



**UNIVERSITY OF KWAZULU-NATAL**

**The impact of social media on teaching and learning in higher  
educational institutions in Lesotho**

**By**

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## **SUPERVISORS' PERMISSION TO SUBMIT FOR EXAMINATION**

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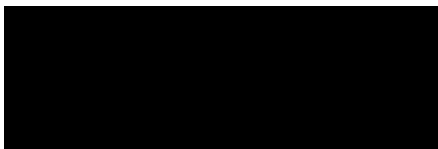
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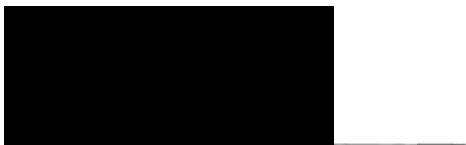


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## **ABSTRACT**

Manning (2014) defined social media as the term used to denote new methods of media that involve interactive participation. It allows individuals and groups to network, create and share information online. Information is shared by users in a form of photographs, audio files, text and videos. Commonly used social media platforms are WhatsApp, LinkedIn, YouTube, Facebook, Twitter, and Google Plus. The majority of respondents in this study were familiar with WhatsApp, YouTube, and Facebook. Social media leads to increased interaction and engagement between teachers and students and it enhances students' learning experience and practice. Other than interaction, social media maintains existing contacts, keeps one up to date with the advances in different fields, and promotes an individual's work to peer and outside communities such as practitioners and industry. Therefore, social media has converted a routine daily exercise in some user's lives into something that attracts the attention of students, researchers and academics progressively. Advantages of social media for learning were identified as social media is being used for recreation purposes, academic activities, and information seeking. On the other hand, disadvantages were identified as cyber bullying, health-related issues, emotional detachment, privacy, and miscommunication. Students are however concerned about inappropriate language and unsubstantiated content in social media. Some also believe that computer support, training and skills are necessary in order to use social media effectively (Public Media Alliance & UNESCO, 2017). Furthermore, this research used the conceptual framework. The framework was adapted from Bexheti, Ismaili & Cico (2014) which specified social media effects as connection, collaboration, creativity, and communication. A quantitative research approach was adopted for this research. This approach helps researchers to solve difficult problems in time with much accuracy and in a cost-effective way (Mishra & Jaisankar, 2007). A convenient sampling was used as a sampling technique for this study. It is a type of nonprobability sampling where participants of the target population that meet a particular practical conditions. The study used both primary and secondary data to answer research questions. Data was collected by using a questionnaire that was distributed to the respondents. Data were analysed with Statistical Package for the Social Sciences (SPSS) Version 25. This research intended to examine the effect of social media on students learning, the degree to which students are familiar with different social media platforms, and factors that influence use of social media. The effects of the study were identified

as connect, collaboration, communication and connectivity. The study discovered that students are familiar with different social media platforms for learning purposes. Factors included; computer skills, IT support, unclear content, computer training, reliability on social media, inappropriate language, and unclear content on social media.

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# CHAPTER 1 – INTRODUCTION

## 1.1 Introduction

Investment in information technology assists organizations to expand nationally and internationally. As per the *Gain's Report (2018)*, Lesotho was in the process of improving its science and technology. The intention of this research was to discover whether academic institutions adapted social media effectively and efficiently in supporting teaching and learning. Attention was paid to the effects of social media for students learning, how familiar students are with different social media platforms, and factors that affect usage of social media in learning. This study looked at seven social media platforms commonly used in teaching and learning: Facebook, YouTube, Skype, WhatsApp, LinkedIn, Twitter, and Google Plus. This study further followed guidelines suggested by Burrows (2011), which include the Introduction, Literature Review, Research Methodology, Results and Discussion and the Conclusion.

## 1.2 Background of the study

Lesotho is a kingdom with a population of 2,108 million (*Lesotho's Bureau of Statistics, 2016*) and is a landlocked country within the Republic of South Africa. This therefore means that the country's decisions are highly influenced by its neighbouring country, South Africa. The country is faced with many technological challenges ranging from poor science and technology, inadequate technical workforce, high cost of Information & Communication Technology (ICT) to lack of ICT policies (Mapeshoane & Pather, 2016). Olatokun & Ntemana, (2012) confirmed the unreliable and inadequate communication infrastructure faced by academic institutions in Lesotho. Studies that have been conducted across the world have shown that education is of poor quality in the Southern African Customs Union (SACU) countries (Van der Berg & Knoesen, 2018). SACU countries

include Botswana, Lesotho, Namibia, South Africa and Eswatini. Providing expert technical and tertiary training necessitates collaborative ventures on the part of SACU economies (Van der Berg & Knoesen, 2018).

The possibilities of collaboration and communication are two of the advantages of social media. It is therefore essential to integrate social media into learning and teaching in higher educational institutions. Although a social network is appropriate for learners and teachers to make learning more interesting and faster, social media abilities have not been exploited and utilized fully (Vincek, 2014; Meda & Makura, 2017). Currently, Lesotho has three Universities situated in the urban area of the country, the capital city, Maseru. These are: NUL, Botho University and LUCT. The overview about these Universities is provided below.

#### 1.2.1 The National University of Lesotho (NUL)

NUL is situated at Roma, Maseru, Lesotho. NUL has 70 programmes and faculties. These include; Agriculture, Health Sciences, Social Sciences, Science and Technology, Humanities, Law and Education (*Council of Higher Education Booklet V3, 2017*). Although NUL has computers on campus, its staff members and students still found it challenging to use them due to internet access issues and other factors (Sefotho, 2010). According to the *Council of Higher Education Booklet V3 (2017)* the total number of students was 9638 while the staff was 626 at the time it was written.

#### 1.2.2 The Limkokwing University of Creative Technology (LUCT)

Dr. Lim Kok Wing from Malaysia founded LUCT. So far, this University has a presence in three continents (Africa, Asia and Europe) with 13 campuses. In Lesotho, the University was opened on 15, October 2008 (Limkokwing University of Creative Technology, 2017). LUCT Lesotho currently runs six faculties and 31 programmes that include; Design Innovation, Information communication technology, Business management and globalization, Creativity in tourism and

hospitality, Communications, media and broadcasting, and Architecture and the built environment (*Council of Higher Education Booklet V3, 2017*). It also has nine computer labs with two e-libraries. According to *The Council of Higher Education Booklet V3 (2017)*, at the time it was written the total number of students at LUCT was 3245 while the staff was 180.

### 1.2.3 The Botho University Lesotho

Botho University was founded in 1997 in Botswana. It offers certificates, diplomas and graduate degrees in the following programmes; Health and Education, Business and Accountancy, Computing, Hospitality and sustainable tourism, Engineering and Applied Science, and Graduate Studies and Research (*Council of Higher Education Booklet V3, 2017*). At the time of this study, this university had three different campuses in Botswana (Francistown, Maun and Gaborone) and in Maseru, Lesotho. Botho University opened its doors in 2012 (Botho University, 2017). This university had eight computer labs with a capacity of 30-40 computers for each lab. In 2017, the number of students is 324 and staff is 40 (*Council of Higher Education Booklet V3, 2017*).

## 1.3 The Research Problem

There were a number of challenges identified at Lesotho's Universities. Among these challenges include the use and acceptance of information technology. As per *Lesotho Communications Authority (2017)*, when comparing Lesotho with other countries like Botswana, Namibia and Swaziland, it had a poor individual' internet user rate per 100 citizens and weak mobile broadband penetration. From the same report: broadband for schools was at 5% within the country and mobile coverage at 45% in 2016. ICT challenges which include infrastructure, access, computer literacy and phobia, and relevant training skills affect Lesotho intensely (Isaacs, 2007). This therefore suggests that sufficient and good ICT infrastructure is essential to improve the quality of education in Lesotho.

Some of the challenges faced by institutions of higher learning in Lesotho include alienation, overcrowding, and lack of resources. Tlali, Mukurunge & Bhila (2019) findings revealed that amongst other factors, large numbers in higher education institutions have affected lecturers negatively as they have to deal with large numbers of students in terms of overall teaching and learning process, assessment, and consultations. The following areas, which are largely impacted, include courses that require a lot of specialised equipment (Broadcasting and Film studies, Information Technology, Agricultural studies, Food and Nutrition, Fashion and Apparel, and Nursing Science) and in libraries where students struggle to access required material like books and other study materials. The problem arising from the above-mentioned challenges faced by institutions of learning in Lesotho is not being aware of the influence of the adoption of social media in education institutions.

The underlying emphasis of this research was on how does the adoption of social media platforms influences teaching and learning in Universities in Lesotho, highlighting effects of social media, how familiar students are with different social media platforms, and factors that affect usage of social media for learning. Therefore, social media was examined as a supplementary learning tool that has the potential of addressing challenges of overcrowding, access to study material, consultations, and learning process in general.

#### 1.4 Research questions

The main research question that drove this research is “**How does the adoption of social media platforms influence teaching and learning in Universities in Lesotho?**” The two sub-question are;

- What effect does social media have on students’ learning?
- What is the students’ degree of familiarity in the use of social media?
- What are the factors that influence students’ acceptance of social media for teaching and learning at Universities in Lesotho?

## 1.5 Research objectives

- To understand the effect social media have on students' learning
- To determine students' degree of familiarity in the use of social media
- To understand factors that influence students' acceptance of social media for teaching and learning at Universities in Lesotho

## 1.6 Significance of the study

In *The Higher Education Policy for the Kingdom of Lesotho* (Council of Higher Education, 2013), some of the objectives were to harness new ICT, upgrade ICT, make effective use of ICT to improve quality in higher education. Challenges that were faced by academic institutions included; very limited budgets for technology, poor use and acceptance of information technology, lack of ICT skills by students and teachers, and computer networks to enable communication. This study therefore targeted social media as an aspect of information technology to identify the effects of social media on students' learning, factors that influence acceptance, and degree of familiarity of social media platforms in Universities. The study will help to inform the policy of the higher learning institutions in Lesotho. In addition, this study will also guide or inform scholars on what is known regarding the problem that was investigated and add to the body of knowledge.

## 1.7 Justification of the study

As implied in the above section, more investigation and research is required into the issue of the use of social media in institutions of higher education in Lesotho. This research intended to find out how the adoption of social media could bridge the gap between students, researchers and lecturers. The study also investigated the degree of familiarity of social media by students in Lesotho's Universities.

## 1.8 Research Methodology

This study used surveys as part of the research design. A survey was considered as a systematic method of gathering information for the purpose of **quantifying replies to the research** questions (Groves, Fowler, Coper, Lepkowski, Singer & Tourangeau, 2009). Most of the studies that are quantitative in nature offer a comprehensive overview of a representative sample from a large population (Mouton, 2001). The quantitative approach was chosen for this study, as the data is easy to analyse, present and to draw conclusions from (Oates, 2006). It also uses numerical analysis (mathematics and statistics) collected through questionnaires and surveys (Babbie, 2010). This means that the data or evidence is based on numbers (Oates, 2006).

Data was collected from staff and students from the three Universities in Lesotho, LUCT, NUL and Botho University. The target population was 13207 (9638 + 3245 + 324) while the sample size was 373. This study's research questions were based on students' perspectives, and responses from academic staff members were not included in the study. A convenience sampling method was used in this study. Convenience sampling is a type of nonprobability sampling where participants of the target population that meet a particular practical conditions, such as geographical proximity, accessible at a given time, easily available, or prepared to participate are included for the purpose of the study (Etikan, Musa & Alkassim, 2016). Convenience sampling is appropriate when randomisation is difficult, particularly when the population is very large. It is also used when the researcher has limited workforce, time, and resources. The questionnaire was used as the primary data collection instrument to collect data from hundreds of staff and students. Secondary data from articles and journals sources were also used to answer the first research question of this study. SPSS version 25 was used to analyse primary data.

## 1.9 Outline of the chapters

- **Chapter 1:** This is the introductory chapter of the study. It defined the research problems, research questions and objectives. This chapter introduced the three participants of this study; National University of Lesotho, Botho University and Limkokwing University of Creative Technology. It gave background information on each of the Universities, population size and sample size. The significance of this study was also discussed.
- **Chapter 2:** This chapter analysed and examined existing literature in line with the topic. This involves defining social media and its background, different social media platforms, advantages and disadvantages of social media, concept of learning, learning styles, and using social media as a tool for learning. This chapter also looked at media background, history, different social media platforms and advantages relating to education. In addition, a proposed conceptual framework was outlined.
- **Chapter 3:** This chapter clarified the research methodology that was adopted. This comprised research design, sampling and sampling procedure, data analysis, validity and reliability. The study adopted a questionnaire as a data collection instrument. Secondary data was also used to answer and supplement some research questions. Quantitative research approach was found ideal for this study and therefore adopted. A convenient sampling was used as a sampling technique for this study.
- **Chapter 4:** This chapter presented the results from the sample by examining the data in terms of the research questions. It also discussed the results in line with the research topic. Frequency analysis, descriptive statistics and inferential techniques were applied to analyse data. Literature was used to answer the first research question. Data were analysed using SPSS Version 25.

- **Chapter 5:** This chapter concluded the study, highlighting limitations, findings and recommendations for prospective research. Conclusions were drawn from the results discovered from Chapter 4.

## 1.10 Chapter summary

This chapter laid down the guidelines for the thesis. The background of the study discussed the formation, location and capacity of Lesotho's Universities. The research problems, questions and objectives were presented. Justification and contribution of the study were outlined specifying how the study was conducted. The research methodology adopted was outlined and it comprise of the research design, approach, target population, sampling, and data collection instruments. Attention was paid to the effects of social media for students learning, how familiar students are with different social media platforms, and factors that affect usage of social media in learning. This study looked at seven social media platforms commonly used in teaching and learning: Facebook, YouTube, Skype, WhatsApp, LinkedIn, and Twitter.

## CHAPTER 2 – LITERATURE REVIEW

### 2.1 Introduction

The aim of literature review is to provide understanding on the existing debate and research associated to a specific subject or area of study, and to present that awareness and understanding in form of a report. Furthermore, literature also intends to teach oneself in the subject area and to help comprehend what the forerunners or other studies found before determining rationalisation (O’Gorman & MacIntosh, 2015). Moreover, a literature review also assists in building knowledge of a particular field. The study proposed a conceptual framework based on the literature and theories that are discussed in the current chapter.

### 2.2 Research questions overview

The first research question addressed by this study is ‘*What effect does social media have on students learning?*’ This research question adopted four constructs, namely; creation, connecting, content, and collaboration (Montebon, 2017); Bexheti et al, 2014). The second research question was ‘*What is the students’ degree of familiarity in the use of social media?*’ This research question looked at students’ degree of familiarity on the use of social media platforms. Facebook, YouTube, WhatsApp, Twitter, Skype, LinkedIn, and Google Plus were identified as social media platforms that were commonly used at academic institutions. The third research question was “*What are the factors that influence students’ acceptance of social media for teaching and learning at Universities in Lesotho?*” which looked at factors that influence the acceptance of social media used or learning. These factors were identified from different sources. They include; inappropriate language, unclear content, internet availability, computer support, training and skills, assistance and reliance on social media for academic assignments.

## 2.3 Social media definition and background

Social media is a phenomenon that has promoted communication between the people globally. There is an intense shift in communication practices where people do not only send emails but they are able to invite, cyber-hug, request, send virtual gifts, block, and ‘poke’ each other (Griffiths, Heinze, Light, Kiveal, & Sethi, 2010) through social media. Manning (2014) defined social media as the term used to denote new methods of media that involve interactive participation. Terminology and nature of connections differ from site to site.

Social media allows people to meet strangers/friends and it permits users to share their views, beliefs and experiences. Most individuals who participate in social media do not necessarily intend to meet other individuals but they mainly wish to connect with other people to build their extended social network. In the past few years, social media became a common platform used to convey educational material and to link individuals to networks of expertise and knowledge that could possibly lead to new practices in education and learning (Friesen & Lowe, 2011). The use of social media has converted everyday experience in many user’s lives, progressively attracting the attention of students, researchers and academics. In 2000, various social media sites began to allow individuals to share movies, photos, educational matters, and music. (Edosomwan, Prakasan, Kouame, Watson, & Seymour, 2011). Other than interaction, social media maintains existing contacts, keeps an individual up to date with developments in different fields, and can promote an individual’s work by making it accessible to associates and to outside societies such as practitioners, industry, and the community as a whole.



### 2.4.1 YouTube

Google Inc. purchased and launched YouTube from PayPal employees. YouTube is located in California and it uses Adobe Flash Video Technology (Edosomwam et al., 2011). Individuals can upload and share videos on YouTube website. In the survey conducted by Berk (2009), YouTube videos were frequently viewed and top-rated by college age individuals. Due to the attractiveness and pressure to incorporate ICT in the curriculum, teachers are advised to utilise YouTube owing to numerous advantages it offers (Pecay, 2017). Albantani & Madkur (2017) believe that YouTube can be used for learning Arabic with a view to attract more enthusiasts and it was also acknowledged for educating students to learn self-taught courses. According to Almurashi (2016), YouTube is regarded as a basis of online content that can perform a major part in the teaching-learning arena. In addition, students perceived that some videos shared on YouTube were more helpful than others (Fleck, Beckman, Sterns, & Hussey, 2014) and that YouTube can be used for knowledge generation over social interactions and observations (DeWitt, Alias, Siraj, Yaakub, Ayob & Ishak, 2013).

#### **YouTube in Education**

(Jackman, 2019; Ebied, Aahouf & Rahman, 2016) summarised YouTube benefits to education as the following;

- It simplifies difficult phenomena
- It reinforces domain-specific jargon through additional exploration or contextualisation
- It can be used to summarise content
- It concretises abstract concepts
- It allows for interactive, constructive, and active learning opportunities
- It is an effective instrument for teaching computer skills and in cognitive achievement

## 2.4.2 Skype

Skype is a software program that uses voice over internet protocol (IP), or VoIP, technology (Sivakumar, 2015). According to Salbego & Tumolo (2015), participants identify web conferencing (e.g. Skype) as potential for language learning with emphasis on listening and speaking skills. Using Skype is convenient for students as it breaks the geographic barrier, as students are able to connect from their homes (Melnyk, 2016). Additionally, Skype also has an advantage of allowing teachers to hold teaching lessons with students away from the classroom and guest speakers can speak directly to students through this platform (Salbego & Tumolo, 2015). Skype can be used as a catch-up tool for students with disabilities in their homes; educators can also use it for professional development by connecting to other educators, watching and sharing presentations (Salbego & Tumolo, 2015). It is however significant to note that both students and staff need a reliable Internet connection to use Skype effectively.

### **Skype in Education**

Skype connects anyone, anywhere at any time (Raja, 2018). Skype has a dedicated portal to educators and it can be used for teaching purposes. Students and teachers are also able to communicate through Skype calls.

Below are the tips of how Skype could be used in Education (Raja, 2018);

- It can be used for tutoring
- Virtual Career Exploration Day can be hosted through Skype
- It allows teamwork, extra classroom or academic activities and group projects.
- Skype enables students who are away from the classroom to share information and catch-up.
- It can be used to conduct experts interviews

### 2.4.3 Facebook

Mark Zuckerberg officially launched Facebook in February 2004 with over 3 million active users (Friesen & Lowe, 2011). It is also reported that in 2009 Facebook was the most frequently used social network platform internationally (Edosomwan et al., 2011). It has also been hailed as distributing new, socially-involved scholastic involvements for students, self-reliant individuals, and other educational segments. Additionally, Facebook has integrated chat, email and other communicative functions within its online environment. Users of Facebook are able to exchange messages, get notifications, upload photos, received comments, create their own profiles, add other users as friends, and link mutual interest user groups whether in college, workplace or in many other environments.

#### **Facebook in Education**

Facebook is known of increasing students' sharing and interaction in course discussions, and increasing the value to student learning through having teaching notes and assessments posted online (Callan, Johnston & Callan Consulting Group, 2017). The greatest significant predictors of Facebook adoption for achieving academic outcomes include, collaboration, pure pleasure, desire to share, and perceived usefulness. (Sharma, Joshi & Sharma, 2016). A good example of a learner-centred education is that teachers and students are now able to share learning material through Facebook, meaning that students feel more empowered through shared ownership of study resources and materials through their online identity.

### 2.4.4 Twitter

Jack Dorsey launched twitter in 2006, and it gained popularity because some of the celebrities were among its users as it offered diverse opportunities such as microblogging (Edosomwan et al., 2011). Twitter has over 100 million active users over the world (Mayer, 2013), and its mandate was to bring together two subcultures; new media coding culture, dispatch enthusiasm and radio scanner (Weller, Bruns, Burgess, Mahrt & Puschmann, 2014) to distribute information online

(Sevin, 2013). The use of Twitter has supported learning organizational skills and it avoids time-consuming complications in face-to-face learning (Cohen & Duchan, 2012). Twitter facilitates communication by providing an easier, economical, and faster means to interact with an intended audience worldwide (Yolcu, 2013).

### **Twitter in Education**

Twitter can be adapted in the Education sector in so many ways. Chawinga (2017); Schindler, Burkholder, Morad & Marsh (2017) summarised them as follows;

- Instructors may utilise Twitter to post updates about the course, clarify expectations, direct students to additional learning materials, and encourage students to discuss course content.
- Twitter can be used to increase involvement. Integrating Twitter into learning may assist students' engagement.
- Twitter is useful for discussing content, asking questions, and sharing ideas and resources.

#### 2.4.5 WhatsApp

WhatsApp is one of the common communication applications in the 21<sup>st</sup> Century. It is known for sending real-time messages (Ahada & Lim, 2014), and has the potential of bridging information divides between students and educators (Rambe & Chipunza, 2013). Kufre & Abe (2017) believe that WhatsApp is the most effective collaboration and communication tool in teaching and learning due to its benefits above other kinds of social media tools. WhatsApp is widely used among students to send videos, audios, text messages, and photos (Gon & Rawekar, 2017). In addition, Cetinkaya (2017) suggested that the use of WhatsApp in the teaching and learning process could be encouraged as a supportive technology. Sayan (2016) demonstrated that WhatsApp could be a useful digital tool to raise achievement in exam preparation.

### **WhatsApp in Education**

WhatsApp is perceived as an educational mobile tool with countless abilities Gon & Rawekar (2017); Kufre & Abe (2017). The authors summarised the benefits of using this social media platform as follows;

- Learning anywhere and anytime, including availability of facilitators.
- Suitable platform that can be effectively used for learning and teaching activity.
- Sharing of information amongst peers through the use of WhatsApp in education develops learner's manipulative skills and it can further simplify the learning process and fosters evaluation process.
- It enhances creativity, communication, critical thinking, and problem-solving skills among students.

