

**UTILIZATION OF SOCIAL MEDIA TOOLS FOR KNOWLEDGE SHARING
AMONG STAFF AND STUDENTS AT THE UNIVERSITY OF NAIROBI,
KENYA**

**BY
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DECLARATION

DECLARATION BY THE STUDENT:

This thesis is my original work and it has not been presented for the award of any degree in any University.

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DEDICATION

This work is dedicated to my late father Wilson Karanja and my mother Lucy Karanja who taught me virtues of hard work, patience and tolerance and for being a source of strength throughout my study period. I also dedicate it to my sister Catherine Karanja, Cousin, ElynnNjeri and auntie Faith Wambui for their unrelenting support and encouragement.

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ABSTRACT

Social media tools have great potential to enhance networking, collaboration, sharing of experiences and communication. This study aimed at examining the utilization of social media tools in knowledge sharing, with a view of proposing a framework for improving its utilization in public universities in Kenya. The objectives of the study were: to examine the types of social media tools used for knowledge sharing at the University of Nairobi; to find out the purposes of social media tools by staff and students of the University of Nairobi; to examine the perception/attitude of students and staff at the University of Nairobi towards using social media tools in knowledge sharing; to establish the challenges faced by staff and students in using social media tools for knowledge sharing and to explore the policies regarding the use of social media tools at the university, make recommendations and propose a framework of improving the utilization of social media tools. The De Fleur model of communication was used. Mixed method approach was used with a case study design informing the study. The target population for this study was staff and students of the College of education and external studies at the University of Nairobi who were selected using purposive and systematic random sampling respectively. A total of 151 students and 6 staff formed the sample size. Data was collected using interviews and questionnaires. From the findings of the study, it is evident that social media tools are used in knowledge sharing for social and academic purposes. Similarly, it was noted that the social media tools such as Facebook, twitter, blogs, LinkedIn, Myspace, Skype among others, provide effective channels of knowledge sharing. The study concluded that University of Nairobi staff and students attach some value on social media tools as they use them. The study recommends that policymakers in the universities encourage students and staff to use social media in productive manner. It also recommends that information communication and technology (ICT) infrastructure be improved. Stakeholders should review costs for internet access, privacy enhancement, tracking of hackers and ensure use of proper language in social media tools. This would be the way forward in increasing the utilization of social media tools for knowledge sharing.

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CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 Introduction

This chapter has given the background information of the study. It has also discussed the problem statement, the research objectives, the research questions, the justification of the study as well as the scope and limitations of the study. Today, the World Wide Web (WWW) has been radically transformed, shifting from an information repository to a more social environment where users are not only active harvesters of information, but also creators of content (Bruns, 2008). This paradigm shift is made possible by social media tools, which most universities have put in use. Many universities and students have been attracted by the concept of connecting with others through social media tools. This attraction extends beyond the use of social media tools for social reasons but also for learning and teaching. While social media tools are established to be topic-focused, they are organized around people and can be seen as “egocentric” networks (Bruns, 2008). What makes social networks unique is that they allow student users to meet, and enable them to articulate and make visible their social or academic connections and relationships. The process is similar to allowing others to view one’s address book and interact with it online. In this way, one’s social connections potentially become the connections of one’s ‘friends’ (Greenhow &Robelia, 2009).

In universities, the most prominent of all tools are the social media tools. Social media tools are communication and distribution tools where the environment as well as the content on the site is constantly changing and evolving. An example is the web 2.0. Vaastet al. (2006) define web 2.0 as a collaborative technological environment in which

users have the opportunity to contribute to a growing knowledge base, assist in the development of web-based tools, and participate in online communities. Web 2.0 is an interactive and social web facilitating collaboration between people (Vaast *et al.*, 2006). This is distinct from the early web (web 1.0) which was a static information dump where users read websites but rarely interacted with them (Brown, 2008). The advanced tool from web 2.0 is web 3.0, which is based on “intelligent” web applications using: natural language processing, machine-based learning and reasoning and intelligent applications (Vaast *et al.*, 2006). According to Vaast *et al.* (2006), while Web 2.0 has enabled users to be individual in the courses of study and even more specifically within student and instructor exchanges throughout a course, Web 3.0 takes the customization to not only the personalized Web spaces of current technology but also the creation and sustainability of entire cultures based on thoughts, ideas, and perceptions. This advancement of media tools is critical given the argument of social learning theories (Brown & Duguid, 2002), that learning occurs in social contexts and is influenced by symbolic interactions provided by advanced technology. Brown (2008) further explains that learning communities are groups of people who share an interest in the learning process, and develop a supportive atmosphere to encourage success among members.

1.1.1 Knowledge Management and Sharing

Knowledge management is the process of capturing, developing, sharing, and effectively using organizational knowledge. It refers to a multi-disciplinary approach to achieving organizational objectives by making the best use of knowledge (Nonaka, 1994). Knowledge management efforts have a long history, to include on-the-job discussions, formal apprenticeship, discussion forums, corporate libraries, professional training and

mentoring programs. With increased use of computers in the second half of the 20th century, specific adaptations of technologies such as knowledge bases, expert systems, knowledge repositories, group decision support systems, intranets, and computer-supported cooperative work have been introduced to further enhance such efforts (Argote& Ingram, 2000). Knowledge sharing is an activity through which knowledge (namely, information, skills, or expertise) is exchanged among people, friends, families, communities or organizations.

Knowledge sharing can sometimes constitute a major challenge in the field of knowledge management (Gurteen, 1999). The difficulty of knowledge sharing resides in the transference of knowledge from one entity to another. Some employees tend to resist sharing their knowledge because of the notion that knowledge is property; ownership, therefore, becomes very important (Bukowitz *et al.*, 1999). In order to counteract this, individuals must be reassured that they will receive some type of incentive for what they create (Argote& Ingram, 2000). However, Davenport (2000) demonstrated that individuals are most commonly rewarded for what they know, not what they share. Negative consequences, such as isolation and resistance to ideas, occur when knowledge sharing is impeded to promote knowledge sharing and remove knowledge sharing obstacles, especially in academic institutions. Universities should encourage the use of social media tools

1.1.2 Connection to Information Technology Systems

Information technology (IT) systems are common tools that help facilitate knowledge sharing and knowledge management (Bukowitz *et al.*, 1999). The main role of IT systems

is to help people share knowledge through common platforms and electronic storage to help make access simpler, encouraging economic reuse of knowledge. IT systems can provide codification, personalization, electronic repositories for information and can help people locate each other to communicate directly (Davenport, 2000). With appropriate training and education, IT systems can make it easier for organizations to acquire, store or disseminate knowledge.

1.1.3 Importance of Knowledge Sharing

Organizations have recognized that knowledge constitutes a valuable intangible asset for creating and sustaining competitive advantages (Argote & Ingram, 2000). Knowledge sharing activities are generally supported by knowledge management systems. However, technology constitutes only one of the many factors that affect the sharing of knowledge in organizations, such as organizational culture, trust, and incentives (Argote & Ingram, 2000). The sharing of knowledge constitutes a major challenge in the field of knowledge management because some employees tend to resist sharing their knowledge with the rest of the organization (Argote & Ingram, 2000). Knowledge constitutes a valuable, intangible asset for creating and sustaining competitive advantages within organizations. Several factors affect knowledge sharing in organizations, such as organizational culture, trust, incentives, and technology (Davenport, 2000). Knowledge sharing activities are commonly supported by knowledge management systems, a form of information technology (IT) that facilitates and organizes information within a company or organization.

1.2 Background to the Study

1.2.1 The University of Nairobi

The University of Nairobi was started back in 1956. It was first established as the Royal Technical College admitting A-level graduates for technical courses in April 1956. The College was changed into the second University College in East Africa on 25th June, 1961 under the name Royal College Nairobi. It was also admitted into special relations with the University of London and prepared students in the faculties of Arts, Science and Engineering who later obtained degrees from the University of London (UoN ICT WebTeam, 2015). However, the students in other faculties such as the Faculty of Special Professional Studies, which later became the Faculty of Commerce and the Faculty of Architecture continued to offer diplomas for qualifications of professional bodies/institutions (UoN ICT WebTeam, 2015). On 20th May 1964, the College became the University College Nairobi and was to be a constituent College of inter-territorial, Federal University of East Africa. It enrolled students who were to study for degrees of the University Of East Africa. In 1970, the University College Nairobi transformed into the first national university in Kenya and was renamed the University of Nairobi.

The university restructured fully in 1983, which led to decentralization of the administration. This, according to the UoN ICT WebTeam (2015) led to the creation of six (6) campus Colleges, which are now headed by principals. The Colleges are; the College of Agriculture & Veterinary Sciences situated at Upper Kabete Campus; the College of Architecture & Engineering situated at the Main Campus; the College of Biological & Physical Sciences situated at Chiromo Campus; the College of education and external studies situated at Kikuyu Campus; the College of Health Sciences situated

at the Kenyatta National Hospital Campus; the College of Humanities and Social Sciences situated at the Main Campus – Faculty of Arts; Parklands Campus-Faculty of Law; Lower Kabete Campus-Faculty of Commerce (UoN ICT WebTeam, 2015).The University of Nairobi which is used in this study is presented as the oldest university in Kenya and is based in Nairobi. It is one of the largest universities in Kenya. The university has many students and based on its location at the heart of Nairobi city, its students are exposed to the earliest and latest technologies. Therefore, it fitted to be used as a site for this study.

1.2.2 Use of Social Media Tools in Universities

Most university students are known to rely on social media for communication purposes. Research has shown that students spent 60% of their time on social media (Goodyear & Ellis, 2008). The students' use of social media is majorly knowledge sharing whether it is their experiences, views and opinions on topical, academic and other issues for personal development. Apart from students, the staff are also known to use social media for the same purposes and also for knowledge sharing between themselves and students. An individual's personal network is important for the effectiveness of knowledge sharing. When one requires information or knowledge, they will largely rely on the social network (Burt, 1992). The university is seen as a source of new knowledge (Feldman, 1994; Saxenian, 1994; Anselinet *al.*, 1997). The University of Nairobi is an academic institution engaged in higher education management and delivery in Kenya. It therefore needs an integrative discipline for studying, researching and learning about the knowledge assets, which are human intellectual, capital and technology. According to Birkinshaw (2001), the academic global environment has changed so drastically that the decision and

operation processes of academic institutions have become more volatile and dynamic. The new academic environment is characterized by radical changes that provide an environment for execution of new mandate (i.e. Social networking) for knowledge creation and implementation in order to get bottom-line benefits. According to Coyle and Vaughn (2008), “A social network is a configuration of people connected to one another through interpersonal means such as friendship, common interests, or ideas. Common applications of social media tools are those that facilitate communication with others by organizing online communities of individuals with similar interests and backgrounds (chat rooms), opportunities for self-description and uploading content (MySpace and FaceBook), professional networking (LinkedIn), and recommender systems (Trip Advisor).

The term “social networking” refers to the formation of a community on the Internet, that facilitates the users to interact or share views for a common purpose (Mahajan, 2009). Social media tools have begun to reshape the information landscape. Blogs, Wikis, RSS feeds and social media tools like Twitter, FaceBook and LinkedIn have provided creative ways to facilitate strategic knowledge sharing and to transform research collaboration in research communication strategies. In a study examining the impact of social media tools on teaching information literacy, Brown and Bussert, (2007) concluded that student learning will increase due to personal engagement, use of preferred learning-styles, and its (social media tools) application to daily life.

Web 2.0 is a social revolution in the use of web technologies, a paradigm shift from the web as a publishing medium to a medium of interaction and participation. Web 3.0, a

phrase coined by John Mark of the New York Times in 2006, refers to a supposed ‘third generation’ of Internet-based services that collectively comprises of what might be called ‘the Intelligent Web’, such as those using semantic Web, micro formats, natural language search, data mining, machine learning, recommendation agents, and artificial intelligence technologies.

The goal of most social media tools is data integration, which is important for university users (Mahajan, 2009). The implications for knowledge construction and applied learning increases considerably from spending time locating and organizing information, to an assumption that information is not only there but embedded and tagged so that time can be spent on constructing knowledge from the existing information immediately (Birkinshaw, 2001). Having integrated data also means that students can develop skills based on integrated information. Additionally, while instructors currently struggle with the concepts of published and distributed environments and ways to enhance the perspective of students, with Web 3.0 instructors can work on the thinking processes of students more directly and immediately, which is a huge leap forward in education (Vaast *et al.*, 2006). The most attractive current characteristic of Web 3.0 is that it is continually evolving and can be shaped by those who use and develop the ideas and technology. This means that the faster educators become engaged in the discussion and begin experimenting with the technology, the more likely it is that instructional interests can influence the emerging technology (Birkinshaw, 2001).

According to Ohler (2008), the semantic web is far enough into the future that we can actually help shape it. Educators, students, and the world can contribute to the discussion

now and help web 3.0 developers realize a vision that recognizes education and promotes the public good. Many educational researchers and practitioners believe that the web has vast potential to shape the way people teach (Barbour & Plough, 2009). Educators should make instructional use of the social nature of social media tools in order to create optimal, natural environments for learning to take place. New technology that enables knowledge sharing includes e-learning, which is a training tool that can be used to train employees to use the knowledge sharing systems and to recognize knowledge sharing behaviors (Wildet *al.*, 2002). Blogs is a new medium for social interaction with an emerging role in the sharing and building of knowledge (Vaast *et al.*, 2006) while social network communities is constituted of social media tools. Social media tools and web 3.0 provide the necessary support for conversations and collaboration for knowledge creation, sharing and publication, for identifying experts and getting access to expert opinions worldwide. It leaves the control of knowledge with the individuals owning it. Each individual is able to maintain his own space for which he has complete control over the information he chooses to share. This creates a bottom-up style of information sharing and collaboration, rather than an imposed or corporate top-down strategy (Fisher, 2005).

In educational institutions, access to learning resources, real-time communication, and access to research sources can be simplified using ICTs, and institutions can enhance classroom-based methods by integrating social learning methods into traditional approaches (Nichols & Anderson, 2005; Kruger, 2010). Academic libraries should know about and use social media tools. This is because social media tools enable sharing of knowledge, which is critical to the success of the organization. Social media tools make it easy to find collaborators, along with providing users with the tools to collaborate, like

blogs and discussion boards. Dissemination of knowledge is much easier in the kind of RSS-enabled push environments that social media tools provide (Vaast *et al.*, 2006).

