numbers on social media. The 2004 Pew Research Center's Internet & American Life Project survey revealed that 39% of online teens shared contents or materials created by themselves, including photos, stories, artwork or videos online. Also, 33% created webpages or worked on blogs for others, including those for groups they belonged to, colleagues, or school assignments. Again, 28% created their own journal or blog, 27% maintained their own personal webpage, while 26% also remixed content they found online into their own creations (Lenhart, Madden, Rankin and Aaron, 2007).

The problems, risks or consequences of social media use by the middle and high school students has necessitated the education of K-12 students in order to become digital citizens who exhibit "the norms of appropriate, responsible behaviour with regards to technology use", according to Ribble (2004, p. 7). International Society for Technology in Education (ISTE) recognizes digital citizenship as a crucial or vital part of educational technology. Nine (9) elements of digital citizenship under the framework of 'Protect, Respect and Educate' are highlighted in a book authored by Ribble (2014) with the title 'Digital Citizenship in Schools'. The elements include "Digital Access, Digital Commerce, Digital Communication, Digital Literacy, Digital Etiquette, Digital Law, Digital Rights and Responsibilities, Digital Health and Wellness, and Digital Security".

A study carried out by Wang et al. (2018) in USA surveyed five hundred and ninety-three (593) middle school students (6th to 8th grade) from two schools in the south-eastern region about the students' perceptions of social media and their activities online. The age range of the respondents

were from 12-16, which constituted 300 females (50.6%) and 293 males (49.4%). The results showed that Instagram was the most used social media site 158 (26.64%) followed by YouTube 148 (24.96%), Snapchat 146 (24.62%), Facebook 45 (7.59%) and Twitter 13 (2.19%). The other social media sites were Pinterest 12 (2.02%), Vine 9 (1.52%) and Google+ 7 (1.18%). The middle school students were asked to indicate the technologies or devices they used to access social media and the results were smartphone 503 (84.82%), laptop 489 (82.46%), tablet 283 (47.72%), desktop 109 (18.38%) and X-Box 40 (6.75%).

In the study, the middle school students pointed out the activities they did online: post pictures 494 (83.31%), read others' posts 397 (66.95%), delete videos 333 (56.16%), comment on others' posts 333 (56.16%), post videos 234 (39.46%), delete pictures 209 (35.24%) and re-share others' posts 150 (25.30%). The other social media activities by the students were re-share others' videos 129 (21.75%), re-share others' pictures 129 (21.75%), post status updates 110 (18.55%), delete my posts 69 (11.64%) and delete my comments 39 (6.58%). The results of the study also showed that traditional sites like Facebook and Twitter were not much used by the teens as compared to mature people (over 25 years of age) because parents and teachers of young students preferred using Facebook and Twitter and could therefore not keep an eye on the activities of their children online. The other reason had to do with the fact that the user interfaces of Snapchat are quite complicated to use by people above 25 years (Oremus, 2015). Also, 40% of the students surveyed were willing to accept friend request from people they did not know, with the girls being more willing to do so than the boys. The girls revealed that they checked their social media updates more frequently than the boys, providing adequate grounds for the parents of girls being more observant or attentive on the activities of the former than parents of the latter.

The study also found that about 17% of the students started using social media as early as 9 years onwards, with the girls starting using social media earlier than boys. Smartphones and laptops were used more frequently than other electronic devices to access social media. This is because most students own these devices and access social media anytime, anywhere (Lenhart et al., 2015). Also, laptops are supplied for students' use both at home and in school, giving them unlimited access to social media with internet. Furthermore, the study showed that students used social media more than ten times per day, with the girls using social media significantly more times than the boys. Cyber bullying was also among the worries expressed by the surveyed students. The study therefore recommended that special attention must be paid to girls and security education for students. An advice was given to parents and teachers as well to monitor the devices and the information they share or the contents they access with those gadgets. Students must be frequently monitored on their use of social media in order to help parents have information on any potential threats of cyber bullying early enough in order to nip it in the bud. Parents were also required to be vigilant on the kind of friends students make on social media including names they were not familiar with in order to protect them from cyber bullying and cyber predators.

In Nigeria, a study was carried out by Dike, Eke and Babarinde (2013) on social media and reading among secondary school students in Enugu State. A descriptive design was used to examine six secondary schools in Enugu and Nsukka, with a sample of 360 students, 60 from each school, comprising 30 from junior secondary and 30 from senior secondary. Data for the study was collected using questionnaire and focus group discussion (FGD). During the FGD, more secondary school students were aware or used social media than the junior secondary

students. Facebook was the most used site, as well as Twitter and 2go while others also sent e-mail or text messages. The young people used social media for entertainment and pleasure. On reasons why students used social media based on the responses from the questionnaire were getting news updates, finding and sharing information, and reading materials of interest being the highest ranked while the emphasis on entertainment was lesser. However, socialization was indicated as the main purpose for their social media use during the FGD.

On the perceived benefits and dangers of social media use, the responses from the questionnaire included developing new skills, keeping up with current events, getting useful information, access to varied media, making new friends, connecting with old friends, sharing ideas, and keeping entertained in ranking order. The questionnaire responses reflected what the young people thought they were expected to see as the benefits and more acceptable reasons for using social medial while the focus group discussion reflected a freer expression of their feelings and attitudes. Among the dangers of social media use by the secondary school students as disclosed by the respondents, addiction to social media was the highest ranked (3.25), followed by cyber bullying (3.01), stealing of study time (2.88), negative effect of writing skills (2.87), character defamation (2.82), exposure to pornography (2.75) and privacy invasion (2.74). The other dangers were misinformation (2.53), concentration reduction (2.52), exposure to hacking (2.45) and discouraging reading for pleasure (2.32) was the least danger cited.

According to the study, when the attitudes of the secondary school students towards reading were compared to social media, the focus group discussions results was positive toward reading because almost all the students enjoyed reading because it made them knowledgeable and successful academically. Few were of the view that reading was entertaining and made them feel

less lonely. Few also read just to pass exams because reading could be tiring. In the study, comparison between attitudes toward reading and social media revealed that more students enjoyed reading because it was more helpful to learning. Those who preferred social media did so because it was "fun", "entertaining" and "not boring like reading". They liked social interaction because it was possible to "discuss what's happening with friends" and "get to meet people online". Another student remarked that social media "remove formality – it doesn't seem like for examinations". The participants also saw social media as sources of information, keeping them well informed and also enabling them "to get to know about places and people on the web".

On the perceived impact of social media on reading habits of secondary school students, the respondents were first asked whether social media use encourages or discourages reading. Most of the respondents during the focus group discussion stated that the use of social media might throw cold water on reading because it could deprive them of quality reading time and energy to read, leaving them feel too lazy to read. Others also saw it as distraction and "substitute for learning" while others were concerned about addiction to social media at the expense of academics and other endeavours. Others felt that social media use have little or no effect on reading because they are mutually supplementary. Some were of the view that knowledge is gained from reading and we become knowledgeable by browsing for more information. Others said as browsing helps in making up notes, reading aids knowledge acquisition. Some of the respondents also felt self-discipline and adherence to keeping timetable was the solution or most important. The researchers therefore made a recommendation to teachers and librarians in Nigeria to take advantage of the students' interest in reading, academic success and ICT to incorporate social media in education. They were of the view that provision of access to internet

and electronic devices as well as the re-orientation of teachers and educators, school librarians and educational administrators would help achieve that purpose.

In Ghana, the findings of a study carried out by Mingle and Adams (2015) on social media network participation and academic performance in senior high schools also affirmed the overwhelming use of social media networks by high school students because all the respondents indicated they were on social media. A mixed method approach was used to survey students in four senior high schools while heads of the schools were interviewed. Out of the sample of 526 students, 244 were males (46.4%) while 282 (53.6%) were females. The results showed that WhatsApp was the most used platform, followed by Facebook, Twitter, YouTube, Google+, Instagram, Snapchat and Myspace in that order. Some of the reasons they assigned for their usage of social network sites were: because Facebook and WhatsApp were used by most of their friends; Facebook was cheap and WhatsApp was cheaper; easy interaction on WhatsApp and Facebook, and the possibility of simultaneous chat with many friends.

Majority of the respondents 294 (55.9%) had between 601-800 friends on social media while 18 (3.42%) had the least number of friends between 401-600 friends. The results also found that most of the senior high school students 446 (41.4%) used social media for the purposes of making friends, followed by 329 (30.5%) for chatting, 170 (15.8%) for discussion with friends on academic matters as well as 132 (12.3%) used social media for entertainment purposes. A considerable number of the respondents spent 8 hours or more on social media every day. Also,135 (25.8%) spent 1-2 hours daily, 120 (38.7%) were always online, 110 (21.0%) spent 3-5 hours. Moreover, 83 (15.8%) and 76 (14.5%) of the students surveyed spent 8-12 hours and 6-

7 hours respectively on social media sites per day. Again, when the students were asked whether they used social media during school hours, 199 out of 520 (38%) responded positively while 277 (53%) gave negative response. Besides, 44 (9%) of the students did not always participate online during school hours but did so 'sometimes'.

The study also revealed that the participation of the students on social network sites affected the time they submitted school assignments mostly due to the fact that they procrastinated or spent little time doing their assignments. Again, there was negative effect on students' use of English language as well as their grammar and spelling due to their social network participation, although it improved their reading skills. According to the study, when the grades of the students were compared before and after their participation on social media sites, majority of the students, 62 (11.8%) out of the 526 strongly agreed and 225 (48.5%) agreed that their grades had dropped after they began participating online, with more females experiencing drop in grades than males, an indication of negative effect to their academic performance. However, 60 (11.4%) neither agreed nor disagreed that their grades had dropped while 43 (8.2%) and 106 (20.2%) disagreed and strongly disagreed respectively.

Furthermore, it was found that addiction was a problem to majority of the students (more males than females) because they found it difficult to concentrate on their studies due to their frequent online activities. They indicated that their grades would improve if they ceased using social media. Some respondents indicated social media was more beneficial to education because it enabled discussions on examinations while others had divergent opinion that social media use was for social and personal purposes. The interviewees also disclosed that the students' social

media use helped them learn new words, work on assignments and research works and discuss and share ideas after class. Also, male students had more friends online than the females because the males were more likely to send friend requests than females. The study therefore recommended education for all stakeholders and parents of students on the pros and cons of using social networks, strict enforcement of the regulations regarding the use of electronic devices in senior high schools and the promotion of the academic use of social networks. It also recommended to school authorities and parents to counsel students who are addicted to using social media platforms.

2.6.2 Risks Associated with Social Media Use by Secondary Level Students

According to Martin, Wang, Petty, Wang and Wilkins (2018), the universal acceptance and mass use of technology by students at very young ages necessitate a great concern for their safety against issues such as impact of digital footprints, improper use of social media, cyber bullying, etc. Aside the numerous benefits or advantages derived from the use of social media by middle school and high school students such as the creation and participation of online communities and linking up with colleagues, they also get exposed to several societal risks. A study by Kraut et al. (1998) supports the above assertion, indicating that when teenagers use the internet, for even three hours per week, teenagers probably suffer from social isolation and depression. However, a study carried out with 130 students (7th-graders) from a middle class public school in California disclosed that internet use had no significant psychological effect on the students (Gross, Juvonen and Gable, 2002). People therefore sought to find out whether or not adolescents who were anxious and lonely were susceptible to online assaulters or attackers.

For further inquiry into the issue, Dowell, Burgess and Cavanaugh (2009), conducted a research with 404 middle school students on their risky behaviours online. Some of the respondents, 31% indicated posting their personal information on social networking sites, including their images. 22% of boys (as against 6% of girls) indicated having sought information about sex on the internet, and about 40% of boys and girls reported they had come across obscene or sexually explicit content on the internet. Some of the respondents, 28% indicated they had experienced bully or harassment on social media sites. The study further revealed that initiating online sex and online harassment, exchanging messages with unknown persons, posting the name of school and email address and overriding internet filters and blocks were some of the potential threats to the vulnerable youth, but not mere posting of one's picture on social media platform (Dowell et al., 2009).

A national survey of 1588 middle school youth from ages 10-15 showed that 32% had experienced harassment online, of which 43% were through instant messaging (IM) in chartrooms and 28% through social networking sites (Ybarra and Mitchell, 2008). However, other empirical data do not support these findings. For example, a research carried out with 1,915 girls and 1,852 boys in grades 6-8, among six elementary and middle school students in the south-eastern and north-western United States showed that 407 of the students (11%) had suffered cyber bullying and 2,961 (78%) had never had that experience. Victims of cyber bullying are also victims of school bullying, although more cases are reported by the non-heterosexual youth. Cyber bullying results in high levels of psychological suffering and depression as well as suicide attempts at times (Schneider, O'Donnell, Stueve and Coulter, 2012). Social media sites are noted to have the potential to influence suicide-related behaviour

negatively and positively. For example, some studies have revealed that the youth often come across or learn about suicide-related content on message boards, chartrooms and YouTube videos. In the same vein, social networking platforms such as Facebook and YouTube can help to prevent suicide by providing information and connecting people to hotlines and websites that help to prevent suicide (Luxton, June and Fairall, 2012).

One issue of worry and mostly discussed risk regarding teenagers/students' use of social media is cyber bullying and online harassment. According to O'Keefe and Clarke-Pearson (2011), cyber bullying and online harassment is defined as "deliberately using digital media to communicate false, embarrassing, or hostile information about another person". Cyber bullying occurs when someone intentionally disturbs, harasses or worries another ceaselessly by the use of online or mobile technology. It includes teenagers spreading false information, sharing distasteful images or information online, slander against others in public, among others. Some of the cyber bullying effects on students include thoughts of violence, depression and even suicide. According to Ahn, Bivona and Discala (2011) and Al-Khateeb and Epiphaniou (2016), the involvement of parents and schools is necessary because cyber bullying has to do with the pervert use of the online or mobile technology. Students therefore need to abide by some "unspoken rules" called netiquette, in order to guide them and ensure good behaviour when interacting or communicating online (Brown, 2014). Also, students need to be conscious of the "digital footprint" they leave online (Grayson, 2011). This is because the messages, images and online posts become permanently stored as "digital footprint" and could be retrieved overtime by teachers, admission officers in colleges, classmates, future employers and the general public (Martin et al., 2018). The 'digital footprint' therefore have the potential to positively or negatively affect one's chances in future endeavours.

2.6.3 Social Media Use among University Students

Majority of tertiary students today are not left out in the use of social media (Chiang and Sumell, 2019). It is discovered that even most PhD level students use social media to enhance their studies (Khan, 2010).The easy access to social media and the internet makes it possible for students to seek answers to questions, share information and discuss issues of interest and also connect easily with colleagues and faculty, notwithstanding its associated distractions (Leyrer-Jackson and Wilson, 2018). A lot of studies on social media and higher education suggest that social media websites ought to be incorporated into the classroom (Lin, Hoffman and Borengasser, 2013; Davis et al., 2014) in order to enhance students' learning. According to Lieberman (2014), 94% of university students at various institutions in UK use social media. Students are known to use social media for different purposes which include academic, in order to complement teaching and learning in the classroom as well as socialization (Salvation and Adzharuddin, 2014). According to Al-Daihani (2010), students used social software "to chat with friends" 56%, "for up-to-date information" 5%, "for networking" 31%, "for self-expression" 28%, and to "share selfies" 23%.

The presence and or adoption of technologies in education and their use by students today cannot be overemphasized. A study by Feshchenko (2015) revealed that students from 25 universities of the Russian Federation (375 participants) made use of social media. He reported that 95% of students used social media sites in education and spent 24% of their time for learning, time spent on entertainment was 41%, with 28% for seeking vital information. In India, Munshi (2014) studied how social science students at Aligarh Muslim University used social networking tools such as Facebook, Twitter, WhatsApp, YouTube, etc. in their learning process. The study

brought to light that the students were cognizant of the existence or availability of tools for social networking and were making use of them for their academic studies which enabled them to network or connect to their colleagues to seek clarification on difficult concepts and share knowledge on subject matter. According to Gupta (2013), most of the students made use of social media platforms to collaborate and keep in touch with each other. However, students' usage of social media, especially Facebook for academic purpose did not have any impact on their performance.

According to Manjunatha (2013), in India, students use social media for chatting, finding new friends, sharing and receiving information and maintaining existing friendships. A survey conducted by Mustapha and Hamzah (2011) on students' participation on social networking sites in Malaysia also showed that students use social media to chat, contact old friends, to manage and maintain their friendships, for entertainment, to obtain knowledge from group discussions as well as for leisure purposes. They added that students spent many hours accessing social media networks. Ezumah (2013) disclosed that the degree of interactivity, contents uploading ability, ease of use and ability to search through a site are some of the reasons that whip up students' interest and inform their choice and usage of particular social media platforms. According to the study, students spent 12 hours daily on social media. Hong et al. (2014) reported that on the average, tertiary students spend over four and half (4.5) hours on Facebook. Singh and Gill (2015) also revealed that 70.1% of students spent one hour on daily basis on social media, while Neier and Zaye (2015) reported that 88% of students visited social media daily. According to Stainbank and Gurr (2016) most students 52.3% accessed social media one to four times per day and more than 40% of them used social media more than five times a day.