### 2.4.6 LinkedIn

LinkedIn is a social networking platform that permits professionals to connect, share experiences and knowledge, market their skills, and plan for future career steps (Caers & Castelyns, 2011). LinkedIn users also create their expanded CVs on the same platform. It is also used to reach large audiences through posts and by opening up interesting conversations (Bergman, 2018).

### **LinkedIn in Education**

- LinkedIn could be used as a platform for students to build professional relationships, which could in return be vital in their career progression.
- To encourage collaboration and engagement in classrooms and beyond; students and lectures could use LinkedIn.

#### 2.4.7 Google Plus

Oracle (2013), reports that Google uses the function +1 to help connect individuals through circles, sharing and is open for recommendations. There are 190 million active users on Google+ and users post content to engage per visitors with the intension to spread to broader audiences (Oracle, 2013). Google+ assists its users in improving engagement on the proposed topic by allowing continued discussions, clarifications, questions, and constructive criticism. According to Sauer (2013), Google + has a social data hub where a website is voluntarily obtainable in Google Analytics. This assists website proprietors to test opinions in all public Google+ conversations associated with the website from right within Google Analytics. Daud (2019) believes Google applications for education are the central medium to enable learning activities in writing and enabling students' interaction. The leading features of Google Plus which are related to higher education include circles, handouts and huddles (Erkollar & Oberer, 2013).

#### **Google Plus in Education**

- It increase the student-instructor relationship
- It can advance students' collaboration through circles
- It support unified e-learning with the hang out functionality

#### 2.5 Advantages of using social media in Education

It is generally known that social media promotes communication, whether in colleges, organizations, or communities at large. When companies and institutions attempt to ensure that etiquette and rules are adhered to, social media becomes a good place for such discussions to start. Sharing experiences and knowledge over social media allows scholars to work in teams and to share projects. It enables the sharing or sending enhanced content such as videos and webcasts rather than just text (Edosomwan et al., 2011) that can be used as a mode of clear, accurate, and fast communication.

Social media assists learners and teachers to work together on team projects by spreading information and gauging opinions in an inexpensive way. Furthermore, online sharing of information and knowledge is one of the key benefits of social media. Moreover, social media stimulates growth in the communication skills amongst students/learners at educational institutions. In a study conducted by Baruah (2012) on the utilization of social media as an educational drive, many respondents believed that social media is broadly used for educational purposes while a few believed otherwise. Social media have accomplished an admirable task by narrowing the communication gap between the people. In addition, through the use of social media, communication skills among scholars and lecturers in academic institutions can be enhanced.

Participation in social media has enhanced such skills as collaboration and communication, promotion of creativity, developed technical and writing skills and has facilitated social interactions. In North Carolina, the use of social media improved maths skills for public schools' students (Papandrea, 2012). Students were allowed to use their smart-phones to communicate with their maths teacher outside of school hours using social media and they collaborated with other students for the same purpose.

It may also be challenging for learners to connect with their lecturers during school hours for either some guidance or mentoring, and social media offers a more approachable and easier technique to reach school officials and lecturers. A rising number of institutions are recognizing the importance of bringing social media into the classrooms/lecture rooms. Furthermore, learners are being taught about common threats in social media which include the potential for reputational harm, compromised student's safety and privacy which results from posting inappropriate and personal information, dangers of cyberbullying and sexting, dangers of depression and isolation as a result of over-use of social media, awareness of websites which promote unethical and unsafe content like drug use, pornography, self-cutting, etc. (Papandrea, 2012). In addition, students can now write more fun, long and creative essays due to the practice of social media (Andersons, Hatakka, Gronlunda & Wiklund, 2014).

According to Selwyn (2012), social media applications are more open than closed, top-down instead of bottom-up. This means users can go online to ‘deal and share’, ‘friend and trend’, and ‘mash-up and remix’. In addition, social media permits users to create, edit and share different content including visual, audio, and textual material.

Social media allows scholars to access disseminated information on a ‘just-in-time’ basis. In a study conducted by Falahaha & Rosmalab (2011), it was found that most students use social media not only for fun but also for information communication and distribution to support teaching activities. These activities include; announcements, examination, assignments, and class rescheduling negotiation.

In their study Nadaraja and Yazdanifard (2014) emphasised that one of the rewards of using social media is its cost-effectiveness. Most of the social media sites allow free access and posting of information as well as the creation of profiles. Social media has a potential to essentially change the character of social lives, community and interpersonal relations (Baruah, 2012). It allows students to show off their achievements among their peers which has a direct positive effect on their self-esteem and possibly on social leadership. It also allows educators to tap into the digital learning style in order to provide students with creative and innovative ways to experience the delivery of lectures. In a study conducted by Hussain, Cakir & Candeger (2018), their findings show that social media plays an important part as a learning technology. When used wisely, social media promotes opportunities for virtual interactions among students. It also aids in problem-solving approaches, and in nurturing critical thinking. Some of the benefits discussed by Mulisa & Getahum (2018) include social media being used for recreational purposes, academic activities, and information seeking.

### 2.5.1 Recreation purpose

Aksoy, Çankaya & Taşmektepligil (2017) defined recreation as the time spent reloading energy and participating in voluntary activities that are done after mandatory duties such as work. Recreational activities are those that purposely offer individuals pleasure and recompense with

recreational and fun activities. In a study conducted by Mulisa & Getahum (2018) at a secondary school in Ethiopia, recreation was found to be one of the benefits of social media. Kokkinos and Saripanidis (2017) believe that social media is mainly used for relational and recreational purposes.

### 2.5.2 Academic activities

Manasijevic, Zivkovic, Arsic & Milosevic (2016) believe that social media undoubtedly contributes to students' academic progress. Students are able to connect to each other, provide and share academic scaffoldings, and share academic information through different social media platforms. Social media can also play a major role in engaging students in learning processes, feeling closer to the given course content, and observing their teachers/lecturers as more involved (Akcaoglu & David, 2016). The use of social media can potentially motivate students to learn at their own place and pace (Lambic, 2016), and enable collaborative learning among students (Sharma et al., 2015).

### 2.5.3 Information seeking

The arrival of information communication technology has fashioned an opportunity wherein web platforms have become essential sources of information sharing among individuals (Hassan, 2017). Social media has become a significant part of life due to its prompt source of information from the massively accessible matters (Hamid & Bukhari, 2015). It has also assisted students with useful material for their academic activities, and also allowing them to connect with the formal and informal setting learning environment (Hamid & Bukhari (2015). Social media platforms are now becoming essential gears for students, teachers, and researchers in seeking for information (Hamid & Bukhari, 2015). The information seeking activities include interacting, informal searching, following, deciding, saving and verifying (Bukhari, Hamid, Ravana & Ijab, 2018) while sources include face-to-face, search engines, and social media settings. Online content can be anything found online on social media such as interactions with the contents posted on Facebook, Twitter, Instagram or LinkedIn. In addition, convenience and easy access to information are some of the factors that motivate students to seek information using social media Hyldegård (2014).

In the study conducted by Bukhari et al. (2018), it was discovered that social media is more dominant than face-to-face and search engine communication. The same conclusion was found in the study conducted by Reaves & Bianchi (2013) where it was discovered that the content on social media is a significant source of information for university students to improve their learning. Furthermore, the study indicated that students are also able to obtain various types of information including health related information from different social media platform such as Twitter, Myspace and Facebook. Hamid, Bukhari et al. (2016) found that social media is a source of information for international students. Furthermore, although Facebook for example, was initially intended as a social network, it has successfully developed into a rich information source for its users (Kaspar & Muller-Jensen, 2019). Users are able to read and post about occurrences that are trending globally.

## 2.6 Disadvantages of using social media in Education

Although students may be cheered to use social media for academic determinations these are not always considered as reliable sources of information. Boyd & Ellison (2008) investigated the potential threats linked to social media and invasion of privacy and safety were found to be dominant concerns. Another study found that about two-thirds of scholars used electronic media while in their classrooms, when they should have been doing their assignments, schoolwork or studying. This impacted negatively on their grades (Jacobsen & Forste, 2011). This multitasking is a distraction which negatively affect students' performance and creates a delay in finishing coursework (Wang, Chen & Liang, 2011). In the study directed by Wang, et al., (2011), where the sample was 102 students, academic performance of more than half of the students who were active on social media had deteriorated. Kalpidou, Costin & Morris' (2011) findings have also shown that there is a close association between students' grades and social media. In the same study, it was concluded that students who use Facebook devote less time to their studies and have lesser marks than learners who are not active on social media. In the study conducted by Baruah (2012) where students were asked about social media as a communication channels, the majority

condemned the use of social media and believed that it compromised their privacy, trust, and safety. In addition, Nadaraja & Yazdanifard (2013) believe that privacy fears have led to humiliation due to the use of social media in some instances.

The use of social media can constrain social, civic and personal lives. It is therefore important for educators and learners to approach social media in an objective manner (Krutka & Carpenter, 2016). According to Yeboah & Ewur (2014), WhatsApp in particular has influenced academic performance of Ghanaian scholars negatively. In the same study, it was discovered that more students devoted their time to social media, the more they get distracted and the more they fail to complete their assignments. It reduces the students' capacity to use grammar and spelling correctly and to construct sentences accurately, and it leads to a lack of concentration during lectures. The same is true for students at The Chinese University of Hong Kong where social media has negatively affected academic performance (Lau, 2017).

Exposure to unregulated information and distractions is one of the downfalls of using social media (Ahada & Lim, 2014). Brook (2015) established that greater use of social media leads to poorer performance, compromised happiness as well as technology stress. The findings by Jumoke, Olorunjoba and Blessing (2015), indicated that social media influences students negatively. They spent more time on their mobile phones, paying attention to chatting and music while neglecting academic activities.

Social media relies heavily on the internet and it brings cost implications to institutions and students. It was noted in the findings of Chawinga (2017) in Malawi that poor bandwidth, Wi-Fi, cost of internet data bundles, and insufficient computers remain as an unsolved issues. According to Ali, Yaacob, Endut, & Langove's (2016) findings, social media were considered as sources of distractions as they divert students' attention from learning and from achieving better academic grades. The greatest dominant factor associated with insomnia among students is frequent accessing of social media, time of usage and use of gadgets before bedtime (Abdalqader, Ariffin, Ghazi, AboBakr, & Fadzil, 2018). Some of the downfalls discussed by Mulisa & Getahum, 2018;

Zaidieh, 2012) were cyber bullying, health related issues, emotional detachment, privacy, and miscommunication.

### 2.6.1 Cyber bullying

Nilan, Burgess, Hobbs, Threadgold & Alexander (2015) defined cyberbullying as a phenomenon that can have a significant effect on the wellbeing due to the definite technological affordance of social media. Cyberbullying is considered as one of the possible threats of using on online technologies (Abaido, 2020). In addition, cyberbullying is also considered as one of the main examples of technology exploitation due to its negative and toxic effects. Cyberbullying is real, Nilan et al. (2015) believe cyberbullying happens when young people extend face-to face bullying to the social media platform and this includes unconstrained conversations, flirting and quarreling. In the same way, the bullying that begins on a social media platform can also be extended to a face to face quarrel and may even result in a physical engagement. Abaido (2020) believes there is a challenge in reporting incidents of cyberbullying and this is due to different social and cultural differences.

There are different forms of cyberbullying as defined by Abaido (2020), students on social media normally experience the following:

- *Harassment* – frequently sending a person attacking messages.
- *Cyberstalking* – harassment that contains intimidations of harm or is highly frightening.
- *Denigration*– sending or posting damaging, false, or harsh statements about a person to other individuals.
- *Exclusion* – activities that specifically and deliberately exclude an individual person from an online group.
- *Masquerade* – pretending to be someone else and sending or posting material that makes an individual appear bad or places the person in a possible hazard.

- *Flaming* – sending vulgar, angry, and impolite, messages focused at an individual or individuals confidentially or to an online group.
- *Impersonation* it is when someone pretends to be a victim and use social media to convey inappropriate or negative information.
- *Sexting* – distributing nude images of another person without the person's agreement.
- *Outing and trickery* – posting or sending material about a person that contains humiliating information, private, or sensitive, including sending private pictures or messages, engaging in tricks to solicit uncomfortable information to be made public.

Cyberbullying is aggressive and dangerous if not dealt with. Rizza & Pereira (2013) believe that teenage suicidal attempt is highly connected to cyberbullying. Nilan et al, (2015) also reported that cyberbullying has a terrible effect on the wellbeing of students. There are other damaging consequences of cyberbullying identified by Johnson, Haralson, Batts, Brown, Collins, Van Buren-Travis & Spencer (2016), they include school dropout, physical violence, suicide, and poor academic performance. Johnson et al. (2016) also support that the aforementioned problems related to cyberbullying are connected to violence at school, family related problems, low esteem and criminal behavior. Alim (2016) revealed that most of the cyberbullying that happens at school is fuelled by incidents such as, peer influences, and increased personal information disclosure on social media.

In the study conducted by Abaido (2020) at Canadian University-Dubai, United Arab Emirates, majority (91%) of participants surveyed in this study agreed with the existence of online harassment in the form of cyberbullying on social media platforms. A study by Johnson et al. (2016), concluded that most social media sites provide a setting where students repeatedly become targets of cyberbullies. Facebook, Twitter, and Instagram were identified as the most common social media sites where cyberbullying occur.

Van Hee, Jacobs, Emmery, Desmet, Lefever, Verhoeven, De Pauw, Daelemans & Hoste (2018) believe that to effectively stop cyberbullying it is necessary to design mechanisms that can detect messages that may cause harm and overload of information on the social media. In addition, Alim

(2016) add that to tackle cyberbullying it is essential to be alert of the bullying, to educate those who are involved in cyberbullying, and to monitor cyberbullying as well as developing softwares that can be used to detect bullying on social media.

### 2.6.2 Health-related issues

This section discussed the health-related issues associated with the use of social media or how it may negatively affect health. House of Commons Science and Technology Committee (2019), categorised this in two; physical health and activity, and mental health and wellbeing. Physical health and activity state that a low level of physical activity allied to passive use of digital technology have been associated with diabetes and obesity. There is also an evolving confirmation that the devices used to access the Internet and social media have influence on the body and its physical development (House of Commons Science and Technology Committee, 2019). In the same study, it was reported that children who spent more than three hours on social websites on a school night were twice more likely to show symptoms of mental ill-health in comparison with those who spent less time (less than three hours).

Abbas, Aman, Nurunnabi & Bano (2019) believe that the extreme use of social media affects students' mental and physical health. Majority of students spend too much time on social media to an extent that they do not have adequate time for meals and time to rest, and they drink too much coffee or tea to boost the energy and this behaviour may have negative impact on their physical and mental health. The excessive use of social media on daily basis can be harmful, it results in students avoiding face to face interactions that helps to create a bond with others. (Abbas et al., 2019) and dissatisfaction in life (McDool, Powell, Roberts & Taylor, 2016). Abi-Jaoude, Naylor & Pignatiello (2020) observational studies allied spending more than 2 hours in social media networks together with electronic devices with a high rate of suicidality and depressive symptoms among young girls.

This study linked excess use of social media with emotional problems and poor sleep quality. Possible harmful effects comprise of decreased attention, antisocial or fearful behaviour,

hyperactivity, increased physiological arousal, social isolation and technology addiction. Tripathi, Singh, Ghimire, Shukla & Kumar (2018) also revealed the darker side of social media. In this study, it was revealed that the more time people spent on social media, the more their mental health is compromised resulting to decline focus in work, eating disorders, decreased self-esteem, and feeling of inferiority.

McDool et al. (2016) suggested indicators to be aware of when assessing whether social media is negatively impacting one's mental health. Those are;

- Using social media as relaxation activity
- A person comparing negatively himself/herself with others via social media content
- Often feeling envious of others while engaged with social media
- Irregular sleeping patterns.
- Often focusing on distress or limitations while looking on other's social media feeds.
- Decreased or low self-esteem during or after using social media.
- A feeling to share everything on social media
- Increased stress or fatigue during or after using social media

### 2.6.3 Emotional detachment

Adolescents are among the highest users of technology and are typically early adopters of new technologies, including the internet, mobile phones, social media and other devices. This younger generation finds it very hard to separate themselves from the technology due to the fear of missing out if they are not connected or up to date. One of the challenges which comes with excess use of social media is emotional detachment.

The negative effects of using social media on interpersonal relationships include irritation, distraction and reduced quality time with their significant other in offline settings. As Christensen (2018) puts it, the more time individuals spent on social media, the more they are likely to experience a negative effect on their general emotional wellbeing and reduced quality in their relationships. Moawad & Ebrahim (2016) also confirmed that the more time an individual spent

on computers, cell phone, television and video games the more it is likely to lead to a lower quality of attachment. Furthermore, Au & Chew (2018) stated that Instagram and Facebook in particular contribute to emotional detachment.

#### 2.6.4 Privacy

One of the concerns of using social media in education is the issue of privacy (Zaidieh, 2012). In addition, Ali, Islam, Rauf, Din, Guizani & Rodrigues (2018) argue that the use of social media comes with the challenge of security and privacy on the users. Kumar, Saravanakumar & Deepak (2016) note that the use of social media can expose individuals to different sorts of dangers and have an influence of severely compromising the users privacy. Twitter and Facebook are the most widely used social media platforms as they are open for everybody to participate, however users have expressed serious concerns regarding privacy of their personal information and quite often users are less vigilant about safeguarding their information (Zaidieh, 2012). Privacy and security are the foremost fears of any social media user particularly on network sites such as Facebook, Twitter, and LinkedIn etc. (Kumari & Singh, 2015).

Ali et al. (2018) categorised privacy threats as classic and modern threats.

##### 2.6.4.1 Classic threats

These types of threats are used to extract personal information of users which is shared on social media platforms and attack the target users and their peers by adjusting the threat correlation to user's private attributes. Examples of classic threats include; malware (malicious software), spam, and cross-site scripting.

- Malware

This refers to the interfering software established with the intent to log into somebody's computer and access private contents or obtain sensitive information (Deliri & Albanese, 2015). This is very

common in social media and the worst case is where users' credentials are accessed and impersonated to send messages to peers. Common malware was Koobface malware, mostly found on Twitter, Facebook, and MySpace (Ali et al., 2018).

- Phishing attacks

This is a form of fraudulent attack where the intruder obtains the user's personal information by camouflaging as a trustworthy third party through either stolen or false identity (Ali et al., 2018). Deliri & Albanese (2015) describe phishing as an attack used to target individuals by sending emails that purport to be coming from trusted organisation with a view to obtain personal information of the targeted individuals. For instance, in the attack which targeted Chinese Government, U.S. and U.K military officials were trapped into becoming Facebook friends with somebody impersonating the U.S senior (Ali et al., 2018).

- Spam attacks

Unwanted messages are referred to as spam messages. These forms of attack are risky when compared to traditional email spam, and this is because users spent more time on social media. These messages usually contain malicious or adverts links that can lead to phishing or malware sites. The attacker uses this method to send random request for friendship to the targeted social media users and wait for the user to accept the request. In addition, if the social media users accept the friend request this may compromise their privacy as the attacker is likely able to gain access to their personal information (Deliri & Albanese, 2015).

- Cross-site scripting

This is the most severe and common security problem that severely affects web applications (Ali et al., 2018). It permits an intruder to run malicious code on the targeted user's web browser which may result in compromising data, theft of data stored in a form of cookies, and saving passwords and credit card numbers.

#### 2.6.4.2 Modern threats

The aim of modern threats is to attain the private information of users and their friends. For instance, if users have privacy settings on their Facebook account as public, they can effortlessly be viewed but if they have customised privacy setting, then it can be viewable to their friends only. In the case like this, an attacker would create a fake Facebook account and send a friend request to the targeted user, upon acceptance of the request, then details will be disclosed to the attacker.

- Clickjacking

This is also known as a user-interface redress attack. A malicious technique is used to create online users to click on something that is not similar to what they mean to click (Ali et al., 2018). The common technique is where a social media user is manipulated by posting spam posts on their timelines and asked for 'likes' to links unknowingly.

- Identity clone attacks

With this technique of attack, an attacker uses theft credentials from an existing profile then make a fake profile in order to steal private information. Stolen credentials may be used across different networks or within the same social media network (Deliri & Albanese, 2015).

- Information leakage

In social media, sharing and exchanging of information with friends is openly common. Some users freely share their private information such as health-related data. Unfortunately, few individuals share more than what is necessary of their personal information such as private data, products, projects, or organisations. Sharing of such private content may have harmful consequences for social media network users (Ali et al., 2018).

### 2.6.5 Miscommunication

E-Learning which in this case is through the use of social media, does not give students the opportunity to clarify what mostly take place in a face-to-face communication. Some of the students experience challenges to use social media networks for writing, the majority of them are comfortable expressing their view orally which is an approach they have used for many years through their studies (Zaidieh, 2012). The advantage of face-to-face compared to miscommunication is that, face-to-face allows students to observe physical clues like body language, inflection, and tone. This is however lacking in an online environment.

### 2.7 Concept of Learning

Barnes-Holmes & Moors (2013) suggest that learning entails behavioural change as a result of knowledge acquisition while Fry, Ketteridge & Marshall (2009) suggest that learning is more than how people perceive the world. It involves understanding abstract principles, appreciating proofs, evaluating concepts, identifying factual information, acknowledgement, reasoning, obtaining methods, approaches and techniques, or developing behaviour suitable to a specific situation; it is about change. Dharmaraj (2015) defined learning as an act of attaining experience, knowledge, skills and values by appreciating what to do and how to perform any assignment by synthesizing the different categories of information perceived by individuals. From all three definitions, it is concluded that the main objective of learning is to carry desirable changes to individual's behaviours.

Dharmaraj (2015) describes three attributes of a learning process as follows;

- Permanent change in the behaviour of a person but not because of changes due to sickness, tiredness and use of intoxicants.
- Learning is established in the behaviour or activities of a person which could not be openly noticeable. Learning results in some change of persistent contact with nature.
- Learning depends on practice and experience in a given situation.

### 2.7.1 Learning Styles

A learning style is “an individual’s mode of gaining knowledge” (Dictionary.com, 2020). It defines how learners attain knowledge, interact, or react to stimuli in their learning environments. Knowing learning styles can assist both learners and students, educators can design and adapt teaching activities to address various groups of learning styles more successfully. There are various learning theories, but for the purpose of this study, only four will be discussed. The literature gives learning theories four main classes; cognitivism, behaviourism, humanism, and constructivism (GSI Teaching & Resource Center, 2016).