In line with the above information, the social media tools are usually circles in which people interact and connect with other people. They transcend strict delineation between personal and business and tend to transcend organizational boundaries and hierarchies. Social media tools can provide the essential context needed to make knowledge sharing possible, valuable, efficient and effective (Pollard, 2003). In recent years, networking and collaboration have become increasingly popular in educational institutions such as universities and Colleges. Social networking is the practice of expanding knowledge by making connections with individuals of similar interests (Gunawardena *et al.*, 2009). The concept of social media tools is commonly linked to and supported by applications of social media that are designed for social interaction and information exchange (such as MySpace, Facebook and Flickr). Lave and Wenger (1991), argue that learning emerges from engagement in social interaction.

As can be seen, the University of Nairobi is the oldest university in Kenya based in Nairobi. The College of education and external studies is situated at Kikuyu Campus students and staff is exposed to the earliest and latest technologies. Therefore, it fitted to be used as a site for this study.

1.3 Statement of the Problem

It has never been easier for people to share their knowledge, especially when there is potential risk that other people would take advantage of it (Park, 2006). Statistics show that university students are the majority users of social media tools the world over. This

argument is backed by studies, for example by Goodyear and Ellis (2008), Tinto (2000) and Anselin et al. (1997); who have shown that emerging technologies provide new opportunities that facilitate knowledge sharing among university fraternity majority of whom are students. Even with the opportunities provided by social media tools, there is limited research on the way social media can be utilized for knowledge sharing in a university setting. This study, therefore, endeavored to provide insight into ways that social media can be utilized for knowledge sharing in institutions of higher learning in Kenya, with an aim of adding to the limited existing research.

1.4 Aim of the Study

This study aimed at examining the utilization of social media tools in knowledge sharing, with a view of proposing a framework for improving its utilization in public universities in Kenya.

1.5 Objectives of the Study

The objectives of the study were to;

- i. Examine the types of social media tools used for knowledge sharing by staff and students at the University of Nairobi.
- ii. Establish the purpose of using social media tools by staff and students at the University of Nairobi.
- iii. Assess the perception/attitude of staff and students in using social media tools for knowledge sharing.
- iv. Establish the challenges faced by staff and students in using social media tools for knowledge sharing.

- v. Establish how social media tools can be used appropriately by staff and students in knowledge sharing at the University of Nairobi.
- vi. Examine the policies regarding the use of social media tools by staff and students at the University of Nairobi.

1.6 Research Questions

The following research questions were used to guide this study.

- i. What are the types of social media tools used by staff and students for knowledge sharing at the University of Nairobi?
- ii. What are the purposes of social media tools by staff and students of the University of Nairobi?
- iii. What is the perception/attitude of students and staff at the University of Nairobi in using social media tools in knowledge sharing?
- iv. What are the challenges faced by staff and students in using social media tools for knowledge sharing?
- v. What policies are in place regarding the use of social media tools by staff and students at the University of Nairobi?
- vi. How can social media tools be used appropriately by staff and students in knowledge sharing at the University of Nairobi?

1.7 Assumptions of the Study

The following assumptions were made in this study

- i. That the staff and students at the University of Nairobi use various social media tools for different purposes including knowledge sharing.

- ii. That the staff and students at the University of Nairobi have different perceptions/attitudes in the use of social media tools

1.8 Significance of the Study

This study investigated the utilization of the social media tools for knowledge sharing at the University of Nairobi. The study has brought to light the fact that social media improves the learning outcomes as it encourages the sharing of information among university staff and students. Social media is a means of communication through the internet that enables social interaction. It is an effective approach for university staff and students to use in communicating and interacting with each other.

1.8.1 Implication of the Study

The study has some notable implications. Since more organizations are applying social media to promote their services and interact with their users or patrons, through sensitization staff and students are able to anticipate the capacity of social media tools to enhance knowledge sharing.

1.8.2 Application of the Study

The study findings could be applied in professional and academic set up. For example, the findings could potentially assist policy makers to develop a policy for using social media tools for knowledge sharing in Universities. Moreover, the study adds to the existing body of knowledge on the utilization of social media tools for knowledge sharing in universities and would be useful for reference purposes.

1.9 The Scope and Limitations of the Study

The study focused mainly on the use of social media tools for knowledge sharing. The researcher limited the study to higher education institutions and chose the University of Nairobi as a case for study to represent other institutions of higher learning. This scope posed some limitations. For example, the results obtained only apply to institutions of higher learning like the one studied. Moreover, the University of Nairobi is an institution of higher learning, which probably had implications on the results. Therefore, performing the same study in a different organization might give different results.

1.10 Chapter Summary

The chapter has established how Social media tools, as tools for communicating and distributing information operates under an ever changing environment. This has been brought by the radical transformation of the World Wide Web (WWW) where users have become active harvesters of information and creators of content. The chapter has also captured the fact that knowledge management is the process of developing, sharing, and effectively using organizational knowledge. That knowledge sharing can sometimes constitute a major challenge in the field of knowledge management where difficulty of knowledge sharing resides in the transference of knowledge from one entity to another. On the importance of knowledge sharing, the chapter has shown that organizations have recognized that knowledge constitutes a valuable intangible asset for creating and sustaining competitive advantages. Knowledge sharing activities are generally supported by knowledge management systems. The University of Nairobi, which is the study site for this research is presented as the oldest university in Kenya based in Nairobi. It is one of the largest universities in Kenya. The university has many students and based on its

location at the heart of Nairobi city, its students are exposed to the earliest and latest technologies. Therefore, it fitted to be used as a site for this study. Since the knowledge on how to utilize social media in a constructive way is limited, this study presents significant findings on social media utilization in knowledge sharing by students.

1.11 Operationalization of Terms

Academic– This is something or someone that is considered to be scholarly. It is the act of placing a greater emphasis on reading and study than on technical or practical work:

Blogs – Blogs are web pages consisting of user-supplied content in chronological order (Boxen, 2008). Blogs, originally known as ‘Web-logs,’ are a method of sharing expertise and information via commentary and description of events.

Digital Literacy –This is the ability to use digital technology, communication tools or networks to locate, evaluate, use and create information. It is the ability to understand and use information in multiple formats from a wide range of sources when it is presented via computers.

Facebook – this is a social media tool that helps individuals to connect and share with the people who are individual colleagues or members of created groups (Hargittai, 2007). It was initially created as a Social media tools for College student use, but later adopted for other institutions and use. Facebook is one of the most popular Social media tools (Hargittai, 2007).

Information and Communication Technologies – This refers to technologies that provide access to information through telecommunications. It is similar to Information Technology (IT), but focuses primarily on communication technologies. It includes the Internet, wireless networks, cell phones, and other communication mediums.

Knowledge Sharing – is an activity through which knowledge (i.e. information, skills, or expertise) is exchanged among people, friends, or members of a family, a community (e.g. Wikipedia) or an organization.

My Space – These are social media tool used in knowledge sharing started as a general social network site, open to all users. It has experienced a lot of negative media attention partly because it always had a portion of younger users (unlike Facebook, which opened up to high school students last year), prompting fears of sexual predators connecting and exploiting this population.

Social media tools – Are online utilities that deliver social media functionality.

Twitter – this is a micro blog tool that allows registered users to post brief messages for other users who follow the account and to comment on other user posts. Unlike traditional blogs, twitter allows librarians to go where the students are already located.

Web 3.0 – This is based on “intelligent” web applications using: Natural language processing, Machine-based learning and reasoning and Intelligent applications.

Wikis – These are social media tools which are open web pages that allow approved users to add and alter a page's content (Richardson, 2006). Wikis are a tool for working collaboratively on a project, whether working at a distance or nearby.

YouTube – This is a popular video-sharing venue online useful to disseminate educational messages, video, and TV news clips for the global audience (Richardson, 2006).

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter reviews existing literature in the area of social media tools as an information resource and service that facilitates knowledge sharing. It deals with the past studies on social media tools and knowledge sharing. It highlights the trends in utilization of the social media tools in knowledge sharing. Accordingly, past researches are explored to shed light on this pertinent area and identify the gaps in knowledge that this study proposes to fill.

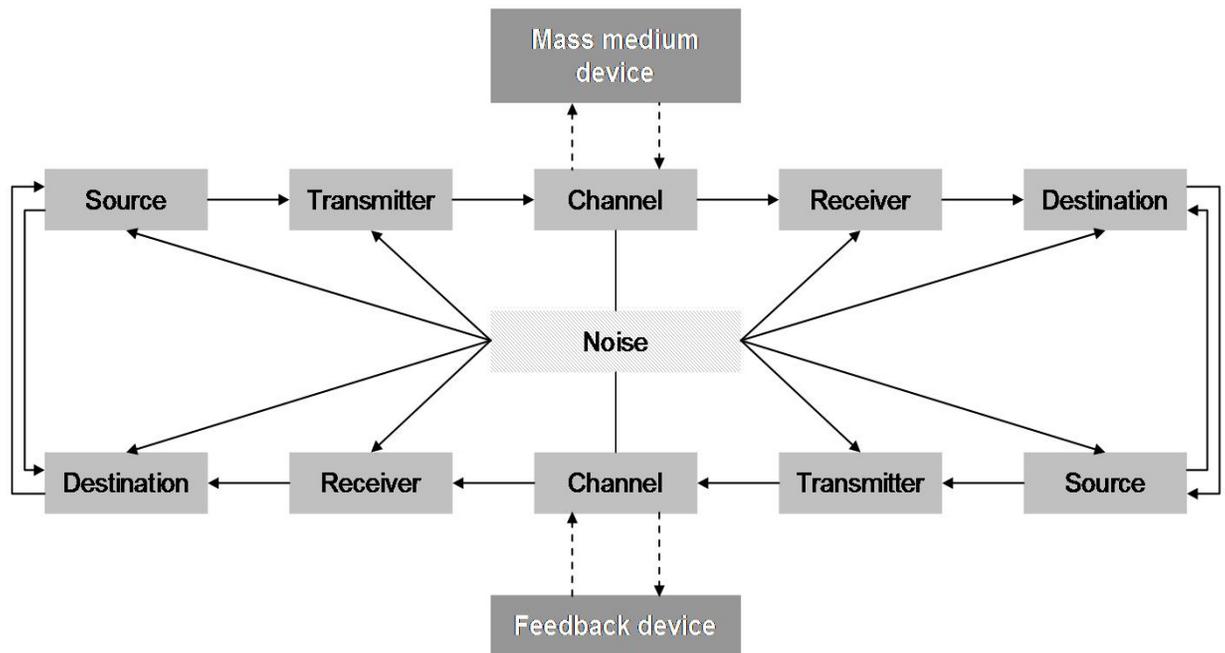
2.1 Importance of Literature Review

Literature review is an evaluative report of studies found in the literature related to a selected area of study. The review describes, summarizes, evaluates and clarifies this literature. It gives a theoretical basis for the research and helps determine the nature of one's research. A literature review goes beyond the search for information and includes the identification and articulation of relationships between the literature and one's field of research. Literature review is important as it helps review and critique what has already been researched. It also helps identify a gap, a problem or need in the research literature. In addition, it provides a rationale for doing the proposed study.

2.2 Theoretical Framework

In order to understand and explain the information sharing process adopted by students and staff at the University of Nairobi, this study adopted the Melvin De fleur Model of communication.

2.2.1 The de Fleur Model of Communication



Defleur Model of Mass Communication System

Figure 2.2.1: De Fleur Model of Communication

The De Fleur Communication model has the following components:

Source: This is the person who creates the message. It is where the information is first encoded.

Message: This is sent by the information source and received by the destination.

Transmitter: This changes the message from the form, which it is created by the information source into the form, which it can be sent to the receiver.

Channel: The message contains information to facilitate knowledge sharing. It is essential for meaningful communication. It is the route in which the message travels on, be it verbal, written, electronic or otherwise.

Receiver: This translates the message into a form that can be processed by the destination.

Destination: This is the person who consumes and processes the message.

Noise: This is any external, internal or semantic stimulus that interferes with the sharing of meaning. Noise can be a patient source that is off-color, unable to emphasize the message, being miles away while receiving the message, being in a mood, which does not allow receiving a specific message or being, inclined to receive a different message. It can also be any physical or psychological disturbances, which distracts the sender or receiver in the communication process. In addition, it can be considered as an interference or distortion that changes the initial message. Noise can be physical, like an actual sound that distorts the message as it is being said, or it can be semantic, like if the vocabulary used within the message is beyond the knowledge spectrum of its recipient.

Mass media device and feedback: These two demonstrate that the communication process is circular and suggests a two-way feedback hence enabling knowledge sharing.

Feedback: This enables communication of information to be more effective. It increases the possibility of achieving correspondence between the meanings. Feedback relates to the source in that it helps determine that the message has been received and most importantly if it has been interpreted accurately.

2.2.2 Significance of De Fleur Communication Model

De Fleur's model is significant in the use of social media tools for knowledge sharing in that the source can be a student who conveys academic information through FaceBook where this piece of information is intended to be communicated to other students. This is then converted into message as FaceBook chat/update. The update is then transmitted

through the social media tools by a channel. At the other end, the receiver (e.g. friend on FaceBook) decodes the information as message and finally it is transformed to the destination (the target audience). The feedback acts an information source where the student conveying the message can get communication from the receiver to facilitate knowledge sharing.

In addition, De fleur model of communication relates to the Dependency Theory. The Dependency Theory says the more a person becomes dependent on the media to fulfill their needs, the media will become more important to that individual. The media will also have much more influence and power over that individual. Dependency theory is a mass communication theory that seeks to explain the long-term effects of media on the audiences and society. Mass media dependency theory holds that the ultimate basis of media influence lies in the nature of the relationship between the social system, the role of media in that system, and the relationship of the audience and the media. The focus of this theory is the relationship between media and its audiences. In the present modern world, you will find that individuals highly depend on media to satisfy a range of their needs. The Dependency theory became the initial mass communication theory that considered its audience as an active part of the process of communication. This is applicable in social media tools. Dependency theory indicates that there is a fundamental connection between media, its audiences and the social system. Since learning from experiences has constraints in practical life, human beings who are largely the audiences rely heavily on media to gather more information about what they need. Therefore, an extended use of the media causes a close relation of dependence in the audience.