The findings of a study conducted in Nigeria by Wickramanayake and Jika (2018) on social media use by undergraduate students of education was that universities in Nigeria had more male student population than females and social media was mainly accessed with mobile phones, followed by laptops and then desktop computers. Most of the students reported to be moderate to frequent users of social media. On the types of social media communities preferred by students, the results showed that educational communities had 47.8%; followed by informational, 31.2%; entertainment or recreational was 15.3%, and resource sharing, 5.5%. The study also indicated that most of the students, 60.2% were of the view that their use of social media never had any adverse effect on their learning nor did it reduce their study time. Furthermore, 32.4% responded that the time they allotted for their studies were not reduced by their use of social media, while 7.2% were neutral. Again, some of the activities carried out on social media were to "watch/listen online music/video/podcast" 37.1%; "chat/with teachers/class fellows" 33.3%; "download music/video/photos/documents" 23.9%; "commenting on blogs/video/podcasts" 22.6%, and "read blogs/documents" 22.2%. In a study carried out by Fasae and Adegbilero-Iwari (2016) among science students in public universities in Southwest Nigeria, it was revealed that students had more interest in communication and entertainment so far as social media use is concerned as against learning.

A study conducted by Asiedu and Badu (2018) on motivating issues affecting students' use of social media sites in Ghanaian tertiary institutions disclosed that on daily basis, majority of students from University of Ghana and Kwame Nkrumah University of Science and Technology use social media while few students do so infrequently. The youth bracket with the very high social media usage rate falls between the ages of 18-24, unlike those who are 25 years or more,

just as reported by Nielsen (2012). This is because the current young generation, especially students are very interested in and conversant with the use of modern technology. The results of the study also showed that the ability to chat, maintain distant relationships and also constantly contact loved ones ranked highest, 80.2% among the factors that propel or move students in the two universities to use social media. Finding information, 78.1%; entertainment, 72.1% and academic work, 59.4% ranked second, third and fourth in that order. Other factors, according to few of the respondents were passing time 40.1%, to satisfy emotional needs 13.2% and to find someone they could share relationship with 12.2%. The study also established that WhatsApp is the most used social media tool by students in the two institutions with the least preferred being Skype. According to the respondents, a particular platform would be chosen over others depending on its suitability or ease of interactivity.

Kolan and Dzandza (2018) revealed that Ghanaian university students are not left out in the use of social media. This is because all the 197 (100%) respondents of the study indicated that they were on social media platforms, particularly Facebook and WhatsApp. Twitter and Instagram were other social media platforms used by the students. Majority of the students, 50.3% spent more than 2 hours daily on social media. Also, 165 (84.6%) of the respondents indicated that their social media use was mainly for chatting and downloading while the remaining 32 used social media mainly for academic purposes.

However, students encounter some challenges or hindrances in their use of social media based on some studies conducted. They include “time consumption”, “fear of misusing their personal information”, “lack of security and privacy” and “access not allowed by university” (Singh and

Gill, 2015). Wickramanayake and Jika (2018) also cited "unstable electricity connections", followed by "internet cost", "unstable security and privacy issues" and "unreliable internet connections" in that order as some of the challenges.

2.7 Social Media and Academic Performance of Students

Lamas (2015) defined academic performance as "the outcome of a student's efforts at educational establishments, which is usually expressed through educational grades". "Academic performance may also be expressed as a quantitative and qualitative score, a grade, which if coherent and valid, will reflect the level of learning generated by the teacher-student relationship on the basis of the goals set out early in the class" (Rodriguez, 2000). According to Banquil (2009), performance in examination is generally the basis for assessing or judging a student. The importance of academic excellence in our current educational settings cannot be overemphasized. This is because it is a key determinant factor for higher academic pursuits of individuals from one level of education to another and also provides opportunities for better work prospects later in life. It also enhances the image of individuals as they command respect and endears them to friends, family and loved ones. As a result, people or mostly students are much concerned with how to excel in their academic performance (Kyoshaba, 2009).

Social media use among students is reported to have positive outcomes on students' academic performance (Reeve and Tseng, 2011; Reeve, 2013), but other studies indicate otherwise (Junco, 2012; Rosen, Carrier and Cheever, 2013). Kirschner and Karpinski (2010) reported that regardless of how students use Facebook, even if leisurely, it results in lower grade point averages (GPAs) – (self-reported or based on the GPAs reported by students themselves) and

reduced or limited study hours compared to others who do not use Facebook. Junco (2012) also supports the assertion that the amount of time spent on social media by university students correlates negatively with the time they spend on their studies. Rosen, Carrier and Cheever (2013) are in agreement with the above studies on the negative outcomes of social media (Junco, 2012; Rosen, Carrier and Cheever, 2013; Kirschner and Karpinski, 2010) by reporting that distraction is quite inevitable among students as they text and use social media within six minutes of their study time. However, the degree of the distraction varies depending on the strictness of the adherence to the study hours by the student and the strategies involved for studying (Rosen, Carrier and Cheever, 2013).

It is not uncommon for technology users today to engage in two or more activities at the same time, known as multitasking (Alt, 2015; Chiang and Sumell, 2019). The practice (multitasking) also occurs or is prevalent in the academic setting as well and has a negative bearing on students because it reduces their concentration and affect both their productivity and efficiency (slows down their pace for accomplishing their work or tasks) which in turn end in poorer academic outcomes (Levin, Waite and Bowman, 2007; Karpinski, et al., 2013; Junco and Cotton, 2012; Lepp, Barkley and Karpinski, 2014). Again, Bowman, Westerman and Claus (2012), also intimate that much time was spent by students who used social media and instant messaging to accomplish tasks or complete their work (e.g. reading a passage in a textbook) as compared to those who did not. They added that although students who engaged in social media usage spent some more time in completing tasks, their understanding was not affected (Bowman, Westerman and Claus, 2012). Therefore, despite the fact that students' ability to understand material was not decreased or affected by the use of the social media websites, their efficiency of grasping new concepts was limited or reduced. In as much as the findings of the above studies indicate that the

academic performance of college students are affected negatively by social media usage, the variety of the effect across the various or different years of the undergraduate programmes (i. e. first, second or third year students) is not yet or well understood, as well as the discipline or field of study (Leyrer-Jackson and Wilson, 2018).

A study conducted by Leyrer-Jackson and Wilson (2018) among biology students in Northern Colorado, USA, reported that 71% of the respondents were distracted by using social media websites in class. Most the respondents reported spending one to two (1-2) hours per day, whereas others spent two and a half (2.5) to three (3) hours per day using social media websites, with the most commonly used social media websites being Facebook, Snapchat and Instagram in that order. However, LinkedIn and Research Gate, the academically based social media platforms were some of the least used websites. According to Leyrer-Jackson and Wilson (2018), there is a negative correlation between GPA and the number of hours students spent on social media platforms per day. They continued that females reported using more social media platforms as compared to the males, with the females subscribing to five platforms on the average as against four for the males. They also found out that the number of social media accounts and GPA for males and females significantly had a negative correlation with the females having a stronger correlation as against the males. They also brought to light the fact that negative correlation exists between the number of hours students dedicate to their studies in a week as against the number of hours spent on social media websites, with a stronger correlation for males than females.

Research indicates that when students commit much time to their studies, it correlates positively with their academic performance. When students develop good attitudes towards their studies or adopt good and efficient study habits, it results in tremendous improvement in their academic performance while laxity in study regimes or poor study habits result in academic failure (Obadara and Olaopa, 2018; Ayodele and Adebiyi, 2013). In Nigeria, a study by Onyeka, Sajoh and Dalhatu (2013) indicated that even if students use social media very often, their academic performance is not affected. However, a research carried out in Sudan by A'lamElhuda and Dimetry (2014) on medical students at Khartoum University on their use of social networks revealed that an association exists between social media use by students and their academic performance and there is the likelihood of low academic performance as a result of frequent social media usage. The study also showed that students visit social media platforms even during lecture sessions and therefore do not concentrate much in class and also in the laboratory.

Kalpidou, Costin and Morris (2011) observed that college students who make use of Facebook spend less time on their studies and have lower grades as compared to students who do not use the popular social media platforms. Social media affects study time, poor grammar and wrong spellings of students as well as attention diversion from their studies (Ndaku, 2013). Mensah and Nizam (2016) also affirm that students spend a greater part of their study hours on social media sites than the time they allot for their study sessions or academic work and it affects their grade point average (GPA) negatively. Jacobsen and Forste (2011) also established a negative link that exists between social media usage, including mobile phones and self-reported GPA among first year varsity students in USA.

From observation, most students are preoccupied with social media use because the time they spend on social media exceed the time they allot for their studies and therefore struggle to come out with flying colours if they do not study hard during examinations (Osharive, 2015). A study by Maya (2015) showed that the use of social media results in lower academic performance, less self-perception and less interest in college oriented carriers. Studies have shown that students' use of English is also affected by their social media use. In their quest to chat and exchange messages very quickly with colleagues, most students adopt short-handwriting and this affects their use of English and consequently their academic performance as they spell words wrongly and repeat the phenomenon during examinations (Obi, Bulus, Adamu and Sala'at, (2012).

Some studies have confirmed that usage of mobile devices have the potential to militate against college students' academic performance (Lepp, Barkley and Karpinski, 2014; Wood et al., 2012). Carter, Greenberg, and Walker (2017) revealed that permitting computers or tablets in class resulted in an average 1.7 point (out of 100) reduction in assessment scores, while Dietz and Henrich (2014) and Wei, Wang, and Klausner (2012) report that frequent texters perform badly and had their cognition impaired or affected which is likened to 'daydreaming'. However, Kuznekoff and Titworth (2013) reported that the category of students who did use mobile devices took or wrote better and more notes, and resulted in them earning very good grades.

In Malaysia, students also create platforms for their various class groups to share information and interact with their teachers as well as for announcements and reminders for assignments, etc. Teachers or lecturers are also not left out in the creation and participation of platforms for sharing course contents with their students as well as linking up with their fellow lecturers in other

institutions for effective collaboration and enhancement of pedagogical activities in order to improve academic performance of students (Salvation and Adzharuddin, 2014). Arif and Kanwal (2016) also conducted a study on the adoption of social media technologies and their impact on the academic performance of students in Pakistan with the focus on the distance education students. They reported that the distance education students also make use of and are conversant with social media technologies just like their counterparts in the regular session, with the most popular and used platforms being Facebook, YouTube and WhatsApp. However, there was low familiarity and less usage of Twitter and Wikipedia among the distance education students. They also suggested the incorporation of technological information literacy programmes for the education of staff, tutors and students across Pakistan. Their findings that social media technologies usage impacts positively on distance education students' academic performance also corroborate the findings of similar studies by Javed and Bhatti (2015) and Arshad, Akram, Arshad and Nazir (2014) which indicate that the use of social networking sites helps to improve the academic performance of students in Pakistan.

Iorliam and Ode (2014) reported that students in Nigeria have developed very keen interest and embraced social media due to its adoption for bonding and interaction amongst the university students. They add that the total number of friends online, the time invested as well as the frequency of visits to social media platforms has numerically substantial implications on the academic performance of students. However, when the social media use of students is put in check or controlled, there is significant enhancement or improvement in the academic performance of students. Also, the study by Wickramanayake and Jika (2018) in Nigeria disclosed how the language used by students on social media affected their communication skills. It reported that 177 (75.6%) out of the 234 respondents revealed that social media was helpful to

their "reading skills". The others disclosed that social media contributed positively to their "writing skills" 54.2%, "speaking skills" 41.8%, and "listening skills" 26.4%. The outcome of a study by Langat (2015) using the uses and gratifications theory showed that the frequent usage of social media platforms such as Facebook and WhatsApp by university students in Kenya have debilitating effect on their studies. Onovughe (2012) indicates that the mass failure of Nigerian students in both internal and external examinations is attributed to the high rate of internet and social media use among the young people and students across the different academic levels.

A research in Ghana revealed that out of the 25,292,392 population of Ghana in 2012, 33% of Ghanaians constantly communicate online on daily basis, 25% often rely on online communication and 30% communicate online once in a while (Kasule, 2013). Appiah (2016) adopting the uses and gratifications theory in a study conducted in Ghana reported that despite the advantages in the usage of WhatsApp, there is adverse effect on the learning habits or academic activities of university students in Ghana. A quantitative study by Asabere (2012) on the use of online social networking sites and social behaviour concluded that the most preferred and frequently used social media platform by students in University of Ghana is Facebook as compared to Skype and YouTube. Yeboah and Ewur (2014) adopted the mixed method approach in their study and found out that university students in Ghana have a very strong liking for WhatsApp as a social media tool, albeit their academic performance is negatively affected. Again, some other studies carried out in Ghana to investigate social media use by university students in Ghana brought to light the strong passion and desire of students to constantly communicate on social media with Facebook and WhatsApp highly tipped and most used (Tuurosong and Faisal, 2014; Tawiah et al., 2014).

Owusu and Agatha (2015) indicate that majority of students in Ghana use social media sites for chatting and downloading contents which had negative implications on their academic performance. The result of the study of Mingle and Adams (2015) on some selected senior high schools in Ghana also affirmed the above study indicating that poor grammar and spelling, late submission of assignments, reduced study hours and poor academic performance are some of the negative effects of students' use of social media. Another study conducted by Kolan and Dzandza (2018) on effect of social media on academic performance of students in Ghanaian universities revealed that despite the fact that most students do not use social media for academic purposes, they use them for academic related activities such as academic discussions with lecturers and course mates, exchanging information on class activities and also for retrieving information for class assignments. A majority of the respondents disclosed that their social media use had positive impacts on their academic work. They also indicated that their formation of online groups and participation in academic group discussions enhanced their understanding of topics treated in class. On social media addiction, some students disclosed that they were indeed addicted to social media and results in distraction from their studies.

Most students are fond of adopting or introducing an informal style of writing and with the use of some jargons and contracted forms of words understood only by them which tend to create some friendship and bond between them. However, such writing skills do not help much so far as their academic writing skills are concerned because they often replicate the same social media language in their academic and formal writings. Sarpong (2014) also affirmed that social media use affect how students write English and also spell words. The study also indicated that many educationists have expressed concern on the effect of social media on how words are correctly

spelt and the English grammar expressions of students. In the light of the knowledge of such phenomenon, Augustina Tawiah, a news reporter of the Daily Graphic in Ghana in a news (Daily Graphic, March 28, 2019, p. 61) reported Mr. Emmanuel Agyei, an English Language trainer who has urged students to avoid the use of social media language in their writings because it can affect them in their internal and external examinations. He said, once they started using that language, they were likely to become too familiar with it and they might eventually end up introducing them in their essays. “When you use social media language in your essays, the impression it creates is that you take things for granted and that you are not serious, apart from the fact that social media language is incorrect” he explained. He also advised students to write in formal language in their essays and examinations, properly paragraph their work and avoid the use of cut-offs or contracted forms of words (Tawiah, 2019).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

According to Kothari and Garg (2014), "research methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically". Research methodology about a study or research problem deals with the reason for undertaking a study, the definition of the research problem, why and how the hypothesis has been formulated, the type of data that has been collected and the particular method adopted, the reason for using a particular data analysis technique, etc. (Kothari and Garg, 2014). The methodology for this study is as follows: the research design, selection of the case(s), population, sample size, sampling technique, data collection instrument, data collection procedure and methods of data analysis.

3.2 Research Design

According to Kothari and Garg (2014), "a research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure". The research design is actually the framework within which research is undertaken; it comprises the pattern or guide for collecting, measuring and analyzing data. It encompasses a synopsis of the researcher's work from hypothesis formulation and its operational implications to the end of data analysis. Summarily, "research design must, at least, contain (a) a clear statement of the research problem; (b) procedures and techniques to be used

for gathering information; (c) the population to be studied; and (d) methods to be used in processing and analysing data" (Kothari and Garg, 2014, p. 30).

The methodology used for this research was the survey methodology. Survey research involves asking questions about people's beliefs, opinions, characteristics, perceptions and behaviour. A survey researcher may want to make an inquiry concerning the relationship between characteristics of respondents such as age, education, social class, race and current attitudes towards a particular issue. The survey enables information to be gathered from a large sample of people relatively quickly and less costly by the researcher (Ary, Jacobs, Sorensen and Walker, 2014). The adoption of the survey methodology for this study enabled the researcher to collect data from a larger number of respondents, which otherwise would have been difficult. It also enabled information to be obtained on the respondents' social media use relatively quickly and less costly.

3.3 Selection of the Case(s)

The cases selected for the study were the University of Education, Winneba (UEW) and University of Cape Coast (UCC). The selection was based on the institutions' commitment to the mission of producing professional and quality teachers for the education sector, and also supporting educational policies and research. Moreover, the two universities run similar academic programmes and are among the top, notable and revered institutions in the country with relatively high student enrollment every academic year. The two institutions (cases) are equally capable of representing the other universities in Ghana for the purpose of this study.

3.4 Selection of Subjects

Subjects are individuals who are selected to participate in a study. For this study, the subjects comprised the Level 300 students of University of Education, Winneba (UEW) and University of Cape Coast (UCC). This section deals with the population, sample size and sampling technique.

3.4.1 Population

According to Ary et al. (2014), "a population is defined as all members of any well-defined class of people, events, or objects''. A population is basically the universe of people, objects, cities, firms, etc. from which the sample is to selected. "A target population is the large group to which the researcher wishes to generalize the results of the study. An accessible population is the population of subjects accessible to the researcher for drawing a sample" (Ary et al., 2014). For this study, the target population is the total number of third year students for both UEW and UCC for which the findings will be generalized, that is 10,007 (comprising 5,394 and 4,613 for UEW and UCC, respectively).

For the sake of comparison and better understanding of the phenomenon, three common faculties were selected. They include the social sciences, the sciences and education. For UEW, the faculties selected were faculties of Social Sciences Education, Science Education and Educational Studies; whilst the faculties of UCC were Humanities and Social Sciences Education, Science & Technology Education as well as Educational Foundations.