Cognitivism emphasizes and encourages active learning to engage students while behaviourism suggests that learners are passive and respond only to environment stimuli (Balakrishnan & Lay, 2016). Nevertheless, the shortcoming of behaviourism is its teacher-centered instructional design for teaching and learning activities (Balakrishnan & Lay, 2016). Humanism improvements upon cognitivism over its weight on student-centred teaching and learning, which forms a reassuring learning environment to improve students’ social and critical thinking skills (Balakrishnan & Lay, 2016).

Lastly is constructivism, which intensely supports self-learning, students are directed and given the required gears for discovery, understanding, and problem solving (Balakrishnan & Lay, 2016). Saini & Abraham (2015) explain that constructivism approach considers learning as a constructive and active process. Social media tools support constructivist theory largely. Social media platforms can be used to access vast resources that are appropriate for learning. This allows learners to build their own meanings while making the learning experience personalised. Social constructivism, a feature of the constructivist theory of learning, views learning as a dynamic social practice that inspires students to partake in social activities for effective learning (Balakrishnan & Lay, 2016). The majority of social media tools are characterised by collaborative features; these features are appropriate for corporative leaning environments (Saini & Abraham, 2015).

The social learning theory (SLT) suggests that learning is the foremost effective when learners are permitted to perceive and interact with other learners, as well as form or participate in small study

groups compared to the lecturers' teaching styles (Bandura, 1971, 2002; Gong et al., 2014). This theory has become popular with the widespread use of social media and mobile technology.

This study discusses popular models of learning. The Myers–Briggs Type Indicator (MBTI), Kolb's Learning Style Inventory (LSI), and the Felder–Silverman Learning Style Dimensions are three predominant and widely cited learning models (Balakrishnan & Lay, 2016).

- MBTI classifies learning styles according to the learner's personalities and suggests four dimensions: orientation (extrovert or introvert), perception (sensing: facts and routine based; or intuitive: impression based and non-routine), decision-making (thinking: objective and logical; or feeling: subjective), and attitude to the outside world (judgment: planning and control; or perception: spontaneous and adaptive).
- Kolb's LSI recommends the following four categories: divergers (who prefer group-based brainstorming discussions), assimilators (who prefer abstract concepts or ideas), convergers (who prefer hands-on activities and enjoy problem-solving), and accommodators (who rely on information and are intuitive).
- The Felder–Silverman five-dimensional model of learning includes perception (type of information one prefers, e.g., external sensory information such as sights and sounds or internal intuitive information such as insights), input (external information, such as graphics, words, and sounds), organization (format of information), processing (method of processing information, such as active or reflective), and understanding (results from processing, i.e., comprehending).

Consequently, as the technique of processing information is fundamental to students' knowledge, the identification of their learning styles is also significant. A review of past studies on learning models and theories has discovered three types of learning styles: collaborative, independent, and participatory (Balakrishnan & Lay, 2016).

### 2.7.1.1 Collaborative

Camarihna-Matos & Afsarmanesh (2008) defined collaboration as a process by which entities share resources, information, and tasks to equally plan, implement and assess a program of activities to accomplish a common objective. Collaboration is a critical component of all features of academic learning; it is through this continuous practice that a mutual vision, common goals, and certainties are developed or/and maintained (Rakhudu, Davhana-Maselesele & Useh, 2016).

Numerous studies have recognised the crucial role of collaborative learning in higher education which includes improving critical thinking skills, developing social skills, encouraging competitiveness, and sustaining knowledge (Balakrishnan & Lay, 2016). Moreover, it was discovered that students are stimulated and encouraged by instructional pedagogies, group discussions and projects, field trips, and open-ended problems or group presentations.

Students of generations Y and Z are generally skilful at using different social media sites or modern web technologies as well as multitasking (Dede, 2005). Therefore, they can share concepts and obtain a prompt response from lecturers and peers in online groups. Google Drive for instance, offers plenty of opportunities for collaboration, and social media sites, namely Google and Facebook (Balakrishnan & Lay, 2016). Students can learn from the contributions of other students and mirror on their own through collaborative working space (Minocha, 2009; Miyazoe and Anderson, 2010). Social media were also found to be vital for boosting creativity among students, be it online collaborations or face to face collaboration (Gaggioli et al., 2015).

Therefore, students who prefer collaborative work can be considered as extroverts. Popular social media sites such as Facebook, Twitter, and YouTube facilitate such collaborations, provide the platform for students to share ideas and opinions. The aforementioned tools require students to not only login but also identify those who post messages or comments, or upload videos. It can be assumed that anonymity is not a concern for extroverts who thrive in active social environments. As such, popular social media sites can be used effectively to foster collaborative learning. The common social media sites such as YouTube, Twitter, and Facebook enable such collaborations, permitting students to deliberate and exchange ideas and opinions. It is evident that privacy is not

a fear for extroverts who thrive in active social environments. As such, popular social media sites can be used successfully to substitute collaborative learning (Balakrishnan & Lay, 2016).

#### 2.7.1.2 Participatory

Institute of Development studies (2020) defined participatory Learning as a “family of approaches, methods, attitudes, behaviours and relationships, which enable and empower people to share, analyse and enhance their knowledge of their life and conditions, and to plan, act, monitor, evaluate and reflect”. There are two main categories of learners: reflective and active learners. Reflective learners understand and remember information best by reflecting on it in advance while active learners appreciate performing their tasks directly by relating and discussing them with others (Awla, 2014). Students with participatory learning style actively pursue to comprehend the subject material, like learning, and take accountability for their own learning. They are also more probable to accomplish well in online learning courses, which necessitate being more proactive than a usual face-to-face classrooms (Balakrishnan & Lay, 2016).

Extroverted students likely opt for group-based brainstorming or debate sessions; therefore, they are more likely to partake in classroom activities. It was found by Junco et al. (2011) that incorporating Twitter into learning curriculum advances students’ engagement and involvement in class. In Balakrishnan & Lay (2016) study, it was also revealed that social media platforms like YouTube and Facebook permit students with a participatory style of learning to interrelate with their online peers despite their location. Thus, these students might prefer using social for their learning.

#### 2.7.1.3 Independent

In contrast to active learners, reflective learners usually choose to work alone in individual projects. Reflective learners have the ability for theoretical work, mainly problem-solving. They are not passive nor do they lack creativity but they independently get subject comprehension and

self-derived knowledge (Balakrishnan & Lay, 2016). “Reflective learners thrive in individual learning spaces, whereas participatory learners prefer group learning” (Balakrishnan & Lay, 2016).

Independent learners are usually considered as introverts, demonstrating the paradigm of constructivism, which supports self-directed, reflexive, and experiential learning (Balakrishnan & Lay, 2016). They usually guard their anonymity by configuring their privacy settings by, preferring online communication to face-face communication with new acquaintances, desire asynchronous over synchronous form of communication (Balakrishnan & Lay, 2016). This therefore, suggests that introvert students would favour to use Blogger and WordPress as the tools or platforms of social media.

### 2.7.2 Social media as a platform for educational purpose

This section explores how social media is a rich and dynamic tool that can benefit students in higher learning institutions. There is a fundamental shift in the education system whereby the learning environment is becoming decentralised, shifting from instructor and institution to one where learners direct their own learning, building knowledge by engaging in networks away from the formal setting and finding their own information (Delello, McWhorter & Camp, 2015). In the study conducted by Kitchakarn (2016), it was indicated that Facebook in particular as a learning platform makes it possible for students to exchange ideas, enable self-study, give comments, and submit the assignments in order to improve their grammar knowledge and writing ability.

In the study found by Delello et al, (2015), Twitter was not only found to increase students’ engagement and improve their grades, but it also increased collaboration with peers and instructors for deeper interactive associates. It was also discovered that using Twitter in a classroom environment permitted student interaction to be fast and natural, facilitated social presence, sustained discussions after the semester, and permitted for the construction of meaning over communication. Although in the study conducted by Rinaldo, Tapp, and Laverie (2011), both students and professors were found to be inexperienced with Twitter, their perceptions later increased and they reported that Twitter assisted them to appreciate and acquire course material

and attained competency in the subject matter, and students thought that knowledge of Twitter would assist in finding future employment.

According to Delello et al. (2015) some studies have revealed that social media have increased creativity rather than attentiveness and engagement. One of the advantages of using social media as an academic tool is its viral marketing, meaning the voluntary sharing of information between users. YouTube, for example, offers an opportunity for student-generated media and viral advertising. From the same discoveries, most students expressed enjoyment in creating the adverts based upon challenge, creativity, teamwork, and entertainment.

The use of social media by students for academic purpose is also affected by the user-friendliness it is associated with, this is compared to complex e-learning sites. Due to this factor, social media has a popularity for educational purposes, and contribution to group communication (Balakrishnan, Teoh, Pourshafie & Liew, 2017).

## 2.8 Theoretical and Conceptual Frameworks

Conceptual and Theoretical frameworks lead the pathways of research and suggest the basis for founding its credibility. This study have defined the two frameworks and reasons for adapting conceptual framework.

### 2.8.1 Theoretical framework

Theoretical frameworks provide a guide or blueprint for research (Adom, Hussein and Agyem, 2018). They are built on existing theories in areas of inquiry that are related to, and they are the blueprint that are regularly lent to build research inquiry by a researcher. These frameworks contain concepts, constructs, theoretical principles, and tenants of theories (Adom et al., 2018). The theoretical frameworks that are commonly used in the field of information technology include:

the unified theory of acceptance and use of technology, theory of reasoned action and technology acceptance model.

### 2.8.2 Conceptual Framework

Adom et al. (2018) defined conceptual framework as a structure that the researcher can use to describe the natural progression of the phenomenon to be studied. It is associated with the empirical research and model used in systemizing and supporting the knowledge adopted by the researcher. The conceptual framework also describes how the research problem would be explored and presents an integrated approach of looking at the problem under study. It is organised in a logical structure to help in providing a visual display or representation of how concepts in a study relate to one another.

### 2.8.3 Difference between Theoretical and Conceptual Framework

Although these frameworks may work hand in hand, each has unique characteristics which distinguishes it. Adom et al. (2018) discussed the difference between the two frameworks and they are as follows;

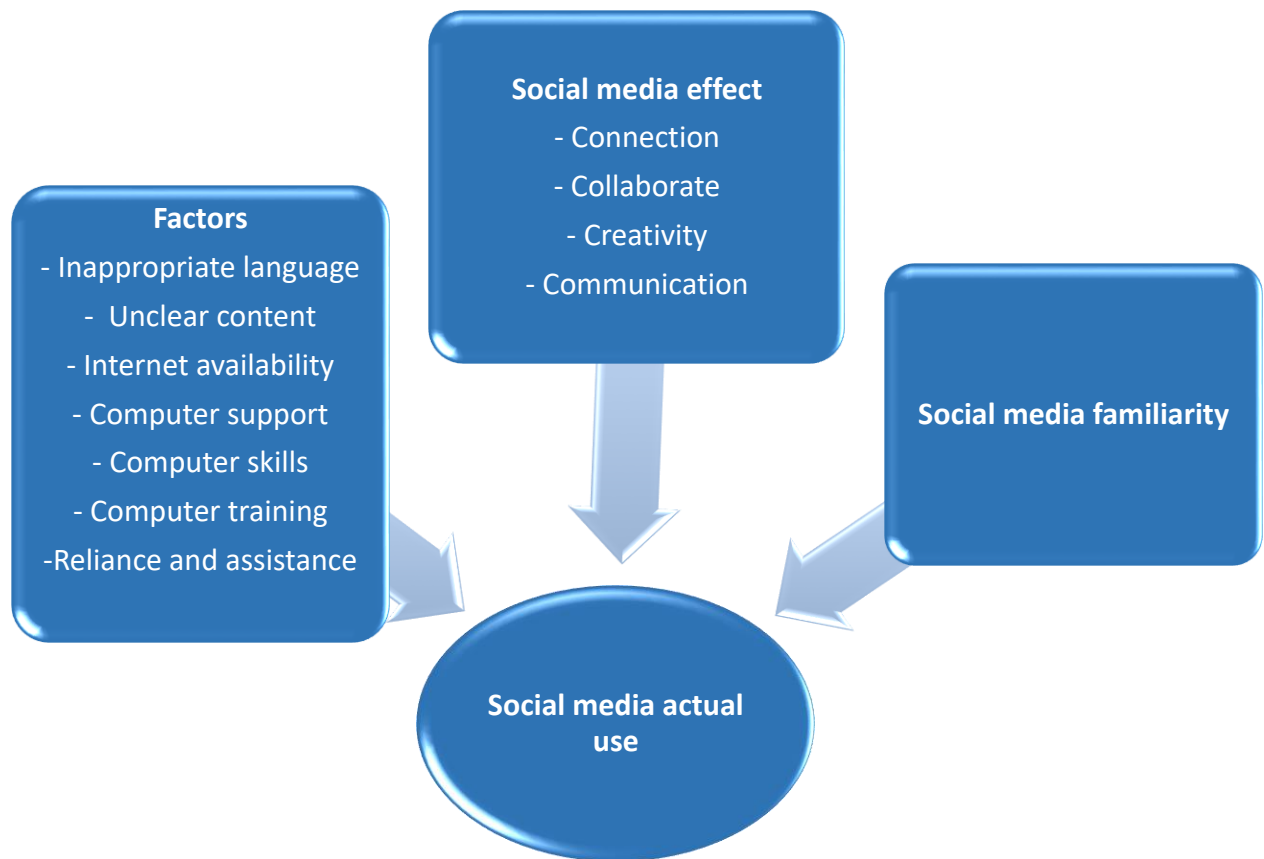
*Table 1: Theoretical and Conceptual Framework*

<b>Theoretical Framework</b>	<b>Conceptual Framework</b>
It offers a broad set of ideas in which a study fits.	It delivers specific ideas a researcher uses in his/her study.
It is built on present theory/theories in the literature which has been confirmed and verified by other researchers.	It is grounded on the concepts, which are the main variables in a study.
It is applied to exam theories, forecast and regulate the circumstances within the context of a research inquiry.	It is intended at encouraging the development of a theory that would be valuable to practitioners in the field.
It suggests the main point for approaching the anonymous research in a particular area of inquiry.	It is a framework that shows rationally how the research inquiry is to be undertaken.
It is soundly established, considered and acknowledged.	Its design is not recognised, but it's a proposal of the researcher's answer to the research problem s/he has defined.
It is in the form of a model that pivots a study, with its exponents and the outcomes of their studies.	It is a researcher's own created model that s/he uses to describe the relationship that occurs among the key variables in his/her study.  It can be an adaptation of a model in an existing theory which a researcher adapts to suit his/her research purpose.
It comprises of theories that appear related with their propositions deduced.	It comprises of concepts connected to clarify the relationships among them and how the researcher declares to answer the research problem defined.

2.8.4 This study was adapted from a conceptual framework due to the following benefits as discussed by Adom et al., 2018);

- It is the simplest way through which a researcher presents his/her stated remedies to the problem defined.
  
- It helps the researcher to find and build his/her worldview on the phenomenon to be examined.
  
- It is frequently used by researchers when existing theories are not appropriate or enough in building a well-founded structure for the study.
  
- It highlights the motives why a research's topic is worth studying and the researcher's assumptions.

## 2.8.4 Proposed Conceptual Framework



*Figure 2: Adapted Conceptual Framework (Bexheti et al., 2014).*

### 2.8.4.1 Social media effect on learning

Research Question: What effects do social media have on students learning?

Montebon (2017) has formulated a conceptual framework based on four roles suggested by Bexheti et al. (2014). The role of social media in teaching and learning has been summarised by Bexheti et al. (2014) as the following:

- ✓ Creation - The use of social media in the classroom assists students to produce digital contents on their own and even broadcast it online which creates an advantage for both the teachers and learners, hence, boosting additional active and proactive methods to learning.
- ✓ Connecting – One of the benefits of using social media in teaching and learning is that information is easily shared and accessed. In addition, it makes it possible for students to connect with other students or teachers globally where they can get particular knowledge in their field of interest.
- ✓ Content - The social media offers students with open and accessible knowledge that can lead them to develop lifelong learners. It also levels the learning opportunity for every student and subject preparation for Higher Education institutions.
- ✓ Collaboration – Students and teachers can work together and accomplish a definite objective through social media. Thus, using social media in the classroom inspires the combining of resources and gathering of professionals towards a mutual objective.

#### 2.8.4.2 Social media familiarity

Research Question: What is the students' degree of familiarity in the use of social media?

Azam & Aldehayyat (2018) defined familiarity as the past and/or current use or awareness gained by attending some form of guidelines or over reading on a topic. Kaptein, Nass, Parvinen & Markopoulos (2013) defined it as an understanding of a contact, thing, or interaction experience that forms a reasonably steady cognitive structure and brings the anticipation of potential actions and results in succeeding contact with someone or the use of something. Furthermore, Haider & Shakib (2017) defined familiarity as a service or/and product-related experience that have been gathered by a consumer. The experience include, exposure, interactions, trials and consumption. Familiarity differs with trust; familiarity eases social doubt through increased appreciation of what

is trending in the present while trust diminishes social intricacy linking to upcoming activities of the other party. Individuals gain actual familiarity through experience of environments (Craig, Conniff & Galan-Diaz, 2012).

Chen, Sun, Wu & Song (2019) explain that familiarity has an influence on user's behaviour and that familiarity has a positive relationship with users' partaking in online societies and Haider & Shakib (2017) believe familiarity might lead to the creation of a positive impression of a service or/and object, it also generates a sense of dependability in consumer's mind. Familiarity is linked to an individual's representation of previous experience with a service or a product Trel (2017). These presentations are acquired through experience, word of mouth, media, learning. This also involves individuals' ability to remember meaning attached to products/service.

This study evaluated the extent to which students are familiar with social media, and the degree to which they are aware and understand how to use it. It involves their experience and learning how students can make use of different platforms of social media for their studies and all academic work.

Familiarity is considered as one of the important human-computer interaction (HCI) aspects. (Van de Walle, Turner & Davenport, 2003). There is a lack of theoretical background in this area, however, to bridge the gap, Heidegger's treatment of familiarity was adopted by the study. The philosopher, Heidegger's work is grounded in an interpretation of familiarity. Van de Walle et al. (2003) believe previous experience and familiarity with computers constitute a significant predictor of users' performance. It is further believed that being familiar with a particular technology is highly linked to the ability to use technology and attitude towards it.

#### Theory of Familiarity - Heidegger's interpretation of familiarity

This theory defines human nature – Being and Time. Heidegger explains that what defines best basically the human way of being is its familiarity with a 'world' (Van de Walle et al., 2003). According to Heidegger, the world is made of a system of equipment, practices, and skills shared

by a particular community. Approving Heidegger's approach, familiarity incorporates a number of concepts.

Firstly, it comprises the idea of involvement which is translated as an expression of 'being-in-the-world'. A human being is involved in its world on the mode of dwelling, inhabiting, which is supplemented by a sense of being-at-home. Secondly, familiarity also comprises the idea of understanding. This is based on the understanding that a human being associates to his/her world. Heidegger's argument is that individuals manifest their understanding by taking part in activities, this is because understanding is an essential skill; a capacity to do something. Thirdly, familiarity comprises of the idea of unity of self and world. Heidegger suggests that self and world are inseparable, this results from involvement in a world on the basis of understanding.

Heidegger believes familiarity is mostly subjective, involving an individual's understanding of themselves in their being-in-the-world. Confidence, success, easiness, and performance are recognisable signs and outcomes familiarity.

In Dwamena, Kwabla, & Kanyir (2016) study conducted in India on student-nurses, it was discovered that most of them engage in Facebook, WhatsApp, Google+, YouTube and Twitter which they use for learning, socializing, and entertainment. Additionally, Boateng & Amankwaa (2016), participants were acquainted with social media: WhatsApp, Facebook, Wikipedia, YouTube and WeChat while a few only were with LinkedIn, Line, Skype and Twitter. From the study conducted by Alabdulkareem (2015), it was found that teachers and students use WhatsApp as a learning tool rather than any other social media platform.

### 2.8.4.3 Social media and demographics

Demographic information which include, age, gender and level of education compared to social media familiarity and influences.

- Age

In the study undertaken by Onger (2012) it was discovered that Facebook followed by YouTube and Twitter are mostly used by all age groups. In addition, most elderly people use social media for downloading music/films, purchasing flight tickets, hiring cars, and obtaining reading material. On the other hand, Gurcan (2015) believed that youngsters aged between 13-25 years use social media intensively as a communication instrument and that young girls are familiar with these media and use them to attract attention, which had nothing to do their studies (Bailey, Steeves, Burkell & Regan, 2013). Youngsters are the greatest consumers of social media compared to older people (Cara, Booker, Kelly and Sacker, 2018).

- Gender

In the study conducted by Chum (2013), it showed that women hesitate to adopt technology until they understand how it works and how to use it properly. They also listen to the views of their colleagues and peers before they can experience the systems themselves (Chum, 2013). On the other hand, men are generally keen to test with the technology themselves in order to appreciate how it works and to define how to use it (Chum, 2013). Females are more information-seeking whilst males are more self-status seeing (Narasimhamurthy, 2014). In the study conducted by Idemudia, Raisinghani, Adeola & Achebo (2017), findings state that males have a stronger perception of satisfaction and information quality while females perceive ease of use, compatibility, risk and relative advantage when using social media.

- Level of education

It is significant to reflect the level of education when implementing social media (Plas 2015). Little literature was found concerning the use and familiarity with social media in line with level of education. Buzov (2014) believed that students' behaviour is highly affected by the non-formal and informal nature of education apart from school education. Both students and staff are keen to do their academic work using social media as they trust that it advances their educational experience (Alabdulkareem, 2015).

#### 2.8.4.4 Factors that influence use of social media

Research question: What are the factors that influence students' acceptance of social media for teaching and learning at Universities in Lesotho?

This question will use different constructs from different sources, and they include; inappropriate language, unclear content, Internet availability, computer support, training and skills, reliance and assistance for academic assignments.

- ✓ Inappropriate language

The introduction and growth of social media has fuelled bad language; from syntax, spelling to vocabulary. Simpson (2018) defined inappropriate language as any swearword or word that may be considered offensive. Inappropriate language or words that can harm people ranges from hate speech, verbal abuse, sexual harassment, to swearing. Chen, Zhu, Zhou & Xu (2012), pointed out that social media's textual content online is often misspelled, informal, and highly unstructured.