Mass communication facilitated by the social media tools is a continuous process of interaction between the societal systems, media systems and media audiences. Its structure, dynamic processes, and culture determine the societal system. Media systems are characterized by their economic goals, values, technology, and organization. The extent to which people will depend on media messages will depend also on the utility of these messages for individuals and for society. The nature of social networks and how their content is delivered can help improve the limited effects of mass-communication by improving the selective effects of the audience.

The De Fleur's model, based on the expanded tenets, was ideal for study because of four main reasons from which the researcher adopted the objectives. The model recognizes that there can be different types of communication channels (social media tools) at a time. It also recognizes that different people can use these channels (social media tools in our case) for different purposes in the communication process. The model also suggests that depending on the feedback element, the sender and the receiver of the messages shape perceptions and attitudes towards a channel use and thus explaining the reason why some channels (social media tools) are preferred, selected or rejected in a certain scenario. Moreover, due to the possible source of noise from both sides, which could interfere with the process, there must be regulations on how to engage in the process of communication and finally, there are the most appropriate ways of using communication channels (social media tools) that suits a specific user or a group of users that can optimize benefit.

2.3 Review of Empirical Studies

2.3.1 The Emergence and Development of Web 2.0 and Web 3.0

According to Greenhow et al. (2010), the rise of online social media tools is rooted in the emergence of Web 2.0. Kroski (2007) defines Web 2.0 as the evolution to a social and interactive Web that gives everyone a chance to participate. It is a social revolution in the use of Web technologies, a paradigm shift from the Web as a publishing medium to a medium of interaction and participation (Davies & Merchant, 2009). Therefore, Web 2.0 applications create and manage a digital expression of people's personal relationships or links, by offering automatic address book updates and viewable profiles. Kroski (2007) argues that these applications should also aid in the identification and conversion of potential ties into weak or strong ties by providing "introduction services" and allowing users to display their knowledge, experience and expertise in a searchable format. In order for individuals to determine whether they wish to create a connection with another person, they will require some form of social feedback

There are various benefits that scholars have associated with Web 2.0 (Attwell, 2008; Gorge, 2007). Firstly, Web 2.0 provide users with the ability to create a global list of contact details (either in a graphical or text-based format) of people with whom they have strong professional ties, co-workers, colleagues and people they do business with (Gorge, 2007). This contact list has information linked directly to the profiles created and maintained by the contact himself, allowing for automatic updates of changes to contact details, current activities, interest and specialist skills and expertise, in a searchable format (ClearSwift, 2007).Attwell (2008) argues that this contact list information allows users to identify mutual relationships, which can be exploited for introductions or

recommendations. Web 2.0 also provides a collaborative learning environment, in which problems encountered are collectively solved and solutions are shared among peers, bridging the gap between procedures and practice (Boshoff&Plessis, 2008; Orlikowski, 2000).

In the analysis of Cairncross (2001) and IBM (2007), Web 2.0 assists organizations to create an online resource containing the accumulated wisdom of the organization by allowing knowledge to be codified, searched and shared. By decreasing the use of e-mails and other disruptive communication methods, the use of asynchronous communication methods, such as blogs and Wikis, can increase productivity and work flow efficiency (IBM, 2007). In addition, Tagging and social book-marking allow colleagues to search for and locate experts at the industry articles, blogs, manuals, Wiki's and other information that the expert finds useful, and so discover answers and solutions without interrupting them with e-mail, instant messages or telephone calls (Godwin-Jones, 2006). Moreover, they allow users to have access to the latest version of a document and to contribute to its understanding by adding annotations and links to external sources (Godwin-Jones, 2006). Web 2.0 has been described by IBM (2007) as having a possibility of use as a viral marketing tool, where people are encouraged to voluntarily pass marketing messages on through word-of-mouth. Viral promotions may include video clips, Flash games, e-books, free software, images and text messages.

Scholars (Selwyn, 2007; Osimo, 2008; Steininger *et al.*, 2010) have described web 3.0 as an "intelligent" web applications with natural language processing, Machine-based learning and reasoning and intelligent applications. It takes the customization for not only

personalizing Web spaces of current technology but also in the creation and sustainability of entire cultures based on thoughts, ideas, and perceptions (Osimo, 2008). Web 3.0, a phrase coined by John Markoff of the New York Times in 2006, refers to a supposed third generation of Internet-based services that collectively comprises of what might be called 'the Intelligent Web; such as those using semantic Web, micro formats, natural language search, data mining, machine learning, recommendation agents, and artificial intelligence technologies (Steininger *et al.*, 2010). Mason and Rennie (2007) argues that Web 3.0 emphasizes on the capability of obtaining contextual information from a web search; the ability to obtain information drawn from a variety of previously incompatible or walled applications or sources; and the engagement of all types of devices and machines in data creation, data use, and in the communication process which informs our daily lives, our work, and our businesses.

2.3.2 Social Media Tools

The social media tools entail sites such as Face book, MySpace, Twitter, Second Life, Delicious, Blogs, Wikis, Bebo, and LinkedIn among others (Gunawardena *et al.*, 2009). These social media tools constitute the environments that are specifically designed to support and develop friendship and whose overall purpose is to provide a context and appropriate tools for communication hence knowledge sharing. Based on the review of existing scientific literature on social media, no studies have been conducted to evaluate the use of social media tools for knowledge sharing in universities. In the argument of Attwell (2008), Barbour, and Plough, (2009), social media have recently managed to grasp the attention of higher education institutions as a means to connect with students. Statistics indicate that almost all market-driven tertiary education institutions in the world

are actively involved in some type of social media activities. Since social media tools first appeared on the World Wide Web in the 1990s, they have become extremely popular, especially with College students (Boyd, 2007). Many students view the sites as a way to maintain existing relationships or to form new friendships. This may be particularly important for students as they leave their families and high school friends to head off to College campuses where they may feel isolated or lonely (Ellison, Steinfield & Lampe, 2007). Once at College, students can also use social media tools to identify study partners or exchange ideas for school projects. For the purposes of this study, social media tools are defined as “a group of internet-based applications that build on the ideological and technical foundations of Web 2.0, and that allow the creation and exchange of user generated content” (Kaplan & Haenlein, 2010).

Therefore, social media is a means of communication through the internet that enables social interaction and is an effective approach for people to use in communicating and interacting with each other (Alexander, 2006). Simultaneously, more organizations are applying social media to promote their services and interact with their users or patrons. Today, the focus of attention is towards social media delivered by mobile and web-based technologies, which create interactive platforms such as FaceBook, LinkedIn, and Twitter. Social media provides and creates fresh opportunities for organizations, communities and individuals as blogs and podcasts. They continue to have a tremendous impact on how people behave online; how they search, play, converse, form communities, build and maintain relationships; and how they create, tag, modify and share content across any number of sites and devices (Coyle & Vaughn, 2008; Ellison *et al.*, 2007). The social media tools are attracting the attention of educators who are

beginning to ask about their relevance to different kinds of learning (Davies & Merchant 2009; Greenhow and Robelia 2009). The internet has worked as a channel for communication in connected social media tools. The internet has always been social (Davies & Merchant 2009) because most social media tools are online based and provide a variety of ways for users to interact. Millions of people are using social media tools regularly making it an enduring part of everyday life (Dwyer, 2007).

Social media tools are a way of describing the patterns of everyday practices of social interaction, including those that take place within family structures, between friends, and in neighborhoods and communities. Wellman (2002) suggests that social media tools in traditional societies are characterized by a predominance of face-to-face encounters contained within relatively small geographical areas. The use of networking is one way through which knowledge and information can be easily transmitted.

2.3.3 The Attitude/Perception on the Use of Social Media Tools

According to Boxen (2008), most discussions about social media tools are primarily anecdotal. There are very few quantitative studies dealing with the effectiveness of social media. This makes it difficult to determine if the social media tools efforts are worth librarian time in competition with other established outreach methods (Boyd, 2008). One of the primary concerns about social media tools is low usage. Mathews (2006) reported that from the messages sent to 1,500 undergraduate and graduate students on FaceBook by an academic librarian, only 48 received a response. Another major concern regarding social media tools by academic libraries is whether students are receptive to the idea. Librarians are authority figures within the university community, and students may be

resistant to befriending the library if their personal information is visible to university officials (Sekyere, 2009). In addition to student perceptions, another concern regarding social media tools by academic libraries is with regard to how students actually use these technologies. Students generally use social media tools to distract themselves from their academic activities (Sekyere, 2009). Even when they use social media tools for school-related activities, it is usually in conjunction with a student organization or a specific class. Essentially, students use social media tools to interact with fellow students. They are not using these services to connect with libraries or for knowledge sharing purposes. Academic librarians are not in favor of social media (Aduke, 2008). Librarians at an academic institution must be proactive in their social media tools attempts and must be willing to participate in the ongoing process. Additionally, most of the librarians feel that FaceBook was a student space and that librarians/staff and other university administrators should not invade this space (Chu &Meulemans, 2008). Ultimately, social media tools require continuous updating, knowledge of changes to the social tools, and monitoring user comments. Thus, academic librarians and other university administrators must be willing to dedicate their time to social network-based student outreach for these methods to be successful. Lastly, many academic librarians fear losing control over their resources if they use some of the available social media tools (Farkas, 2007). Tools that allow students and faculty to edit content about the library, remove a certain amount of control from the librarians themselves. For example, allowing users to assign tags to resources replace the traditional subject headings established by librarians and can result in a lack of synonym control, lack of precision in subject terms, a lack of hierarchy among categories, and a lower recall ability (Kroski, 2007).

2.3.4 Purpose of Using Social Media Tools

Social media platforms allow organizations to freely take advantage of existing social networks and virally spread their messages. While the cost of social media are likely similar to that of traditional media, the costs of amplifying transmission or modifying in response to audience reception are negligible. The only barrier to responding to changing conditions in real time lies in the limits of organizational capacity. While the utility of social media tools for syndromic surveillance is still being tested, it is clear that infodemiology provides tools to track both real epidemics and what Eysenbach has called “epidemics of fear”. Tracking both types of conversations can be used to “improve health communication, learn about (Li, 2010).

Social media networking has been used for a wide range of purposes, including employee learning and development (44%), communications and public relations (44%), recruiting (38%), and support functions such as human relations, training, and finance (35%). The National Association of State Chief Information Officers (NASCIO) surveyed U.S. states and territories about their use of social media (Mathews, 2006) Among 43 agencies responding to the survey, the primary reasons for using social media cited include citizen engagement (98%) and public information and outreach (93%). More than half of the agencies responding also selected open government (67%) and business engagement (54%) as important goals. NASCIO’s survey indicated that many government organizations routinely use social media for public safety and emergency notifications, although the survey did not specifically cover this application. A survey conducted for FHWA had similar findings (Lenhart *et al.*, 2010). State departments of transportation

reported using Web 2.0 technologies to provide information and to build communities around transportation issues.

Some literature has shown that social media provide transit agencies with an unparalleled opportunity to connect with their customers (Pollard, 2003). These connections may take many forms, but they all can help agencies personalize what can otherwise appear like a faceless bureaucracy. According to Patchin (2008), many organizations use social media for different purposes including Timely updates, where social media enable them to share real-time service information and advisories with their riders. They also enlisted public information where many organizations use social media to provide the public with information about services, fares, and long-range planning projects and citizen engagement where organizations take advantage of the interactive aspects of social media to connect with their customers in an informal way (Patchin, 2008). Godwin-Jones, (2006) further adds that social media could be used for employee recognition in which social networking can be an effective tool for recognizing current workers and recruiting new employees and also for entertainment in which social media can be fun. Agencies often use social media to display a personal touch and to entertain their riders through songs, videos, and contests.

Agencies and officials at all levels of government use social media. According to Vaastet al.(2006), 66% of government agencies used some form of social networking in 2009, and 65% of those used more than one tool. More studies have agreed that social media has been used for timely updates, provision of public information and citizen engagement. from a library set up Godwin-Jones, (2006) argues that librarians have

several objectives including seeking opinion on the library and its services for self-evaluation purposes, to encourage debate and to instigate an opportunity to respond to library user feedback; reaching library users in their homes or ‘virtual spaces’ as today’s modern online library is no longer solely relying on its physical space as an access point; to publicize events, services, news and presence; to encourage collaboration, for example through collection development and building repositories of collaborative content specific to certain user groups; to increase usage of library collections by promoting new and existing content; to connect with other librarians and keep abreast of industry news; and to build a sense of community with both users and also with other institutions and industry contacts.

2.3.5 Academic Libraries and Social Media Tools

The varied social media tools are used by individuals of all ages but are especially popular among young people and College students (Lenhart *et al.*, 2010). Due to high use among these two groups, many academic librarians advocate using these new social Web platforms to reach out to student populations (Farkas, 2007; Mathews, 2006). Social media tools used by academic librarians provide a potentially effective method of student outreach as long as librarians take into account the possible issues that may arise. According to Gordon (2006), Library 2.0 is in essence what libraries should be about: a service in which the user is openly involved and participates. Gordon (2006) advocates ‘unblocking’ the library by discarding traditional barriers such as filtering social media tools and banning mobile phones in libraries. The need to remain relevant and active in the knowledge-making process in today’s information state calls for a more proactive approach on the part of the information professional. As a result, the creation of new

roles such as the “embedded librarian” or “knowledge advisor” (Weddell, 2008) calls for academic librarians to “exert a dynamic influence on the teaching and learning agenda” (Peacock, 2002). Online social media tools provide an avenue to reach College students in their own environments. The goal among academic libraries is to reduce the need for users to come to the library and “to repackage their materials into an environment that is more familiar to specific users” (Mathews, 2007). Social media tools make it easy to find collaborators along with providing users with the tools to collaborate, like blogs and discussion boards. Dissemination of knowledge is much easier in the environments that social media tools provide.

2.3.6 Social Media Tools and Education

Face-to-face teaching is not the only way to reach learners because asynchronous learning online is available anytime (Barbour & Plough, 2009). Asynchronous learning allows users to access the Internet to obtain information outside of the constraints of time and place, and among a network of people through social networking tools such as Wikis, blogs, podcasts, FaceBook, and YouTube (Gunawardena *et al.*, 2009). E-learning platforms are also undergoing a transformation in response to the communicative and collaborative opportunities that Web 2.0 technologies and the social media tools provide. Learning management systems (LMSs) such as Sakai, Moodle, and even Blackboard have integrated many of the popular tools and functionality of Web 2.0: blogs, wikis, simple syndication (RSS) feeds, AND bookmarking (Greenhow *et al.*, 2010). In a knowledge economy, the principles of active learning are paramount: students need to learn how to become arbiters of their own education, and how to negotiate and filter the

increasingly complex and contradictory digital information and social environments to which they now have access (Hase& Kenyon, 2000).