The accessible population is the total number of students from the selected faculties in the two institutions, 4,487 and 1,234 for UEW and UCC respectively, totaling 5,721 (UEW Basic Statistics, November 2017; MIS – UCC). The rationale for selecting the third year students is that the researcher wanted to find out about their experiences on social media use vis-à-vis their academic work over the three year period that they have been in the university. The table below shows the selected faculties and the number of students involved from the two institutions, hence the accessible population for the study. Therefore, the population for the study is **5,721**.

Table 3.1: Population

UEW		**UCC**		
Faculties	**No.**	**Faculties**	**No.**	**Grand Total**
Social Sciences Educ.	2216	Humanities & Soc. Sci. Educ.	635	2,851
Science Educ.	1272	Science & Tech. Educ.	350	1,622
Educational Studies	999	Educational Foundations	249	1,248
Total	**4,487**		**1,234**	**5,721**

3.4.2 Selection of Sample and Sample Size

Ary et al. (2014) define a sample as "a portion of a population''. It is the segment of the population that is selected for investigation. A sample is also a subset of the population (Bryman, 2012). A sample must be representative enough to be able to generalize the findings from the sample to the population. According to Krejcie and Morgan (1970), for a population between 5,000 and 7,500, a sample size of 357 is acceptable (357 / 5000 x 100 = 7.1%)

Therefore, the researcher selected seven percent (7%) of the population (7 / 100 x 5,721 = **400**) as the sample size. As with all sampling, the representativeness of the sample is more important than its size (Ary, et al., 2014). Irrespective of its size, a sample that is not representative enough may lead to inappropriate conclusions. Also, the variability of the population from which a sample is drawn is another factor to be considered in relation to sample size. It is acceptable to use a smaller sample if the population is fairly homogeneous than a heterogeneous population. For example, with a population of college students, less variability would be expected than a population of adults in general, and thus, a smaller sample could be used. A sample size that is only a small percentage of the population can represent the population well when random sampling is used (Ary, et al., 2014).

Sampling is effective because it seeks to link the findings from a selection of respondents or instances to the entirety of respondents or instances. What the different ways of sampling actually do is justify both (a) the link between the sample and the population and (b) the inferences that the researcher draws on the back of that link. In broad terms, the researcher ascribes to the population the characteristics of the sample (Newby, 2014, p. 236). The proportional stratified sampling was adopted for the study.

3.4.3 Sampling Technique

It is often appropriate to use stratified sampling which is a form of probability sampling when the population of a study involves a number of subgroups that have different characteristics. In stratified sampling, the population is divided or stratified by the researcher based some specific characteristics such as gender. Simple random sampling is then used to sample from each subgroup (called stratum) of the population (e.g. males and females). This will ensure the

inclusion of specific characteristics required in the sample by the researcher (Creswell, 2014, p. 162). The use of a larger sample is appropriate to reflect the varied population when the population is very heterogeneous such as a city or whole country. However, with a relatively homogeneous population such as staff of an institution or population of students, the sample can be smaller because the amount of variation is less (Bryman, 2012, p. 200). Stratification is used when the population reflects an imbalance on a characteristics of a sample. For example, when there are more males in a population than females, the male views will dominate that of the females. Stratification ensures that the desired stratum is represented in the sample in proportion to the population. The process for selecting a stratified random sample involves (a) the division of the population by stratum (e.g. women and men) and then (b) sampling within each group in the stratum (for example, women first and then men) to ensure that selected individuals are proportionally represented in the total population (Creswell, 2014, P. 162).

In this study, the population was subdivided into subgroups in the two universities on the basis of faculties. Because the characteristics involve the use of social media in the two universities by faculties, there will be six strata, three for each. The researcher proportionately selected 7% of the respondents from each stratum for the sake of fair representation, based on the proportion of the number of students in each institution and in terms of faculties; hence the proportional stratified sampling technique. The technique or method used for the selection of the sample sizes is as follows:

Population: 4,487 + 1,234 = 5,721

Sample size: 7 / 100 x 5,721 = 400

Proportion of UEW faculties in population

Faculty of Social Sciences Education: 2216 / 5721 x 100 = 38.73%

Faculty of Science Education: 1272 / 5721 x 100 = 22.23%

Faculty of Educational Studies: 999 / 5721 x 100 = 17.46%

Proportion of UCC faculties in population

Faculty of Human. & Social Sciences Educ.: 635 / 5721 x 100 = 11.10%

Faculty of Science & Tech. Education: 350 / 5721 x 100 = 6.12%

Faculty of Educational Foundations: 249 / 5721 x 100 = 4.35%

[38.73% + 22.23% + 17.46% + 11.10% + 6.12% + 4.35% = **100%**]

No. of students selected from the UEW faculties

Faculty of Social Sciences Education: 38.73 / 100 x 400 = 155 students

Faculty of Science Education: 22.23 / 100 x 400 = 89 students

Faculty of Educational Studies: 17.46 / 100 x 400 = 70 students

No. of students selected from the UCC faculties

Faculty of Human. & Social Sciences Educ.: 11.10 / 100 x 400 = 44 students

Faculty of Science & Tech. Education: 6.12 / 100 x 400 = 25 students

Faculty of Educational Foundations: 4.35 / 100 x 400 = 17 students

Total: 155 + 89 + 70 + 44 + 25 + 17 = **400 students**

The targeted sample size for each stratum is depicted in the table below:

Table 3.2 Sample Size

UEW		**UCC**		
Faculties	**No.**	**Faculties**	**No.**	**Grand Total**
Social Sciences Educ.	155	Humanities & Soc. Sci. Educ.	44	199
Science Educ.	89	Science & Tech. Educ.	25	114
Educational Studies	70	Educational Foundations	17	87
Total	**314**		**86**	**400**

Proportional stratified sampling is used when the researcher wants to generalize the findings to the population as a whole (Adjei and Tagoe, 2009).

3.5 Data Collection Instrument

An instrument is used for the measurement of variables in quantitative data collection. According to Creswell (2014), "an instrument is a tool for measuring, observing, or documenting quantitative data. It contains specific questions and response possibilities that you establish or develop in advance of the study". The instruments include standard tests, checklists that are used to observe the behaviours of a teacher or student, survey questionnaires, etc. The instrument is

administered to participants of the study for the collection of numerical data. The purpose is mainly for the application (generalization) of the results from a small number of people to a large number. The stronger the case for applying the results to a large number of people is mostly dependent on the larger number of individuals studied (Creswell, 2014, p. 28). Some of the techniques generally employed for collection of data for research works include interview, observation and questionnaire. For this study, a questionnaire was used to solicit information for the study. The questionnaire was in an open and closed-ended form and was based on the objectives of the study.

3.5.1 Questionnaire

The study is a quantitative research necessitating the use of questionnaire for data collection. According to Kothari and Garg (2014), "a questionnaire consists of a number of questions printed or typed in a definite order on a form or set of forms". It is one of the popular methods of data collection, especially in case of big enquiries. Research workers, individuals, organisations, and even governments make use of questionnaire for research purposes (Kothari and Garg, 2014, P. 96). The questionnaire for this study solicited information regarding the use of social media and academic performance of university students, particularly UEW and UCC. The questionnaire was designed by the researcher and contained both close-ended and open-ended questions relating to the opinions, attitudes and beliefs of the respondents on their use of social media. The questions were structured, divided into eight parts containing twenty-three items.

Section A had to do with the information on the respondents, that is the institution/university, faculty, department, programme of study, gender and age. Section B dealt with the electronic devices possessed or used by the respondents as well as their reasons or purposes for using social

media. Section C was about the social media websites or platforms the respondents subscribe to as well as the number of friends or followers they have on social media. Section D asked respondents to indicate the number of hours they spend on social media as well as the hours they spend studying. In Section E, students answered questions regarding how they use social media and Section F dealt with questions on their social media use and academic performance. Students/respondents were asked to indicate their current grade point (GPA) in Section G, as section H also requested respondents to provide further comments or any additional information on their social media use in relation to their academic performance.

3.5.2 Pre-Testing / Pilot Study

Before using the questionnaire, it is always necessary to pre-test or carry out a 'pilot study' (Pilot Survey). Pilot survey is the rehearsal or replica of the main survey. It discloses or enables the researcher to identify any potential weaknesses to the questionnaire and also the survey techniques for modification or improvement to be done. (Kothari and Garg, 2014, p. 97).

The data collection began with the researcher designing the survey questionnaire and carrying out a pilot study or pre-testing the questionnaire in order to check its suitability and appropriateness. The pilot study was carried out using thirty (30) regular Level 300 Information Studies students of University of Ghana, Legon, in class. Information Studies students were chosen because their programme of study is in relation to the use of Information and Communication Technology (ICT) of which social media was part. Again, regular Level 300 students specifically because the questionnaire was meant to be administered or answered by their regular Level 300 counterparts in other sister institutions (UEW and UCC).

The questionnaire for pre-testing requested respondents to express their views and make remarks or suggestions that will help modify and put the questionnaire in shape. Some of the comments pointing to the repetition of some questions as well as the suggestions to reduce the number of questions were acted upon by the researcher. The remarks from the respondents enabled the researcher to effect the necessary changes and make appropriate modifications to the final questionnaire.

3.6 Data Collection Procedure

Data used for this study by the researcher included primary and secondary sources. According to Creswell (2014), "primary source literature consists of literature reported by the individual(s) who actually conducted the research or who originated the ideas. Secondary source literature, however, is literature that summarizes primary sources. It does not represent material published by the original researcher or the creator of the idea". The researcher took an introductory letter from the Department of Information Studies at the University of Ghana, Legon, introducing the researcher to the deans of the faculties of the two institutions (UEW and UCC). The researcher found out the lecture periods and went to lecture halls early before the start of classes to seek the permission and assistance of teaching assistants and class representatives for the distribution or administration of questionnaires. The copies of questionnaire were administered in class (during the day) from March 26th to April 17th 2019, a three-week period and were collected immediately after they had been filled by the respondents.

3.7 Analysis and Presentation of Data

The kinds of information solicited from respondents by researchers are referred to as data. Respondents' gender, ethnicity, race, age, etc. known as demographic information, is one kind of data; scores from a commercially available or test prepared by the researcher are another. Written responses to a survey questionnaire or responses in an oral interview to questions posed by the researcher are other kinds of data (Fraenkel, Wallen, and Hyun, 2015, p. 112). According to Bryman (2012, p. 13), data analysis means the "application of statistical techniques to the data that have been collected". Data analysis and interpretation is about the researcher analyzing the data, representing the data in the form of pictures, figures or tables and giving explanations in order to provide answers to research questions and statements asked in a study (Creswell, 2014, p. 1). The data that was collected from the research study was coded and analysed using the Statistical Package for Social Sciences (SPSS) version 23. Serial numbers were assigned to the questionnaire (from 1 – 400) to aid identification and entry of variables into the SPSS. Responses were assigned scoring codes in the SPSS with respect to the questionnaire which enabled data to be manipulated with regards to the study's objectives. Data output was extracted after the rectification of omissions and wrong entries. The presentation shows the frequencies and percentages of the responses to the questions that were given by the respondents in the form of tables and bar charts. Relationship between variables were tested using Chi-Square.

3.8 Ethical Issues

Punch and Oancea (2014, p. 58) state that "ethics is the study of what are good, right or virtuous courses of action; applied ethics focuses this study on particular and complex issues and contexts. Research ethics is a branch of applied ethics focused on the specific contexts of planning,

conducting, communicating and following up research". Adherence to ethics is very important in undertaking any research. To ensure the adherence to research ethics, the researcher first of all took an introductory letter from the Department of Information Studies at the University of Ghana to the various deans of the faculties of the institutions where data was collected, seeking permission and informing them of the purpose for the data collection. Respondents were asked to participate on their own volition without any compulsion. Again, the purpose of the data collection was made known to them as purely for research. Respondents were assured that as they remain anonymous, their responses would be treated with utmost confidentiality. Also, all the sources that were used for this research work were duly acknowledged. Furthermore, the code of ethics stipulated in the University of Ghana Handbook for Graduate Research was adhered to by the researcher.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION OF FINDINGS

4.1 Introduction

This chapter analyses data collected from the survey by the use of questionnaire and the presentation of the results of the study. It analyses the data with regard to the objectives of the study. The chapter is divided into two (2) sections. The first section captures biographic data and the rest of the sections are based on the objectives of the study. A total number of 400 copies of questionnaire were distributed to respondents in the two institutions (UEW and UCC) and 390 were successfully completed and retrieved, giving a response rate of 97.5% (304 out of 314 = 96.8% for UEW; and 86 out of 86 = 100% for UCC). Babie (2005) stated that for a survey, a response rate of fifty percent (50%) is adequate for analysis and reporting. The author further stated that a response rate of sixty percent (60%) is good while that of seventy percent (70%) is very good. The response rate of ninety-seven point five percent (97.5%) as stated above, fell within the accepted domain proposed by Babie (2005). The chapter has been organized under the following headings:

4.2 Demographics of respondents,

4.3 Social media platforms and their usage by students,

4.4 Reasons or purposes for students' use of social media,

4.5 The time students spent on social media and the time they spent studying per day,

4.6 Students' grade point average (GPA) and the number of social media platforms subscribed by respondents,

4.7 Social media usage rates across faculties,

4.8 Social media and academic performance of students.

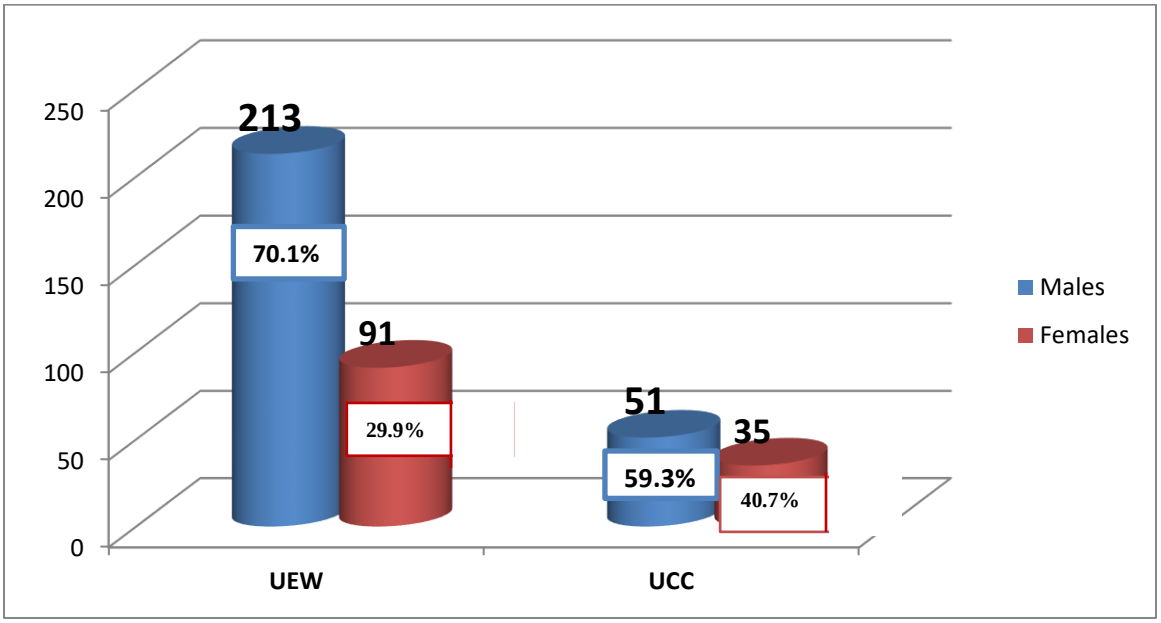
4.2 Demographics of Respondents

Demographics are the statistical data of a population that shows age, income, education, etc. This part collected data about gender distribution, age distribution, and faculties of the respondents.

4.2.1 Gender

This section sought to find out the gender of the respondents for the institutions under study. The frequencies are presented in the figure below:

Figure 4.1: Gender Distribution of Respondents



The result is presented in Table 4.1

Table 4.1: Gender Distribution of Respondents

Institution	Males	Females	Total
UEW	213 (70.1%)	91 (29.9%)	**304 (100%)**
UCC	51 (59.3%)	35 (40.7%)	**86 (100%)**
Total	**264 (67.7%)**	**126 (32.3%)**	**390 (100%)**

Source: Field data, 2019

As shown in Table 4.1, out of the 390 copies of questionnaire that were distributed, 264 (67.7%) were males and 126 (32.3%) were females. The number of male respondents from UEW were 213 (70.1%) while that of UCC were 51 (59.3%). Also, female respondents from UEW were 91 (29.9%) and that of UCC were 35 (40.7%). This result is an indication that the population of UEW and UCC had more males than females.