Social media language has influenced numerous areas particularly, teaching and learning (Thurairaj et al., 2015). A worsening rate of intellectual excellence is highly connected to social media usage as has been proven by numerous scholars (Wilson, 2018); inappropriate language being one of them. Social media is categorised as one of the platforms where the use of offensive

language is practised (Kawate & Patil, 2017); this could lead to depression, frustration, and a large change in students' behaviour.

In the study conducted by Wilson (2018), the research found that the usage of social media by students affects their spelling ability negatively more particularly when writing letters and examinations, which in turn affect conventional technique of writing. Upcoming social media platforms have created its new meta-language which has altered the English Language to some extent. Thurairaj et al. (2015) findings also proved that frequent use of social media hugely affected English language proficiency.

✓ Unclear content

Jeng, DesAutels, He and Li (2017) considers a social media platform as an informal scholarly communication platform due to unclear content shared in these platforms and the speed at which false information spread which remains a concern (Global Agenda Council on Social Media, 2016); it is therefore, important to check the veracity of information re-sharing. Akakandelwa & Walubita (2017) blame the damage to language skills such as grammar and spellings by students on their exposure to an excess of social media.

✓ Internet availability

One of the social media requirements is internet availability and connectivity. The Internet provides ways of accessing, interacting and connecting with people and content (Goodwill Community Foundation, 2013). According to the *Lesotho Communications Authority (2017) Report*; 78.7% of Lesotho residents own mobile phones, only 32.5% of the population have access to the internet, but of this number 86% use social media.

✓ Computer support, training and skills

Technical skills refer to skills where a user is able to configure, maintain and troubleshoot (Gibson, 2015). This study aimed to examine whether students and staff have the skills to use social media platforms to connect, share, chat, save, and upload information (Barbas, Valerio, Martínez, Murillo, & Jiménez, 2014). Alabdulkareem (2015) suggests that both educators and learners need training in order to evaluate and boost their abilities to use available social media platforms. In a similar survey conducted by Schmucki, Hood & Meell (2009), teachers expressed the need for supervision, teaching, and specialized development on how to use social media as they too are becoming part of the social network. According to Public Media Alliance & UNESCO (2017), social media is not only a central part of the business plan but also staff and participants of social media require sufficient resources and training which includes technical training.

✓ Reliance and assistance for academic assignments

One of the benefits of social media is to disseminate important course information to students (Akakandelwa & Walubita, 2017). As Boateng & Amankwaa (2016) put it, the use of social media was linked to an improved multitasking tendency for youth due to its reliance on digital juggling between channels and programmes. Social media provides students with new mechanisms to remark on their campus' atmosphere, lecturers, administration, official policies, classes, and fellow students in real-time. University life can be challenging and stressful due to demanding coursework and exams. It was discovered, however, that the use of social media could reduce tension (Akakandelwa & Walubita, 2017). The users with developed social media self-efficacy perceive information distributed on social media to be dependable and they rely on the opinions of others (Hocevar, Flanagin & Metzger, 2014).

✓ Information Technology (IT) support availability

Social media is computer-based technology that enables the sharing of information and ideas through building of virtual networks and societies (Dollarhide, 2019). Users participate in social media via smartphones, tablets, and computers. Like any other computer-based technology, not every user is familiar with the use and utilisation of social media platforms. In cases like that, organisations and institutions provide with help-desk to support such users. This means IT support desk could assist to ease students' lives by offering them with singular source that they can consult for any IT related queries. Ghavifekr, Kunjappan, Ramasamy & Anthony (2016) found that one of the top obstacles to ICT use in education was absence of technical assistance in institutions. In addition, Suryani (2010) believes that schools do not afford enthusiastic support for teachers and student to use technology in class.

#### 2.8.4.5 Social media actual use

This looked at the actual hours spent by students on social media. Students spent hours on social for different reasons: sharing (information, videos, and photos), staying up-to-date with current events and news, staying in touch with friends, filling up spare time, networking with people, and entertainment. The study focused on time spent on social media in relation with academic activities. Although social media tools assure people to socialise with less effort in virtual environments, they also take people away from face-to-face communication Ünal (2018). Different studies showed different results when it comes to time spent by students on social media. The first is El-Badawy & Hashem (2015) where the study revealed that 33% of students spent 1-3 hours on social media daily. Secondly, Paliszkievicz J., .Mądra M., Filipiak T., .Svanadze S., & .Jikia M. (2017), 50% of respondents spent 4 hours on social media daily. Thirdly is the study conducted by Kolan & Dzandza (2018), it was discovered that majority (50.3%) of participants spent 2 hours and above daily on social media

## 2.9 Chapter conclusion

This chapter aimed to evaluate the existing literature in line with the study. It provided the answers to the questions connected to the effects of social media on students learning, the degree of familiarity of social media use in Lesotho Universities, and factors that influence user's acceptance of social media. The study discussed in detail the learning concept, different learning styles, and using social media a learning tool. The most commonly used social media platforms that connect students were identified as Facebook, WhatsApp, LinkedIn, YouTube, Skype, and Twitter. The learning concept was linked to social media. The study adopted a conceptual framework fitting for the phenomenon being investigated. The next chapter looked at the research methodology of the study.

## **CHAPTER 3 – RESEARCH METHODOLOGY**

### **3.1 Introduction**

Research methodology “is a way to systematically solve the research problem” (Kothari, 2004:8). Similarly, Singh (2006) defines it as a systematic procedure by which the researcher starts from the original identification of the problem, and then proceeds to consider its latter assumptions. Like most knowledge domains, research methodologies are also subject to the vagaries of human history and influenced by various aspects of social conditions at any particular time (Court, 2018). Research methodology decisions rest on the nature of the research questions. The methodology looks at what must be done, how the study will be conducted, what data are needed for the study, how sources of data will be identified, what data gathering tools are needed, how data will be analysed and used to formulate a conclusion. Essentially methodology is a plan to conduct research work in an effective and scientific manner (Singh, 2006). This therefore means that research methodology contains all the detailed and broad activities of the research.

The chapter outlined that research methods, the population, sampling strategy, research design, ethical consideration, research paradigm, data collection and validity and reliability.

### **3.2 Aim of the research**

The aim of this research was to examine the impact of social media in teaching and learning at Universities in Lesotho. The research intended to address the succeeding research questions: ‘What effects do social media have on students learning?’ ‘What is the students’ degree of familiarity in the use of social media?’ ‘What are the factors that influence students’ acceptance of social media at Universities in Lesotho?’

### 3.3 Research design

In order to study a scientific problem, the researcher must be able to draw up a plan systematically. There are a number of research design categories that are appropriate for the different types of research projects. The nature of the problem as set by the research goals gives guidance to the type of research design to be used. In addition, each of these research designs has an array of research methods that are used to gather and evaluate the kind of data that is created by the study (Walliman, 2011). The examples of research designs include case studies, action research and surveys. Case studies permit a researcher to inspect the data within a particular context, using a small geographic or a restricted number of individuals as the focus of the study (Zainal, 2007). There are three kinds of case study as suggested by Zainal (2007), namely explanatory, descriptive and exploratory case studies. However, case studies were frequently blamed for lack of rigour, for having little basis of scientific generalization and for being too complex (Zainal, 2007). According to Burns (2005), action research is a superordinate term for a set of methods of research which scientifically examines a particular social situation and which encourages democratic change and collaborative participation. Action research is significant in studying the progress and usually practiced by teachers in schools (Lasha, 2014), this therefore made it irrelevant for this proposed study.

Driscoll (2011) defines surveys as a data collection method where the researcher asks contributors about their behaviour and opinions through a short questionnaire. Surveys were mainly used for non-experimental descriptive designs that attempt to define actuality (Mathers, Fox & Hunn, 2007) and they are restricted to a representative sample. If a researcher's objective is to study an overall tendency in people's experiences, behaviour, and opinions, then surveys become the most relevant research design to be adopted. They are also useful if the researcher needs to discover a little or limited evidence from a broader variety of individuals with the intention of constructing a general claim (Driscoll, 2011). Researchers who wish to know the opinions, behaviours, beliefs, and attitudes of respondents (Polland, 2005) can use surveys. For these reasons, surveys became the ideal research design for this study. Primary data for this study was sourced from students and staff of National University of Lesotho, Botho University, and Limkokwing University of Creative Technology by conducting a survey using self-administered questionnaires. Online services,

journals, and books were used as secondary sources of data for the literature review and data collection instrument to address some of the research questions proposed by this study. Secondary data includes using data collected by other researchers usually for a different purpose. Common sources for secondary data include scholarly journals, books, technical reports, trade journals, national survey research organisations, and census data.

### 3.4 Research approach/paradigm

The most commonly used research approaches comprise of quantitative, qualitative and mixed methods, researchers can choose any of the three or a combination (mixed method approach) depending on the nature of the study. Quantitative and qualitative research approaches use tools to achieve the same goal but with varying procedures and techniques. They are both based on different theories and assumptions (Daniel, 2016).

#### 3.4.1 Qualitative research approach

The main objective of a qualitative research approach is to provide an accurate description of the phenomenon, event, problem or situation (Kumar, 2011). Neuman (2011) defines the qualitative research approach as a 'data enhancer' that enables one to appreciate significant cases more clearly. The qualitative approach relies on images and text, on having exclusive phases in data analysis, and on drawing upon varied intentions (Creswell, 2014). A qualitative researcher emphasises description, exploration, generalization and assembly of theories using qualitative data (Johnson & Christensen 2014), and follows features of the qualitative research paradigm. According to Kothari (2004), this type of study is concerned with the independent valuation of attitudes, thoughts and behaviour and uses in-depth interviews, focus group interviews, and projective practices. Its goal is to unfold the fundamental intentions of human behaviour.

This approach is deemed inappropriate for this study due to the reason discussed below. According to Daniel (2016), Haradhan (2018) and Rahman (2017), the following are the downfalls of using qualitative research approach;

- This approach is not static rather than dynamic. This is because the approach limits its finding to a particular group of individuals being studied. Perhaps it could have been significant to this study if its discoveries were reflective of a broader population.
- A qualitative research approach is known for its level of replicability. This approach is characterised by personal reports and feelings, and therefore this result in its data compromising consistency and reliability compared to quantitative research approach. Most of the researchers who uses this approach are authors who write fiction since they have no other ways of substantiating their true statements.
- Subjective methods deployed by researchers of this approach may be misleading, inaccurate and wrong. Researchers are likely to impose their meaning and understanding of an event or situation to a given time or place to other individuals.
- The use of non-numerical data a qualitative research approach makes it challenging to simplify observations and findings, explanations are based on the researcher's interpretation.
- This approach is costly and time-consuming. Thus the time required to collect, analyse and interpret data is long.
- Due to the nature of a qualitative research approach, small sample size, it becomes problematic to generalise the results to the entire population.
- It is more complex to interpret and analyse data using qualitative research approach.

### 3.4.2 Quantitative research approach

The second approach is quantitative research and it was deemed appropriate for this study. Here the researcher focuses on testing hypotheses and theories using quantitative data. The quantitative approach follows the characteristics of the quantitative research paradigm, and relies on quantitative data (Johnson & Christensen 2014). The primary objective of quantitative research is to define the association between a dependent and independent variable in a population (Singh, 2007). According to Mishra & Jaisankar (2007), a quantitative approach assists researchers to solve complex problems in time with much more accuracy and in an economical way; it uses mathematical models to achieve this. It applies scientific methods for decision-making and therefore increases the likelihood of making good and informed decisions. Quantitative approaches use quantitative data that consists of measurements of different kinds. The different measurement scales include an ordinal scale which uses numbers to rank responses based on some criteria, but with no unit of measurement. Secondly, there is the ratio scale; a constant unit of measurement and a complete zero point. Thirdly, there is a nominal scale; numbers that uniquely identify members of a category or group, and lastly there is an interval scale with a constant unit of measurement but a random zero point. The third approach was mixed methods research. It is a combination of qualitative and quantitative approaches (Johnson & Christensen, 2014).

### 3.5 Data collection instruments

The researcher should be capable to select a proper data collection method depending on the number of factors including literacy level and motivation of participants, and access to the potential participants, etc. (Mathers et al., 2007). Focus groups, interviews, observations and questionnaires are examples of data collection instruments.

### 3.5.1 Focus groups

Focus groups are defined as group discussions formed for a specific subject planned for research purposes (Gill, Stewart, Treasure & Chadwick, 2008) and sharing of numerous features with less structured interviews. Focus groups normally comprise 6-11 participants which enables the researcher to engage participants on the proposed topic.

This study could not use focus group due to the following reasons;

Firstly, focus groups tend to raise participants' expectations that cannot be fulfilled or where strategic group's biases are predicted (Ochieng, Wilson, Derrick & Mukherjee, 2018). This method of qualitative research approach cannot produce useful numerical results, therefore they cannot be used where statistical data are required (Ochieng et al., 2018).

Secondly, Sim & Waterfield (2019) believe that focus groups create distinct ethical challenges and therefore they must be used with care. Some of the challenges of using focus groups include anonymity and confidentiality, and this is because of the researcher is restricted to regulate over what participants may subsequently communicate outside the group (Sim & Waterfield, 2019).

Eaton (2017) cited that participants may influence each other due to peer pressure or the perception that supporting each other is better than raising a differing perspective.

### 3.5.2 Interviews

The second is interviews, according to Gill et al. (2008) and Mathers et al. (2007), research interviews are adopted in order to discover the experiences, motivations, beliefs and views of persons on a specific matter and usually face-to-face or telephonic.

Interview were not an appropriate method to collect data for this study. Interviews are not a cost effectively method for this study and they are time consuming. The researcher needs to travel or fund participants' fare to the interview location (Adhabi & Anozie, 2017). This also means that limited resources may compromise the quality of data to be collected. In addition, Adhabi &

Anozie, (2017) believe that there are challenges and ethical dilemmas directly linked to interviews. Abawi (2017) suggests that interviews can be tiresome for a large number of participants, the risk of bias is high due to fatigue of the interview process, and challenging data analysis if there is a lot of qualitative data. Interviews might be complex for the inexperienced researchers to adequately perform the interview (Majid, Othman, Mohamad, Lim and Yusof, 2017).

### 3.5.3 Observations

Observations look at observing and measuring the world around, as well as measurable occasions and observations of people (Driscoll, 2011). Kawulich (2012) describes observation as one of the data collection methods where data about cultures, people, and processes is collected.

Observations are not appropriate data collection methods due to the following reasons; they are prone to many challenges which include; Hawthorne effect which means that if a group is aware that they are being observed, resulting conduct may be affected. This method of data collection cannot be used to generalise the entire population except if a plan of representatives is established. In addition, an observer may lose objectivity due to his/her involvement in the activity particularly in participant observation (Michael, Olalekan, Onjefu and Ovie, 2017). At times an observer can go beyond recoding what individuals do and assumes he can read their minds and visualise why they are doing things in a particular way (Michael, Olalekan, Onjefu and Ovie, 2017).

It is also challenging to quantify observer reliability when the observation research data collection is used (Holmes and Bloxham, 2007). Another disadvantage of this method is its cost, which includes; participants' incentives, training, equipment, software, staff and observer salaries and other costs. When compared to survey research, observational research is more expensive (Holmes and Bloxham, 2007).

The nature of focus group, interviews and observations do not match with the requirements of this study. In addition, these data collection tools are used mostly with qualitative research approach which is inappropriate for this study.

### 3.5.4 Questionnaire

Lastly, is the questionnaire which is one of the most regularly used data collection tools used for acquiring information on public knowledge (Bird, 2009). When conducting a survey, questionnaires are the most useful data collection tools to consider (Mathers et al., 2007). They are known to be relatively cheaper than interviews and quicker if the sample is widely dispersed and large. This, therefore, makes a questionnaire an ideal data collection tool for this study.

Kabir (2016) and Abawi (2017) suggested the following advantages of using questionnaire as data collection method;

- A large amount of data can be collected from a large population in a very short time and relatively cheaper compared to other methods of data collection.
- The results of a questionnaire can simply and quickly be quantified by either the use of software packages like SPSS or the researcher.
- Data can be analysed more accurately and scientifically than other methods of research.
- This method is a good instrument to protect the privacy of the participants.

The total population of institutions was 13207 with a sample size of 373. Due to questionnaires' ease and flexibility as compared to interviews and observations (Akinci & Saunders 2015), questionnaires were found to be more fitting for this study. The questionnaire consisted of 20 questions and 6 demographic questions that relate to the study. The total population and sample exclude staff participants. Due to the nature of the study, staff was excluded and focus was on students only.

#### 3.5.4.1 Questionnaire design

The three (3) institutions where the study was conducted are NUL, LUCT and Botho University, Gatekeeper's letters (Appendix 2) from three institutions (NUL, LUCT and Botho University) were received. The letters indicated that the institutions are interested in participating in the study.

On the other hand, gatekeepers' letters, questionnaires and other documents were submitted to the University's research office for authorisation to conduct the research. In return, the University of KwaZulu-Natal provided an ethical clearance (Appendix 4). After obtaining all essential endorsements from the University's research office, the supervisor tested all the questions for consistency and possible ambiguity. In addition, the supervisor tested whether or not the questionnaires were time-consuming, whether instructions had been followed correctly, and whether the questions were suitable for the study or not.

Both ethical clearance and questionnaires were distributed to the participants as per sample size at different intervals. Upon completion of the data collection procedure, the researcher specified that participants were not allowed to choose their institution name; however, questionnaires were collected in different batches due to different academic calendars and therefore data from each institution could easily be identified.

A Likert scale was used to weigh the attitude of the respondents and factors that relate to the use of social media. The likert scale ranged from strongly disagree to strongly agree. A Likert scale provides a range of responses or a series of statements. Usually there are 5 categories from strongly disagree = 1, disagree = 2, neutral = 3, agree = 4, and strongly agree = 5 (Croasmun & Ostrom, 2011). In addition, a likert scale is an extensively used in social sciences and educational research (Joshi, Kale, Chandel & Pal 2015).

The first section of the questionnaire is about the biological information of participants. The information included gender, age, role, level of education, and years been with the University. These are considered as independent variables of this study. Other sections (B to F) comprises of dependable variables of the study. Not all components of the questionnaire were used due. Below is how each research questionnaire relate to data collection instrument;

✓ *What effect do social media have on students' learning?*

The first research question of this study relied entirely on secondary data. This means that this is not part of the primary data. This research question adopted a framework introduced by Bexheti,

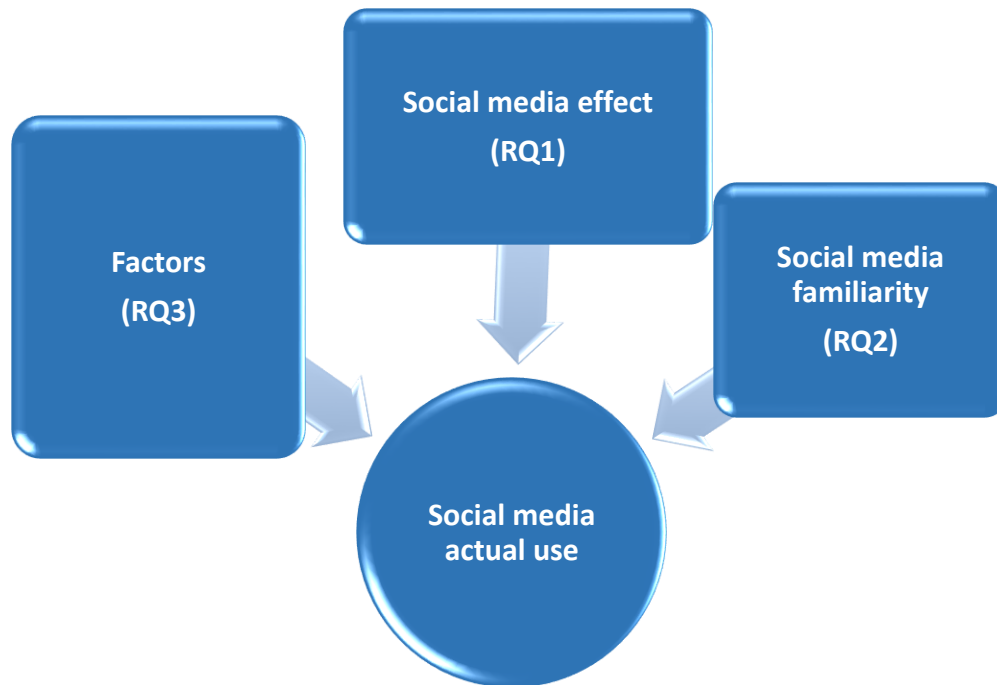
Bexheti et al. (2014) and that has been used by (Montebon, 2017). Represented by RQ1 in Figure 3.

- ✓ *What is the students' degree of familiarity in the use of social media?*

This research question used primary data. From the research instrument, Section F (23) was used to answer this research question. Represented by RQ2 in Figure 3.

- ✓ *What are the factors that influence students' acceptance of social media for teaching and learning at Universities in Lesotho?*

This research question used primary data from the questionnaire (Section C-12, 13, 14, 15, 20, 21 Section F - 25). Represented by RQ3 in Figure 3. The contents of this construct come from different sources of literature.



*Figure 3: Proposed Conceptual Framework and Research Questions (Adapted: Bexheti et al. (2014)).*

### 3.6 Population of the study

All the members who meet a certain condition identified for a research investigation are referred to as the target population (Alvi, 2016). The population may be heterogeneous or homogenous. It is homogenous when every component is related to each other in all aspects, and on the other hand, heterogeneous when its fundamentals are unrelated to each other. Whether a population is homogenous or heterogeneous depends on the nature and goal of the research (Alvi, 2016). The variables that are mostly considered to brand a population heterogeneous include age, ethnicity, socioeconomic status, and gender. The total Target population from NUL, LUCT and Botho University was 9638, 3245 and 324 respectively. This makes a total population of 13207 for students.

### 3.7 Sampling procedure

Alvi (2016) defined a sample as a lesser crowd of people nominated from a population for investigation purposes. The term participant is used to describe the members of a sample. Sampling involves a variety of study elements from a defined study population (Phrasisombath, 2009). It is difficult and uncertain to know whether the researcher could possibly have collected data from all cases in order to respond to the research questions; therefore, a sample needs to be determined from the population. This was done by using sampling techniques to diminish the amount of cases as the researcher did not have enough resources to analyse the total population nor the time. Random sampling and non-random sampling are two divisions of sampling techniques. In probability sampling, each sample has an equal probability of being selected meaning each element of the population has a known non-zero probability selection. Non-probability sampling uses non-randomised methods to draw the sample and they generally include judgement (Etikan & Bala, 2017). This method is less costly, less complex and easy to apply. Types of non-probability sampling include purposive, expert, snowball, quota, and convenience sampling.