Critical thinking and discriminatory skills are an essential part of the learning toolkit. Active learning principles and constructivist pedagogy support the notion that learning happens when students are engaged in producing knowledge (Staley, 2009; Bond, 2002). In this sense, the constructivist classroom is like a Web 2.0 platform in which everyone is invited to participate in content-creation, and peer production is central to the intrinsic value of the platform. According to Staley (2009), the constructivist classroom is transformational and teachers must cede some of the control in the direction of learning to allow for the emergent learning that takes place when students are allowed to interact. Despite the social and cognitive benefits of constructivist learning, the teaching paradigm of universities continues to be overwhelmingly that of the lecture and the lecture hall (Ellison *et al.*, 2007; Tynes, 2007). Social media tools are gaining recognition in educational circles for their potential to engage students creatively and thoughtfully, as well as to establish a record of a student's progress through their coursework. In a social context of rapid technological innovation and dissemination, it is vital to be aware of the role that technology plays in all our lives, and particularly in the lives of those, we are responsible for, including the children and young people in the education systems (Tynes, 2007).

The academic institutions may not know enough about the young people's experience of online social media tools and how this is interwoven with life offline. There is need for 'a stronger focus on students' everyday use and learning with social media tools in and

outside of classrooms (Greenhow, Robelia & Hughes, 2010). Academics can benefit from social media tools when checking on the progress of the student teams, accessing information on the history of their work and seeing the full extent of the students' collaboration, including their latest research and assignments, meeting agendas and minutes, updated business plans, and then leave feedback on their progress and read the comments of other advisors (Greenhow, Robelia & Hughes, 2010; Ellison *et al.*, 2007). In addition, students can use their online social network to fulfill social learning functions within and across informal and formal learning spheres of activity. These social learning functions included obtaining validation and appreciation of creative work through feedback on their profile pages and peer/alumni support – that is, reaching out to former classmates to give or receive help in managing the difficulties of high school or College life; and help with school-related tasks (Greenhow & Robelia, 2009).

2.3.7 Policies Regarding the Use of Social Media

A social media policy, also called a social networking policy, is a corporate code of conduct that provides guidelines for employees who post content on the internet either as part of their job or as a private person (Vaast *et al.*, 2006). Although the practice is not universal, many public agencies have adopted social media policies to provide guidance for addressing barriers and concerns. Research conducted by the Center for Technology in Government (CTG) at the State University of New York at Albany, and summarized as part of the literature review, provides a roadmap for government agencies that are considering developing a social media policy (Mason & Rennie, 2007). The CTG research showed that there are many policies regarding for example employee access; this is where agencies manage access in two ways, either by restricting the number or type of

employees who can access social media sites or by limiting the types of sites that employee can access. There is also account management where many agencies require the chief information officer and/or the communications officer to oversee social media accounts.

Other policies give guidelines on acceptable use (Mason & Rennie, 2007). This is where companies and organizations are challenged by the softening line between personal, professional, and official agency use of social networking sites (Lenhart *et al.*, 2010). In addition to this are policies on participants conduct where organizations refer to existing policies for social media user conduct, although a few address some behaviors specific to social media, such as the need for transparency.

Lenhart (2010) has identified policies on content where most organizations try to maintain at least minimal control over online content, either by assigning oversight responsibility to an individual manager or retaining the right to review content. There are also policies on security which include the IT security guidelines, although according to Godwin-Jones, (2006) a few focus specifically on the importance of password control. In this study, the researcher tried to establish the policies in place in the study area regarding the use of social media.

2.3.8 Knowledge Sharing

Knowledge sharing is a process where information, skills and expertise exchanged among people, friends, or members of a family, a community or an organization through some communication medium. Today, social media are the most used tools in knowledge sharing given that they are outcomes of a transformative technology (Godwin-Jones,

2006). Social media utilize Web 2.0 technologies by applications or web sites to support the maintenance of personal relationships, the discovery of potential relationships and to aid in the conversion of potential ties into weak and strong ties (Greenhow *et al.*, 2009). In the last decade, internet access, the nature of the web and contexts for learning has evolved, along with the emergence of desired competencies for learners, instructors, and administrators and generally the knowledge sharing resources. These changes impact constructs for learning, teaching, and paths for future research (Greenhow *et al.*, 2009). The young people in academic institutions now have more choices over what, how, and with whom they learn and share knowledge in a wide range of settings such as classrooms, after school programs, home-school, formal online learning programs, and web-enabled spaces that dominate popular culture.

The web has undergone a transformation. It is no longer only about disseminating and linking information; it is about linking and empowering people through knowledge production and sharing (Gurteen, 1999). With the rise of the social media tools, the importance of socialization to online knowledge acquisition and sharing has once again been foregrounded. The learning communities and networks that many engage with today, display many features that have long been associated with people's inherent preference for sociable knowledge seeking, and the comparable weight given to a friendly, supportive community as to exhaustive, precise and authoritative information. Interfaces and interaction patterns are better coming to reflect human preferences for discussion, argument and personal narratives as well as the frequent need for "quick answers". There are several social media tools used in Knowledge Sharing. The first one is Facebook.

Facebook helps individuals connect and share with the people in their life (Messina, 2009). Though Facebook originated in 2004 as a Social media tools for College student use, the site soon opened up to corporate networks in early 2006 and then to the general public (Boyd& Ellison, 2007). Facebook is one of the most popular Social media tools (Hargittai, 2007). Ellison et al. (2007) argue that Facebook serves to build social capital, concluding that “online interactions keep people in contact, even when life changes move them away from each other”.

Other recent studies conclude that Facebook connects individuals to local and long-distance social ties (Hargittai, 2007). Facebook has recently opened to the general public, but it is still dominated by College users. In addition, Facebook is divided into “networks”, which for College students means their schools. The default setting is that only people in your College (network) can see your full profile, while all others can see only the profile picture, the name of your home network, and the name provided by the owner of the profile. Therefore, at least for College students, Facebook has a close connection between offline and online social environments (Ellison, Steinfield, & Lampe, 2007).Almost all social media tools allow various levels of privacy controls, the most important of which is the level of “visibility.” In Facebook, the default visibility level is visibility to everyone in the “network,” that is, everyone in the College for a College student. It also restricts the profile to “friends only,” meaning that only other profiles that are explicitly linked as a “friend” can access one’s profile.

As a result of its strong user base among College students, Facebook appears to be the most logical social media tool web site to be used by academic libraries. There are several uses of Facebook for academic library outreach. One of the primary uses of

Facebook by academic libraries is to market the library with a library fan page. Libraries advertise hours, location, and web site information. By linking to the library's web site, the Facebook page acts as a portal to the library (Farkas, 2007). As students frequently use outside search engines for academic research, even a basic Facebook page can serve as a reminder to use the resources available in an academic library (Farkas, 2007). Libraries also create event invitations for programs as an additional forum to promote library activities (Chu & Meulemans, 2008). Essentially, Facebook pages provide a marketing tool for the services available to students at their academic library. Additionally, academic libraries are experimenting with embedding library services within the Facebook page itself for a true outreach program. Using Facebook applications, some academic libraries embed the library catalog to allow students to access the contents of the library catalog without actually visiting the library's web site (Farkas, 2007). Some academic libraries are also embedding the "ask-a-librarian" feature within the Facebook page to provide reference services through the social media tools medium and to expand the chat and message function available through Facebook itself.

My space is another social media tool used in knowledge sharing started as a general social network site, open to all users. It has experienced a lot of negative media attention partly because it always had a portion of younger users (unlike Facebook, which opened up to high school students last year), prompting fears of sexual predators connecting and exploiting this population. MySpace has approximately 70 million users in the USA, but has recently experienced a decline in the number of users compared to Facebook (Jesdanum, 2006). MySpace was originally the most popular social media tool. In My space, one may restrict the profile to "friends only," meaning that only other profiles that

are explicitly linked as a “friend” can access one’s profile. MySpace has introduced efforts to promote Internet safety, and various organizations (both online and offline) have sought to inform and equip the youth with knowledge to stay out of harm’s way when interacting in cyberspace (Jesdanum, 2006; Reuters, 2007). At a basic level, MySpace enables individuals to create their digital representations by posting biographical information, personal diary entries, affiliations, likes and dislikes, interests and multi-media artifacts (pictures, video and audio). Creating an online persona allows the youth to display the selves they are, the selves they wish to become, and the selves they wish others to see (Tynes, 2007). It then allows connectivity between these profiles so that an individual can include another as a ‘friend’ to view the contents of their page, leave public comments, or send private messages, which makes knowledge sharing possible and easier.

Blogs are other knowledge sharing tools. They are web pages consisting of user-supplied content in chronological order (Boxen, 2008). Blogs, originally known as ‘Web-logs,’ are a method of sharing expertise and information via commentary and description of events. Bloggers vary from professionals to lay people who share information and Web links. Blogs are open to the public and found widely on the Internet. Readers can leave public comments on a blog in an effort to increase the blog's interactivity (Bruns, 2008). Extension educators may want to join a blogging community of professionals because they can bring research-based information to consumers. Blogs offer another social platform to reach university students. Blogs and wikis encourage interaction and collaboration among users, an important component for a new outreach tool (Richardson, 2006). Blogs have several potential uses for libraries. They encourage user interaction

through their comment feature, which allows students to provide feedback regarding the information provided and the library itself. Blogs are also used to create subject guides as they can be easily updated to reflect the most current sources for a particular class or department (Bruns, 2008). Libraries embarking on large projects such as renovations can also create a blog detailing the progress for students. Blogs allow students to comment on the information included in the blog by inviting user feedback regarding the library. They also allow libraries to provide easy-to-update information for students while also encouraging student comments and interaction.

Another knowledge sharing social media tools are Wikis, which are open web pages that allow approved users to add and alter a page's content (Richardson, 2006). Wikis are a tool for working collaboratively on a project, whether working at a distance or nearby. A wikimay be made available publicly and therefore, found by anyone searching on the internet. Wikis can also be private and open to only a select audience of contributors or collaborators. Wikis provide a log and date stamp of the work that has been completed by contributors working on the same project and usually generate-mails automatically to members of the site. Within academic libraries, wikis are primarily used for the creation of collaborative subject guides (Staley, 2009). Academic libraries can create subject wikis with links to resources on a chosen topic or for a particular class, including information regarding relevant databases and search tips tailored to that subject (Kroski, 2007). Students conducting research on a topic can use the resources provided as well as edit the wiki to include additional information. Thus, a wiki-based subject guide allows for collaboration between academic librarians and the students. Both wikis and blogs

have several creative uses for academic librarians engaged in student outreach and knowledge sharing.

YouTube is another popular video-sharing venue online that attracts millions of users daily. Extension educators find it useful to disseminate educational messages, video, and TV news clips for the global audience (Vaast *et al.*, 2006). The last one is Twitter; a micro blog that allows registered users to post brief messages for other users who follow the account and to comment on other user posts (Vaast *et al.*, 2006). Unlike traditional blogs, twitter allows librarians to go where the students are already located. Libraries post hour changes, events, new resources available, search tips, deadlines, links to the library web sites, responses to student comments, and news affecting students without the requirement that students visit the official library web site. For it to truly be an effective method of interaction, academic libraries need to post discussion questions and respond quickly to any questions posted to the library's account (Boxen, 2008). These social media tools have become very crucial in knowledge sharing and their extent of use in this matter requires investigation.

2.3.9 Challenges of Social Media Tools in Knowledge Sharing

Social media tools enable employees to access websites while at work and students to interact for social, learning or information gathering purposes. However, social media tools present specific challenges for the users. Some of the key threats that organizations need to guard against include the viruses and malware attacks. The MySpace Trojan (2006), the Orkut worm (2007), the Secret Crush Facebook widget (2008) and Koobface (2008 and 2009) which affected MySpace, Facebook and Bebo are examples of how

virtual criminal gangs can use social media tools to their advantage (Aduke, 2008). Social media tools provide an easy way to meet and interact with so many users, where some of them can be harmful. Spammers and virus-writers can set up false profiles and trawl through Social media tools (including Blogs) gathering information about job titles, phone numbers, and e-mail addresses (MessageLabs, 2007). Fake profiles, blogs and other networking tools can contain links to other web sites that download unwanted spyware or adware, or the posting itself can contain a flash file with an embedded virus or worm (Clear Swift; MessageLabs, 2007). The goal of the majority of malware is to cause data leakage. If the user, i.e. Staff or Student is accessing the social media tool from a Personal Computer/Universities' Computer, then the organization's whole network risks being compromised.

2.4 Summary and Gaps

Social media tools are likely to provide an impoverished view of the challenges and opportunities that the new communication technologies present. Social media tools comprise a large part of today's Web. Libraries can engage their patrons using these tools, whether by connecting with students via Facebook, by posting pertinent Web links in delicious or helping implement corporate social media tools. Social Networking, incorporating Web 2.0 technologies have the ability to expand social contacts, accelerate business processes, the improvement of customer relations, cost-effective recruitment of high-caliber staff, and the improvement of morale, motivation and job satisfaction among staff. On the negative side, this form of social network has gained the reputation of negatively affecting staff productivity, and with many companies fearing damage to productivity and reputation (MessageLabs, 2007). Social media sites are a new

technology offering promising new outreach options for academic librarians. They provide a new platform for reaching students beyond the traditional library building and website by allowing students to access librarians and the library's resources without leaving the comfort of the web sites they use the most. The literature review does not identify the different purposes that people use social media tools. The literature also lacks the attitudes/perceptions regarding and social media use as well as policies to control the social media use. Finally, there is need to expand on literature on use of social media in knowledge sharing among university staff and students. This study is aimed at filling these gaps.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter discusses the methodological procedures used in data collection and analysis. It details various steps followed in the entire research. Discussed in details are the research design; location of the study; population of the study; sampling procedure and sample size; validity and reliability; data collection; and data analysis.