4.2.2 Age

The age of the respondents was of importance to the study because age differences demonstrate how users respond to technology such as the use of social media. With this in mind, respondents were asked to indicate their age ranges as depicted in Table 4.2

Table 4.2: Age Distribution of Respondents

Age interval	UEW	UCC	Percentage (%)
18 – 21	20 (6.6%)	13 (15.1%)	**33 (8.5%)**
22 – 25	129 (42.4%)	35 (40.7%)	**164 (42%)**
26 – 29	86 (28.3%)	14 (16.3%)	**100 (25.6%)**
30 – 34	60 (19.7%)	18 (20.9%)	**78 (20%)**
35 or more	9 (3%)	6 (7%)	**15 (3.9%)**
Total	**304 (100%)**	**86 (100%)**	**390 (100%)**

Source: Field data, 2019

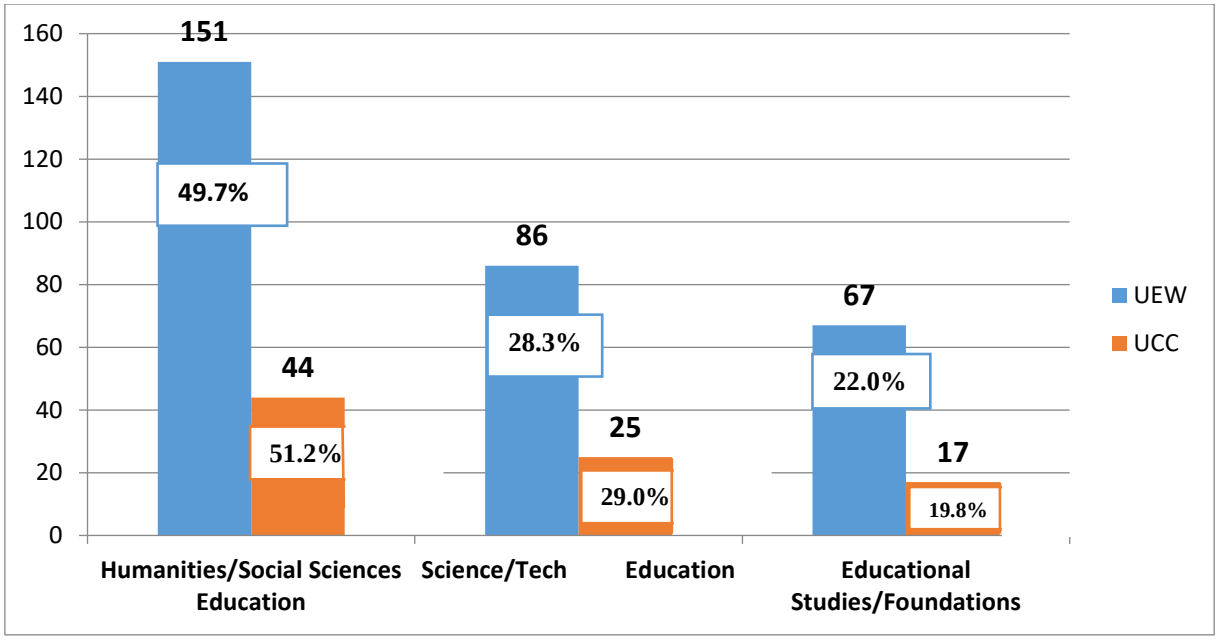
From Table 4.2, it can be noticed that, majority of the respondents 164 (42%) were between the ages of 22-25, followed by 100 (25.6%) which constitute the ages of 26-29, and 78 (20%) were in their early thirties, that is from 30-34 years. Those between the ages of 18-21 were 33 (8.5%) and 15 (3.9%) were 35 years or more. It can therefore be inferred that, the majority of the respondents, 164 (42%) were found between the ages of 22-25. It was however, not surprising because this age bracket (22 – 25 years) is usually the most predominant age bracket of most tertiary students. It is relevant because they constitute the cream of the youth (18 – 35 years) who are often more into ICT than the older people who are often techno-stressed and may not use social media regularly as compared to the youth.

4.2.3 Faculties of Study

A faculty is a group of university departments concerned with a major division of knowledge.

The frequencies of the faculties are presented in the figure below:

Figure 4.2: Respondents' Faculties of Study



The respondents were asked to indicate their faculties of study and the result is presented in Table 4.3 below.

Table 4.3: Respondents' Faculties of Study

Faculties	UEW	UCC	Freq. / (%)
Humanities/Social Sciences Educ.	151 (49.7%)	44 (51.2%)	**195 (50.0%)**
Science/Technology Educ.	86 (28.3%)	25 (29.0%)	**111 (28.5%)**
Educational Studies/Foundations	67 (22.0%)	17 (19.8%)	**84 (21.5%)**
Total	**304 (100%)**	**86 (100%)**	**390 (100%)**

Source: Field data, 2019

As it can be seen from Table 4.3, majority of the respondents 195 (50%) formed part of the Humanities/Social Sciences Education, these included 151 (49.7%) from the Faculty of Social Sciences Education at UEW and 44 (51.2%) from the Faculty of Humanities and Social Sciences Education at UCC. Again, 111 (28.5%) were part of the Science/Technology Education, including 86 (28.3%) from Faculty of Science Education at UEW and 25 (29.0%) from Faculty of Science and Technology Education at UCC. Also, 84 (21.5%) belonged to the Educational Studies/Foundations, constituting 67 (22.0%) from Faculty of Educational Studies at UEW and 17 (19.8%) from Faculty of Educational Foundations at UCC. This results, therefore, indicate that most of the students are found under the Faculties of Humanities/Social Sciences Education.

4.3 Social Media Platforms and their Usage by Students

4.3.1 Social Media Platforms Subscribed to by Respondents

After the advent of the internet, numerous social media platforms have been developed with different features which enhance interactions and connect people together irrespective of their geographical locations. Respondents were therefore asked to indicate the social media platforms they subscribed to as shown in Table 4.4

Table 4.4 Social Media Platforms Subscribed to by Respondents

Social Media Platforms	UEW		U C		Total
	Freq.	%	Freq.	%	
Facebook	165	54.3	65	75.6	**230 (58.9%)**
WhatsApp	204	67.1	86	100	**290 (74.4%)**
YouTube	92	30.3	26	30.2	**118 (30.3%)**
Twitter	94	30.9	26	30.2	**120 (30.8%)**
Instagram	111	36.5	29	33.7	**140 (35.9%)**
Skype	49	16.1	20	23.3	**69 (17.7%)**

Source: Field data, 2019

As shown in Table 4.4, out of the 390 respondents, majority 290 (74.4%) had subscribed to WhatsApp. This is obvious because WhatsApp has become the most popular social media platform for calls and exchange of multimedia contents. Also, 230 (58.9%) respondents used Facebook which was the next widely used social media platform. The other platforms are as follows: Instagram 140 (35.9%); Twitter 120 (30.8%); YouTube 118 (30.3%) and Skype 69 (17.7%).

4.3.2 Electronic Devices Used or Possessed by Respondents

It is obvious that, social media can only be used or accessed through an electronic device such as mobile phone, iPad, laptop computer, desktop computer, tablet, and many more. Based on this knowledge, respondents were asked to indicate the kind of electronic device(s) they possessed or used, as shown in Table 4.5 below:

Table 4.5: Electronic Devices Used or Possessed by Respondents

Electronic devices	**UEW**		**UCC**		**TOTAL**
	Freq.	**%**	**Freq.**	**%**	
Laptop computer	237	78.0%	64	74.4%	**301**
Mobile phone	304	100%	86	100%	**390**
Personal Digital Assistant (PDA)	162	53.3%	38	44.2%	**200**
Smartphone	243	79.9%	68	79.1%	**311**
Tablet	120	39.5%	29	33.7%	**149**
iPhone	69	22.7%	21	24.4%	**90**
iPad	66	21.7%	13	15.1%	**79**
Desktop computer	29	9.5%	5	5.8%	**34**

Source: Field data, 2019

As shown in Table 4.5, all the respondents, 390 (100%), comprising 304 (77.9%) and 86 (22.1%) students from UEW and UCC respectively affirmed that they possessed mobile phones. Again, 311 students, including 243 (79.9%) from UEW and 68 (79.1%) from UCC indicated that they used smartphones, whereas 301, including 237 (78.0%) from UEW and 64 (74.4%) from UCC

used laptop computers. Also, more than half of the respondents, 200, with 162 (53.3%) UEW students and 38 (44.2%) UCC students used Personal Digital Assistant (PDA). Tablet was used by 149 respondents, including 120 (39.5%) from UEW and 29 (33.7%) from UCC. The other devices used were iPhone 90, 69 (22.7%) from UEW and 21 (24.4%) from UCC; iPad 79, 66 (21.7%) from UEW and 13 (15.1%) from UCC, and Desktop computer 34, 29 (9.5%) from UEW and 5 (5.8%) from UCC. It is evidently clear that, in this technological age, almost every individual, especially students at the tertiary level possess a mobile phone, no wonder all the respondents confirmed that they used or possessed one.

4.3.3 Respondents' Friends or Followers on Social Media Platforms

On every social media platform, users are rated based on the number of friends or followers they have. The higher the number of followers, the better the contents or posts shared by the user, the more likes he or she receives and also the more influential the user seems to be. It also depends on the personality of the subscriber, such as a celebrity, very important personality, someone that has made an impact in society, accomplished a special feat or a very popular person. Table 4.6 below depicts the respondents' number of friends or followers on social media.

Table 4.6: Number of Friends or Followers on Social Media Platforms by Respondents

No. of Friends or Followers			Institution		Total
			UEW	UCC	
No. of friends or followers	1 – 100	Freq.	14	2	**16**
		Percent (%)	4.6%	2.3%	**4.1%**
	100 – 300	Freq.	64	8	**72**
		Percent (%)	21.1%	9.3%	**18.5%**
	300 – 500	Freq.	54	19	**73**
		Percent (%)	17.8%	22.1%	**18.7%**
	500 – 1,000	Freq.	111	20	**131**
		Percent (%)	36.5%	23.2%	**33.6%**
	1,000 – 5,000	Freq.	50	33	**83**
		Percent (%)	16.4%	38.4%	**21.3%**
	5,000 – 10,000	Freq.	10	1	**11**
		Percent (%)	3.3%	1.2%	**2.8%**
	10,000 or above	Freq.	1	3	**4**
		Percent (%)	0.3%	3.5%	**1.0%**
Total		**Freq.**	**304**	**86**	**390**
		Percent	**100%**	**100%**	**100%**

Source: Field data, 2019

As shown in Table 4.6, 131 (33.6%) of the respondents representing the majority, had between 500-1,000 followers on social media, 83 (21.3%) of the respondents had about 1,000-5,000 followers and 73 (18.7%) of the respondents had between 300-500 followers. The other ranges

of the number of followers with their respective percentages are: 72 (18.5%) 100-300; 16 (4.1%) 1-100; 11 (2.8%) 5,000-10,000 and 4 (1%) 10,000 or above. It can be inferred from the results that, a considerable number of social media subscribers have a lot of followers they engage with.

4.3.4 Students' Use of Social Media

The tables provided below describe the manner in which students of UEW and UCC used social media**.**

Table 4.7: Regular Use of Social Media

The use of social media has always been part of your usual routine	**Institution**				**Total**	
	UEW		**UCC**		**Freq.**	**%**
Never	23	7.6%	9	10.5%	**32**	**8.2%**
Rarely	65	21.4%	22	25.5%	**87**	**22.4%**
Sometimes	132	43.4%	30	34.9%	**162**	**41.5%**
Very Often	59	19.4%	16	18.6%	**75**	**19.2%**
Always	25	8.2%	9	10.5%	**34**	**8.7%**
Total	**304**	**100%**	**86**	**100%**	**390**	**100%**

Source: Field data, 2019

From Table 4.7, a considerable number of the respondents 162 (41.5%) made it known that sometimes social media use had been part of their usual routine, followed by 87 (22.4%) who rarely did so. Also, 75 (19.2%) of the respondents indicated very often while 34 (8.7%) and 32

(8.2%) always and never made social media use their usual routine respectively. The result revealed that a significant number of the students 109 (27.9%) agreed (very often and always) that using social media has always been part of their usual routine.

Table 4.8: Addiction to Social Media

You always think or feel that you are addicted to social media use	**Institution**				**Total**	
	UEW		**UCC**		**Freq.**	**%**
Never	20	6.6%	5	5.8%	**25**	**6.4%**
Rarely	84	27.6%	20	23.3%	**104**	**26.6%**
Sometimes	125	41.1%	39	45.3%	**164**	**42.1%**
Very Often	44	14.5%	16	18.6%	**60**	**15.4%**
Always	31	10.2%	6	7.0%	**37**	**9.5%**
Total	**304**	**100%**	**86**	**100%**	**390**	**100%**

Source: Field data, 2019

As shown in Table 4.8, 164 (42.1%) specified that sometimes they always felt or thought they were addicted to social media use and 104 (26.6%) indicated rarely. The rest of the responses are as follows: very often 60 (15.4%), always 37 (9.5%) and never 25 (6.4%). Therefore, a total of 97 (24.9%) thought or felt they were addicted to social media use (very often and always).

Table 4.9: Frequency of Social Media Use

Do you always wish to or try to cut down on the use of social media without success?	Institution				Total	
	UEW		UCC		Freq.	%
Never	24	7.9%	3	3.5%	**27**	**6.9%**
Rarely	66	21.7%	21	24.4%	**87**	**22.3%**
Sometimes	118	38.8%	35	40.7%	**153**	**39.2%**
Very Often	57	18.8%	17	19.8%	**74**	**19.0%**
Always	39	12.8%	10	11.6%	**49**	**12.6%**
Total	**304**	**100%**	**86**	**100%**	**390**	**100%**

Source: Field data, 2019

The Table shows that majority of the respondents 153 (39.2%) specified that sometimes they always wished to or tried to cut down on the use of social media without success, and 87 (22.3%) indicated they rarely did so. Again, 74 (19.0%) said they very often failed to reduce their use of social media, 49 (12.6%) always did and 27 (6.9%) never had that experience. It can be inferred that 123 (31.6%) of the respondents (very often and always) tried to cut down on their use of social media without success.

Table 4.10: Social Media and Sleep Deprivation

You often fail to get enough rest because of your use of social media, especially at night	Institution				Total	
	UEW		UCC		Freq.	%
Never	20	6.6%	3	3.5%	**23**	**5.9%**
Rarely	67	22.0%	19	22.1%	**86**	**22.1%**
Sometimes	137	45.1%	39	45.4%	**176**	**45.1%**
Very Often	46	15.1%	15	17.4%	**61**	**15.6%**
Always	34	11.2%	10	11.6%	**44**	**11.3%**
Total	**304**	**100%**	**86**	**100%**	**390**	**100%**

Source: Field data, 2019

As shown in the Table 4.10, 176 (45.1%) of the respondents who were in the majority indicated that they sometimes failed to get enough rest because of their use of social media, especially at night. Also, 86 (22.1%) rarely had that experience while 61 (15.6%) very often used social media at night instead of sleeping. Others, 44 (11.3%) always did and 23 (5.9%) of the respondents indicated that they never did. A significant number of the students 105 (26.9%) as shown in the table (very often and always) failed to have enough rest, especially at night because of their use of social media.

Table 4.11: Social Media and Sleep Disruption

You often wake up at night to check or send messages on social media	Institution				Total	
	UEW		UCC		Freq.	%
Never	27	8.9%	2	2.3%	**29**	**7.4%**
Rarely	59	19.4%	13	15.1%	**72**	**18.5%**
Sometimes	136	44.7%	42	48.8%	**178**	**45.6%**
Very Often	52	17.1%	17	19.8%	**69**	**17.7%**
Always	30	9.9%	12	14%	**42**	**10.8%**
Total	**304**	**100%**	**86**	**100%**	**390**	**100%**

Source: Field data, 2019

In Table 4.11, 178 (45.6%) of the respondents representing the greater portion specified that sometimes they often woke up at night to check or send messages on social media. Also, 72 (18.5%) rarely did so, followed by 69 (17.7%) who indicated very often. Again, 42 (10.8%) of the respondents stressed always whiles a few 29 (7.4%) never did that. It is observed from the result that a significant number of the students (very often and always) 111 (28.5%) do wake up frequently at night to check or send messages on social media platforms.

Table 4.12: Selfie Sharing on Social Media

You take and share selfies on social media	Institution				Total	
	UEW		UCC		Freq.	%
Never	19	6.3%	5	5.8%	**24**	**6.2%**
Rarely	70	23.0%	13	15.1%	**83**	**21.2%**
Sometimes	128	42.1%	46	53.5%	**174**	**44.6%**
Very Often	49	16.1%	11	12.8%	**60**	**15.4%**
Always	38	12.5%	11	12.8%	**49**	**12.6%**
Total	**304**	**100%**	**86**	**100%**	**390**	**100%**

Source: Field data, 2019

As reported in Table 4.12, when respondents were asked whether they took and shared selfies on social media, 174 (44.6%) did so sometimes. Eighty-three (21.2%) indicated rarely, others 60 (15.4%) responded that they did very often. Also, 49 (12.6%) and 24 (6.2%) of the respondents indicated always and never respectively. It is therefore evident per the responses that a significant number (very often and always) 109 (27.9%) of the students regularly took and shared selfies on social media.

Table 4.13: Addiction to Selfie Sharing on Social Media

You are addicted to taking and sharing selfies on social media	Institution				Total	
	UEW		UCC		Freq.	%
Never	23	7.6%	2	2.3%	**25**	**6.4%**
Rarely	67	22.0%	26	30.2%	**93**	**23.9%**
Sometimes	126	41.4%	29	33.7%	**155**	**39.7%**
Very Often	51	16.8%	20	23.3%	**71**	**18.2%**
Always	37	12.2%	9	10.5%	**46**	**11.8%**
Total	**304**	**100%**	**86**	**100%**	**390**	**100%**

Source: Field data, 2019

As can be seen from Table 4.13, a greater number 155 (39.7%) of the respondents revealed that they sometimes got addicted to taking and sharing selfies on social media. Again, 93 (23.9%) rarely did so, whereas 71 (18.2%) indicated getting addicted very often. Furthermore, 46 (11.8%) of the respondents always got addicted while 25 (6.4%) never did. It can therefore be established by the result that many students (very often and always) 117 (30%) are addicted to taking and sharing selfies on social media platforms.