First is purposive sampling; Purposive sampling is when the researcher select participants with specific characteristics that enables them to provide relevant information/data to address the research question. Second is expert sampling; this is when a researcher select experts in a particular field to become participants of the study with the aim of getting their insight finds for the permission of those that are expert in the field of study, and start the process of collecting information straight from group or people of respondents. The third sampling strategy is snowball sampling; this is when a design process selection is done by means of chain-referral or network. It is mostly used when the researchers know little about the organisation or group to study, a contact with few people will direct the researcher to other groups. The fourth sampling technique is quota sampling; it entails taking a tailored sample that is in proportion to some specific or attribute of a population.

The last sampling technique is convenience sampling. Convenience sampling allows the researcher to find or target respondents who are conveniently accessible to him or her. The researcher selects the closest live persons as respondents. The key objective of convenience sampling is to gather information from participants who are easily available to the researcher. When using convenience sampling, subjects are readily reachable or obtainable to the researcher are selected. Some of the advantages of convenience sampling include its affordability, less complexity, and readily available subjects. The important aspects that should be taken into consideration and be described thoroughly when choosing this method are; how the sample would differ from the one that was selected randomly, and taking into account subjects which should be excluded during the selection process. For the purpose of this study, convenience sampling was selected due to its merits. No particular criteria was used to select students, this means any students, whether gender, faculty, race, level of study, were selected.

### 3.7.1 Sample technique and size

Following guidelines of *Creative Research Systems (2012)*, if the population is 13207, with 95% confidence level and (+-) 5% confidence interval, then the sample size is 373. Convenience

sampling was used and therefore samples from all three institutions were combined. Response rate 64.79%. This means analysis was based on 242 from students' respondents.

### 3.8 Data analysis

Hard copies of questionnaires were hand-delivered and collected from participants. The results of questionnaires were captured in Microsoft Excel then pass on to SPSS Version 25 for data analysis in order to conclude statistical relationships, draw graphs and cross-tabulate data. For secondary data from the articles for research question 1, both literature and data analysis from journals and articles were used.

### 3.9 Validity and reliability

Beninger et al. (2014) define validity as a research quality key measure where a participant has understood the question in a way the researcher intended and in return the researcher is able to interpret the answers as intended by the participants. Reliability can be thought of as consistency. For this study, 10% of the sample size was used as pilot sample. According to Connelly (2008) existing literature proposed that a pilot study sample should be 10% of the sample estimated for the larger parent study. Therefore, this means 37 is the pilot sample based on 373 sample size. To measure reliability, Cronbach's alpha is applied based on the response rate of 64.79% (242). Cronbach's alpha is often used in studies in science education as a measure of reliability (Taber, 2017). Pallant (2016) indicated that Cronbach's alpha offers the indication of the average correlation amongst all the items that make up a scale. Higher values indicate greater reliability with values ranging from 0 to 1. Cronbach's Alpha for degree of familiarity with different social media platforms is 0.703 and this is considered as good. At this stage, Google Plus was removed from the datasets due its poor Cronbach Alpha.

When it comes to factors that influence social media use, Cronbach’s Alpha is 0.607 which is acceptable. Although some authors consider this questionable, Streiner (2003) considers it as acceptable (Table 2). Panayides (2013) believes higher values do not certainly mean higher reliability and better quality scales and tests; they could be a sign of lengthy scales, narrow coverage of the construct under consideration, or parallel items. Wongpakaran & Wongpakaran (2013) note that some of the factors that cause questionable or poor results include;

- ✓ Administrator factors – the influence of students on respondent biases
- ✓ Examinee factors – this means poor concentration and poor motivation and fatigue

*Table 2: Reliability test*

<b>Cronbach's Alpha</b>	<b>Internal Consistency</b>
$\alpha \geq 0.9$	Excellent (High-Stakes testing)
$0.7 \leq \alpha < 0.9$	Good (Low-Stakes testing)
$0.6 \leq \alpha < 0.7$	Acceptable
$0.5 \leq \alpha < 0.6$	Poor
$\alpha < 0.5$	Unacceptable

(Source: Streiner, 2003, p.102)

### 3.10 Chapter Summary

The aim of this chapter was to deliberate research methodology for this study. This chapter addressed questions relating to research design, research approach, data collection methods, population of the study, sampling procedure, data analysis, and validity and reliability. This study adopted surveys as part of the research design compared to action research and case studies due to surveys merits discussed above. The study’s goal was to define the association between dependent and independent variables, therefore a quantitative research approach was appropriate. Convenience sampling was found to be appropriate for this study due to the large population, limited workforce, time and resources. The secondary data was used for the first research question. A questionnaire was the data collection instrument used; when conducting a survey, questionnaires

are the most useful data collection tools to consider. Secondary data from articles were used to supplement and to answer one of the research questions. The total population for this study was 13207 with a sample of 373 from all three Universities of Lesotho. 242 students responded to the questionnaire. To determine statistical relationships, graphs and cross-tabulation: SPSS Version 25 was the data analysis instrument used in this study. With validity and reliability, Cronbach's alpha was applied. The next chapter looked at the analysis, interpretation, and discussion of the collected data.

## CHAPTER 4 – ANALYSIS, INTERPRETATION AND DISCUSSION

### 4.1 Introduction

This chapter incorporated a comprehensive analysis and discussion of the statistics acquired from the questionnaire with 26 questions (Appendix 3) in total. The outcomes were explained in line with the research questions and objectives of the study. This chapter also examined and discussed the inferential techniques used that include chi-square test values corrections which were interpreted using p-values. Frequency analysis, descriptive statistics presented in both graphs and tables was also performed in order to respond to some of the questions in the study. The first research question used literature for analysis as secondary data. The questionnaire response data were distributed and returned in hard copies; they were then captured in Microsoft Excel and uploaded to SPSS Version 25 for analysis.

### 4.2 Statistical tests

A non-parametric statistical test was applied to the sample;

- **A Chi-square test for independence:** it is used to discover the association amongst two definite variables (Pallant, 2016). Chi-square is known of its strength with respect to the spreading of data, detailed information that could result from the test, ease of computation, flexibility in terms of handling data from two or more group studies (McHugh, 2013).

### 4.3 Brief background

The target population and sample for this study was 13207 (9638 + 3245 + 324) and sample size is 373. 242 responses were received. It was assumed that the different numbers were influenced

by the different University's years of existence in Lesotho and the NUL is public University whereas LUCT and Botho University are private Universities. NUL was officially opened in 1945 followed by LUCT in 2008 and Botho University in 2016 (*Council of Higher Education Booklet V3, 2017*). The study had separated its two participants; staff and students. The reason was that, the study is mainly concentrating on students. Staff data was used for comparison only two different categories of participants from institutions; staff and students. In addition, due to the sampling method used (convenience sampling), participants from the institutions were not separated.

#### 4.4 Demographic profile

Table 3 summarised the demographic profile of students. This section presented the students' demographic information such as age, gender, and level of study.

*Table 3: Demographic profile of students*

	<b>STUDENTS</b>	
<b>VARIABLE</b>	N	%
<b>Gender</b>		
Male	91	37.6
Female	151	62.4
<b>Age</b>		
18-20	13	5.4
21-29	215	88.8
30-39	13	5.4
40-49	1	0.4
<b>Level of education</b>		
Self-educated	1	0.4
Primary school	1	0.4

Secondary school	53	21.9
Tertiary certificate or Diploma	128	52.9
Bachelor's degree	25	10.3
Honours degree	33	13.6
Master's degree	1	0.4

Students:

- ✓ **Gender.** Students' gender indicated as 151 and 91 for females and males respectively.
- ✓ **Age.** The majority were between the age of 20-29 years (215) followed by 18-30 and -39 years (13) and lastly 40-49 years (1).
- ✓ **Level of education.** The current level of education of the majority is tertiary certificate/diploma (128), secondary school or COSC (53), honours degree (33), bachelor (25) while self-educated, primary school and master's degree is 1 for each.

#### 4.5 Frequency analysis

In this section, frequency tables are presented to define the total number of responses in a percentage form. Responses from different participants of the study are presented separately. Each question and the total number of participants were used to conclude the total number of replies by summing-up relative percentages of each question that was asked. As mentioned earlier in the study, research question 1 'What effect does social media have on students learning' used analysis from difference research findings.

#### 4.5.1 Effect of social media on students' learning

RQ: What effect does social media have on students learning?

##### 4.5.1.1 Collaboration

Alotaibi & Bull (2012) conducted a study on 15 third year students in the School of Electronic, Electrical and Computer Engineering at The University of Birmingham who were studying adaptive learning environments modules. In this study, students were asked to join a Facebook group page dedicated to their course to allow them to discuss their learning with instructors and peers.

Results from this study revealed the following;

- Week 1; students did not participate in anything on this Facebook
- Week 2; 23 postings
- Week 3; 36 postings
- Week 4; 20 postings
- Week 5; 3 postings

In this platform (Facebook), students offered assistance to their peers by responding to questions. In addition, some of the students used the 'Like' button but did not post anything in the group wall. In general, students shared and discussed their knowledge. Moreover, (14 out of 15) students reported that they benefit more from Facebook than a face-to-face discussion. Therefore, this showed a positive attitude towards the use of Facebook as a tool for communication and collaboration. Furthermore, students used Facebook to make queries, it was indicated that they identified Facebook as a tool to search for help and students also collaborated to answer some peers' questions showing support to their peers.

In the study conducted by Lofters, Slater, Angl & Leung (2016) with 26 (22.6%) respondents in a survey. The aim of the study was to implement and value a private Facebook group of members of a large Ontario multisite Family Health Team (FHT) to aid enhanced communication and

collaboration. While a large fraction of respondents admitted that they use different social media sites for personal use including Facebook (13), Twitter (8), and LinkedIn (6), the majority (50%) of respondents admitted that social media could advance communication amongst FHT members.

Suwannatthachote & Tantrarungroj (2012) also conducted a study which showed that to communicate, comment and post, students used Blackboard LMS, followed by Facebook and Windows Live Messenger (47.3%, 35.1%, and 18.0% respectively) as they interact with each other. Facebook was also found to be a rich communication tool in online chats, status posts, and Face-group. The study further indicated that the majority of students (98%) did most of their collaborative activities using used Facebook in the group projects. Moreover, to communicate in real-time, and to connect with group member, about 81.0% of students were using Facebook Chat. The study also revealed that participants used social media for private communication. The results showed that the top three social media platforms were Facebook (100%), Twitter (38.0%), and Google Plus (20.5%).

#### 4.5.1.2 Connecting

Ali-Hassan & Nevo (2016) proved in their study that using social media has the ability to support and improve a persons' knowledge, and on the other hand providing with access to information. From the summary of articles summarised by Kümpel, Karnowski & Keyling (2015) in the context of sharing information on social media, the following was concluded from 71% of them. Twitter was found to be the most important platform for researchers (69%) followed by Facebook with 17%, then YouTube 12%. Digg, Flickr, and Google+ were 8%, 4%, 1% respectively. Oher social media platforms shared 17%.

In the study conducted by Mowafy (2018), with 422 undergraduate students aged between 18-23 at Nile University in Nigeria, the following was observed. The study shows that the majority of student (72.5%) use WhatsApp (social media platform) or an alternative to share information with classmates. Qualitative results also show that students use social media platforms as a communication tool due to several numbers of available features and advantages.

In the study conducted by Wok, Idid & Mismar (2012) using random sampling in which participants were students between the age of 17-40 years old from the Department of Communication, at the main campus of the International Islamic University Malaysia, from different levels of program. The study looked at several activities in line with teaching and learning, information sharing was one of them. The study found that the majority of university students (71.6%) do use social media for information sharing followed by high school (56.9%) and specialisation (21.8%).

**Table 4: Types of information-sharing activities among youth**

	Types of information-sharing activities	Frequency	Percentage
Educational information shared ( <i>N</i> = 634)	University	454	71.6
	High School	361	56.9
	Specialisation	138	21.8

In a study by Kim & Sin (2015) at a public university in the United States participated targeting undergraduate and the following was concluded; The study evaluated how frequently students were using various platforms of social media as a source of academic information The findings indicated the following as the top five platforms students used for academic purpose; media sharing, internet forums, Q & A site, blogs and wikis.

#### 4.5.1.3 Content

In a study by El-Badawy & Hashem (2015) which consisted of 110 sample size from different socioeconomic classes and the types of school programs varied between IG, American, French, German and National. The participants were asked to indicate if they use social media to study or not and how they use social media to study. About 92% of these participants use the internet for their study. Some of the students stated that they use social media platforms with their maths

homework since they can use Google for the equations. Therefore, most of them use social media in a positive way, which helps them do better at school.

Talaue, AlSaad, AlRushaidan, AlHugail & AlFahhad (2018) conducted a study at Jubail University College, Saudi Arabia in the academic year 2017-2018 during the summer semester. The participants of this study were 60 students who were actively using social media. The goal of the study was to find the social media impact on academic performance. The study revealed the following:

- ✓ Frequently students do not absorb all the information shared with them during academic lessons.
- ✓ Students find phones/table screens more interesting and use them to correspond with peers, new tapes and YouTube videos.
- ✓ Students spend more time on social media than doing sports, although this affects physical and intellectual development negatively.
- ✓ Social media platforms are useful for educational groups and videos, mainly Facebook and YouTube.

Aillerie & Mcnicol (2016) conducted a study from UK (65.8%), France (22.0%), Thailand (5.7%), and Denmark (5.1%). There were other insignificant numbers of respondents from non-European countries (Russia, Qatar, Singapore, Netherlands, Philippines, and Namibia). The study revealed that 55.8% of students use social media to seek information often while 23.7% did so rarely. Only 18.8% of the students never seek information from the social media platforms.

In addition, Aillerie & Mcnicol (2016) study also revealed that students seek enormous variety of learning material free of charge for the following;

- Information related to friends (69.8%)
- Cultural events (56.0%)
- International news (49.3%)
- Information related to health (14.8%)
- Practical information (17.5%)

#### 4.5.1.4 Creation

According to a study by Delello & McWhorter (2014) which focused on curators and creators of information while building relationships with peers in an online environment. The study examined Pinterest (one of the common social media platforms) for the University Students who were required to select 20 resources from the Web that they planned to reconstruct or utilise in their classroom after graduation.

When students completed the assignment, there was a follow-up in form of an experience survey. About (96%) majority of student were excited about the experience and found that the platform was very useful and rewarding for academic use. It was further noted that, although most students (92%) were digital natives, some of them felt that it was challenging to use social media especially those who used it for the first time.

As mention earlier in Chapter 2, the first research question used secondary data while the remaining three research questions (2, 3, and 4) used primary data.

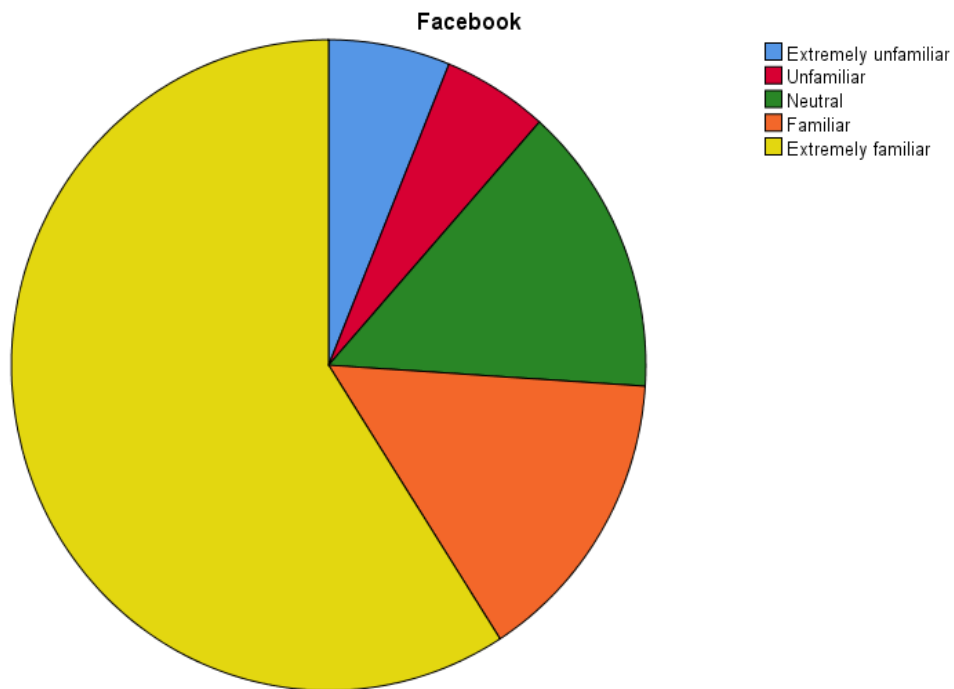
#### 4.5.2 Degree of familiarity of social media

This section looked at how familiar students are with social media for learning. It evaluated the extent to which students are familiar with social media. Frequency tables were presented to define the total number of responses in a percentage form. The study looked at how familiar students are with the use of the following social media platform: Facebook, YouTube, WhatsApp, Twitter, and LinkedIn.

Table 5 and figure 4 looked at how students are familiarity with the use of Facebook for learning purposes.

*Table 5: Facebook familiarity*

		Frequency	Percent	Valid Percent
Valid	Extremely unfamiliar	15	6.2	6.2
	Unfamiliar	13	5.4	5.4
	Neutral	35	14.5	14.5
	Familiar	36	14.9	14.9
	Extremely familiar	143	59.1	59.1
	Total	242	100.0	100.0



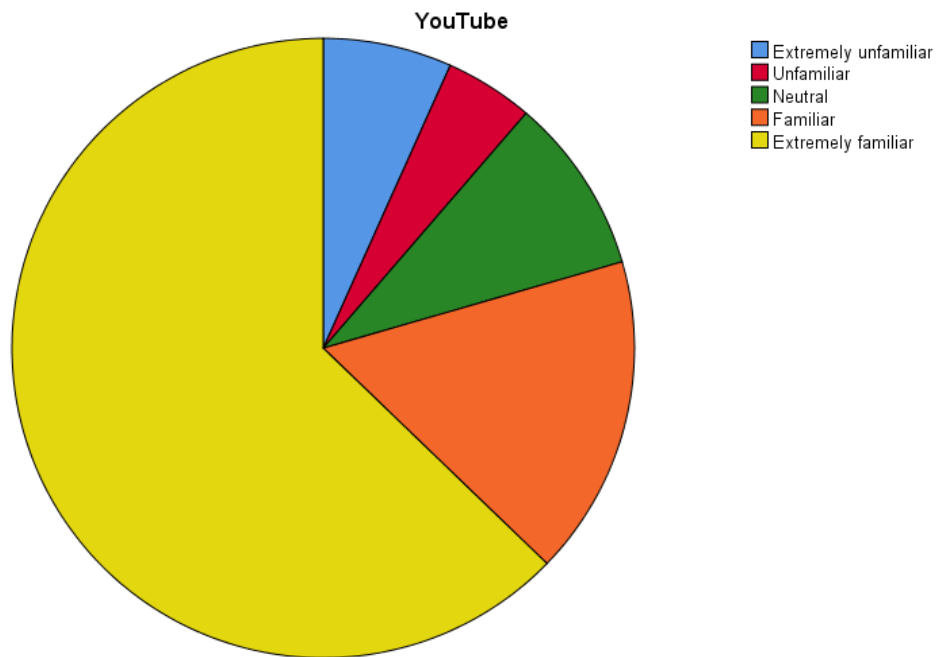
*Figure 4: Facebook familiarity*

The majority of students are extremely familiar with Facebook (59.1%). A minority of students were unfamiliar (5.4%) This means students were familiar with Facebook as one of the social media platforms (Table 5).

Table 6 and figure 5 looked at how students are familiarity with the use of YouTube for learning purposes.

*Table 6: YouTube familiarity*

		Frequency	Percent	Valid Percent
Valid	Extremely unfamiliar	16	6.6	6.7
	Unfamiliar	11	4.5	4.6
	Neutral	22	9.1	9.2
	Familiar	40	16.5	16.7
	Extremely familiar	150	62.0	62.8
	Total	239	98.8	100.0
Missing	Missing	3	1.2	
Total		242	100.0	



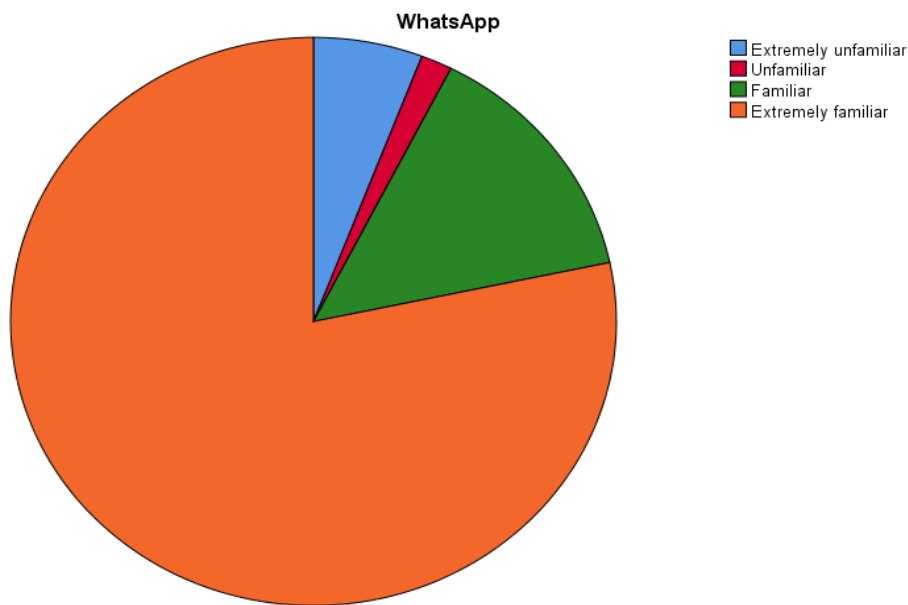
*Figure 5: YouTube Familiarity*

Most of the students were extremely familiar with YouTube (62.8%). A minority of students were unfamiliar 4.6% with YouTube. This means that many students are familiar with YouTube usage (Table 6).

Table 7 and figure 6 looked at how students are familiarity with the use of WhatsApp for learning purposes.