3.1 Research Design

Burns and Groove (2003) define a research design as a blueprint for conducting a study with maximum control over factors that may interfere with the validity of the findings. This study used case-study survey design with mixed approaches to assess the utilization of social networks for knowledge sharing. Mixed method design is an approach to inquiry that combines both qualitative and quantitative forms. It involves Philosophical assumptions, the use of qualitative and quantitative approaches and the mixing of both approaches in a study (Holt & Graves, 2007). Qualitative research is best in gaining understanding of underlying reasons, opinions, and motivations regarding the issue at hand. It provides insights into the problem or helps to develop ideas or hypotheses for potential quantitative research. Quantitative research on the other hand is best when one needs to ask people for their opinions in a structured way so that they can produce hard facts and statistics to guide the researcher (Vaast *et al.*, 2006). To get reliable statistical results, it is important to survey people in fairly large numbers and to make sure they are a representative sample of the target population (Holt & Graves, 2007) as was done in this study. Interpretivism and positivism will be employed in the study. According to

Interpretivists individuals are intricate and complex and different people experience and understand the same 'objective reality' in very different ways and have their own, often very different, reasons for acting in the world. Positivism is best where information is derived from sensory experience, interpreted through reason and logic, forms the exclusive source of all authoritative knowledge and fitted in this study.

3.2 Target Population

The University of Nairobi College of education and external studies students were selected using simple random sampling to draw the target population. The students included those in third and fourth years because they have gone through many ICT courses and they have gained adequate skills.

3.3 Sampling Procedure and Sample Size

In determining the best sample for this study, the research objectives and the research questions were considered. For this study, the target population constituted the students from College of education and external studies whose sample was selected using systematic random sampling. The study also involved the following key informants who were identified through purposive sampling:

- i. The Principal of the College
- ii. The Dean
- iii. The Registrar
- iv. The Head of the Department
- v. The College Librarian
- vi. The ICT Director

3.3.1 Sample for the Education Students

The sample for the students was selected using systematic random sampling. This entailed dividing the total number of units in the general population by the desired number of units for the sample population. Every “nth” member is selected from the total population for inclusion in the sample population in which the total Population was 756 and the “nth” number was 5, therefore the sample was calculated as:

$$756 \div 5 = 151$$

Therefore, the researcher settled at a sample of 151 students.

3.4 Data Collection Instruments

3.4.1 Questionnaires

The questionnaires were used for soliciting information from the students. The questionnaires for the data collection were semi-structured. They sort information with regard to the membership of participants in social media, hours spent on social media, knowledge sharing, knowledge management and challenges of the use of social media. These questionnaires were preferred because they ensure anonymity, respondent acceptability, and save cost thus enabling the researcher to collect huge volumes of data using a flexible design.

3.4.2 Interviews Schedules

Interviews were administered to 6 key informants who included: the Principal of the College, the Dean, the Registrar, the Head of the Department, the College Librarian and the ICT Director. The interviews schedule obtained information on the improvements to facilitate the social media tools for knowledge sharing, policies regarding the use of

social media tools within the College and the purpose for the use of social media tools in the university. The interviews enabled the researcher to probe for more information from the key informants respondents. During the data collection, the researcher took notes on those issues found worthy in substantiating the data.

3.5 Pilot Study

A pilot study was conducted at the University of Nairobi, Kikuyu campus to test the validity and reliability of the instruments of data collection. The pilot study was conducted to 50 students from Kikuyu campus. The campus was preferred because it is a setting similar to that of the study site. The number of students was enough to pilot for the validity and reliability of the study instruments. The instruments worked effectively without hitches.

3.5.1 Validity

Validity is a measurement describing to what extent a method examines what it is supposed to examine (Wallen & Fraenkel, 2000).It is concerned with establishing whether the questionnaires and interview content is measuring what it is supposed to measure. The questions answered by the researcher were simplified so that they became easy to understand thus ensuring validity. These adjustments included cross checking the results versus the objectives of the study as well as the research questions. Validity is concerned with establishing whether the questionnaires and interview content is measuring what it is supposed to measure. The questions to be answered by the researcher were simplified so that they became easy to understand thus ensuring validity.

These adjustments included cross checking the results versus the objectives of the study as well as the research questions.

3.5.2 Reliability

After validating the instruments, the measure of the degree to which such instruments produce consistent results after a repeated trial is inevitable hence testing for reliability (Wallen & Fraenkel, 2000). After piloting, necessary adjustments were done so that the instruments were accurate and valid for the main research. The piloting was to establish the clarity and accuracy of the instruments used in the main study. A pilot study was conducted at the University of Nairobi Kikuyu campus to test the validity and reliability of the instruments. Reliability was tested using a checklist, which was later used to test the questionnaires on:

- Language
- Technical terms
- Grammatical errors
- Invitations for possible suggestions through brochures and other relevant materials

3.6 Data Collection Procedures

The researcher obtained permission from all relevant authorities before embarking on this research. The researcher also obtained a research permit from the National Council of Science and Technology (N.A.C.O.S.T.I) in the Ministry of Higher Education Science and Technology (MHEST) through the Moi University, School of Information Science. To maintain confidentiality, the questionnaires did not require respondents' names. This was discussed prior to the filling of the questionnaires with the respondents, so that they

do not withhold essential information. The questionnaires were issued to only those participants willing to participate. Those not willing to participate were also appreciated and their wish granted. No respondent was forced to fill the questionnaire. If the fifth respondent failed to participate, the researcher went to the next candidate and considered them as fifth in order to attain the nth number. The fifth respondent was only valid when they accepted to fill the questionnaire.

3.7 Data Analysis

The results of the research were essential in order to make the final recommendations and conclusion. This was carefully done in line with the research questions and objectives. After collecting the data, it was necessary to compile and analyze the results so that decisions could be made regarding the questions being tested. With qualitative data, it was the duty of the researcher to name and define the categories of data. The researcher also coded the data into meaningful descriptive parts. Whereas with quantitative data, the Statistical Package for Social Science (SPSS) version 15.0 for windows was used to aid in data analysis. The collected data was used to compare the research findings with related literature in order to develop accurate results that could be relied on making recommendations for the utilization of social networks for knowledge sharing.

3.8 Chapter Summary

The chapter has established the research design; location of the study; population of the study; sampling procedure and sample size; validity and reliability; data collection; and data analysis. The researcher has justified every aspect of the methodology so that it stands out in obtaining all information required to fulfill the objectives of the study.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.0 Introduction

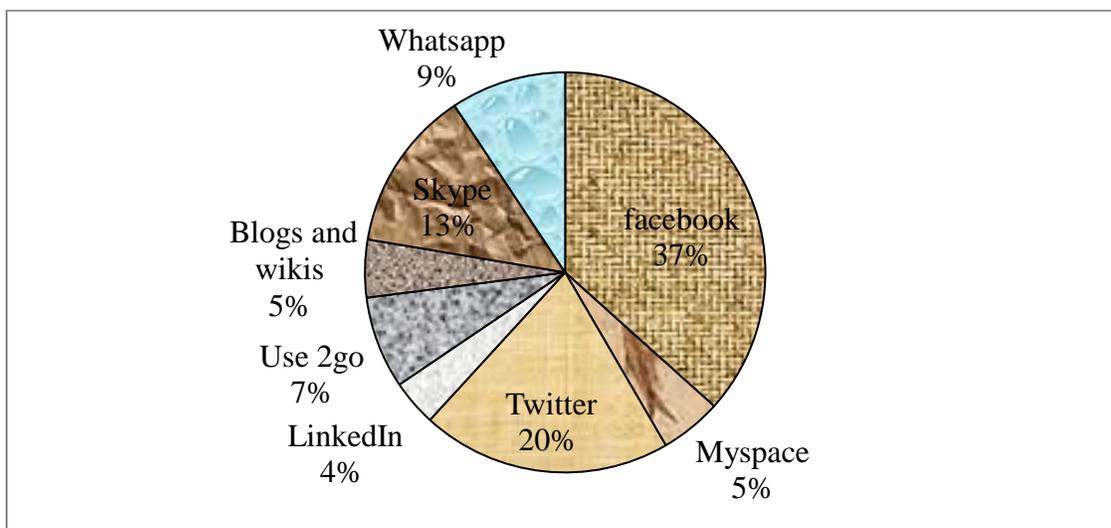
This chapter presents the results of data analysis on the utilization of social media tools for knowledge sharing among staff and students at the University of Nairobi. The collected data has been presented, analyzed and interpreted. Data are presented based on interviews conducted with the staff and questionnaires distributed to education students. Their opinions, views and comments formed the basis for the findings of the study. The presentation of the data has been done according to the objectives of the study

4.1 Respondents Return Rate

The study targeted one hundred and fifty one (151) undergraduate students. Out of these, one hundred and twenty seven (127) students completed and returned the questionnaires. The response rate for the students was therefore eighty-four per cent (84%). On the other hand, all six (6) university staff members, who were targeted key informants were interviewed; making their return rate to be 100 percent.

4.2 Types of Social Media Tools used for Knowledge Sharing and Their Purpose

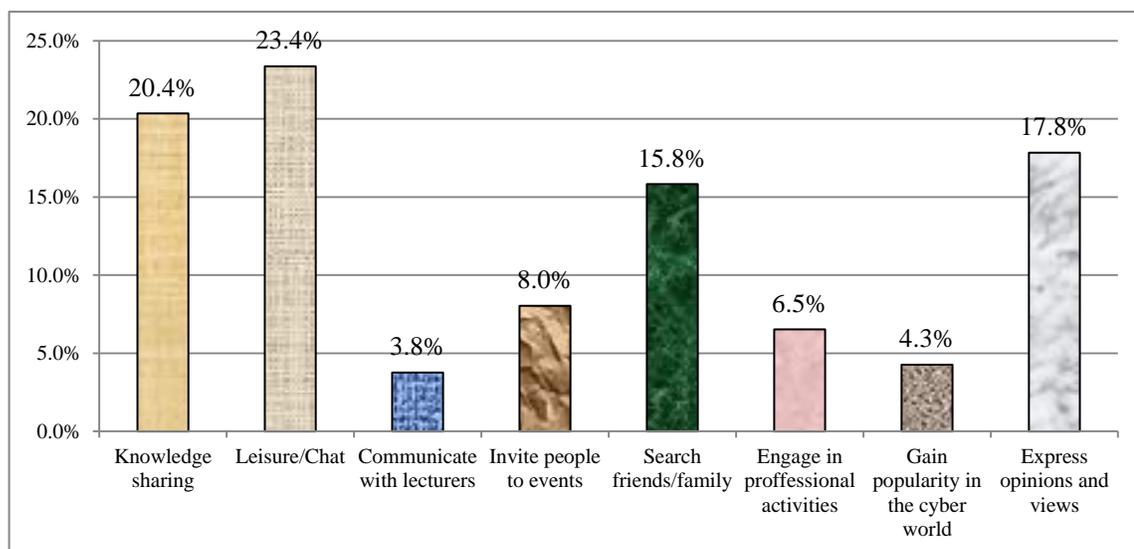
The study examined whether the respondents used the social media tools. It further sought to establish the types of social media tools they used and the results in figure 4.1 below were obtained.



N=119

Figure 4.1: Social Media Tools Commonly Used

119 (94%) of the respondents indicated that they used social media tools while only 8 (6%) do not use social media tools. From the study, one can conclude that most students use the social media tools. Of the 119(94%) of the respondents who use social media tools, 47 (37%) of the respondents said they use Face Book, 25 (20%) indicated they use Twitter, and 17 (13%) used Skype. Those who use Whatsapp were 11 (9%) while those who said they use LinkedIn are 9 (7%). In addition, respondents who said they use 2go are 5 (4%), and 6 (5%) use MySpace. The study showed that Face Book and twitter are the most commonly used social media tools constituting of 47 (37%) and 25 (20%) respectively as shown in (Figure 4. 1) above. Face Book and twitter have changed the way people communicate and have expanded reach and functionality of processes at the University of Nairobi.



N=119 and above

Figure 4.2: The Purpose of Social Media Tools

Figure 4.2 indicates responses given by respondents in defining their purpose for using the social media tools. This was necessary to establish the reasons why respondents use social media tools. This data was important, as it would help determine whether they use social media tools for knowledge sharing. The figure above shows that 25 (20%) of the respondents use social media tools for knowledge sharing while 29(23%) use it for Leisure/Chat. In addition 5 (4%) of the respondents use the social media tools to communicate with Lecturers. Similarly 10 (8%) respondents said they used the social media tools to invite people to events, while 20 (16%) of the respondents indicated that they use the tools to search friends/Family. In addition, the results shows that 23 (18%) used the social media tools to express opinions and views. Seven percent 9 (7%) of the respondents engaged in professional activities while using the social media tools and 5 (4%)respondents used the tools to gain popularity in the cyber world .In addition, the study sought to determine the purpose of using the social media tools from the librarian.

The response was that the library staff to update clients on services for instance new acquisitions and for current awareness service used the social media tools. In the discussion of this objective, two thematic areas are entailed and they include Knowledge sharing and leisure/Chat.

4.2.1 Knowledge Sharing

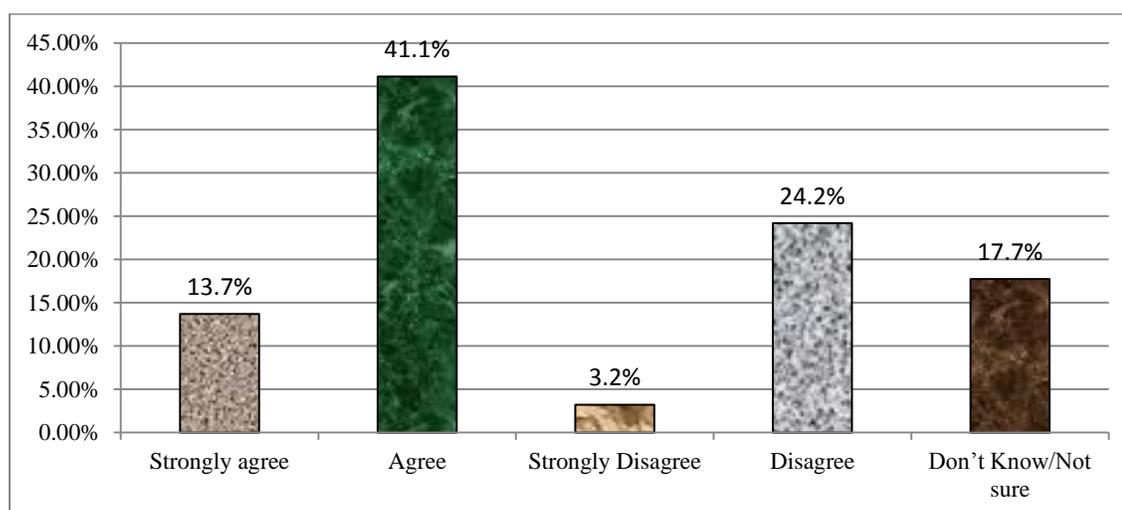
The findings of the study (Figure 4.1) showed that items regarding the sharing of knowledge which includes Knowledge sharing, express opinions and views, communicate with lecturers and engage in professional activities entail 62 (49%) of the total number of respondents. This was an indication that social media tools can be used for the provision of information to support the student centered learning. This is because the respondents express opinions, communicate and engage in professional activities on the social media. In addition, the social media tools can be excellent tools for teaching and learning hence, knowledge sharing and can provide exciting new opportunities for universities to communicate and collaborate.