4.4 Reasons or Purposes for Using Social Media

It is obvious that the use of social media is fuelled by various reasons, while others may use it for communication, some may use it for advertisement, business or socialization purposes. In view of this, respondents were asked to indicate their reasons or purposes for using social media. The result is depicted in Table 4.14

Table 4.14: Reasons or Purposes for Using Social Media

Reasons / purposes for using social media	**UEW**		**UCC**		**TOTAL**
	Freq.	**%**	**Freq.**	**%**	
Socialization	118	38.8%	42	48.8%	**160**
Latest/Up-to-date news or events	146	48.0%	53	61.6%	**199**
Entertainment/Recreation	273	89.8%	18	20.9%	**291**
Learning/Academic work	107	35.2%	18	20.9%	**125**
Leisure	97	31.9%	18	20.9%	**115**

Source: Field data, 2019

Table 4.14 shows that, out of 390 respondents, 291 comprising 273 (89.8%) from UEW and 18 (20.9%) from UCC used social media for entertainment/recreational purposes. More than half of the respondents, 199 comprising 146 (48.0%) students of UEW and 53 (61.6%) students of UCC used social media for latest/up-to-date news or events. 160 of the respondents, including 118 (38.8%) from UEW and 42 (48.8%) from UCC used social media for socialization. Out of the 125 respondents that used social media for learning or academic work, 107 (35.2%) were UEW students and 18 (20.9%) were UCC students, while 115 respondents, including 97 (31.9%) and

18 (20.9%) from UEW and UCC respectively used social media for leisure. This result indicates that social media is mostly used for entertainment/recreational purposes as indicated by the majority and insignificant number of the students use it for leisure.

4.5 Time Students Spent on Social Media / Amount of Time They Spent Studying Per Day

4.5.1 Number of Hours Spent by Respondents on Social Media Daily

As social media is gradually becoming part of human life, it consumes a lot of users' precious hours that could be used for other important activities. It is obvious that the number of hours spent on social media can affect users positively or negatively. In view of that, respondents were asked to indicate the number of hours they spent on social media platforms per day as shown in Table 4.15

Table 4.15: Number of Hours Spent by Respondents on Social Media Daily

No. of Hours			INSTITUTION		Total
			UEW	UCC	
Number of hours spent on social media daily	1 - 2	Freq.	59	9	**68**
		Percent (%)	19.4%	10.5%	**17.4%**
	2 - 3	Freq.	52	20	**72**
		Percent (%)	17.1%	23.2%	**18.5%**
	3 - 4	Freq.	71	13	**84**
		Percent (%)	23.3%	15.1%	**21.5%**
	4 - 5	Freq.	72	27	**99**
		Percent (%)	23.7%	31.4%	**25.4%**
	5 - 6	Freq.	42	14	**56**
		Percent (%)	13.8%	16.3%	**14.4%**
	6 - 7	Freq.	3	2	**5**
		Percent (%)	1.0%	2.3%	**1.3%**
	7 - 8	Freq.	2	0	**2**
		Percent (%)	0.7%	0.0%	**0.5%**
	8 hours or more	Freq.	3	1	**4**
		Percent (%)	1.0%	1.2%	**1.0%**
Total		**Freq.**	**304**	**86**	**390**
		Percent %)	**100%**	**100%**	**100%**

Source: Field data, 2019

From Table 4.15, it can be seen that, majority of the respondents 99 (25.4%) spent 4-5 hours of their time per day on social media, 84 (21.5%) of the respondents spent 3-4 hours on social media, 72 (18.5%) spent 2-3 hours and 68 (17.4%) spent 1-2 hours per day. Also, 56 (14.4%) of the respondents spent 5-6 hours, 5 (1.3%) spent 6-7 hours, 4 (1%) spent 8 hours or more and 2 (0.5%) spent 7-8 hours per day on social media. These results suggest that users of social media

spend a considerable amount of time on social media sites which could have many implications on their academic work.

4.5.2 Number of Hours Respondents Spent Studying Daily.

As it was indicated in the previous section, the extent of use of the social media platforms affects the lives of its users in one way or the other. It is obvious that, since most users especially students, normally use their cell phones to access social media, there is the possibility that it will affect the number of hours they spend studying if care is not taken. As a result, respondents were asked to indicate the number of hours they spent studying per day as depicted in Table 4.16

Table 4.16: Number of Hours Respondents Spent Studying Daily

No. of Hours			INSTITUTION		Total
			UEW	UCC	
Number of hours respondents spent studying daily	1 - 2	Freq.	105	21	**126**
		Percent (%)	34.5%	24.4%	**32.3%**
	2 - 3	Freq.	71	27	**98**
		Percent (%)	23.4%	31.4%	**25.1%**
	3 - 4	Freq.	45	18	**63**
		Percent (%)	14.8%	20.9%	**16.2%**
	4 - 5	Freq.	22	6	**28**
		Percent (%)	7.2%	7.0%	**7.2%**
	5 - 6	Freq.	38	6	**44**
		Percent (%)	12.5%	7.0%	**11.3%**
	6 - 7	Freq.	7	1	**8**
		Percent (%)	2.3%	1.2%	**2.1%**
	7 - 8	Freq.	7	3	**10**
		Percent (%)	2.3%	3.5%	**2.6%**
	8 hours or more	Freq.	9	4	**13**
		Percent (%)	3.0%	4.6%	**3.3%**
Total		**Freq.**	**304**	**86**	**390**
		Percent %)	**100%**	**100%**	**100%**

Source: Field data, 2019

As shown in Table 4.16, majority of the respondents 126 (32.3%) spent 1-2 hours studying per day, 98 (25.1%) spent 2-3 hours studying and 63 (16.2%) spent 3-4 hours studying per day. Other number of hours respondents spent on studies daily are as follows: 44 (11.3%) spent 5-6 hours, 28 (7.2%) spent 4-5 hours, 13 (3.3%) spent 8 hours and more whiles 8 (2.1%) spent 6-7 hours, representing the least number of the respondents.

4.5.3 Hypothesis Testing

Hypothesis refers to an educated guess of the relationship among variables. It helps to establish the relationship between variables before a conclusion can be drawn. According to Ankrah (2014) as cited in Darko-Adjei, 2018) "a hypothesis is a specific statement of prediction. It describes in concrete (rather than theoretical) terms what the expectation will be in the study".

Hypothesis One

H0: The time students spend on social media will not affect the amount of time they spend studying.

H1: The time students spend on social media will affect the amount of time they spend studying.

H0 is the "Null hypothesis"

H1 is the "Alternative hypothesis"

The significant level (α) for this study is 0.05 and the test statistic is a Chi-Square and is given as;

$$\chi^2 = \sum_i \frac{(O_i - E_i)^2}{E_i}$$

Where *Oi are* the observed frequencies

Where Ei are the expected frequencies

X2 is Chi-Square

DF is Degree of Freedom

COR is the Correlation Coefficient

Table 4.17: Relationship between Students' GPA and the Number of Subscribed Social Media Websites

			1-2	2-3	3-4	4-5	5-6	6-7	7-8	8hrs / more	Total
Number of hours students spend using social media	1-2	Count	27	19	6	8	6	2	0	0	68
		Expected Count	22.0	17.1	11.0	4.9	7.7	1.4	1.7	2.3	68.0
	2-3	Count	21	20	12	.6	.9	.1	.1	.2	72
		Expected Count	23.3	18.1	11.6	5.2	8.1	1.5	1.8	2.4	72.0
	3-4	Count	24	21	20	.6	10	.0	.1	.2	84
		Expected Count	27.1	21.1	13.6	6.0	9.5	1.7	22	28	84.0
	4-5	Count	29.	26	13	1	15	2	5	8	99
		Expected Count	32.0	24.9	16.0	7.1	11.2	2.0	25	33	99.0
	5-6	Count	21	10	11	5	3	2	3	1	56
		Expected Count	18.1	14.1	9.0	4.0	6.3	1.1	1.4	1.9	56.0
	6-7	Count	3	1	0	1	0	0	0	0	5
		Expected Count	1.6	1.3	.8	.4	.6	.1	.1	.2	5.0
	7-8	Count	0	0	0	1	1	0	0	0	2
		Expected Count	.6	.5	.3	.1.	.2	.0	.1	.1	2.0
	More than 8 hours	Count	1	1	1	0	0	1	0	0	4
		Expected Count	1.3	1.0	.6	.3	.5	.1	.1	.1	4.0
		Count	126	98	63	28	44	8	10	13	390
		Expected Count	126.0	98.0	63.0	28.0	44.0	8.0	10.0	13.0	390

Source: Field data, 2019

The degree of freedom (DF) is given as:

(r-1)(c-1)

Where r is the number of rows

c is the number of columns

From Table 4.17, the degree of freedom is:

(8-1)(8-1) = 7 x 7 = 49

From the Chi-Square table, a DF of 49 at $\alpha = 0.05$ is given as 67.50

Table 4.18: Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	65.907[a]	49	.054
Likelihood Ratio	64.590	49	.067
Linear-by-Linear Association	3.364	1	.067
No. of Valid Cases	390		

Table 4.19: Chi-Square Tests

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	.093	.047	1.840	.067[c]
Ordinal by Ordinal	Spearman Correlation	.063	.051	1.245	.214[c]
No. of Valid Cases		390			

The calculated Chi-Square from Table 4.18 = 65.907 and the Chi-Square value from a Chi-Square distribution table at a Degree of Freedom of 49 = 67.50. Since the calculated Chi-Square value is greater than that of the Chi-Square table, then the H_O is rejected and H_1 is accepted, this means that the time students spend on social media affects the amount of time they spend studying.

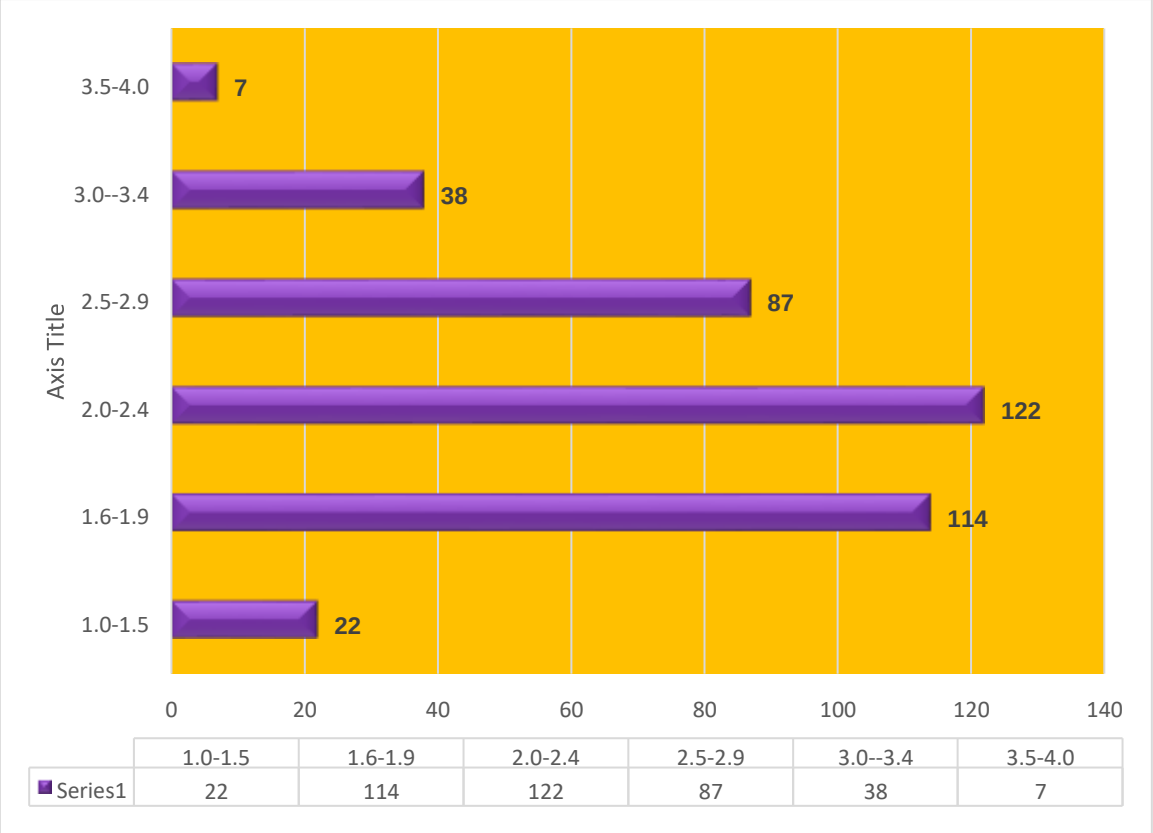
This is a positive relationship between the number of hours or time students spent on social media and the amount of time they spent studying. When the value of the Pearson's correlation (R) is greater than 0.5, it is an indication of a strong relationship and weak when less than 0.5. Based on this rule, from Table 4.19, the Pearson's Correlation (R) = 0.093 which is an indication of a weak relationship between the number of hours or time students spent on social media and the amount of time they spent studying. Therefore the time students spent on social media made them spend less time for studies.

4.6 Students' Grade Point Average (GPA) and the Number of Social Media Platforms Subscribed to by Students

4.6.1 Students' GPA

Social media is reported to have negative effects on the students' academic performance such as distractions, stealing of time, grammar, spellings, etc. which have negative effects on grades (GPA) and academic performance. In view of this background, respondents were asked to indicate their current GPA as shown in Figure 4.3 below. The intent was to compare their GPA with the number of social media websites they had subscribed to.

Figure 4.3: Respondents' GPA.



As shown in Figure 4.3, majority of the respondents 122 (31.3%) had current GPA falling within a lower division (2.0 - 2.4) while 87 (22.3%) with a range of 2.5 - 2.9. A considerable number of the students 114 (29.3%) also fell within third class division (1.6 - 1.9) whiles a few 22 (5.6%)

indicated between (1.0 - 1.5) representing pass. Again, a couple of the respondents 38 (9.7%) had GPA falling within the ranges of (3.0 - 3.4). A very few of the respondents 7 (1.8%) had first class honours per their GPA, within the range of (3.5 - 4.0). It is obvious that in most students' graduation, very few graduates come out with first class honours and the majority of them fall within the lower division. This assertion is not different from the results obtained from the respondents with respect to their current GPAs.

Table 4.20: Students' Grade Point Average (GPA)

GPA range			Institutions		Total
			UEW	UCC	
Respondents' GPA	1.0 – 1.5	Freq.	15	7	**22**
		Percent (%)	4.9%	8.1%	**5.6%**
	1.6 – 1.9	Freq.	90	24	**114**
		Percent (%)	29.6%	27.9%	**29.3%**
	2.0 – 2.4	Freq.	94	28	**122**
		Percent (%)	31.0%	32.6%	**31.3%**
	2.5 – 2.9	Freq.	70	17	**87**
		Percent (%)	23.0%	19.8%	**22.3%**
	3.0 – 3.4	Freq.	30	8	**38**
		Percent (%)	9.9%	9.3%	**9.7%**
	3.5 – 4.0	Freq.	5	2	**7**
		Percent (%)	1.6%	2.3%	**1.8%**
Total		**Freq.**	**304**	**86**	**390**
		Percent (%)	**100%**	**100%**	**100%**

Source: Field data, 2019

4.6.2 Relationship between Students' GPA and the Number of Subscribed Social Media Platforms.

Social media platforms are gradually becoming indispensable tools among students, although the number of subscribed social media platforms inadvertently affects academic performance of students if not well managed. This section sought to find out if indeed students' GPA is affected by the number of social media websites they subscribe to.

4.6.3 Hypothesis Two

H0: Students' GPA will not be affected by the number of social media websites they subscribe to.

H1: Students' GPA will be affected by the number of social media websites they subscribe to.

H0 is the "Null hypothesis"

H1 is the "Alternative hypothesis"

Table 4.21: Relationship between Students' GPA and the Number of Subscribed Social Media Websites

			Respondents' GPA						Total
			1.0-1.5	**1.6-1.9**	**2.0-2.4**	**2.5-2.9**	**3.0-3.4**	**3.5-4.0**	
Social media websites or platforms subscribed by respondents	Facebook	Count	7	36	44	26	11	3	127
		Expected Count	7.2	37.1	39.7	28.3	12.4	2.3	127.0
	WhatsApp	Count	11	53	52	51	21	2	190
		Expected Count	10.7	55.5	59.4	42.4	18.5	3.4	190.0
	YouTube	Count	3	16	11	2	2	0	34
		Expected Count	1.9	9.9	10.6	7.6	3.3	.6	34.0
	Twitter	Count	0	6	12	7	3	1	29
		Expected Count	1.6	8.5	9.1	6.5	2.8	.5	29.0
	Instagram	Count	0	3	3	0	1	1	8
		Expected Count	.5	2.3	2.5	1.8	.8	.1	8.0
	Skype	Count	1	0	0	1	0	0	2
		Expected Count	.1	.6	.6	.4	.2	.0	2.0
		Count	22	114	122	87	38	7	390
		Expected Count	22.0	114.0	122.0	87.0	38.0	7.0	390.0

From Table 4.21, the degree of freedom is;

(6-1)(6-1) = 5x 5 = 25

From the Chi-square table, a DF of 25 at $\alpha = 0.05$ is given as 38.89

Table 4.22: Chi-Square Tests

	Value	DF	Asymp. Sig. (2-sided)
Pearson Chi-Square	34.952[a]	25	.089
Likelihood Ratio	34.379	25	.100
Linear-by-Linear Association	.001	1	.971
No. of Valid Cases	390		

Table 4.23: Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	-.002	.054	-.036	.971[c]
Ordinal by Ordinal	Spearman Correlation	-.018	.050	-.346	.730[c]
No. of Valid Cases		390			

The calculated Chi-Square from Table 4.22 = 34.952 and the Chi-Square value from a Chi-Square distribution table at a Degree of Freedom of 36 = 38.89. Since the calculated Chi-Square value is less than that of the Chi-Square table, the H_0 is accepted and H_1 is rejected. This means that students'

GPAs are not affected by the number of subscribed social media websites by respondents. This is a negative relationship between students' GPA and the number of subscribed social media websites. When the value of the Pearson's Correlation (R) is greater than 0.5, it is an indication of a strong relationship and weak when less than 0.5. Based on this rule, from Table 4.23, the Pearson's Correlation (R) = -.002 which is an indication of a weak relationship between students' GPA and the number of subscribed social media websites. The number of sites students subscribed to did not affect their GPA.