*Table 7: WhatsApp familiarity*

		Frequency	Percent	Valid Percent
Valid	Extremely unfamiliar	14	5.8	5.8
	Unfamiliar	4	1.7	1.7
	Familiar	34	14.0	14.2
	Extremely familiar	188	77.7	78.3
	Total	240	99.2	100.0
Missing	Missing	2	.8	
Total		242	100.0	



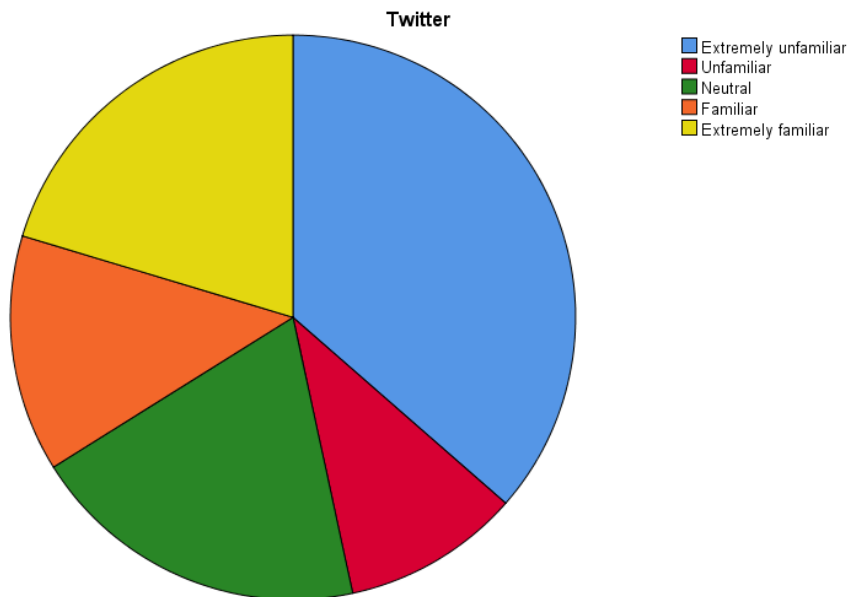
*Figure 6: WhatsApp Familiarity*

The overwhelming majority of students were extremely familiar (78.3%) with WhatsApp while only a few were not (1.7%). This means that many students are familiar with WhatsApp usage (Table 7).

Table 8 and figure 7 looked at how students are familiarity with the use of Twitter for learning purposes.

*Table 8: Twitter familiarity*

		Frequency	Percent	Valid Percent
Valid	Extremely unfamiliar	86	35.5	36.4
	Unfamiliar	24	9.9	10.2
	Neutral	46	19.0	19.5
	Familiar	32	13.2	13.6
	Extremely familiar	48	19.8	20.3
	Total		236	97.5
Missing	Missing	6	2.5	
Total		242	100.0	



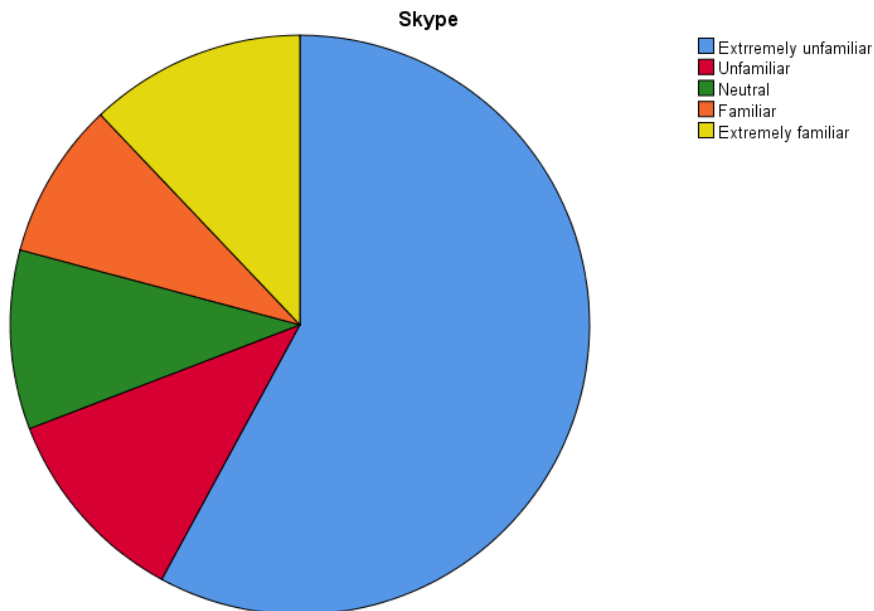
*Figure 7: Twitter Familiarity*

The majority of students were extremely unfamiliar (36.4%). This suggests that many students were not familiar with Twitter usage (Table 8).

Table 9 and figure 8 looked at how students are familiarity with the use of Skype for learning purposes.

*Table 9: Skype familiarity*

		Frequency	Percent	Valid Percent
Valid	Extremely unfamiliar	139	57.4	57.9
	Unfamiliar	27	11.2	11.3
	Neutral	24	9.9	10.0
	Familiar	21	8.7	8.8
	Extremely familiar	29	12.0	12.1
	Total	240	99.2	100.0
Missing	Missing	2	.8	
Total		242	100.0	



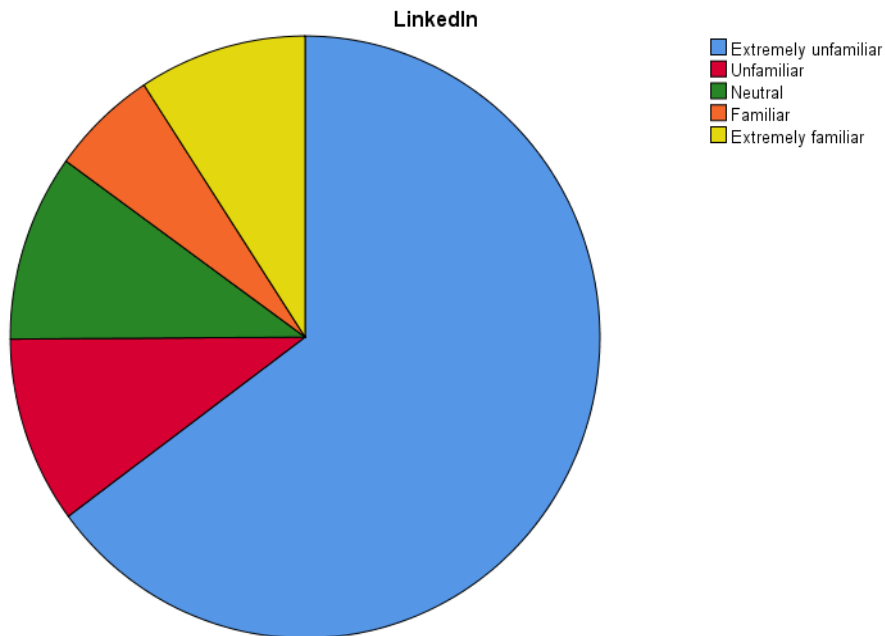
*Figure 8: Skype familiarity*

The results show that about 57.9% of students were extremely unfamiliar with Skype. This means majority of students were not familiar with Skype (Table 9).

Table 10 and figure 9 looked at how students are familiarity with the use of LinkedIn for learning purposes.

*Table 10: LinkedIn familiarity*

		Frequency	Percent	Valid Percent
Valid	Extremely unfamiliar	155	64.0	64.9
	Unfamiliar	24	9.9	10.0
	Neutral	24	9.9	10.0
	Familiar	14	5.8	5.9
	Extremely familiar	22	9.1	9.2
	Total	239	98.8	100.0
Missing	Missing	3	1.2	
Total		242	100.0	



*Figure 9: LinkedIn Familiarity*

Most of the students were extremely unfamiliar (64.9%) with LinkedIn. This implies that many students were not familiar with LinkedIn usage (Table 10).

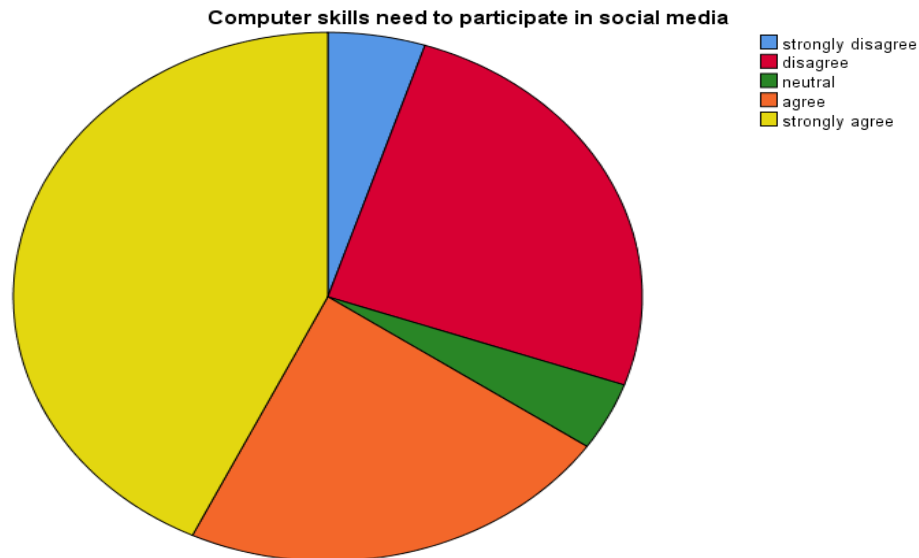
#### 4.5.3 Factors that affect social media use

This section looked at the factors that affect social media use. The study looked at computers skills, computer training, inappropriate language, unclear content, reliance on social media for academic assignments, IT availability, and internet availability. Frequencies were presented in tabular form. Pie charts were also used for presentation of results.

Table 11 and figure 10 looked at the students' computer skills need to participate in social media.

*Table 11: Computer skills need to participant in social media*

		Frequency	Percent	Valid Percent
Valid	strongly disagree	12	5.0	5.0
	disagree	61	25.2	25.4
	neutral	10	4.1	4.2
	agree	54	22.3	22.5
	strongly agree	103	42.6	42.9
	Total	240	99.2	100.0
Missing	missing	2	.8	
Total		242	100.0	



*Figure 10: Computer skills need to participant in social media*

Students were asked whether they have the necessary computer skills needed to participate in social media. The majority of students agreed (42.9%). A few were neutral; students (4.2). This, therefore, suggests that students believe that they need computer skills to participants effectively in social media (Table 12).

Table 12 and figure 11 looked at whether students need a computer training to participate in social media.

*Table 12: Computer training needed to use social media*

		Frequency	Percent	Valid Percent
Valid	strongly disagree	23	9.5	9.5
	disagree	70	28.9	28.9
	neutral	23	9.5	9.5
	agree	83	34.3	34.3
	strongly agree	43	17.8	17.8
	Total	242	100.0	100.0

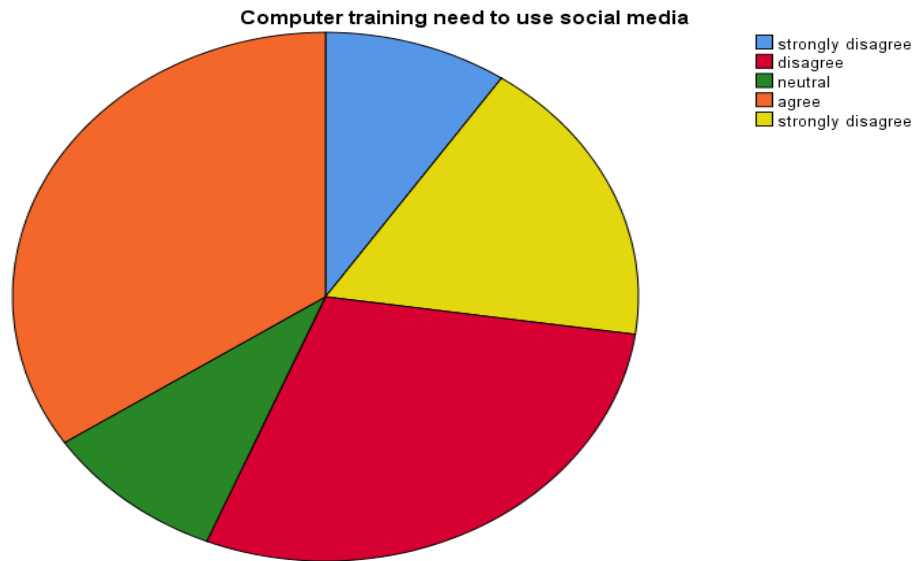


Figure 11: *Computer training needed to use social media*

Students were asked whether they need computer training to participate in social media. The majority of students agreed (34.3%) and agreed (17.8%). A few students were neutral and strongly disagreed (9.5%). This means that most students are equipped and do not need computer training to participate in social media (Table 13).

Table 13 and figure 12 looked at whether inappropriate language is a concern in social media use.

Table 13: *Inappropriate language is a concern*

		Frequency	Percent	Valid Percent
Valid	strongly disagree	19	7.9	7.9
	disagree	25	10.3	10.3
	neutral	40	16.5	16.5
	agree	113	46.7	46.7
	strongly agree	45	18.6	18.6
	Total	242	100.0	100.0

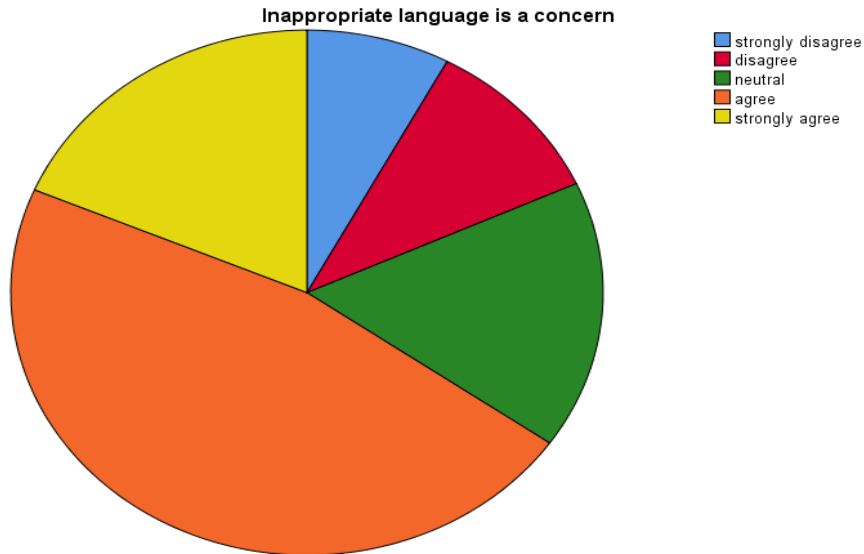


Figure 12: *Inappropriate language is a concern*

Students were asked whether they believe that inappropriate language is a concern in social media. About 46.7% of students agreed. A minority believed that language used in social media is appropriate (students – 7.9%). This, therefore, implies that most of the students believe that inappropriate language use on social is a concern (Table 14).

Table 14 and figure 13 looked at the unclear content as a concern in the use of social media.

Table 14: *Unclear content is a concern*

		Frequency	Percent	Valid Percent
Valid	strongly disagree	8	3.3	3.3
	disagree	22	9.1	9.1
	neutral	78	32.2	32.4
	agree	64	26.4	26.6
	strongly agree	69	28.5	28.6
	Total	241	99.6	100.0
Missing	missing	1	.4	
Total		242	100.0	

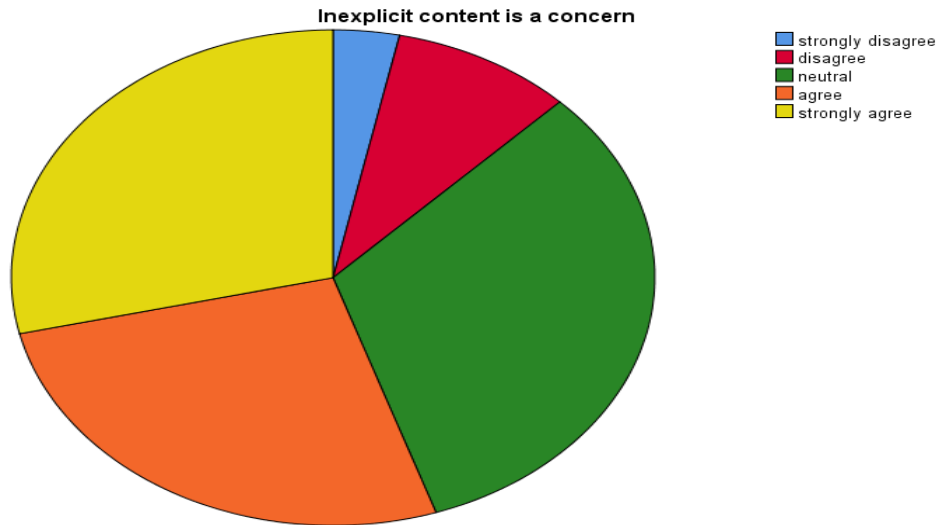


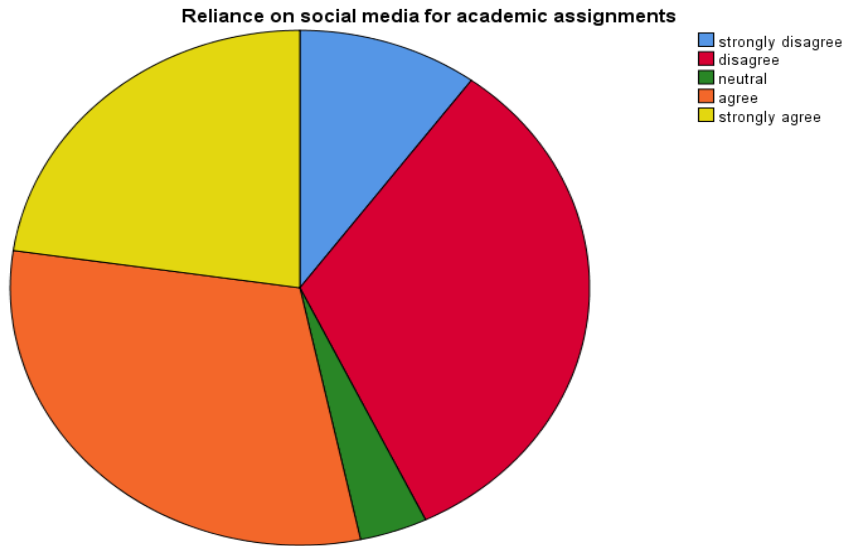
Figure 13: *Unclear content is a concern*

The majority of students (32.4%) were neutral on the issues of unclear content shared on social media. In addition, a few students (3.3%) strongly disagreed, while 28.6% and 26.6% strongly agreed and agreed respectively. Unclear content on social media is a concern to the greatest number of students in the Universities of Lesotho (Table 15).

Table 15 and figure 14 looked at the students' reliance on social media for academic assignments.

Table 15: *Reliance on social media for academic assignments*

		Frequency	Percent	Valid Percent
Valid	strongly disagree	24	9.9	10.1
	disagree	78	32.2	32.8
	neutral	9	3.7	3.8
	agree	73	30.2	30.7
	strongly agree	54	22.3	22.7
	Total	238	98.3	100.0
Missing	missing	4	1.7	
Total		242	100.0	



*Figure 14: Reliance on social media for academic assignments*

This question inquired whether students rely on social media for their academic assignments. The majority (53.4%) of students agreed (30.7% and 22.7%) disagreed. In addition, a minority were neutral (3.8%). This suggests that students believe that social media assists them with their academic work while few do not (32.8% and 10.1%). (Table 16).

Table 16 and figure 15 looked at whether IT support available in order to use social media.

*Table 16: IT support availability*

		Frequency	Percent	Valid Percent
Valid	strongly disagree	24	9.9	10.0
	disagree	46	19.0	19.2
	neutral	50	20.7	20.8
	agree	85	35.1	35.4
	strongly agree	35	14.5	14.6
	Total	240	99.2	100.0
Missing	missing	2	.8	
Total		242	100.0	

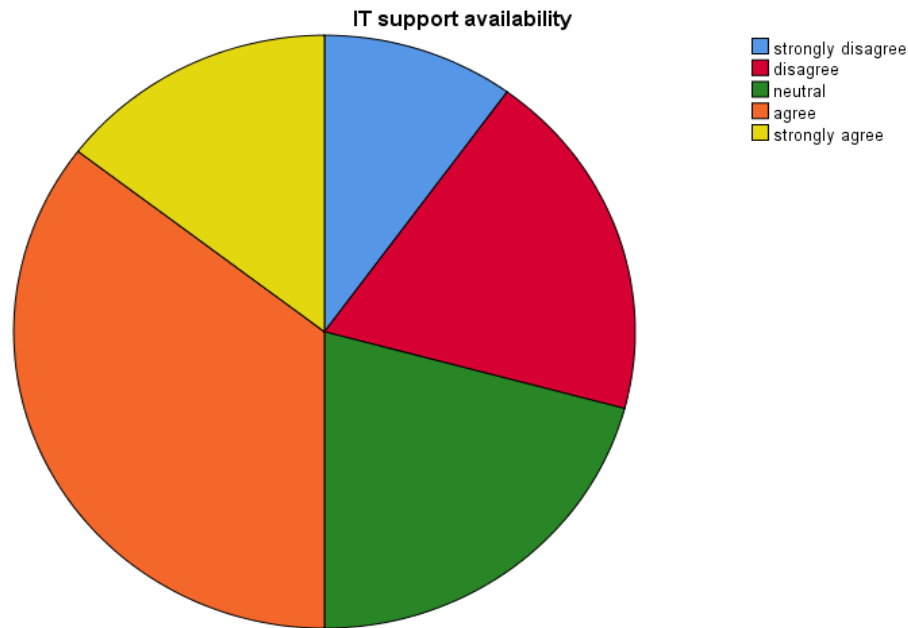


Figure 15: *IT support availability*

Table 17 and figure 16 looked at internet availability in order to use social media.

Students were asked whether there is information technology support/assistance from information technology personnel. About 50% agreed while (35.4% strongly agreed and 14.6%) strongly disagreed. A large number remained neutral (20.8%). IT support for the use of social media is available for students at Universities in Lesotho (Table 17).