4.2.2 Leisure/Chat

In addition, areas regarding leisure/chat which include search friends/family, invite people to events, and gain popularity to the cyber world and leisure/chat entail 65 (51%) of the respondents. This means that since the social media is interactive, instant and a mass medium, it has become a natural background of everyday life hence its importance in the university.

4.2.3 Perception and Attitude on Social Media Tools for Knowledge Sharing

The study sought to establish the perception and attitude of the respondents in using the social media tools for knowledge sharing. This was done by finding out from the respondents whether they have trust in the use of the social media tools, whether they think the social media tools bring valuable knowledge, their attitude towards the social media in relation to the library and their attitude towards provision of library services through the social media tools. This is shown in the below figures.



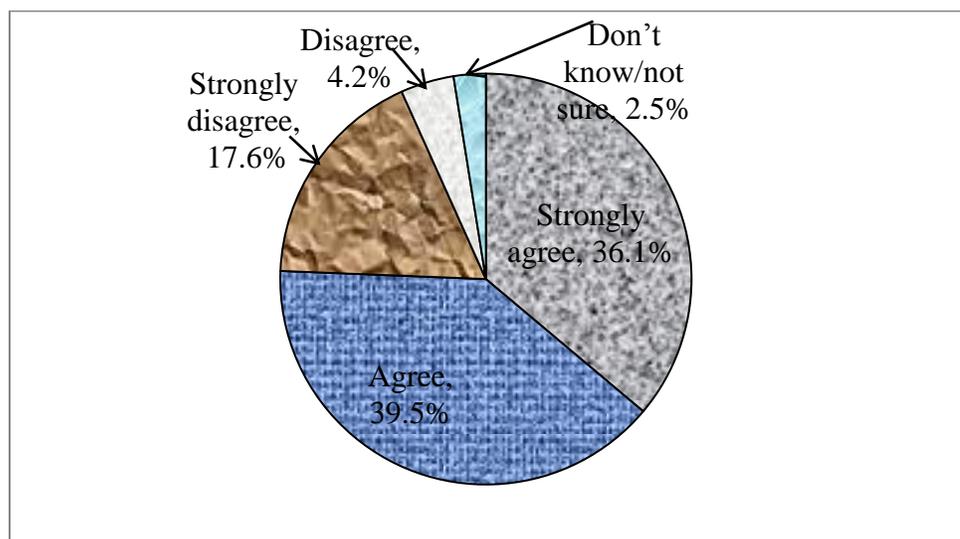
N=119

Figure 4.3: Trust in Use of the Social Media Tools

The findings of the study (Figure 4.3) showed that 70 (55%) of the respondents agreed that trust is a key issue in knowledge sharing using the social media tools in that one loses control of the information when it is shared. Twenty seven per cent 34 (27%) of the respondents disagreed and 23 (18%) of the respondents did not know or were not sure. Trust plays a key role in transferring knowledge. The fundamental elements for making

knowledge transference fluid are trust among members; and a knowledge friendly culture, which means that people are intellectually curious, free to explore and motivated to create and use new knowledge. For the purpose of this study, more than half of the respondents agree on the concept of trust in knowledge sharing.

4.2.4 Social Media Tools Providing Valuable Knowledge



N=119

Figure 4.4: Social Media Tools Providing Valuable Knowledge

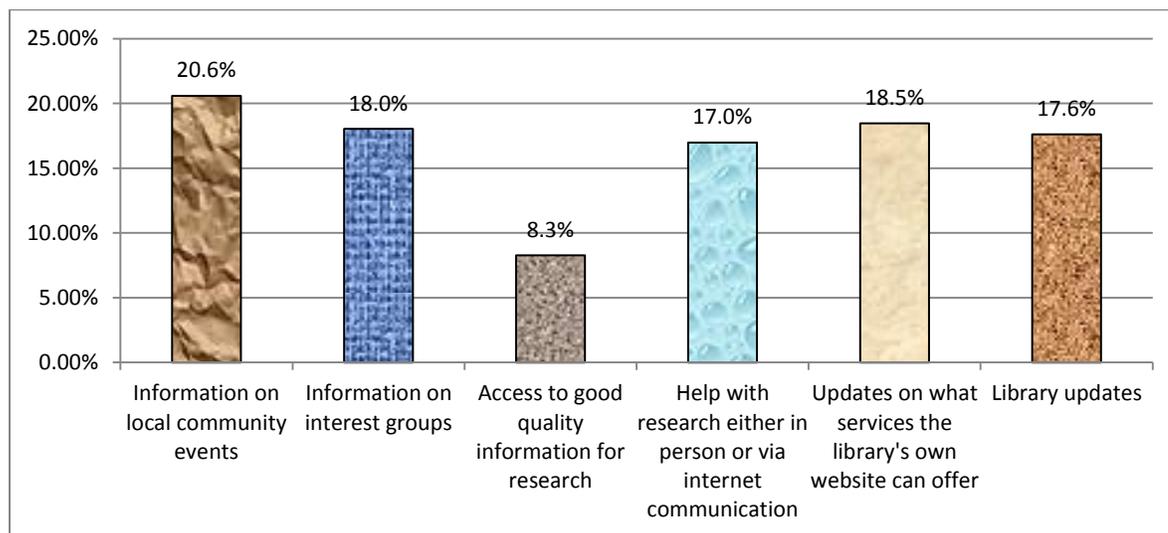
This was an important and basic aspect in determining the attitude of the social media tools in bringing valuable knowledge. The question was framed in terms of strongly agree, agree, strongly disagree, disagree, did not know/not sure. The findings of the study (Figure 4.4) show that 36.1% strongly agreed that social media tools bring valuable knowledge; 39.5% agree that social media tools bring valuable knowledge; 4.2% disagreed while 17.6% strongly disagreed that social media tools bring valuable. On the other hand, 2.5% either did not know or were not sure whether social media tools bring

valuable knowledge. From the above results, it is clear that the ultimate goal of the social media tools is to create an active and knowledge network community that individuals can share their valuable information

4.2.5 The Provision of Library Services on Social Media Tools

Respondents were asked to indicate whether they would like a page of the university library on a social media tool. The purpose of the question was to indicate their attitude towards social media and the library. During the study, 119 (94%) of the respondents said that they liked the university library page on social media, 4 (3%) of the respondents indicated that they did not like the university library page on social media and 4 (3%) of the respondents said that they were not sure on whether they liked the university library page on social media. This was a clear indication that the respondents had a positive attitude towards the relation between the social media and the University Library. Social media tools count as a new and powerful type of communication system that provides a good platform for knowledge sharing.

4.2.6 Interests in Relation to Library Services using the Social Media Tools



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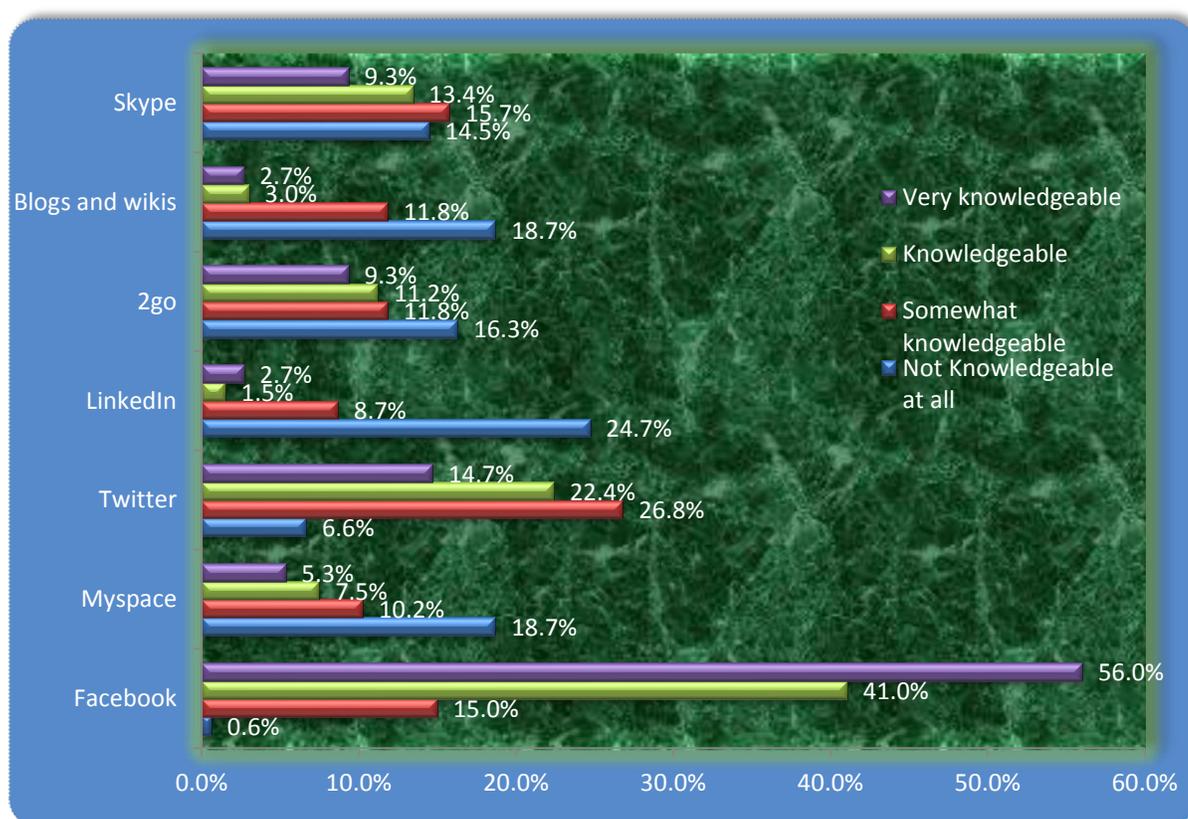
Figure 4.5: Interests in Relation to Services the Library Provides using the Social Media Tools

The study investigated the interests of the respondents in relation to services the library provides using the social media tools. There were several options given from which respondents could choose more than one depending on the circumstances as shown in (Figure 4.5). The study established that 27 (21%) of the respondents were interested in information on local community events and 23 (18%) of the respondents indicated their interest in information on interest groups. In addition, 10 (8%) of the respondents were interested in good quality information while 22 (17%) said they were interested in ease of access to research either in person or via internet communication. 23 (18%) of the respondents said that they were interested on updates on what services the library's website offers, and 23 (18%) of the respondents were interested in library updates. This is a very significant study since it established that the respondents were generally interested in information on local community events, information on interest groups, ease of access

to research either in person or via internet communication, updates on what services the library's website offers and library updates. In addition, social media tools can be a suitable environment for librarians' interaction to manage user information needs in education and research.

4.2.7 Frequency and Extent in the Use of the Social Media Tools

The study sought to determine the frequency and extent of use of the social media tools. This involved the consideration of the extent of familiarity of the social media tools and the period the respondents spend on social media tools.

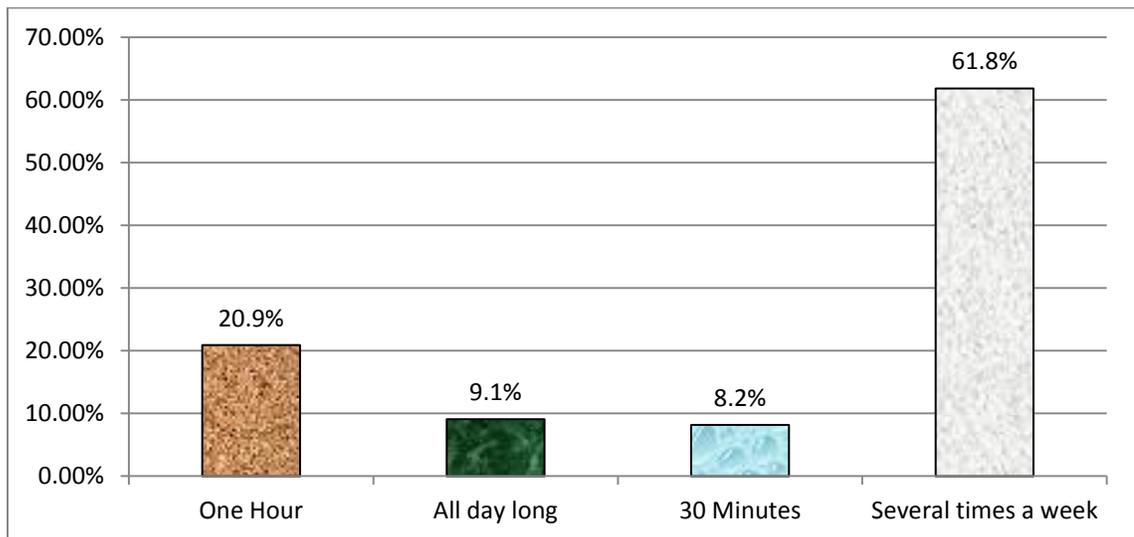


N=119

Figure 4.6: Extent of Familiarity of the Social Media Tools

The study explored the extent of familiarity of the social media tools among the respondents. 71 (56%) respondents indicated that they were very knowledgeable in the use of FaceBook while 32 (25%) of the respondents said they were not knowledgeable at all in use of LinkedIn. In addition, 24 (19%) respondents said they were not knowledgeable at all in use of MySpace. Those who are somewhat knowledgeable in use of twitter are 34 (27%) of the respondents. Additionally, 20 (16%) of the respondents indicated that they are not knowledgeable at all with 2go. 24 (19%) of the respondents are not knowledgeable at all with Blogs and Wikis while 20 (16%) respondents said that they were somewhat knowledgeable with Skype. This is an indication that respondents are most knowledgeable in use of FaceBook and are least knowledgeable in the use of MySpace and blogs and Wikis.