4.7 Social Media Usage Rates across Faculties

This study sampled from various faculties and it is imperative to know the extent of use of social media by the respondents from the faculties. Table 4.24 shows respondents' extent of use of social media by faculties.

Table 4.24: Extent of Use of Social Media by Faculties (UEW & UCC)

No. of Hours			Faculties			
			Hum. / Soc. Sci. Educ.	**Science / Tech. Educ.**	**Educational Stud. / Found.**	**Total**
Number of hours spent on social media	1 - 2	Freq.	31	19	18	**68**
		Percent (%)	15.9%	17.1%	21.4%	**17.4%**
	2 - 3	Freq.	36	22	14	**72**
		Percent (%)	18.5%	19.8%	16.7%	**18.5%**
	3 - 4	Freq.	43	25	16	**84**
		Percent (%)	22.1%	22.5%	19.0%	**21.5%**
	4 - 5	Freq.	47	27	25	**99**
		Percent (%)	24.1%	24.3%	29.8%	**25.4%**
	5 - 6	Freq.	31	17	8	**56**
		Percent (%)	15.9%	15.3%	9.5%	**14.4%**
	6 - 7	Freq.	2	1	2	**5**
		Percent (%)	1.0%	1.0%	2.4%	**1.3%**
	7 - 8	Freq.	1	0	1	**2**
		Percent (%)	0.5%	0.0%	1.2%	**0.5%**
	8 hrs. / more	Freq.	4	0	0	**4**
		Percent (%)	2.0%	0.0%	0.0%	**1.0%**
Total		**Freq.**	**195**	**111**	**84**	**390**
		Percent (%)	**100%**	**100%**	**100%**	**100%**

Source: Field data, 2019

Table 4.24 shows that out of the 390 respondents, 99 (25.4%) spent 4-5 hours on social media daily, followed by 84 (21.5%) who spent 3-4 hours and 72 (18.5%) that spent 2-3 hours on social media every day. 68 (17.4%) of the respondents also indicated that they spent 1-2 hours while 56 (14.4%) spent 5-6 hours on social media per day. Also, 5 (1.3%) and 4 (1.0%) spent 6-7 hours and 8 hours or more respectively while 2 (0.5%) of the students spent 7-8 hours on social media

platforms on daily basis. The results as shown in the table indicate that 68 (17.4%) of the students spent the least number of hours, 1-2 hours while 4 (1.0%) students spent the most hours, 8 hours or more every day on social media platforms.

Table 4.25: Extent of Use of Social Media by Faculties of Humanities / Social Sciences Education (UEW & UCC)

No. of hours	Frequency	Percentage (%)
1-2	31	15.9%
2-3	36	18.5%
3-4	43	22.1%
4-5	47	24.1%
5-6	31	15.9%
6-7	2	1.0%
7-8	1	0.5%
8 hours or more	4	2%
Total	**195**	**100%**

Source: Field data, 2019

As table 4.25 depicts, out of the 195 respondents from the Faculties of Humanities/Social Sciences Education (both UEW and UCC), majority 47 (24.1%) spent 4-5 hours on social media daily, followed by 43 (22.1%) who spent 3-4 hours and 36 (18.5%) spent 2-3 hours on social media every day. Again, 31 (15.9%) and another 31 (15.9%) spent 1-2 hours and 5-6 hours respectively per day.

4 (2.0%) spent 8 hours or more daily, followed by 1 (0.5%) and 2 (1.0%) of the respondents that spent 7-8 hours and 6-7 hours respectively on social media platforms on daily basis. The result indicates that 31 (15.9%) students spent the least hours, 1-2 hours while 4 (2.0%) spent the most hours, 8 hours or more every day on social media platforms.

Table 4.26: Respondents' Extent of Use of Social Media by Faculties of Science / Technology Education (UEW & UCC)

No. of Hours	Frequency	Percent (%)
1-2	19	17.1%
2-3	22	19.8%
3-4	25	22.5%
4-5	27	24.3%
5-6	17	15.3%
6-7	1	1%
7-8	0	0.0%
8 hours / more	0	0.0%
Total	**111**	**100%**

Source: Field data, 2019

Table 4.26 shows that 111 respondents from the Faculties of Science/Technology Education (both UEW and UCC) participated in the study. Out of the number, majority 27 (24.3%) spent 4-5 hours on social media daily, followed by 25 (22.5%) who spent 3-4 hours and 22 (19.8%) spent 2-3 hours on social media every day. 19 (17.1%) spent 1-2 hours, 17 (15.3%) spent 5-6 hours while 1 (1.0%) spent 6-7 hours on social media platforms per day. None of the students

according to the result, spent beyond 7 hours on social media daily. According to the result, 19 (17.1%) students spent the least hours, 1-2 hours while only 1 (1.0%) spent the most hours, 6-7 hours every day on social media platforms.

Table 4.27: Respondents' Extent of Use of Social Media by Faculties of Educational Studies/Foundations (UEW & UCC).

No. of hours	Frequency	Percent (%)
1-2	18	21.4%
2-3	14	16.7%
3-4	16	19.0%
4-5	25	29.8%
5-6	8	9.5%
6-7	2	2.4%
7-8	1	1.2%
8 hours / more	0	0.0%
Total	**84**	**100%**

The result of Table 4.27 shows that 84 respondents from the Faculties of Educational Studies/Foundations (both UEW and UCC) participated in the study. Majority of the students 25 (29.8%) spent 4-5 hours on social media daily, followed by 18 (21.4%) who spent 1-2 hours and 16 (19.0%) spent 3-4 hours on social media every day. 14 (16.7%) spent 2-3 hours and 8 (9.5%) spent 5-6 hours on social media. Again, 2 (2.4%) and 1 (1.2%) spent 6-7 hours and 7-8 hours respectively on social media platforms on daily basis. However, none of the students spent

beyond 8 hours on social media per day. Therefore, 18 (21.4%) students spent the least hours, 1-2 hours while only 1 (1.2%) student spent the most hours, 7-8 hours every day on social media websites.

4.8 Social Media Use and Academic Performance of Students

4.8.1 Effects of Social Media Use on Students' Academic Activities

The following tables describe some of the effects of social media use on the academic activities of students of UEW and UCC.

Table 4.28: Sleep Quality and Academic Performance

Your lack of quality sleep due to social media use negatively affect your studies or academic performance	**Institution**				**Total**	
	UEW		**UCC**		**Freq.**	**%**
Strongly Disagree	23	7.6%	2	2.3%	**25**	**6.4%**
Disagree	75	24.7%	15	17.5%	**90**	**23.1%**
Undecided	114	37.5%	30	34.9%	**144**	**36.9%**
Agree	55	18.0%	23	26.7%	**78**	**20%**
Strongly Agree	37	12.2%	16	18.6%	**53**	**13.6%**
Total	**304**	**100%**	**86**	**100%**	**390**	**100%**

Source: Field data, 2019

As shown in 4.28, it can be observed that out of the total respondents 390, 144 (36.9%) were undecided on the statement “Your lack of quality sleep due to social media use negatively affect your studies or academic performance”, 78 (20.0%) agreed, 53 (13.6%) strongly agreed. On the flipside, 90 (23.1%) disagreed while 25 (6.4%) strongly disagreed. It is evident from this result that, majority of the respondents were neutral to the statement. However, more than one-third, comprising 131 (33.6%) students conceded (agreed and strongly agreed) that they lacked quality sleep. It can therefore be inferred from the results that a significant number of the students conceded that social media use deprived them quality sleep which affected their academic performance.

Table 4.29: Social Media and Students' Concentration

Sometimes it is quite difficult to concentrate as you use social media while studying or doing academic work	**Institution**				**Total**	
	UEW		**UCC**		**Freq.**	**%**
Strongly Disagree	18	5.9%	6	7.0%	**24**	**6.2%**
Disagree	85	28.0%	12	14.0%	**97**	**24.9%**
Undecided	112	36.8%	34	39.5%	**146**	**37.4%**
Agree	57	18.8%	20	23.2%	**77**	**19.7%**
Strongly Agree	32	10.5%	14	16.3%	**46**	**11.8%**
Total	**304**	**100%**	**86**	**100%**	**390**	**100%**

Source: Field data, 2019

From Table 4.29, it can be seen that, greater number of the respondents 146 (37.4%) were neural to the fact that they sometimes had difficulties concentrating as they used social media while studying or doing academic work. Some number of the respondents 77 (19.7%) agreed whiles 46 (11.8%) strongly agreed. On the other hand, 97 of the respondents, representing 24.9% disagreed and 24 (6.2%) strongly disagreed to the statement. The result showed that a total of 123 (31.5%) students (agreed and strongly agreed) had their concentration on academic work impaired while 121 (31.1%) indicated otherwise (disagreed and strongly disagreed).

Table 4.30: Social Media and Students' GPA

Do you think your GPA would be better or higher if you cut down or reduce the time you spend using social media?	Institution				Total	
	UEW		UCC		Freq.	%
Strongly Disagree	21	6.9%	7	8.1%	**28**	**7.2%**
Disagree	71	23.4%	16	18.6%	**87**	**22.3%**
Undecided	111	36.5%	34	39.5%	**145**	**37.2%**
Agree	62	20.4%	14	16.3%	**76**	**19.5%**
Strongly Agree	39	12.8%	15	17.5%	**54**	**13.8%**
Total	**304**	**100%**	**86**	**100%**	**390**	**100%**

Source: Field data, 2019

It can be observed from Table 4.30 that, 145 (37.2%) of the respondents representing the majority did not take any stance on the statement "Do you think that your grade point average (GPA) would be better or higher if you cut down or reduce the time you spend using social media? Some respondents 87 (22.3%) disagreed, while 28 (7.2%) strongly disagreed to the above question. Also, 76 (19.5%) and 54 (13.8%) agreed and strongly agreed respectively. It can therefore be inferred from the result that one-third of the respondents 130 (33.3%) conceded (agreed and strongly agreed) that their GPAs would have been better if they had cut down on the time they spent using media.

Table 4.31: Social Media and Students' Grammar

Your social media use affect your grammar	Institution				Total	
	UEW		UCC		Freq.	%
Strongly Disagree	24	7.9%	6	7.0%	**30**	**7.7%**
Disagree	71	23.4%	21	24.4%	**92**	**23.6%**
Undecided	118	38.8%	29	33.7%	**147**	**37.7%**
Agree	52	17.1%	20	23.3%	**72**	**18.4%**
Strongly Agree	39	12.8%	10	11.6%	**49**	**12.6%**
Total	**304**	**100%**	**86**	**100%**	**390**	**100%**

Source: Field data, 2019

As indicated in Table 4.31, 147 (37.7%) of the total respondents were neutral to the fact that their social media use negatively affected their grammar. Also, 92 (23.6%) disagreed as 30 (7.7%) strongly disagreed. Again, 72 (18.4%) and 49 (12.6%) of the respondents agreed and strongly agreed respectively. The result is an indication that a significant number 122 (31.3%) of the respondents were not affected (disagreed and strongly disagreed) as against almost the same

number 121 (31%) who had their grammar negatively affected by their social media use (agreed and strongly agreed).

Table 4.32: Social Media Use in Class

You often or at times interact on social media during class hours or at lectures	Institution				Total	
	UEW		UCC		Freq.	%
Strongly Disagree	14	4.6%	4	4.7%	**18**	**4.6%**
Disagree	87	28.6%	21	24.4%	**108**	**27.7%**
Undecided	108	35.5%	33	38.4%	**141**	**36.2%**
Agree	60	19.7%	19	22.1%	**79**	**20.2%**
Strongly Agree	35	11.5%	9	10.4%	**44**	**11.3%**
Total	**304**	**100%**	**86**	**100%**	**390**	**100%**

Source: Field data, 2019

As seen in Table 4.32, when the respondents were asked whether they interacted on social media during class hours or at lectures, 141 (36.2%) representing the majority were undecided. The rest of the responses are as follows; 108 (27.7%) which is next to majority disagreed, followed by 79 (20.2%) of the respondents who agreed. Also 44 (11.3%) of the respondents strongly agreed while 18 (4.6%) of the respondents strongly disagreed. The result revealed that 126 (32.3%) of the

students did not use social media in class or at lectures (disagreed and strongly disagreed) while 123 (31.5%) engaged in that practice (agreed and strongly agreed).

Table 4.33: Social Media and Study Regime

At times you struggle or have difficulties adhering to your study timetable due to your use of social media	Institution				Total	
	UEW		UCC		Freq.	%
Strongly Disagree	16	5.3%	7	8.1%	**23**	**5.9%**
Disagree	84	27.6%	23	26.8%	**107**	**27.4%**
Undecided	104	34.2%	29	33.7%	**133**	**34.1%**
Agree	64	21.1%	14	16.3%	**78**	**20.0%**
Strongly Agree	36	11.8%	13	15.1%	**49**	**12.6%**
Total	**304**	**100%**	**86**	**100%**	**390**	**100%**

Source: Field data, 2019

Table 4.33, shows that out of the total respondents, 133 (34.1%) were undecided when they were asked whether they struggled or had difficulties at times sticking to their study timetables due to their use of social media. Also, 107 (27.4%) of the respondents disagreed, 78 (20.0%) agreed whiles 49 (12.6%) and 23 (5.9%) of the respondents strongly agreed and strongly disagreed respectively. The result therefore suggests that one-third, 130 (33.3%) out of the 390 respondents (disagreed and strongly disagreed) managed to stick to their study timetable without difficulties

as they used social media. However, a considerable number, almost one-third of the students 127 (32.6%) lacked the discipline to stick to their study regimes (agreed and strongly agreed).

Table 4.34: Social Media and Academic Performance

Your social media use affects your academic performance negatively	**Institution**				**Total**	
	UEW		**UCC**		**Freq.**	**%**
Strongly Disagree	24	7.9%	8	9.3%	**32**	**8.2%**
Disagree	90	29.6%	19	22.1%	**109**	**28%**
Undecided	98	32.2%	31	36.1%	**129**	**33%**
Agree	55	18.1%	18	20.9%	**73**	**18.7%**
Strongly Agree	37	12.2%	10	11.6%	**47**	**12.1%**
Total	**304**	**100%**	**86**	**100%**	**390**	**100%**

Source: Field data, 2019

Table 4.34 shows that the majority of the respondents 129 (33%) neither agreed nor disagreed that their social media use affected their academic performance. Again, 109 (28%) of the respondents disagreed while 73 (18.7%) of the respondents agreed. Also, 47 (12.1%) of the respondents strongly agreed whiles 32 (8.2%) strongly disagreed. The result shows that a significant number of the students 141 (36.2%) did not admit (disagreed and strongly disagreed) that their use of social media affected their academic performance negatively. However, a

significant number 120 (30.8%) admitted (agreed and strongly agreed) that their use of social media had negative effects on their academic performance.

4.8.2 Social Media and Academic Performance

Several authors have revealed that the use of social media has effects on students' academic performance when not handled with care.

4.8.3 Hypothesis Three

H0: The extent of social media use will not affect a student's academic performance

H1: The extent of social media use will affect a student's academic performance

H0 is the "Null hypothesis"

H1 is the "Alternative hypothesis"

Table 4.35: The Relationship between the Time Students Spent on Social Media and Students' Academic Performance

			Students' GPA						Total
			1.0 -1.5	1.6 - 1.9	2.0 -2.4	2.5-2.9	3.0 -3.4	3.5 -4.0	
Number of hours students' spent using social media	1-2	Count	2	22	19	17	8	0	68
		Expected Count	3.8	19.9	21.3	15.2	6.6	1.2	68.0
	2-3	Count	4	20	22	17	6	3	72
		Expected Count	4.1	21.0	22.5	16.1	7.0	1.3	72.0
	3-4	Count	3	28	25	17	11	0	84
		Expected Count	4.7	24.6	26.3	18.7	8.2	1.5	84.0
	4-5	Count	8	30	30	20	9	2	99
		Expected Count	5.6	28.9	31.0	22.1	9.6	1.8	99.0
	5-6	Count	3	14	20	14	3	2	56
		Expected Count	3.2	16.4	17.5	12.5	5.5	1.0	56.0
	6-7	Count	1	0	3	0	1	0	5
		Expected Count	.3	1.5	1.6	1.1	.5	.1	5.0
	7-8	Count	0	0	2	0	0	0	2
		Expected Count	.1	.6	.6	.4	.2	.0	2.0
	8 hrs or more	Count	1	0	1	2	0	0	4
		Expected Count	.2	1.2	1.3	.9	.4	.1	4.0
Total		Count	22	114	122	87	38	7	390
		Expected Count	22.0	114.0	122.0	87.0	38.0	7.0	390.0

From Table 4.35, the degree of freedom is;

(8-1)(6-1) = 7x 5 = 35

From the Chi-Square table, a DF of 35 at $\alpha = 0.05$ is given as 55.76

4.36: Chi-Square Tests

	Value	DF	Asymp. Sig. (2-sided)
Pearson Chi-Square	30.236[a]	35	.697
Likelihood Ratio	34.199	35	.507
Linear-by-Linear Association	.269	1	.604
No. of Valid Cases	390		

4.37: Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	-.026	.050	-.518	.605[c]
Ordinal by Ordinal	Spearman Correlation	-.022	.050	-.436	.663[c]
No. of Valid Cases		390			

As shown from Table 4.36, the calculated Chi-Square = 30.236 and The Chi-Square value from a Chi-Square distribution table at a Degree of Freedom of 35 = 55.76. From this comparison, since the calculated Chi-Square value is less than that of the Chi-Square table, therefore the H_0

is accepted and H_1 is rejected, this means that the number of hours spent on social media platforms do not affect students' academic performance.