Table 17: *Internet availability*

		Frequency	Percent	Valid Percent
Valid	Yes	237	97.9	97.9
	No	5	2.1	2.1
	Total	242	100.0	100.0

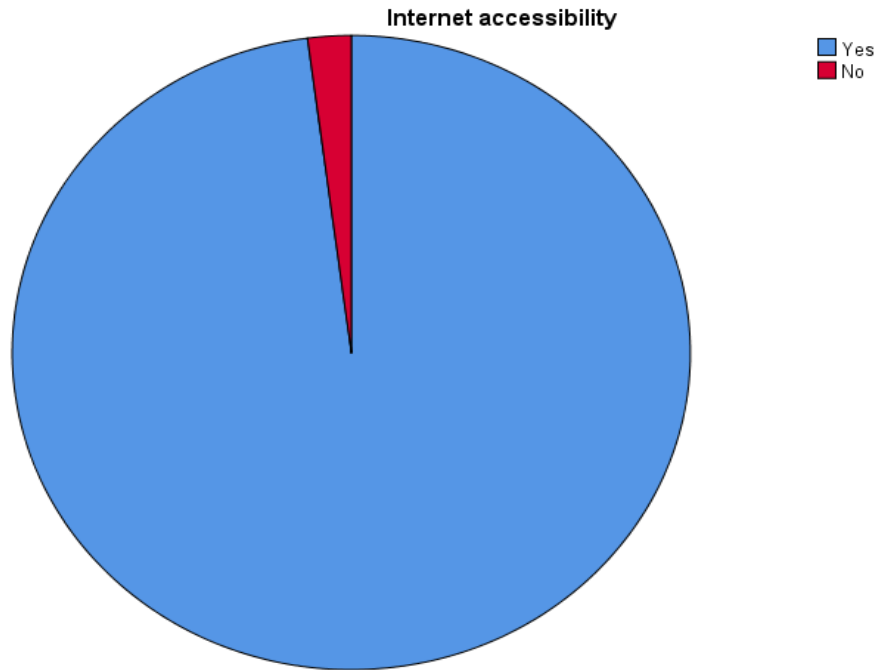


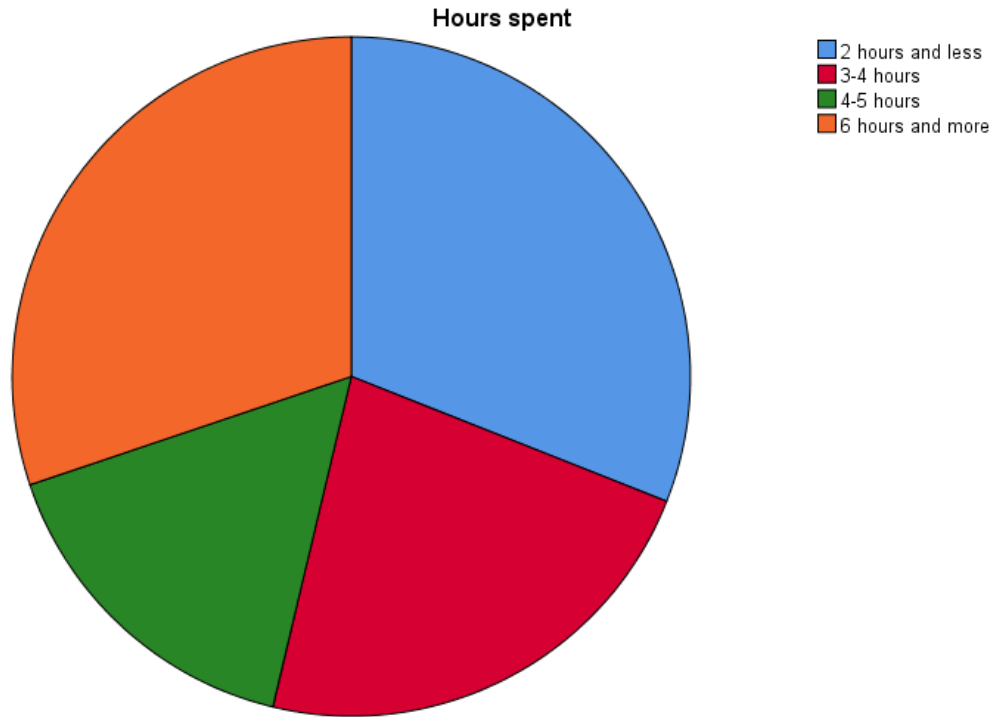
Figure 16: *Internet availability*

The majority of students (97.9%) have internet accessibility on their campuses. This means that students from three Lesotho’s Universities agree that there is internet accessibility at their Universities, and therefore they are able to be exposed to social media (Table 18).

#### 4.5.4 Actual use of social media

Table 18: *Hours spent*

		Frequency	Percent	Valid Percent
Valid	2 hours and less	75	31.0	31.0
	3-4 hours	55	22.7	22.7
	4-5 hours	39	16.1	16.1
	6 hours and more	73	30.2	30.2
	Total	242	100.0	100.0



*Figure 17: Hours spent*

Majority (31.0%) of students spent 2 hours and less of social media daily followed by those who spent 6 hours and more (30.2%). About 22.7% spent 3-4 hours while minority spent 4-5 hours daily. Looking at the scale, it was concluded that student spent few (31.0% and 22.7%) hours daily on social media.

#### 4.6 Chi-square test

Chi-square test and Pearson product-moment correlation coefficient were performed to discover relationships among variables (Pallant, 2016).

##### 4.6.1 The degree of familiarity in use of social media in Lesotho universities

This section looked at the degree of familiarity in the use of social media by students in the Universities of Lesotho.

This section inspected the familiarity of social media use among the students. The extent of familiarity was matched with age, gender, period of schooling and the highest level of education. Table 19-21 represents the extent of familiarity with each of the examined social media platforms.

Table 19, Looked at the familiarity with the usage of social media in Lesotho Universities based on students' age. Facebook, YouTube, WhatsApp, Twitter, Skype, and LinkedIn were studied.

*Table 19: Familiarity with the usage of social media in Lesotho Universities based on students' age*

Social media platforms	Age	Familiarity						Chi-square analysis	
		1	2	3	4	5	N/A	Pearson Chi-square value	P-value
<b>Facebook</b>	18-20	1	0	1	2	9	-	18.963	0.089
	21-29	13	11	32	32	127	-		
	30-39	1	1	2	2	7	-		
	40-49	0	1	2	0	0	-		
	<b>Total</b>	<b>15</b>	<b>13</b>	<b>35</b>	<b>36</b>	<b>143</b>	-		
<b>YouTube</b>	18-20	2	0	0	1	10		15.048	0.239
	21-29	14	11	19	37	132			
	30-39	0	0	3	1	8			
	40-49	0	0	0	1	0			
	<b>Total</b>	<b>16</b>	<b>11</b>	<b>22</b>	<b>40</b>	<b>150</b>	<b>3</b>		
<b>WhatsApp</b>	18-20	1	0	-	2	10		20.570	0.057
	21-29	12	4	-	28	169			
	30-39	1	0	-	3	9			
	40-49	0	0	-	1	0			
	<b>Total</b>	<b>14</b>	<b>4</b>	-	<b>34</b>	<b>188</b>	<b>2</b>		

<b>Twitter</b>	18-20	5	1	3	2	2		10.872	0.540
	21-29	77	23	37	28	44			
	30-39	4	0	5	2	2			
	40-49	0	0	1	0	0			
	<b>Total</b>	<b>86</b>	<b>24</b>	<b>46</b>	<b>32</b>	<b>48</b>	<b>6</b>		
<b>Skype</b>	18-20	10	2	0	1	0		18.613	0.098
	21-29	122	25	19	20	27			
	30-39	6	0	5	0	2			
	40-49	1	0	0	0	0			
	<b>Total</b>	<b>139</b>	<b>27</b>	<b>24</b>	<b>21</b>	<b>29</b>	<b>2</b>		
<b>LinkedIn</b>	18-20	13	0	0	0	0		10.924	0.206
	21-29	136	22	21	12	21			
	30-39	6	2	2	2	1			
	40-49	0	0	1	0	0			
	<b>Total</b>	<b>155</b>	<b>24</b>	<b>24</b>	<b>14</b>	<b>22</b>	<b>3</b>		

Table 19 looked at the degree of familiarity with the usage of social media platforms in Lesotho Universities based on the age of the students. It was found that many students indicated that they were extremely familiar with Facebook, WhatsApp, and YouTube compared to the other platforms. When investigating further using cross-tabulation analysis, it was established that there was no statistically significant association between age and Facebook, WhatsApp, and YouTube as the p value was bigger than 0.05 for all of them. However, when looking at Twitter, Skype, Dropbox and LinkedIn: the majority of the students indicated that they were extremely unfamiliar with these platforms. When performing Chi-square analysis: there was no association amongst age when matched with Twitter, Skype and LinkedIn familiarity. This means the results are likely to occur by chance or randomly (p values greater than 0.05).

Table 20 Looked at the familiarity with the usage of social media in Lesotho Universities based on students' gender. Facebook, YouTube, WhatsApp, Twitter, Skype, and LinkedIn were studied.

*Table 20: Familiarity with the usage of social media in Lesotho Universities based on students' gender*

Social media platforms	Gender	Familiarity						Chi-square analysis	
		1	2	3	4	5	N/A	Pearson Chi-square value	P-value
<b>Facebook</b>	Female	10	5	26	24	86		5.989	0.209
	Male	5	8	9	12	57			
	<b>Total</b>	<b>15</b>	<b>13</b>	<b>35</b>	<b>36</b>	<b>143</b>	-		
<b>YouTube</b>	Female	12	7	14	25	90		0.078	0.837
	Male	4	4	8	15	60			
	<b>Total</b>	<b>16</b>	<b>11</b>	<b>22</b>	<b>40</b>	<b>150</b>	3		
<b>WhatsApp</b>	Female	7	4	-	15	125		9.537	0.023
	Male	7	0	-	19	63			
	<b>Total</b>	<b>14</b>	<b>4</b>	-	<b>34</b>	<b>188</b>	2		
<b>Twitter</b>	Female	57	13	23	23	31		5.574	0.233
	Male	29	11	23	9	17			
	<b>Total</b>	<b>86</b>	<b>24</b>	<b>46</b>	<b>32</b>	<b>48</b>	6		
<b>Skype</b>	Female	92	13	17	12	16		4.812	0.307
	Male	47	14	7	9	13			
	<b>Total</b>	<b>139</b>	<b>27</b>	<b>24</b>	<b>21</b>	<b>29</b>	2		
<b>LinkedIn</b>	Female	103	14	13	6	12		4.758	0.313
	Male	52	10	11	8	10			
	<b>Total</b>	<b>155</b>	<b>24</b>	<b>24</b>	<b>14</b>	<b>22</b>	3		

In Table 20, a cross-match was done to see the extent of familiarity with social media platforms in Lesotho Universities based on students' gender. The same results in terms of the age variable were observed (Table 19). When performing the chi-square analysis, it was recognized that none of the social media platforms had any statistically significant associations with gender. This suggested that gender does not contribute to the degree of familiarity with any of the social media platforms.

Table 21 Looked at the familiarity with the usage of social media in Lesotho Universities based on students' level of study. Facebook, YouTube, WhatsApp, Twitter, Skype, and LinkedIn were studied.

*Table 21: Familiarity with the usage of social media in Lesotho Universities based on students' level of study (Highest level of education)*

Social media platforms	Highest level of education	Familiarity						N/A	Chi-square analysis	
		1	2	3	4	5	Pearson Chi-square value		P value	
Facebook	- Secondary/High school	4	2	5	5	37	-	34.809	0.071	
	- Tertiary certificate/Diploma	9	8	22	18	71				
	- Bachelors degree	1	-	3	5	16				
	- Honours degree	1	2	4	5	18				
	- Masters degree	-	1	-	8	-				
	<b>Total</b>		<b>15</b>	<b>13</b>	<b>35</b>	<b>36</b>	<b>143</b>			

YouTube	- Secondary/High school	-	1	6	7	39	3	28.218	0.251
	- Tertiary certificate/Diploma	14	8	12	22	69			
	- Bachelors degree	1	-	2	6	16			
	- Honours degree	1	2	2	3	25			
	- Masters degree	-	-	-	1	-			
	<b>Total</b>	<b>16</b>	<b>11</b>	<b>22</b>	<b>40</b>	<b>150</b>			
WhatsApp	- Secondary/High school	2	-	-	13	37	2	23.439	0.494
	- Tertiary certificate/Diploma	9	3	-	13	103			
	- Bachelors degree	1	1	-	3	20			
	- Honours degree	2	-	-	4	26			
	- Masters degree	-	-	-	1	-			
	<b>Total</b>	<b>14</b>	<b>4</b>	<b>-</b>	<b>34</b>	<b>188</b>			
Twitter	- Secondary/High school	14	6	15	6	11	6	27.172	0.296
	- Tertiary certificate/Diploma	55	10	14	16	28			
	- Bachelors degree	7	3	10	2	3			
	- Honours degree	10	5	5	7	6			
	- Masters degree	-	-	1	-	-			
	<b>Total</b>	<b>86</b>	<b>24</b>	<b>46</b>	<b>32</b>	<b>48</b>			
Skype	- Secondary/High school	27	8	5	5	8	2	34.008	0.085
	- Tertiary certificate/Diploma	84	11	9	13	10			
	- Bachelors degree	12	4	4	-	5			

	- Honours degree	15	4	4	3	6			
	- Masters degree	1	-	-	-	-			
	<b>Total</b>	<b>139</b>	<b>27</b>	<b>24</b>	<b>21</b>	<b>29</b>			
LinkedIn	- Secondary/or High school	32	8	5	4	4	3	10.410	0.960
	- Tertiary certificate/Diploma	87	10	12	5	12			
	- Bachelors degree	14	4	2	3	1			
	- Honours degree	20	2	4	2	5			
	- Masters degree	-	-	1	-	-			
	<b>Total</b>	<b>155</b>	<b>24</b>	<b>24</b>	<b>14</b>	<b>22</b>			

Table 21 showed the results of the extent of familiarity with social media platforms in Lesotho Universities matched with the highest level of education of students. With Facebook, WhatsApp, YouTube and Google plus, the research found that some students were extremely familiar with them. The same trend was observed with gender and age independent variables (Table 19 & 20). When performing the chi-square analysis, it was discovered that none of the social media platforms had any statistically significant association with the level of education. This suggested that the level of education does not contribute to the degree of familiarity with any of the social media platforms.

#### 4.6.2 Factors that influence the use of social media

Table 22 showed the chi-square analysis for factors that influence student's use of social media. Student's demographics and factors that affect use of social media were cross-tabulated to examine if there were any associations. A Pearson Chi-square calculation was used to discover the association amongst variables.

Table 22: *Factors that affect use of social media*

Question	Variables	Pearson Chi-square value	P value
Unclear content is a concern	Gender	4.115	0.391
	Age	15.225	0.287
	Level of education	17.606	0.822
Inappropriate language is a concern	Gender	7.466	0.114
	Age	16.596	0.165
	Level of education	22.836	0.530
Computer skills needed to participate in social media	Gender	0.464	0.977
	Age	8.674	0.731
	Level of education	20.536	0.666
IT support is available	Gender	5.251	0.263
	Age	11.300	0.503
	Level of education	25.394	0.385
Internet availability	Gender	0.674	0.412
	Age	2.374	0.498
	Level of education	49.288	0.000
Reliance on social media	Gender	1.500	0.827
	Age	8.690	0.729
	Level of education	17.447	0.829
Computer training needed to use social media	Gender	1.885	0.757
	Age	18.337	0.106
	Level of education	25.868	0.360

When looking at age, gender, and level of education in association with unclear content, inappropriate language, computer skills needed to participate, information technology support,

reliance on social media, and computer training, no association was found. All p values were greater than 0.05. This means the results from the table above are unlikely to be attributable to a specific cause.

However, with internet availability, an association with level of education was found ( $p < 0.05$ ) but none was found with gender and age. This means relationship does exist between internet availability and level of education.

Table 23 below looked number of hours spent on social media daily.

#### 4.6.3 Hours spent

*Table 23: Hours spent*

Question	Variables	Pearson Chi-square value	P value
Number of hours spent on social media daily	Age	8.554	0.479
	Gender	7.921	0.048
	Level of study	13.446	0.764

When looking at the association between hours spent daily on social media and demographics (age, gender, and level of study), no association was found. All p values were greater than 0.05.

#### 4.7 Discussion of results

From Chapter 1 to Chapter 2, research topic of this study was outlined. In Chapter 2: an overview of the literature and conceptual framework were presented. The first research question of this study focused on the effect of social media on students' learning. It was evident that many that majority

of students appreciated effects of social media on learning. The second research question looked at the degree of familiarity of social media use in Lesotho Universities. Different social platforms were discussed. The third research question focused on the factors that influence user's acceptance of social media. Factors that influence users' acceptance of social media were tabulated. Literature from different sources were used to establish these factors. This following section focused on the extent to which the results enable the study to answer the research questions. The results and research questions were further linked to the proposed conceptual framework.

#### 4.7.1 Objective 1: To understand the effect of social media on students' learning

As mentioned earlier, this research question relied entirely on secondary data. Constructs adopted from the conceptual framework of Montebon (2017), namely creation, connecting, content, and collaboration. Different sources confirmed that the four have a very strong effect on the use of social media (Section 4.5.1). Based on the findings the following was concluded:

Connecting – using social media makes it easy to share and access information, leading to the connection among students themselves, their teachers/lecturers, and globally where they can get particular knowledge in their field of interest. Mowafy (2018) found that most of the students (72.55) use WhatsApp as an alternative medium to share information among themselves. In addition, in a study by Wok, Idid & Mismar (2012) it was discovered that about (71.6%) students use social media for sharing information with each other.

Ali-Hassan & Nevo (2016) noted that social media has an ability to provide with access to information for students. In addition, Kümpel, Karnowski & Keyling (2015) study found that Twitter, followed by YouTube were most social media platforms used for sharing information among students. These findings from the above authors agree with the conceptual framework of Bexheti et al. (2014) which assert that connecting as an aspect of social media has an effect on student' learning.

Collaboration – social encourages teamwork. This means students can work together to accomplish a definite objective. Thus, using social media in the classroom inspires the combination of resources and gathering of professionals towards a mutual objective.

Many studies have concluded that social media encourages teamwork among students and their lectures/teachers. The study of Alotaibi & Bull (2012) confirmed that students share and discuss knowledge using different social media as a learning tool. It was also noted that students prefer using social media than face-to-face discussion. In the study conducted by Lofters, Slater, Angl & Leung (2016) students also admitted that they use different media sites for collaboration and communication. In addition, Suwannathachote & Tantrarungroj (2012) also conducted a study which showed that students used social media to post, comment and communicated with their peers in the group discussion. Furthermore, social media platform, particular Facebook, was found to be dominant for collaborative work in the group projects. Looking at framework, literature above confirms the collaborations effect on students' learning.

Content - The social media offers students with open and accessible knowledge that can lead them to develop lifelong learners. It also levels the learning opportunity for every student and subject preparation for Higher Education institutions. In a study by El-Badawy & Hashem (2015) the findings suggested that students use social media platforms with their maths homework since they can use Google for the equations. Therefore, most of them use social media in a positive way, which helps them do better at school. Talaue, AlSaad, AlRushaidan, AlHugail & AlFahhad (2018) believe that often students do not absorb all the information shared with them during academic lessons. Therefore, they use social media to assist them to supplement face-face classroom lessons. In a study by Aillerie & Mcnicol (2016) it was revealed that 55.8% of students use social media to seek information often, and 23.7% of them rarely sort information, while only few 18.8% of the students never seek information from the social media platforms. Content incorporates 'free of charge' information. Students seek enormous variety of learning material free of charge. Aillerie & Mcnicol (2016) confirmed that students get learning material such related to friends (69.8%), cultural events (56.0%), international news (49.3%), health (14.8%), and practical information

(17.5%) free of charge through use of social media. These findings are all, in line with the framework which asserts that content have an effect on students' learning.

Creation – students used social media to produce digital content on their own and even broadcast it online which creates an advantage for both the teachers and learners, hence, boosting additional active and proactive methods to learning. According to Bexheti et al. (2014) conceptual framework creation have an effect on students' learning. This is confirmed by the study of Delello & McWhorter (2014) where 96% of students considered social media effective for creation.

#### 4.7.2 Objective 2: To understand the degree of familiarity of social media use in Lesotho Universities

The degree of familiarity of social media for scholastic commitments is mainly regulated by socio-demographic variables; age, gender, level of education, marital status, and employment status (Bartosik-Purgat, Filimon & Kiygi-Calli, 2017). For this study, age, gender, and level of education were the variables used. The following study discussed below agree with the Theory of Familiarity - Heidegger's interpretation of familiarity which states that familiarity comprises of the idea of understanding. Heidegger believes that familiarity is mostly subjective, and it involves the individual's understanding of themselves in their being-in-the-world. Considering both the results of this study and other related studies, students are familiar with most of the social media platforms. Heidegger considers confidence, success, easiness, and performance as recognisable signs and outcomes of familiarity.

The findings of this study revealed that students are more familiar with WhatsApp, with the total of (78.3%) confirming that, followed by YouTube with (62.8%) of student using it and about (59.1%) of student use Facebook. This is in line with the findings of the study by Alabdulkareem (2015) where teachers and students used WhatsApp as the main tool in preference to any other social media platform. The findings of this study contradicted the results of the survey undertaken by Schmucki et al. (2009), where educators were more familiar with Facebook, followed by MySpace and LinkedIn more than any other social media platform and they valued these

technologies for educational purpose. In the study conducted by Tawiah & Nondzor (2015), respondents were given a list of some social media sites to specify their familiarity. Their study focused on Facebook, LinkedIn, Twitter, and YouTube as social media platforms, and the results indicated that the majority of participants, 99% were more familiar with Facebook followed by YouTube with 98,5%.

Comparing the four social media sites (Facebook, LinkedIn, Twitter, and YouTube) in the same study conducted by Tawiah & Nondzor (2015), LinkedIn had (68.5%) followed by Twitter with (50.8%) were the least social media sites which respondents were familiar with. The same results were also confirmed in this current study, where majority of the participants were unfamiliar with LinkedIn had (64.9%) followed by Skype with (57.9%) and Twitter had (36.4%). Liu (2018) believes that students' familiarity with Twitter for academic purpose depends on pre-existing use by such students. Nsizwana, Ige & Tshabalala (2017) conducted a study at University of Zululand and the results suggested that respondents were more familiar with Facebook and least with LinkedIn.

However, a study conducted by Paliktzoglou, Giousmpasoglou & Marinakou (2016) revealed that generally most of the students were highly aware and familiar with social media and the majority were active and regular users of social media.

#### 4.7.3 Objective 3: Determining factors that influence the use of social media

Factors which influence the use of social media investigated by this study included; Inappropriate language, unclear content, internet availability, computer support, training and skills, assistance and reliance on social media for academic assignments (Table 11-17).