4.2.8 Time Respondents Spent on Social Media Tools



N=119

Figure 4.7: Period of Time the Respondents Spend on Social Media Tools

This was an important aspect in determining the frequency of use of the social media tools. The question was framed in terms of time scale -one hour, all day long, 30 minutes, several times and a week. The findings of the study (Figure 4.7) showed that more than half of the respondents at 79 (62%) indicated they used social media tools several times a week. Those who said they used social media tools all day long are 11 (9%), while 10 (8%) respondents spent 30 minutes on the social media tools. 25 (20%) of the respondents indicated that they spent one hour on social media tools.

4.2.9 To Share Information

Seventy seven per cent 98(77%) of the respondents indicated that the social media tools can be used as a forum to share information. Their views were “For research work”, “To share educative materials and lecture notes”, “To access quality information”, “It can be used for educational purposes” and “Groups can be created where challenging questions can be posted so that others can discuss them”. In addition, 11 (9%) of the respondents expressed views that the reduction of costs on the internet access can result to social media tools being used appropriately for sharing of information. Their views were “By reducing internet costs”, “Have no costs” and “Free access to the social media tools”

4.2.10 Use of Proper Language and Decency Regarding Content Posted

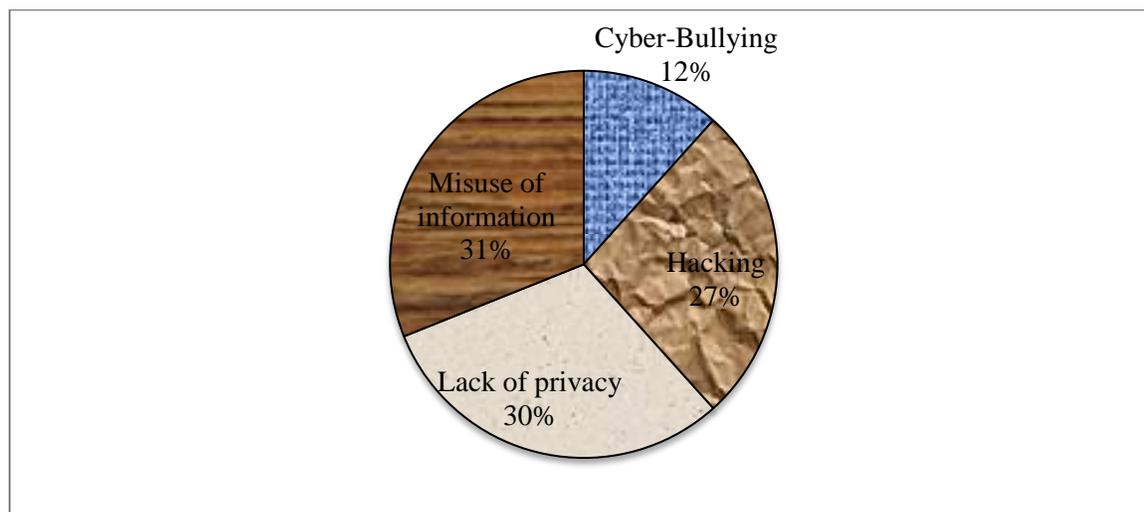
Furthermore, they noted that if information on social media can be posted in a decent manner and in proper language then the tools can be very useful in sharing knowledge. This was noted by 11% of the respondents. Their responses included “Avoidance of pornography”, “Use of correct language” and “Enhance proper language use”

4.2.11 Skills on Usage of Social Media Tools

Moreover, 3% of the respondents noted that the social media tools require some skills in access and use hence educating students and staff on how to use the tools would assist in ensuring that they are appropriately used for knowledge sharing. Their responses included “Skills on usage of social media” and “Creating awareness on the importance of social media”

4.2.12 Challenges Experienced in Using the Social Media Tools

Another objective of this study was to establish the challenges in using the social media tools. This was done by finding out the security problems in use of the social media tools and the challenges experienced in access of the social media tools.

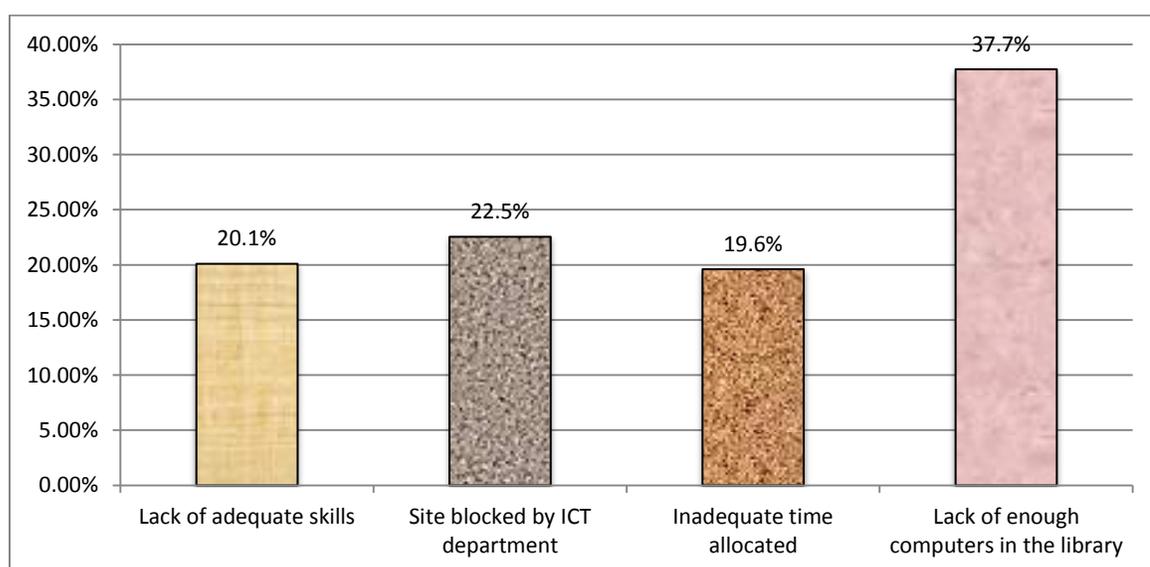


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Figure 4.8: Security Problems in Use of Social Media Tools

Respondents were asked to indicate the security problems encountered in use of the social media tools. During the study, 15 (12%) respondents indicated cyber bullying as a security problem in the use of social media tools. In addition, 34 (27%) respondents cited

hacking as a major security problem. 38 (30%) of the respondents said lack of Privacy limits their use of social media tools. Moreover, 39 (31%) respondents indicated misuse of information as indicated in (Figure 4.9). This is a very significant finding as it indicated that 39 (31%) of the respondents cited misuse of information and 38 (30%) indicated lack of privacy as the major security problems. Online privacy concerns and misuse of information are a deterrent for the frequency of using social media tools. It is essential for social media tools operators to ensure online privacy.



N=119

Figure 4.9: Challenges Experienced in the Use of the Social Media Tools

In addition, the study sought to find out the challenges experienced in use of the social media tools. During the study 25 (20%) of the respondents said lack of adequate skills was a challenge in use of the social media tools. 28 (22%) of the respondents indicated the blocking of sites by ICT department hindered the use of social media tools. In addition 25 (20%) of the respondents indicated a challenge regarding time allocated to

the use of social media tools. Additionally, 48 (38%) of the respondents said that lack of enough computers in the library was a challenge experienced in using the social media tools. The study revealed that lack of enough computers, lack of privacy and misuse of information were the major challenges in the use of social media tools. In addition, there was a challenge in ICT policies regarding the use of social Media tools. This was directed to the Principal of the College and the ICT director. The response was that there is no mention of the social media tools on the ICT policy but the ICT department allows for some limited time on use of the social media. Despite the contribution of social media tools, the widespread use of the tools pose challenges as they change the way students behave in the Universities.

4.2.13 Suggestions on the Use of Social Media Tools for Knowledge Sharing

The last objective sought to establish recommendations to the challenges experienced by students in use of the social media tools for knowledge sharing. Respondents were asked to give suggestions for use of the social media tools for knowledge sharing and below results obtained:

Measures	Frequency	Percentage (%)
Reduce costs for constant internet access	48	38
Enhancing privacy and tracking hackers	28	22
Provision of skills	24	19
Enhancing knowledge sharing	13	10
Use of Proper language	10	8
Increase number of facilities	4	3
TOTALS	127	100%

Figure 4.10: Suggestions on the USE of Social Media Tools for Knowledge Sharing

This was an open-ended question in which respondents could provide what they felt should help to facilitate the social media tools so that they can be appropriately used for Knowledge Sharing. The responses included:

Reduce Costs for Constant Internet Access

On the reduction of costs for internet use, 48 (38%) respondents said that reduction of costs for constant internet access would assist in addressing the challenges experienced in use of the social media tools. This was established from some of the views from the respondents, which include: “Reduce the costs”, “Free internet services in the hostels” and “Reduce the charges”.

Provision of Skills

In addition, 24 (19%) of the respondents indicated that providing skills on social media use to the students would address challenges of inadequate skills in use of the social media tools. The respondent's views include; more skills needed more skills on use of social media, Educating people on the use of social media and more time to be allocated on computer classes.

Enhancing Privacy and Tracking Hackers

Similarly, 28 (22%) of the students said that in their opinion increasing confidentiality and privacy by tracking hackers of the social media tools would address the challenges of the tools. The information gathered includes; tracking hacking users, Privacy should be enhanced, Have disciplinary repercussions for the misuses' of social media and Improve security and privacy in use of the social media.

Enhancing Knowledge Sharing

Moreover, 13 (10%) respondents noted that the challenges in use of the social media tools could be addressed by enhancing knowledge sharing in use of the tools. The responses include; creating sites for knowledge sharing and academic improvement, share useful information, putting more information on regularly visited sites and useful information should be posted.

Use of Proper Language

Ten respondents (8%) noted use of proper language as a measure to address the challenges experienced in use of the social media tools. The responses include; action on

those who use abusive language on social media and use of proper language on social media.

Increase Number of Facilities

Four (3%) of the respondents emphasized that increase in number of facilities such as computers, and other electronic devices would go a long way in addressing the challenges in use of the social media tools. The information gathered include: Increase the number of computers in campus, equipping the library with enough computers, Have adequate tools to access the social media tools, Avail ICT equipment in campus, Provision of smart phones, and Installation of WI-FI in the hostels to facilitate easier communication.

4.3 Responses from Key Informants

The researcher also obtained information from the key informants on the improvements to facilitate the social media tools for knowledge sharing, policies regarding the use of social media tools within the College and the purpose for the use of social media tools in the university. The following is an analysis of the obtained responses.

4.3.1 Improvements to Facilitate the Social Media Tools for Knowledge Sharing

The study sought to determine the improvements that can be made to facilitate the social media tools so that they can be appropriately used for knowledge sharing by staff. This was an open question to which respondents provided what they felt could help improve the social media tools so that they could be appropriately used for knowledge sharing. Comments were summarized as follows; Sensitization on the abilities and use of social media tools, Sensitization on the importance of social media tools among staff, increased

internet bandwidth, more facilities such as computers and skills on how to use the social media tools for knowledge sharing.

4.3.2 ICT Policies Regarding the use of Social Media Tools

This was directed to the Principal of the College and the ICT director. The principle said “among the students, the ICT department has allowed students to use social media for a limited period based on other ICT guidelines. Moreover, the staff has access to social media tools in the university although I do not think they may have enough time to use it.” The response was that there is no mention of the social media tools on the ICT policy but the ICT department allows for some limited time on use of the social media. The principle also was for the opinion that social media is not fully exploited and could be made more useful at the university level through sensitization.

4.3.3 Purpose for using Social Media Tools in the University

The study sought to determine the purpose of using the social media tools from the librarian. The response was that the social media tools were used by the library staff to update clients on services for instance new acquisitions and for current awareness service. From this response, it is clear that librarians use social media for communication purposes more than knowledge sharing. Although this is still commendable, it seems more should be done so that there is knowledge flow from the resources (librarians) to the users (students and staff). This is so given that the informant reported that they are on social media for only 1 hour in a week. The library also reported to spend only 30 minutes per week to maintain networking presence, which is far below the time they could use. This limited presence on networking for individual and the library may not

suffice to share knowledge with the highly expectant and big community of students and staff.

4.4 Summary

From the data analysis, it is evident that Social media tools are used at the University of Nairobi and the respondents are somehow knowledgeable in use of the social media tools. Similarly, it is noted that the social media tools provide valuable knowledge. In addition, social media tools are used several times a week, and they are used largely for knowledge sharing, leisure and chat. Moreover, there are various challenges encountered in use of the social media tools. Increasing the number of facilities, reduction of costs for constant internet access, provision of skills, enhancing knowledge sharing, enhancing privacy, tracking hackers and use of proper language in/with the social media tools, could be the way forward in increasing the utilization of social media tools for knowledge sharing.

CHAPTER FIVE

DISCUSSION OF FINDINGS

5.0 Introduction

The study has presented in this section a discussion of its findings based on the objectives it had set out to achieve. It discusses the major findings of the study, which have been categorized into the major areas. These include the types of social media tools used for knowledge sharing, the purpose of social media tools used by staff and students, the frequency and extent in the use of social media tools, and the challenges experienced in using the social media tools for knowledge sharing.

5.1 Types of Social Media Tools used for Knowledge Sharing

The study established that all of the respondents used the social media tools. Face Book and twitter were the most commonly used social media tools. The use of social media tools is viewed as crucial because of the general observation that the tools can be used as communication platforms, for marketing of information resources and to improve the e-reputation of an organization resulting to knowledge sharing. When integrated with educational practices, social media applications provide new and exciting opportunities. They facilitate convenience, flexibility, freedom of time and they reduce demand on resources. The social media tools have transcended to become useful in information sharing, user interaction, and education. They appear to be a more facilitating platform for users to reflect on prior knowledge, capture new experiences and provide feedback that is constructive to cultivating a knowledge-sharing environment. The study also established that the social media tools support the expression of social support among

users, thereby reinforcing their motivation in participating in knowledge management processes. In addition, the social media tools encourage openness in thinking, sharing of knowledge in a collaborative manner, shared power to decide, and interactivity. Moreover, they establish enduring relationships with real people. This means going beyond seeing others simply as peers who trade digital content. The findings of this study are consistent with Ellison et al. (2007) who noted that *FaceBook* serves to build social capital, concluding, "Online interactions keep people in contact, even when life changes move them away from each other". The findings of the study concur with those of Lenhart (2009) which reported 75% of 18-24 years olds use some form of social network.