There is a negative relationship between the number of hours spent on social media and students' academic performance. When the value of the Pearson's Correlation (R) is greater than 0.5, it is an indication of a strong relationship and weak when less than 0.5. Based on this rule, from Table 4.37, the Pearson's Correlation (R) = -.026 which is an indication of a weak relationship between the number of hours spent on a social media platforms and students' academic performance. The amount of time spent on social media platforms by students did not affect their academic performance much.

CHAPTER FIVE

DISCUSSION OF FINDINGS

5.1 Introduction

This chapter discusses the findings of the study in relation to the objectives and existing literature. This study investigated the effects of social media use on the academic performance of public tertiary institutions in Ghana. The discussion of the major findings was carried out under the following headings:

i. Social media platforms and their usage by students,
ii. Reasons or purposes for students' use of social media,
iii. The time students spent on social media and the time they spent studying per day,
iv. Students' grade point average (GPA) and the number of social media platforms subscribed to by respondents,
v. Social media usage rates across faculties,
vi. Social media and academic performance students.

5.2 Social Media Platforms and their Usage by Students

The first objective of this study was to find out the social media platforms and their usage among students. The findings revealed that all the 390 (100%) respondents from the various faculties of UEW and UCC are social media users. The results supports the findings of the study conducted by Kolan and Dzandza (2018) on the effect of social media on academic performance of students in universities with University of Ghana as the case study. They also reported that all the 197 (100%) respondents were social media users. It is therefore an undisputable fact that almost or

all students of tertiary institutions in Ghana are users of social media. Again, this study revealed that there are more male student population, 264 (67.7%) with 213 (70.1%) and 51 (59.3%) for UEW and UCC respectively, as against 126 (32.3%) females, with 91 (29.9%) for UEW and 35 (40.7%) for UCC. This finding is not different from the result of the study by Wickramanayake and Jika (2018) in Nigeria where the male student population were higher than the females. This is indication that most tertiary institutions have more male students than females.

On the age of social media users, several studies indicate that young adults, especially within the age bracket of 18-24 are the heaviest users of social media platforms. As reported by Smith and Anderson (2018) on a Pew Research Center's survey of US adults, the younger Americans between the ages of 18-24 years were the predominant users of social media platforms. Also, Asiedu and Badu (2018) revealed that majority of the respondents 182 (92.4%) from University of Ghana and Kwame Nkrumah University of Science and Technology were within the ages of 18-24 who were active social media. The results of the findings of this study is in agreement with the aforementioned studies because majority of the respondents 197 (50.5%) in the two institutions were within the ages of 18-25 years [(18-21) = 33) + (22-25 = 164) = 197]. It is therefore not surprising because as indicated by Alt (2015), this age bracket are highly interested and skilled in the use of ICT. Also, according to Pew Research Center (2018), the current generation is referred to as 'Generation Z' because they "dominate online searches for information on the Post-Millennial generation".

As disclosed by Ezumah (2013), the degree of interactivity, contents uploading ability, ease of use and ability to search through a site are some of the reasons that inform students' choice of social media platforms. Also, Katz's Use and Gratification Theory postulates that a student is

responsible for his or her choice of media to satisfy a particular need which in turn contests with other information sources for gratification (Katz et al. 1974). When the students were asked to indicate the social media platforms that they have subscribed to, the results showed that WhatsApp was the most used, followed by Facebook, Instagram and Twitter. The other platforms were YouTube and Skype. The result confirms that the above named platforms are some of the most famous social network sites worldwide as of April 2019, as reported by Statista. Also, the findings of Munshi (2014) in India on how social science students at Aligarh Muslim University used social networking tools for learning purposes. The sites used by the students such as Facebook, Twitter, WhatsApp, YouTube, etc. are the same used by the respondents of this study. Furthermore, the study of Kolan and Dzandza (2018) on the use of social media by University of Ghana students also showed that the popular social media platforms used by the students were Facebook, WhatsApp, Twitter and Instagram which corroborates the findings of this study on the social media platforms used by university students.

Electronic devices are the prerequisites so far as social media accessibility is concerned. This is because they are indispensable tools that facilitate social media use. Respondents were therefore made to disclose the electronic devices used or possessed by them. The result showed that all the respondents 390 (100%) owned or used mobile phones. Smartphone use was next as 311 students possessed them. Mobile phone and smartphone were asked to be indicated separately by the researcher because all smartphones are mobile phones but not all mobile phones are smartphones.

Almost or all smartphones support social media use but the same cannot be said of mobile phones. The other devices owned by the respondents were laptop, computer, personal digital assistant (PDA), tablet, iPhone, iPad and desktop computer in the order of frequency as they are

used to access social media. This result corresponds with the study of Wickramanayake and Jika (2018) which revealed that the main devices used by students to access social media were mobile phones, laptops and desktop computers. The result is in consistence with Melhuish and Falloon (2010) as cited in Qi (2019) that mobile technologies like smartphones, laptops and tablets are present everywhere in higher academic institutions. However, it is also revealed that the usage of mobile devices have the potential to militate against college students' academic performance (Lepp, Barkley and Karpinski, 2014; Wood et al. (2012).

Also under this objective, students were asked of the number of friends or followers they had on social media. To the researcher, this is relevant because on social media platforms, users are rated based on the number of friends or followers they have. The higher the number of friends and followers, the better the contents or posts shared by the user, the more likes he or she receives and also the more influential the user seems to be. This in turn, could influence the individual's frequency or use of social media since he or she has many friends or followers to engage with all the time. Iorliam and Ode (2014) revealed that the total number of friends online has implications on academic performance of students. This study revealed that the majority of students of UEW and UCC have friends and followers on social media platforms. This finding is similar to that of Mingle and Adams (2015) which disclosed that students of senior high schools in Ghana have many friends they engage with online.

On the manner in which students use social media, students responded to some statements reflecting their use of social media using a five point Likert scale. Firstly, the respondents were asked whether social media had always been part of their usual routine. Very few 32 (8.2%)

'never' made it part of their usual routine while 87 (22.4%) 'rarely' did. However, the overwhelming majority 271 (69.5%) indicated that social media use had been part of their usual routine 'sometimes', 'very often' and 'always'. It confirms the observation made by Wickramanayake and Jika (2018) that most students are moderate to frequent users of social media.

On addiction to social media use, some students who participated in this study disclosed that they were never addicted to social media as they indicated 'never' and others 'rarely'. The majority of the respondents also disclosed that they were addicted to social media 'sometimes', 'very often' and 'always'. This affirms the study of Firat (2017) that social media use could result in addiction to users, especially students. Besides, the frequency of use of social media resulted in majority of students being deprived of sleep, especially at night. When students were asked whether they failed to get enough rest because of their social media use, especially at night, few responded they did not (rarely and never). However, the majority indicated that they often lacked enough rest due to their use of social media. This revelation affirms the study of Power, Taylor and Horton (2017) that some youth, especially students, use social media often in the night and it affects their quality of sleep. Other studies that support this assertion include Levenson et al. (2016); Mark et al. (2018) and Garett et al. (2018). As posited by Przybylski et al. (2013), this phenomenon often takes place as a result of the students' fear of missing out. They tend to have the feeling that they are missing out on important and trending social events or happenings around, hence their constant online visits for up-to-date news and developments. This practice is very likely to affect the students in diverse ways as the study of Adams et al. (2017) revealed, sleep deprivation affects the 'academic, social, physical and emotional functioning' of individuals, especially students.

Moreover, on taking and sharing of selfies on social media, 24 (6.2%) of the students never did while 83 (21.2%) rarely did so. However, the overwhelming majority 283 (72.6%) stated that they 'sometimes', 'very often' and 'always' took and posted selfies on social media platforms. This confirms the study of Shah and Tewari (2016) and Jain and Mavani (2017) that majority of students engage in selfie taking and sharing, stressing that it is a very common practice or culture among students, especially on campus. Interestingly, 272 (69.7%) of the students indicated that they were 'sometimes', 'very often' and 'always' addicted to taking and posting selfies on social media.

5.3 Reasons or Purposes for Using Social Media

The importance and usefulness of social media cannot be overemphasized. This is because individuals, organizations, institutions, etc. use social media for several reasons and purposes such as communication, advertisement, business, academic, socialization and other purposes. The result of this study showed that students of UEW and UCC use social media for variety of purposes. The majority of the students indicated they used for entertainment or recreation. This is in agreement with Fasae and Adegbilero-Iwari (2016) in Nigeria that students had more interest in using social media for entertainment and communication than learning. This may not be surprising because users often share interesting and funny stuff on social media, not also forgetting the popular video site YouTube which has many interesting and entertaining videos. The next purpose for students' use of social media as revealed by this study was for latest or up-to-date news or events. It supports the study of Al-Daihani (2010) which showed that some students use social media for up-to-date information. As stated by Przybylski et al. (2013), the desire to be abreast of current events and latest developments mostly drive students to constantly

stay connected on social media platforms. They always wish to satisfy their curiosity, share their opinions on trending issues and contribute to the 'talk of the town'. The finding is therefore not different from that of Przybylski et al. (2013).

Socialization emerged as the third purpose for students' use of social media. As indicated by Salvation and Adzharuddin (2014), socialization is one of the main reasons why students use social media. It also corroborates the findings of Mustapha and Hamzah (2011) that students use social media to chat, contact old friends, to manage and maintain their friendships. It also confirms the study of Asiedu and Badu (2018) that the primary purposes for social media use among students of University of Ghana and Kwame Nkrumah University of Science and Technology were: the ability to chat, maintain distant relationships and also constantly contact loved ones.

Learning or academic work was the fourth reason or purpose students of UEW and UCC used social media as shown by the results. Incidentally, students' use of social media for academic work ranked fourth according to the study of Asiedu and Badu (2018) among students of University of Ghana and Kwame Nkrumah University of Science and Technology on motivating issues affecting students' use of social media sites in Ghanaian tertiary institutions. However, this contradicts the findings of Munshi (2014) on how social science students at Aligarh Muslim University use social networking tools mainly for their academic work which enabled them to connect to their colleagues to seek clarification on difficult concepts and share knowledge on subject matter. This study showed that the least purpose for students' use of social media is leisure, which is when they have some time to spare for relaxation or enjoyable activity. As

disclosed by Mustapha and Hamzah (2011), leisure was among the least purposes for which students of Malaysia used social media, thus supporting this finding of the study.

5.4 The Time Students Spent on Social Media and the Time they Spent Studying

As stated by Al-Jabri and Roztocki (2015), attitude has been a major determinant so far as behaviours concerning system's usage is concerned. Attitude is an individual's manner of response, whether favourable or unfavourable to an object or behaviour (Ajzen and Fishbein, 1980; Fishbein and Ajzen, 1975). Therefore, students' attitude toward social media use and the amount of time they spend using could affect their academic performance. Obadara and Olaopa (2018) and Ayodele and Adebiyi (2013) also indicated that when students develop good attitudes toward their studies or adopt good and efficient study habits, it results in tremendous improvement in their academic performance while laxity in study regimes or poor study habits result in academic failure. Mensah and Nizam (2016) also affirm that students spend a greater part of their time on social media sites than the time they spend studying. Participants of this study were also asked the time they spent on social media as against studying per day. The majority 99 (25.4%) spent 4-5 hours daily on social media. This result confirms the study of Hong et al. (2014) that on the average, tertiary students spend over four and a half (4.5) hours on social media, particularly on Facebook. A significant number 84 (21.5%) of the respondents of this study also spent three to four (3-4) hours on social media, 72 (18.5%) spent 2-3 hours and 68 (17.4%) who spent 1-2 hours per day on social media, very similar to the findings of Leyrer-Jackson and Wilson (2018) on time spent on social media daily by some students in USA. This study also showed that some students spent many hours on social media daily, including 56 (14.4%) spent 5-6 hours; 5 (1.3%) spent 6-7 hours, 2 (0.5%) spent 7-8 hours while 4 (1.0%) spent

as much as 8 hours or more. However, this result is even below the time spent on social media by students of Taiwan, according to Hong et al. (2014) who spent 12 hours daily on social media.

On time spent studying per day, the majority of the respondents 126 (32.3%) spent just 1-2 hours studying every day. This does not even match up or correspond with the time majority spent using social media per day (4-5 hours). It therefore substantiates the claim by Khan (2010) and Englander, Terregrossa and Wang (2010) as cited in Kolan and Dzandza (2018) that social media use by students is not related to their academic activities as they use them for purposes other than academic.

On the relationship between the time students spent on social media and the amount of time they spent studying, the Chi-Square test revealed a positive relationship. That means the time students spent on social media affected the amount of time they spent studying. The more hours students spent on social media, the less hours they spent studying. This finding substantiates that of Feshchenko (2015) among students of 25 universities of the Russian Federation involving 375 participants. The results showed that 95% of the students used social media. They spent the least 24% of their time for learning as against 28% for seeking vital information and 41% on entertainment. Junco (2012) also supports the assertion that the amount of time spent on social media by university students correlates negatively with the time they spend on their studies.

5.5 Students' Grade Point Average (GPA) and the Number of Social Media Platforms Subscribed to by Respondents

Under this objective, the researcher sought to find out whether the number of social media platforms subscribed by students had any bearing on their grade point average (GPA). Respondents were first asked to make known the social media platforms they subscribed to, as shown in Table 4.4. The result shows that indeed respondents subscribed to multiple platforms. Also, on students' GPA, the majority 123 (31.3%) had GPA falling within the lower division (2.0 – 2.4) while very few respondents 7 (1.8%) had first class honours (3.5 – 4.0). The Chi-Square test showed that students' GPAs are not affected by the number of subscribed social media websites by the respondents. This finding does not support the study of Leyrer-Jackson and Wilson (2018) that the more social media platforms students use have negative bearing on the GPA of students or results in lower GPA.

5.6 Social Media Usage Rates across Faculties

The usage rate per the number of hours spent on social media daily kept alternating between the respective faculties indicating no clear difference. Students from the faculties involved in this study on the average spent almost the same amount of time on social media per day. The finding corroborates the study of Raza and Soroya (2019) which also found that there is no significant difference in the use of social media among students of all faculties, all courses and all academic years.

5.7 Social Media and Academic Performance of Students

5.7.1 Effects of Social Media on Students' Academic Activities

According to Leyrer-Jackson and Wilson (2018), using social media for other purposes such as social may not necessarily affect students' academic performance but rather the manner or frequency of use and the level of addiction and distraction. To have a further view of how the use of social media affects the academic activities of students, some statements were responded by the students using a five point Likert scale (1 – Strongly Disagree; 2 – Disagree; 3 – Undecided; 4 – Agree; 5 – Strongly Agree). On sleep quality and academic performance, a majority of the students 144 (36.9%) were undecided. However, more than one-third comprising 131 (33.6%) of the students admitted (agreed and strongly agreed) that they lacked quality sleep due to their social media use and affected their academic performance. It therefore affirms the study of Adams et al. (2017) that majority of students often go to bed very late at night and others become restless in bed because of their use of social media in order to remain connected to their colleagues, family and friends. This in turn affects their 'academic, social, physical and emotional functioning'.

Students were also asked whether they thought their GPA would be better or higher if they cut down or reduced the time they spent using social media. A higher number 145 (37.2%) were neutral. Some of the respondents 115 (29.5%) had a different view (disagreed and strongly disagreed). This finding affirms the study by Onyeka, Sajoh and Dalhatu (2013) in Nigeria that even if students use social media very often, their academic performance is not affected. On the contrary, several studies reveal that social media use has negative impact on students or results in lower grade point average (GPA). Kirschner and Karpinski (2010) reported that regardless of how students use social media, even if leisurely, it results in lower grade point averages (GPAs). Mingle and Adams (2015) also reported that senior high school students experienced and confirmed reduction in their grades after they had started using social media. Leyrer-Jackson and Wilson (2018) also found that social media correlates negatively with GPA. It was therefore not surprising when a significant number or one-third 130 (33.3%) of the respondents of this study indicated (agreed and strongly agreed) that their GPAs would have been better or higher if they had cut down on the time they spent on social media.