Students were asked whether they believe that inappropriate language is a concern in social media. The results indicated that about 46.7% of students agreed. This implies that most of the students believe that inappropriate language use on social is a cause for concern (Table 13). Chen, Zhu, Zhou & Xu (2012) pointed out that social media's textual content online is often misspelled,

informal, and highly unstructured. Secondly, Wilson (2018) also pointed out that a decreasing rate of intellectual excellence is inextricably linked to social media usage. Thirdly, Thurairaj et al. (2015) argued that social media language has negatively influenced numerous areas particularly, teaching and learning, especially English language proficiency. Kawate & Patil (2017) categorised social media as one of the platforms where the use of offensive language is practised leading to depression, frustration, and a significant change in students' behaviour.

The issue of unclear content on social media is a cause for concern to most of the students in the Universities of Lesotho as revealed by the study (Table 14). Majority of the students (28.6%) agreed with the issue of unclear content of social media, while 26.6% strongly agreed. This is in line with findings of Akakandelwa & Walubita (2017) where social media was blamed for causing a profound damage on the language skills such as grammar and spellings for students due to their exposure to social media.

Reliance on social media for academic assignments (Table 15). This question inquired whether students rely on social media for their academic assignments. The majority (30.7%) that they rely on social media for academic assignments. It is believed that using social media assists in dissemination of important course information to students (Akakandelwa & Walubita, 2017). In addition, Akakandelwa & Walubita (2017) discovered that the use of social media could reduce tension. Thirdly, the study by Hocevar et al. (2014) revealed that some students depend and rely on the opinions of others.

Students were asked whether there is information technology support/assistance from IT personnel (Table 16). About 50% (35.4% and 14.6%) agreed and strongly agreed. IT support for the use of social media is available for students at Universities in Lesotho. Lack of technical support may hinder use of social media in institutions. Ghavifekr et al., (2016) study found that one of the top hindrances to ICT use in education was absence of technical assistance in institutions. In addition,

Suryani (2010) believes that schools do not afford enthusiastic support for teachers and student to use technology in class.

The majority of students (97.9%) have internet access on their campuses (Table 17). This confirms that generally, students from three Lesotho's Universities accept that there is internet accessibility at their Universities, and therefore they are able to connect to social media. Goodwill Community Foundation (2013) believes that internet availability and connectivity is one of the major requirements of social media use in order to access and share information while also interacting and connecting with people.

Students were asked whether they need computer training to participate in social media (Table 12). The majority of students agreed (34.3%) This means that most students are not equipped and do need computer training to participate in social media (Table 13). This results agree with Alabdulkareem (2015) where it was believed that learners and educators need training in order to evaluate and boost their abilities to use available social media platforms. In addition, Schmucki et al., (2009) study revealed that there is a need for teaching and supervision on how to effectively use social media. Thirdly, Public Media Alliance & UNESCO (2017) also argued that participants of social media need technical training. Suryani (2010) pointed out that lack of of computer training is one of the barriers which affects utilisation of any computer-based or internet-based applications. The same was found by Ghavifekr et al., (2016) that lack of training is one of the top three barriers to teachers' and students' use of ICT.

Students were asked whether they have the necessary computer skills needed to participate in social media (Table 11). The majority of students agreed (42.9%). This means majority of students are able to chat, share, save, and upload information on social media.

Majority (31.0%) of students spent 2 hours and less daily on social media (Table 18). However, Ünal (2018) believed that although social media tools assure people to socialise with less effort in virtual environments, they also take people away from face-to-face communication Ünal (2018).

Findings of this study agree with El-Badawy & Hashem (2015) where the study revealed that students spent at least 1-3 hours on social media daily. Additional study which revealed the same findings is of Kolan & Dzandza. (2018) where it was revealed that majority (50.3%) spent at least 2 hours or more on social media. This is however in contrary with Paliszkiewicz et al., (2017) where it was discovered that students spent 4 hours on social media daily.

#### 4.8 Conclusion of the study

From literature review, analysis and discussion, the study concluded the following. Effects of social media which affect students' included content, collaboration, creation, and creativity. The study found that the four effects do have positive impact in students' learning. The second object of the study was to look at the extent of the social media familiarity on different social media platforms. Oyelere, Paliktzoglou & Suhonen (2016) study revealed that the majority of respondents were very familiar with chat tools, social network tools, media sharing and m-learning tools. In contrast, some respondents were less familiar with social bookmarking, audio and video podcasts. Many researchers have confirmed that social media is used for various purposes, it has been revealed that social media is mostly used for teaching, learning and sharing (Tawiah & Nondzor, 2015).

This study discussed different factors that influence students' use of the social media. Results in line with this were discussed in the previous section. The study also concluded that majority of students spend less hours (2 hours or less) on social media daily.

## 4.9 Chapter summary

This chapter examined data with the intention of drawing conclusions from the information. Data was quantitative. SPSS Version 25 was used to analysis the data. The study used different approaches to analyse data which include; inferential techniques, frequency analysis and descriptive statistics. Inferential techniques that include chi-square test values and corrections were used to interpret the data using p-values. Furthermore, frequency analysis, descriptive statistics, and literature review presented in both graphs and tables were also used in order to respond to some of the questions in the study. In addition, questionnaire results were connected back to research questions and further supported with literature as noted in Chapter 2.

## **CHAPTER 5 –RECOMMENDATIONS, LIMITATIONS AND FUTURE RESEARCH**

### **5.1 Introduction**

The former chapter looked at the research results of this study by linking the research objectives, findings and theory. It further made recommendations based on the discoveries and limitations of the study.

### **5.2 Recommendations of the study**

- Social media ought to be included in institutions as teaching and learning tools. Merits allied to the use of social media as noted were sharing experiences and knowledge over social media, which permits students to work together and to share their projects. Social media also encourages enriched content such as videos and webcast material rather than just text (Edosomwan et al., 2011). Both students and staff can share and spread information and gauge opinions in a relatively inexpensive way. Social media also stimulates growth in communication skills amongst students/learners at educational institutions. In addition, social media have other benefits that include collaboration and communication, development of technical and writing skills that could be seen as advantages of integrating social media into teaching and learning. In conclusion, content, connect, and collaboration were considered as major effects of social media for teaching and learning.
- It is significant for institutions not to overlook some of the downfalls of social media for educators and scholars. Cyber-bullying, health-related issues, emotional detachment, privacy, and miscommunication were identified as aspects that institutions can look into. Social media can also be a source of distractions and therefore affect students negatively.

- It is also important to note that educators and scholars do not rely solely on social media content for their academic assignments. It is suggested that other sources of information should still be in place.
- Factors influencing the use of social media include; 1) Unclear content. Ling (2015) believe the level of English grammar has deteriorated. This suggests that the content shared on social media did not pay attention to language forms which result in grammatically incorrect sentences. 2) Inappropriate language. The textual content on social media is often misspelled, informal, and highly unstructured. The users are also vulnerable to vulgar language and therefore they are concerned about the kind of language that cause humiliation. 3) Computer skills, training and support are important to consider computer skills and training in order to participate in social media (Public Media Alliance & UNESCO, 2017). The provision of technical support to users to utilise social media functionality needs to be considered.
- Institutions should be aware that students are more familiar with some social media platforms rather than others. This will assist in using or implementing suitable social media platforms. Facebook, YouTube, and WhatsApp are the most social media platforms that students are familiar with.
- It is also noted that students spent 2 hours and less on social media. This means institutions should note that students spent more time on their means of learning.

### 5.3 Recommendations for future research

- A higher sample size could be used in the future; covering all institutions of higher learning not only the Universities.
- Future research is required in the area but separating private and public institutions of higher learning in Lesotho.
- A study could be piloted on how to integrate social media into learning and teaching in institutions of higher learning.
- Further studies are required in this area to examine whether universities of Lesotho have enough resources to implement and integrate social media into learning and teaching.
- Future research is recommended in line with this research; exhausting qualitative and quantitative research approaches together.
- A study with social media usage and dissimilar or additional demographic profiles is recommended
- Future research can be conducted to evaluate how social media downfalls could be avoided or be dealt with. For instance, improvement of language used and content shared.

### 5.4 Limitations of the study

- Only selected aspects of social media were examined in this study.
- The study did not accommodate how social media downfalls could be avoided.
- The study did not explore whether participants believe that all information technology resources are enough to accommodate social media in their institutions.
- There is a huge difference in sample size among institutions, especially between NUL and Botho University. This is caused by years of existence, private vs public issues, total population, and institution's infrastructure.
- The study used a quantitative research approach only.

- Random sampling technique is mostly associated with qualitative research (Taherdoost, 2016). This, therefore, means that the study ignored all benefits of non-random technique.

## 5.5 Chapter summary

This chapter provided an analysis of the results. It further made recommendations, suggested for future studies, and declared boundaries of the study and research methodology. The study found that educators and scholars positively value social media for educational purposes. They are however mindful of the downside of using social media. Some participants in this study were more familiar with some of the social media platforms than others. Looking at the factors such as inappropriate language, unclear content, internet availability, computer support, computer skills, computer training, and reliance and assistance that influence social media use for learning; no relationship was found. However there was an exception with internet availability and level of study where a relationship was found. This means results are not likely to occur randomly or by chance but instead likely to be attributable to a specific cause.

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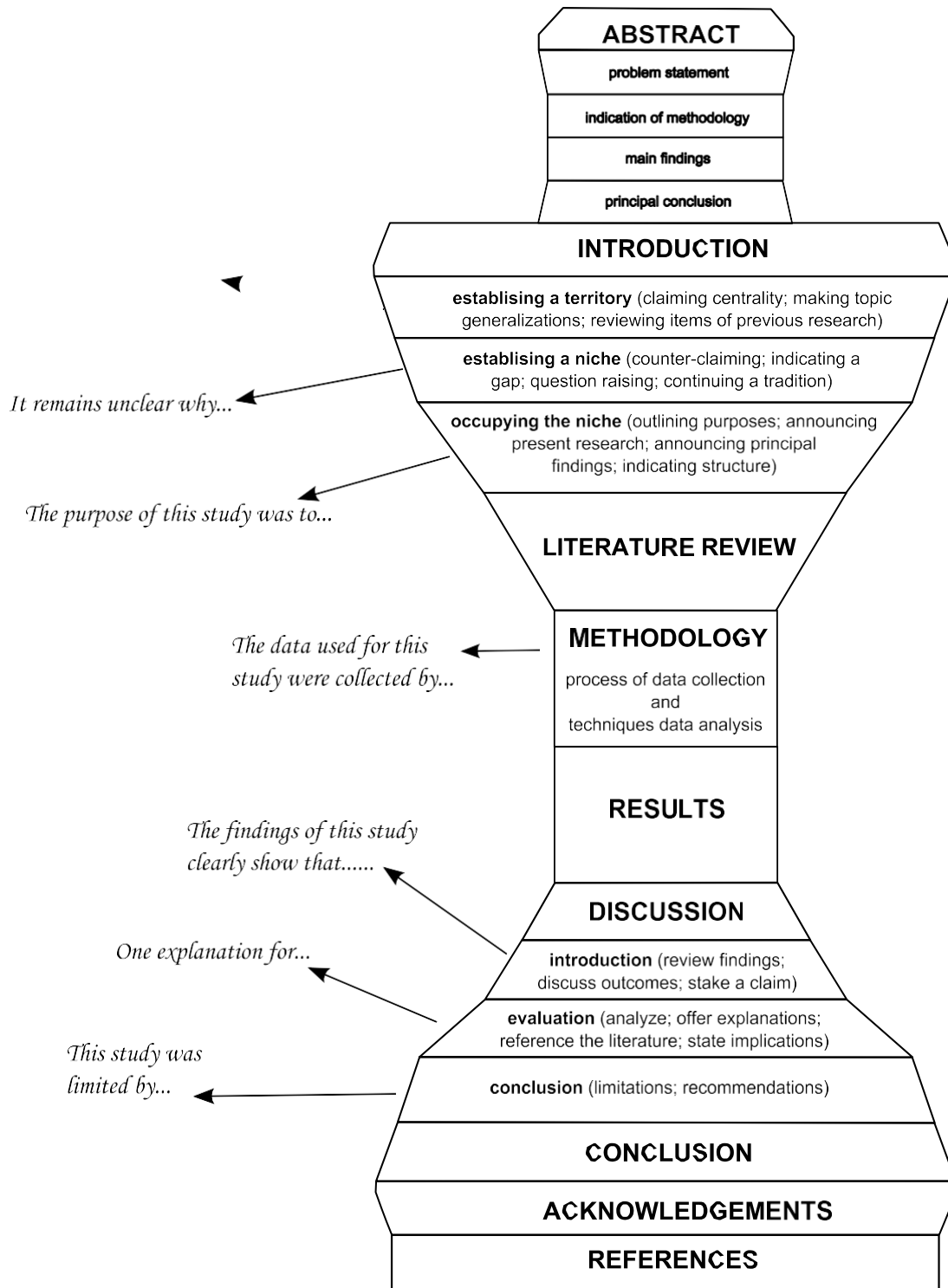
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Appendix 1 - Typical research article structure (Burrows T., 2011:89)



## Appendix 2- Gate keeper's letters from NUL, LUCT and Botho University

### THE NATIONAL UNIVERSITY OF LESOTHO

Telephone: 266 52213807  
              +266 22340264  
              266 22340601  
Fax: +266 22340000  
Website: <http://www.nul.ls>



P.O. Roma 180,  
Lesotho,  
Africa.

OFFICE OF THE REGISTRAR

22<sup>nd</sup> May 2015

REF: REG/ADM-1.37  
LM-L/hym1

Ms. Kolitsoe Sehapi  
P.O. Box 10890  
Maseru 100  
Lesotho

Dear Ms Sehapi

**Re: Request for Data Collection at the National University of Lesotho**

The National University of Lesotho (NUL) is in receipt of your application to collect data at this institution.

After careful consideration of all relevant facts, the University has agreed to allow you to continue with your assignment as requested. It is hoped that the research outcome will be beneficial to both the institution of Higher learning and the country at large.

By copy of this letter the Dean Faculty of Science and Technology and Director Students Affairs are requested to assist you with all the necessary information you need to carry out your assignment.

Yours sincerely,

  
L. Maqalika-Lerotholi  
Registrar

Cc: Pro Vice Chancellor  
Dean - FOST  
Director Students Affairs



**GABORONE:**  
Botho Education Park, Kgale,  
Gaborone  
P.O. Box 551564, Gaborone,  
Botswana  
Tel: +267 301 9100 / 301 9655  
Fax: +267 318 7818

**FRANCISTOWN:**  
Plot 6434 Tlo River Flots,  
Francistown  
P/Bag F451, Francistown,  
Botswana  
Tel: +267 244 0586  
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**LESOTHO CAMPUS:**  
Maseru Mall, West Wing  
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Lesotho  
Tel: +266 383 3742  
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**NAMIBIA CAMPUS:**  
Office No. 1001, Ausaarapina  
Aussarapina  
11 - 13, Dr. Augustino Naco Street  
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Windhoek, Namibia



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**Ref: BU/MSU/EDU/2018/001**

19<sup>th</sup> October 2018

Kolitsoe Sehapi  
P.O. BOX 10890  
Maseru 100  
Lesotho


Dear Ms. Kolitsoe,

**RE: PERMISSION TO CONDUCT RESEARCH TOWARDS THE MASTERS QUALIFICATION**

The purpose of this letter is to grant Ms. Kolitsoe Sehapi, at the University of KwaZulu-Natal permission to conduct research at Botho University. The project titled, "The Impact of Social Media at Universities in Lesotho" entails obtaining data through questionnaires from the staff and students at a sample size of one hundred and twenty.

After review of the study protocol, the University hereby grants permission for Ms. Kolitsoe Sehapi to conduct the research at Botho University. It is hoped that the research outcome will be in beneficial to both the institution of Higher learning and the country at large.

Yours Sincerely,

  
Mr Augustin Minalkar  
Education Manager  
Botho University-Lesotho

## Appendix 3 – Questionnaire



### UNIVERSITY OF KWAZULU-NATAL

**School of Management, Information Technology & Governance,  
Discipline of Information Systems and Technology**

#### **M Com Research Project**

**Researcher:** Kolitsoe Sehapi (+266 58781111 / 63738325)

**Supervisor:** Mr Karunagaran Naidoo (031) 260 3526

**Research Office:** (031) 260 7291

I am a Masters student in Information Systems & Technology at the University of KwaZulu-Natal. You are requested to participate in a research project “that is intended to improve the information system of the unit”.

Your participation in this project is voluntary. You may withdraw from the project at any time. There will be no financial gain from participating in this project. Your personal identity and responses will be maintained confidentially.

If there are any questions or concerns about participating in this study, please contact the researcher or my supervisor via the numbers provided above.

Approximately 30 minutes is required to complete the questionnaire. I hope you will take the time to complete the questionnaire.

Yours faithfully

\_\_\_\_\_

Researcher’s Signature: \_\_\_\_\_ Date: \_\_\_\_\_

*This page should be retained by the participant*



**UNIVERSITY OF KWAZULU-NATAL**

**School of Management Information Technology and Governance,  
Discipline Information Systems & Technology**

**M Com Research Project**

**Researcher:** Kolitsoe Sehapi (+266 58781111 / 63738325)

**Supervisor:** Mr Karunagaran Naidoo (031260 3526)

**Research Office:** (031) 260 7291

CONSENT

I \_\_\_\_\_ (full names of participant) hereby confirm that I understand the contents of this document and the nature of the research project, and I agree to participate in the research project. I also understand that I can withdraw from the project at any time.

\_\_\_\_\_

Signature of Participant

\_\_\_\_\_

Date

***This page should be signed and returned to the researcher***



Respondent number: \_\_\_\_\_

Voluntary Questionnaire  
Research Title: **Impact of social media on teaching and learning in higher educational institutions in Lesotho**

Researcher: **Kolitsoe Sehapi (+266 58781111 / 63738325)**

Supervisor: **Mr Karunagaran Naidoo (031260 3526)**

School of Management, Information Systems & Technology and Governance

Faculty

Discipline Information Systems & Technology

University of KwaZulu-Natal, Durban, South Africa

- Please complete this voluntary questionnaire.
- Please be forthright in your answers.
- Complete the questionnaire by pen and please do not revise your initial answers.
- Please indicate your response to the Question by placing a (√) in the appropriate boxes.
- Please sign the letter of informed consent, giving me permission to use your responses for this research project.

**Section A: Biographical Information**

*Please mark only ONE option per question.*

1. Are you a male or a female?

<input type="checkbox"/>	Female
<input type="checkbox"/>	Male

2. What is your age group?

- 18 – 20 years
- 21 – 29 years
- 30 – 39 years
- 40 – 49 years
- 50 – 59 years
- 60 years or older

3. Position/role I occupy within the University

- Academic staff
- Non-academic staff
- Student
- Other (specify).....

4. I belong to ethnic group

Black	Coloured	Indian	White	Other, Specify

5. I am a Lesotho citizen

Yes	No

6. My highest level of education is

- Self-Educated
- Primary School
- Secondary School
- Tertiary Certificate or Diploma
- Bachelors degree
- Honours degree
- Masters degree
- Doctorate/PhD

**Section B**

7. The use of social networks aids in my studies/assignments/research

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

8. I regret information shared/posted over social media

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

9. I evaluate the content published on social networks

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

**Section C**

10. The period of my employment/schooling with the University has been;

- ≤ 2 years
- 3 – 4 years
- 5 – 6 years
- 7 – 8 years
- 9 – 10 years
- > 10 years

11. I am an expert in my field at the University

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

12. I need computer skills to participate in social media

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

13. I need computer training to use social media

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

14. Inappropriate language is a concern in using social media

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

15. Unclear content that might deem inappropriate is a concern in using social media

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

16. Use of social media is socially unacceptable

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

#### **Section D**

17. Social media should only be used in information technology courses

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

18. Social media does not offer me any professional benefit

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

#### **Section E**

19. Social media assists me in doing my work

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

20. I rely on social media to do my academic assignments

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

21. Information technology personnel are available to assist when difficulties arise when one uses social media

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

**Section F**

22. Number of hours spent engaging with social media a day

	≤ 2 hours
	3-4 hours
	4-5 hours
	≥ 6 hours

23. I am familiar with social media platforms

	Extremely Not familiar			Extremely Familiar	
	1	2	3	4	5
Facebook					
YouTube					
WhatsApp					
Twitter					
Skype					
Dropbox					
LinkedIn					
Google Plus					

24. I am familiar with social media management tools in

	Extremely Not familiar			Extremely familiar	
	1	2	3	4	5
TweetDeck					
Social flow					
Google analytics					
Other (specify)					

25. I have access to the internet at University

Yes	No

Thank you very much.  
Your time and effort to complete the questionnaire is highly appreciated.

## Appendix 3 – Ethical Clearance



26 November 2018

Ms Koltsoe Sehapi (207519918)  
School of Management, FT & Governance  
Westville Campus

Dear Ms Sehapi,

Protocol reference number: HSS/1952/018M  
Project title: Impact of Social Media on teaching and learning in higher educational institutions in Lesotho

### Approval Notification – Expedited Application

In response to your application received on 23 October 2018, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number. **PLEASE NOTE:** Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully,



Professor Shenuka Singh (Chair)

/ms

Cc: Supervisor: Mr Karunakaran Naidoo  
cc: Academic Leader Research: Professor Isabel Martins  
cc: School Administrator: Ms Angela Pearce

Humanities & Social Sciences Research Ethics Committee  
Professor Shenuka Singh (Chair) / Dr Sharmila Naidoo (Deputy Chair)  
Westville Campus, Gevaan Mibokul Building

Postal Address: Private Bag 954001, Durban 4003

Telephone: +27 (0) 31 203 8527/8590/4557 Facsimile: +27 (0) 31 200 4608 Email: [s.miboko@ukzn.ac.za](mailto:s.miboko@ukzn.ac.za) / [amc@ukzn.ac.za](mailto:amc@ukzn.ac.za) / [ethics@ukzn.ac.za](mailto:ethics@ukzn.ac.za)

Website: [www.ukzn.ac.za](http://www.ukzn.ac.za)



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INYUVESI  
**YAKWAZULU-NATALI**

**RE: Editing of Dissertation Titled; The impact of social media on teaching and learning in higher educational institutions in Lesotho.**

This letter serves to certify that content editing has been carried out on the dissertation whose title is captured in the above reference.

Regards



Doctor Felix Makonye (PhD)

Academic Literacy Coordinator, Teaching & Learning Unit, J-Block, Office J-021, Lower Ground Floor, Westville Campus, College of Law and Management Studies, 0312602873 +27744687931.