Besides, social media is found to affect the grammar of students. They become used to the informal style of writing and communication among colleagues and loved ones and often repeat the practice during formal communication or examinations, as indicated by Obi, Bulus, Adamu and Sala'at (2012). Most of the respondents of this study 147 (37.7%) were not certain about social media affecting their grammar. Others 122 (31.3%) disagreed and strongly disagreed, substantiating the study by Wickramanayake and Jika (2018) in Nigeria which revealed that social media was helpful to the "reading skills", "writing skills", "speaking skills" and "listening skills" of the students. However, 121 (31%) confirmed (agreed and strongly agreed) that their grammar was affected negatively as a result of their social media use, as revealed by Ndaku

(2013); Sarpong (2014) and Mingle and Adams (2015). This revelation also affirms a news report in a Ghanaian newspaper, Daily Graphic (March 28, 2019, p. 61) by Augustina Tawiah on an advice to students by an English language trainer, Mr. Emmanuel Agyei, urging them to avoid the use of social media language in their writings. “When you use social media language in your essays, the impression it creates is that you take things for granted and that you are not serious, apart from the fact that social media language is incorrect”.

Moreover, 141 (36.2%) were undecided while 126 (32.3%) did not agree (disagreed and strongly disagreed) that they often interacted on social media during class hours or at lectures. A significant number of the respondents 123 (31.5%) admitted that they did interact on social media during class hours or at lectures. This finding also agrees with the study in Sudan by A’lamElhuda and Dimetry (2014) on medical students at Khartoum University that students visit social media platforms even during lecture sessions and in the laboratory.

In relation to their study regime or how the respondents kept to their study time table so far as social media use was concerned, the majority 133 (34.1%) were neutral or undecided about whether they kept to their study timetable or not. One-third of the students 130 (33.3%) did not admit (disagreed and strongly disagreed) that at times they struggled or had difficulties adhering to their study timetable due to their use of social media while almost the same number 127 (32.6%) admitted (agreed and strongly agreed). Their responses were similar to that of the respondents of a study by Dike, Eke and Babarinde (2013) among Nigerian secondary school students. Some had divergent views on the perceived impact of social media on their reading or learning while others were of the view that self-discipline was the key to adherence to study timetable.

Furthermore, participants of this study were asked whether social media use affected their academic performance negatively. Some of the respondents 129 (33%) could not determine whether social media negatively affected their academic performance or not. However, a considerable number 120 (30.8%) admitted (agreed and strongly agreed) that social media had negative effect on their performance while the majority 141 (36.2%) did not admit (disagreed and strongly disagreed) that social media use negatively affected their academic performance. This finding confirms the results of other studies. While some studies report the positive effect of social media (Reeve, 2013; Javed and Bhatti, 2015; Arif and Kanwal, 2016; Wickramanayake and Jika, 2018), other studies report otherwise (Junco, 2012; Osharive, 2015; Appiah, 2016; Leyrer-Jackson and Wilson (2018). However, some studies also report both negative and positive effects. For example, Iorliam and Ode (2014) indicated that though social media has some negative implications on students, when students are put in check on its use, there is significant improvement in their academic performance. Kolan and Dzandza (2018) also affirmed that though students used social media for purposes other than academic, they also used them for academic related activities.

5.7.2 Social Media and Academic Performance

Under this section, students' grade point average (GPA) were compared with the amount of time they spent on social media. According to Kirschner and Karpinski (2010), irrespective of how students use social media, particularly Facebook, even if leisurely, or at their convenience, there is an adverse effect on their GPA compared to others who do not. The Chi-Square test between the amount of time students of UEW and UCC spent on social media and their GPA revealed a negative relationship. Students' GPA were not affected by the amount of time they spent using

social media. This finding does not substantiate the assertion by Kirschner and Karpinski (2010) that no matter the least amount of time spent by students on social media, specifically Facebook, it affects their GPA negatively. The finding also refutes the results of the study of Leyrer-Jackson and Wilson (2018) that the number of hours students spent using social media negatively correlated with or lowered their GPA.

CHAPTER SIX

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This final chapter deals with the summary of the findings, conclusion and recommendations in relation to the objectives of the study. Also, areas for further studies have been suggested to other researchers who may be interested in carrying out further studies on social media use among students. This study sought to find out how students use social media and also determine whether their use had any effects on their academic performance. The theories adopted for this study were Bandura's Social Learning Theory (SLT) and Uses and Gratification Theory propounded by Katz (KUGT). Bandura (1997) as cited in Mingle and Adams (2015) states that individual learners, peers and situations are the three elements that are likely to affect individuals' learning outcomes. Therefore, the use of social media platforms (by the individual or student) with colleagues (peers) on various social media platforms (situations) affect his or her academic performance (learning outcomes). Also, Katz's Use and Gratification Theory postulates that a student is responsible for his or her choice of media to satisfy a particular need which in turn contests with other information sources for gratification (Katz et al. 1974).

6.2 Summary of Findings

This study sought to find out how students use social media and also determine whether their use has any effects on their academic performance. The summary of the main findings are presented below.

6.2.1 Social Media Platforms and their Usage by Students

The study revealed that all the students, 390 (100%) who participated in this study from the two institutions were social media users. The most popular or used social media platform was WhatsApp, followed by Facebook, Instagram, Twitter, YouTube and Skype in the order of frequency. Some of the electronic devices mostly used for accessing social media were mobile phones, smartphones and laptop computers. Most of the students had large number of friends and followers online which influenced their frequency of social media visits. The study also revealed that majority of the students were addicted to social media use and got deprived of quality sleep, especially at night due to their use of social media while others were not. Most of the students also indicated that they were not left out of the selfie culture while others were addicted to the practice.

6.2.2 Reasons or Purposes for Using Social Media

The study revealed that students of UEW and UCC used social media for a variety of reasons or purposes. Entertainment or recreation was the main purpose for their social media use. Latest or up-to-date news and events was the next purpose due to their desire to be abreast of current developments and happenings around. The other reasons or purposes were socialization, learning or academic work as well as for leisure.

6.2.3 The Time Students Spent on Social Media and the Time they Spent Studying

The study revealed that students of UEW and UCC spent many hours on social media platforms per day as against the time they spent studying. As majority of the students 126 (32.3%) spent as few as 1-2 hours for studies every day, as high as 99 (25.4%) of the students spent 4-5 hours

using social media every day. The Chi-Square test revealed a negative relationship between time spent on social media and time spent studying on daily basis.

6.2.4 Students' Grade Point Average (GPA) and the Number of Social Media Platforms Subscribed to by Respondents

The researcher sought to find out whether the number of social media platforms subscribed by respondents had any bearing on their grade point average (GPA). The study brought to light that students of UEW and UCC have subscribed to multiple social media platforms. Most of the students had grade point average falling within the lower division (2.0 – 2.4) while very few students had GPA falling within the first class range (3.5 – 4.0). The Chi-Square test revealed that students' GPA are not affected by the number of subscribed social media platforms by students.

6.2.5 Social Media Usage Rates across Faculties

Out of the 195 students from Faculties of Humanities/Social Sciences Education, 111 from Faculties of Science/Technology Education and 84 from Faculties of Educational Studies/Foundations, the usage rate per the number of hours spent on social media daily alternated between the faculties. There was no significant difference in the social media usage rate in terms of faculties. Students from the faculties involved in this study on the average spent almost the same amount of time on social media platforms per day.

6.2.6 Social Media and Academic Performance of Students

6.2.6.1 Effects of Social Media on Students' Academic Activities

On the effects of social media on students' academic activities, students responded to statements using a five point Likert scale. As some were neutral and stated they did not lack quality sleep, more than one-third admitted (agreed and strongly agreed) they lacked quality sleep due to their social media use and affected their academic performance. Also, as some of the students were 'undecided' and others did not agree to distraction on their studies, a significant number admitted (agreed and strongly agreed) that social media caused a distraction to their academic work. Again, as one-third 130 (33.3%) of the students admitted that a reduction in their social media use would result in a higher GPA, some did not agree while others were undecided. Although some of the students interacted on social media during class hours and at lectures, others did not. Besides, on study regime, as majority were undecided whether they kept to their study timetable or not, one-third of the students indicated they were able to stick to their study timetable while almost the same number struggled to do so because of their use of social media. Furthermore, some of the students were undecided and others admitted while a majority did not admit (disagreed and strongly disagreed) that the use of social media negatively affected their academic performance.

6.2.6.2 Social Media and Academic Performance of Students

Students' grade point average (GPA) were compared with the amount of time they spent on social media platforms. The Chi-Square test between the amount of time students of UEW and UCC

spent on social media and their grade point average revealed a negative relationship. Students' GPA were not affected by the amount of time they spent using social media.

6.3 Conclusion

The impact of the information revolution in our current generation cannot be overemphasized. It offers effective means for communication and interactions between individuals, organizations and groups of people worldwide. Technological advancement, especially social media, is the order of the day and serves as an antidote to the challenges associated with the former means of communication and information sharing. It is therefore not surprising that a significant percentage of the world's population are active social media users. Students of almost all levels of education are not left out in the use of social media due to its immense benefits, notwithstanding the negative effects. Several studies suggest that social media use by students has negative effects on their academic performance while others indicate positive effects. As the use and gratification theory of Katz et al. (1974) indicates, an individual's choice of media contests with other sources of information. Social media platforms rival against students' concentration and academic work. Again, the social learning theory by Bandura (1997) situates that the learning outcomes (academic performance) of students are affected by the students' choice of situation (social media use) and peers (friends and followers online). Since the use of social media has become inevitable among students, it is imperative that students are made aware of its effects (both positive and negative) in order to derive maximum benefits from it.

6.4 Recommendations

Based on the findings of this study, the following recommendations are made:

6.4.1 Integration of Social Media Topics in the Classroom

Firstly, the researcher recommends to university management the integration of topics relating to social media use in the classroom by instructors and implementers, especially the pros and cons, to enable students make informed decisions and responsible use of social media. Also, social media accounts must be opened purposely for courses instead of personal ones.

6.4.2 Regulation of Students' Social Media Use in Class

Most students use social media in class, lectures or school hours which cause a lot of distraction and affect them academically. It is therefore recommended to university and school authorities to have policies or rules that regulate the use of social media by students. Students should be restricted from using social media during class sessions, lectures and other academic activities.

6.4.3 Provision of Facilities to Support Social Media Use

Despite some negative effects associated with social media use, it is also beneficial to students' academic work. It is therefore recommended to stakeholders of education, including government and educational authorities to make constant provision of facilities that support the use of technology including social media such as internet, Wi-Fi connectivity, etc. to enhance students' learning.

6.4.4 Allotment of Quality Time for Studies

It is also recommended to students to strive to allot more quality time to their studies as against the time they spend on social media platforms in order to enhance their academic performance. This may also help them to develop the right attitudes and become more responsible for future endeavours.

6.4.5 Use of Social Media for the Right Purposes

It is recommended to students to reconsider the purposes for which they use social media. They should endeavour to cut down on the use of social media for other purposes such as entertainment and socialization instead of learning or academic work.

6.4.6 Use of Selfies for Solidarity and Grievance Expression

In times of misunderstanding between student bodies and educational authorities, students could use selfies as tools for mobilizing support on social media. Sharing selfies that portray students' displeasure against authorities could be more helpful to their cause than resorting to riotous demonstrations and other forms of attacks.

6.5 Areas for Further Studies

The following areas are suggested to be considered for further studies:

1. The social media platform(s) that is more beneficial to students and support teaching and learning.
2. Social media use in terms of the various academic levels (e.g. Level 100, 200 and 400).
3. Also, further studies should be conducted on lecturers and tutors' perceptions on social media use by students.

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APPENDIX A

QUESTIONNAIRE

Dear Respondent,

The researcher is an M. Phil student at the University of Ghana, Legon, researching on "**The effects of social media use on the academic performance of students of public tertiary institutions in Ghana**". It would be much appreciated if you could complete this questionnaire which would take about 10 minutes. You are kindly requested to answer all the questions as honestly as possible without any compulsion. You are assured that your responses are for research purposes only and would be treated as confidential. Your time and willingness to participate in this study is very much appreciated. Thank you.

Section A **Personal Information**

Kindly provide the following information

Institution / University_____

Faculty_____

Department_____

Programme of Study_____

Gender_____

Age (Please tick) ☐ 18-21 ☐ 22-25 ☐ 26-29 ☐ 30-34 ☐ 35 or more

Section B

Kindly indicate the electronic devices you possess or use. Tick as many as you use.

- ☐ Laptop Computer
- ☐ Mobile Phone
- ☐ Personal Digital Assistant (PDA)
- ☐ Smartphone
- ☐ Tablet
- ☐ iPhone
- ☐ iPad
- ☐ Desktop Computer
- ☐ Other (please state)……..

What are some of your reasons or purposes for using social media? Please tick as many as applicable.		
Socialization ☐	Latest/Up-to-date news or events ☐	Entertainment/Recreation ☐
Learning/Academic work ☐	Leisure ☐	Other……..

Section C

Please indicate the social media websites or platforms you subscribe to. Tick as many as you use							
Facebook ☐	WhatsApp ☐	YouTube ☐	Twitter ☐	Instagram ☐	Skype ☐	Snapchat ☐	LinkedIn ☐
Google+ ☐	Flickr ☐	Other (Please state) ……..					

Kindly indicate the number of friends or followers you have on social media. Tick as appropriate.

- ☐ Between 1 – 100
- ☐ Between 100 – 300
- ☐ Between 300 – 500
- ☐ Between 500 – 1,000
- ☐ Between 1,000 – 5,000
- ☐ Between 5,000 – 10,000
- ☐ Over 10,000

Section D

Kindly indicate the number of hours you spend using social media per day. Please tick.							
1-2 hours ☐	2-3 hours ☐	3-4 hours ☐	4-5 hours ☐	5-6 hours ☐	6-7 hours ☐	7-8 hours ☐	8 hours or more ☐

Kindly indicate the number of hours you spend studying per day. Please tick.						
1-2 hours ☐	2-3 hours ☐	3-4 hours ☐	4-5 hours ☐	5-6 hours ☐	6-7 hours ☐	7-8 hours ☐
8 hrs or more ☐						

Section E

Kindly indicate how these statements reflect your use of social media. **(1 – Never, 2 – Rarely, 3 – Sometimes, 4 – Very Often, 5 – Always)**	
You always think or feel that you are addicted to social media use.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐
The use of social media has always been part of your usual routine.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐
You always wish to or try to cut down on the use of social media without success.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐
You often fail to get enough rest because of your use of social media, especially at night.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐
You often wake up at night to check or send messages on social media.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐
You take and share selfies on social media.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐
You are addicted to taking and sharing selfies on social media	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Section F

Social media use and academic performance **Indicate your level of agreement with the following statements regarding how you use social media.** **(1 – Strongly Disagree, 2 – Disagree, 3 – Undecided, 4 – Agree, 5 – Strongly Agree)**	
Your lack of quality sleep due to social media use negatively affect your studies or academic performance.	1☐ 2☐ 3☐ 4☐ 5☐
Sometimes it is quite difficult to concentrate as you use social media while studying or doing academic work.	1☐ 2☐ 3☐ 4☐ 5☐
Do you think that your grade point average (GPA) would be better or higher if you cut down or reduce the time you spend using social media?	1☐ 2☐ 3☐ 4☐ 5☐
Your social media use negatively affect your grammar.	1☐ 2☐ 3☐ 4☐ 5☐
You often or at times interact on social media during class hours or at lectures.	1☐ 2☐ 3☐ 4☐ 5☐
At times you struggle or have difficulties adhering to your study timetable due to your use of social media.	1☐ 2☐ 3☐ 4☐ 5☐
Your social media use affects your academic performance negatively.	1☐ 2☐ 3☐ 4☐ 5☐

Section G

Kindly indicate your current grade point average (GPA) by ticking the applicable range					
1.0 – 1.5 ☐	1.6 – 1.9 ☐	2.0 – 2.4 ☐	2.5 – 2.9 ☐	3.0 – 3.4 ☐	3.5 – 4.0 ☐

Section H

Comments or Remarks

Please, provide further comments or any additional information on your social media use in relation to your academic performance.

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APPENDIX B: LETTERS OF INTRODUCTION

UNIVERSITY OF GHANA
DEPARTMENT OF INFORMATION STUDIES
SCHOOL OF INFORMATION AND COMMUNICATION STUDIES

Ref. No.:.....

March 12, 2019

The Dean
University of Education Winneba (UEW)
Winneba

Dear Sir/Madam,

LETTER OF INTRODUCTION

This is to introduce to you **Mr. Obed S.O. Dadzie**, an MPhil student of the Department of Information Studies. He is researching on the topic: **"Effects of social media use on the academic performance of students of public tertiary institutions in Ghana".** Obed is expected to submit his Thesis as part of the requirement for the MPhil programme.

We would appreciate any support you can give him.

Yours faithfully,

Dr. Emmanuel Adjei
(Head of Department)

COLLEGE OF EDUCATION
P. O. Box LG 60, Legon, Accra, Ghana.
• Tel: +233 (0) 303 937 957 • Email: dislegon@ug.edu.gh • Website: www.coe.ug.edu.gh

UNIVERSITY OF GHANA
DEPARTMENT OF INFORMATION STUDIES
SCHOOL OF INFORMATION AND COMMUNICATION STUDIES

Ref. No.:.....

March 12, 2019

The Dean
University of Cape Coast (UCC)
Cape Coast

Dear Sir/Madam,

LETTER OF INTRODUCTION

This is to introduce to you **Mr. Obed S.O. Dadzie**, an MPhil student of the Department of Information Studies. He is researching on the topic: **"Effects of social media use on the academic performance of students of public tertiary institutions in Ghana".** Obed is expected to submit his Thesis as part of the requirement for the MPhil programme.

We would appreciate any support you can give him.

Yours faithfully,

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