5.2 The Purpose of Social Media Tools used by Staff and Students

The study revealed that half of the respondents used social media tools for knowledge sharing while the other half used the tools for leisure/chat. Using social media to support educational endeavors leverages the benefits of in-person learning communities with the benefits of using technology to support student engagement. The findings are in agreement with Tinto (2000) who found that learning communities could have a positive impact on student learning and the level of university student interaction and cooperation. Along with supporting the formation of professional learning communities, social media has the potential to reap the benefits of using technology for academic purposes. This is also supported by Hemmi, Bayne & Land (2009), who maintain that since students already collaborate, search for information, communicate and socialize using web technologies as part of their everyday lives, there is no reason not to use the same skills and behaviors in the classroom to support learning. Similarly, Boshoff and du Plessis (2008); Brown and Duguid (2000); Cairncross (2001); Davenport and Prusak (2000) and Orlikowski (2000)

noted that Social media tools provide a collaborative learning environment in which problems encountered are collectively solved and solutions are shared among peers, bridging the gap between procedures and practice. Boyd and Ellison (2007) also established that the topic of most conversations at these social media sites is education and 60 percent of the students maintain that they use social networking sites to discuss educational topics and more than 50 percent use social networking sites to discuss specific schoolwork. A 2007 National School Boards Association study found that, 60 percent of students use social networks to talk about educational topics, and 50 percent of students use the networks to “talk specifically about schoolwork”.

However, it also emerged out that a good number of students use social networking sites for social activities. In addition to student perceptions, another concern regarding social media tools by academic libraries is with regard to how students actually use these technologies. The social media tools permit and favor the publication and sharing of information; self-learning; teamwork; communication, both between students and between pupil-teacher feedback; access to other sources of information that support or even facilitate constructivist learning and collaborative learning; and contact with experts. In addition, students learn to distinguish the skills needed to locate information online from the ability to understand that information. Students can develop a capacity for practical reasoning when using social media. Social media provides a perfect opportunity for students to engage in critical thinking and digital literacy skills development. Much of what students learn they learn informally, through conversations with peers and through experimentation. Social media provides an opportunity to engage

students in these important informal dimensions of learning, in informal discussion, practice and creative solutions; this is often where learning occurs.

5.3 The Perception and Attitude of Students and Staff on Social Media Use

The study established that over a half of the respondents agreed that trust is a key issue in knowledge sharing using the social media tools in that one loses control of the information when it is shared. This information is in line with what Preece (2004), noted that with any social media environment, success in creating a vibrant learning community is dependent upon the establishment of social presence, authentic voice, and a sense of trust. In addition, twitter has provided an opportunity for institutions to create live, up-to-the-minute notices of commencement programs, homecoming events, class reunions, and live chat sessions (Wilburn, 2008) as well as campus emergency alerts (Swartzfager, 2007). The findings further revealed that all of the respondents would like the University Library page in the social media. In addition, the findings revealed that the services found on the library page on social media would provide interest areas such as information on local community events, information on interest groups and update on the services the library offers. Social media tools assist in marketing the library with a fan page. They provide a platform to update the services the library offers, libraries' operating hours, its location, and Web site information. This is in line with Farkas, (2007) who posit that by linking to the library's Web site and the social media page acts as a portal to the library.

In addition, the social media tools encourage user interaction through their comment feature, which allow students to provide feedback regarding the information provided and the library itself. In addition, some social media tools such as blogs are used to create

subject guides as they can be easily updated to reflect the most current sources for a particular class. The varied social media tools are increasingly used by individuals of all ages but are especially popular among young people and College students. Social media tools used by academic librarians provide a potentially effective method of student outreach as long as librarians take into account the possible issues that may arise. Online social media tools provide such an avenue to reach College students in their own environments. Kroski (2007) observes that academic libraries currently post videos of library tours as well as bibliographic instruction videos for students. Ultimately, social media sites enable librarians to create multimedia profiles with the goal of encouraging interaction between library staff and students. As Mathews (2007) observed, the goal among academic libraries is to reduce the need for users to come to the library and “to repackaging their materials into an environment that is more familiar to specific users”. Online social networking by academic libraries is not, however, without controversy. While some maintain that social networking efforts are a successful and innovative method of student outreach, others argue that social networking by academic librarians is an ineffective use of librarian time and effort (Sekyere, 2009). A review of recent literature shows that social networking by academic librarians provides a potentially effective method of student outreach as long as librarians take into account the possible issues that may arise.

5.4 Frequency and Extent in the Use of the Social Media Tools

According to the above findings, FaceBook is the most used social media tool by both the staff and students. It was also found that about two thirds of the respondents used the social media tools several times a week. University students make intensive use of social

networks, which form part of their lives and their everyday tasks. These findings are in agreement with earlier findings by Dwyer (2007), who found that millions of people are using Social media tools regularly, and it now seems that the social media tools will be an enduring part of everyday life. Social media tools have become part of the daily life experiences for an increasing number of people. Through the use of cell phones, laptops, iPods, and online “social networks”, students are not only staying connected with their peers but are also becoming more adept at keeping up with world events and helping to shape them. Olubiyi (2012) noted that these days, students are so engrossed in the social media that they are almost 24 hours online. Even in classrooms and lecture theatres, it has been observed that some students are always busy ping-ponging or Facebooking, while lectures are on. Times that ought to be channeled towards learning, academic research and innovating have been crushed by the passion for meeting new friends online, and most times busy discussing trivial issues. Hence, most students suffer setbacks because of distraction from the social media.

5.5 Challenges in the use of Social Media Tools in Knowledge Sharing

Although the social media tools are being utilized at the College of education and external studies at the University of Nairobi for different purposes and it is agreed that they bring valuable knowledge, as this study established, several challenges hamper the utilization of social media tools for knowledge sharing. The study established that there were various security problems including cyber bullying, hacking and lack of privacy and misuse of information. In addition, utilization of social media tools was also hampered by lack of adequate skills, sites blocked by ICT department, inadequate time allocated and lack of enough computers in the library as discussed below:

5.5.1 Cyber-Bullying

The study revealed that cyber-bullying, is a relatively common occurrence and it can often result in emotional trauma for the victim. About an eighth of the respondents indicated cyber bullying as one of the security problems cited in use of the social media tools. This is supported by Kowalski and Limber (2007) who investigated middle school students in grades 6 to 8, and identified that nearly a similar percentage reported having been victims of cyber bullying.

5.5.2 Hacking

The study findings found that over a quarter of the respondents noted that hacking is one of the security problems experienced in use of the social media tools. A small body of research has explored the subculture and norms of computer hackers and malware writers, finding that hackers value learning on their own but share information with others about attacks and successful practices through on-line and off-line networks (Gordon, 2003; Holt & Graves, 2007).

5.5.3 Lack of Privacy

The study established that slightly over a third of the respondents cited lack of privacy as one of the major security problems in use of the social media tools. Privacy concerns with social media tools have raised growing concerns amongst users on the dangers of giving out too much personal information. Many scholars, policymakers and 'netizens' have discussed appropriate methods to protect privacy in electronic transactions and to ensure protection of personal information on networks (Jorstad, 2001; Spencer, 2002). There is some evidence that young people are aware of potential privacy threats online and many

proactively take steps to minimize potential risks (Hitchcock, 2008; Lenhart *et al.*, 2010; Hinduja & Patchin, 2007; Boyd *et al.*, 2007). Moreover, popular press coverage of Social media tools has emphasized potential privacy concerns, primarily concerning the safety of younger users.

5.5.4 Misuse of Information

The respondents in the study (social media users) maintained that there is much more control over their information environment hence the need for action to be taken on the information shared. About a third of the respondents in the study cited the misuse of information as a security problem in use of the social media tools. Many social media tools such as FaceBook provide the user with a choice of who can view their profile. This prevents unauthorized user(s) from accessing their information. Lately, as Manyasi (2010) observes, the concern has been third party applications misusing information without users even knowing that their information is being made available.

5.5.5 Lack of Adequate Skills

In the study, a fifth of the respondents indicated that inadequate skills were one of the challenges experienced in access of the social media tools. Various studies have found that students have poor Internet skills. Bond (2002) found that nearly half of new pre-registration nursing students at an English University felt that they ended up getting irrelevant information from the social media tools.

5.5.6 Site Blocked by ICT Department

The findings of the study show that slightly over a fifth of the respondents had challenges in accessing the social media tools since the ICT department had blocked the sites. In

practitioner literature, Li (2010) believes that challenges related to access to the social media tools are related to the lack of guidelines and monitoring in social media tools. According to Li (2010), guidelines are essential in controversial situations, as they make it easier for managers to recognize problems and turn to advice for potential next steps. Institutions need to clarify how discussions on social media tools are monitored, and that it is important to reach an agreement on how information and responsibilities should flow.

5.5.7 Inadequate Time Allocated

The study revealed that there are needs to be a strategic reason and plan in place to use social media tools. The study revealed that a fifth of the respondents were challenged by a time limitation. Time commitment is an issue that worries experts as it pertains to social media tools and its educational use. Social media mix to workload means that staff and students in higher education will result to time intensity.

5.5.8 Lack of Enough Computers

The study established that lack of enough computers was one of the challenges experienced in access of the social media tools. Over a third, of the respondents indicated this. Manyasi (2010), while studying how using information technology could increase access to higher education through distance learning in Kenya found that institutions of higher learning lacked the necessary technology. The institutions had only a few computers, which were used by lecturers to access internet services. Advances in Information Technology such as the social media tools could provide solutions for the demand in University education in Kenya. Kowalski and Limber (2007) who investigated

middle school students in grades 6 to 8, and identified that nearly similar percentage reported having been victims of cyber bullying. (Li, 2010) also believes that institutions need to clarify how discussions on social media tools are monitored, and that it is important to reach an agreement on how information and responsibilities should flow. In an effort to reduce these challenges, human and information, systems must be designed to help social media users think together in addition to simply making information available. In addition, social media users must maintain enough diversity to encourage innovative thinking, yet still have common goals and interests.

As Vaast et al. (2006) observe, environments that truly value knowledge sharing must be created and maintained. Similarly, social media users must be open to the ideas of others, be willing to share ideas, and maintain a thirst for new knowledge. The findings of the study concurs with those of Kruger (2010) in that while the educational potential of the social networks is huge, the challenge will consist awakening the interest of the institutions, teachers and students to integrate them as basic teaching tools. Staff and students must ensure that they do not make disparaging remarks about other staff or students, or any other persons. Staff must also ensure that not all postings and commentary are false, misleading or deceptive. Cyber bullying in the form of angry, racism, sexism, or other postings that compromise the safety of the environment should be monitored and mediated. On the strategies that could be implemented to enhance the use of social media tools for knowledge sharing, include a screenshot record of the offending content to be kept, along with date and time of post. Other strategies include a policy that students should not be unwitting participants in a social media platform in which their postings are made public.

It is no longer a waste of time for young people to browse the internet or to use the social media tools, as they are assimilating technological and communications competences that are crucial in the contemporary world (Hinduja& Patchin, 2007). This means that together with a merely social use, as a space and a route for communication, information and entertainment, networks possess vast potential for the educational sphere, and evidence is emerging that students are favorably disposed towards the academic use of social networks (Patchin, 2008).Alternatively, since social media tools have capabilities for protecting personal information, it is likely that respondents who do actively place restrictions and take care in what they put on social media tools factor that into their answers and express less concern. When these challenges are addressed, knowledge-sharing communities can provide opportunities for researchers, policymakers, and service providers to work together and learn from one another.

CHAPTER SIX

SUMMARY OF THE FINDINGS, CONCLUSION AND RECOMMENDATIONS

6.0 Introduction

This chapter gives the summary of the main findings of the study, concludes and makes several recommendations, which address key issues based on the findings of the study. The summary is provided in reference to the objectives, research questions and the assumptions of the study. The research findings are briefly discussed to offer an overview of the major insights of the study.

6.1 Summary of the Findings

Below is the summary of the study findings:

6.1.1 Types of Social Media Tools used for Knowledge Sharing

The study established that all the respondents used the social media tools. The findings also reveal that at the time of the study, Face Book and Twitter were the most commonly used social media tools. The study further established that other social media tools were Skype, WhatsApp messenger, Linked In, 2go, and MySpace. Most respondents reported that they used more than one social media tool.

6.1.2 The Purpose of Social Media Tools by Staff and Students

The study established that half of the respondents used social media tools for knowledge sharing while the other half used the tools for leisure/chat. This is in agreement with what most studies maintain; that social media can be used successfully to support the provision of what Goodyear and Ellis (2008) term 'serious student-centered learning'.

6.1.3 The Perception and Attitude on Social Media Tools use for Knowledge Sharing

The study established that trust is a key issue in knowledge sharing. Using the social media tools makes one to lose control of the information once it is shared. In fact, previous research by Vaast (2006) has suggested dimensions of interpersonal trust that promote knowledge sharing. The findings also confirmed that the social media tools add valuable knowledge to the users as indicated by the three quarters of the respondents who agreed that the social media tools bring valuable knowledge.

6.1.4 Challenges Experienced in using the Social Media Tools in Knowledge Sharing

The study established that although the social media tools are being utilized at the College of education and External Studies at the University of Nairobi for different purposes and it is agreed that they bring valuable knowledge, several challenges hamper the utilization of social media tools for knowledge sharing. Some challenges appear to be associated with obscuring use of social media for knowledge sharing. The study established that there were various security problems including cyber bullying, hacking and lack of privacy and misuse of information. In addition, utilization of social media tools was also hampered by lack of adequate skills; sites blocked by ICT department, inadequate time allocation and lack enough computers in library. When engaging access and use of social media tools, people navigate through a range of risks and challenges.

6.1.5 Policies in Place regarding the Use of Social Media Tools

The study established that blocking of sites by the ICT department is a common policy for controlling the use of social media tools for knowledge sharing. The lack of adequate

infrastructure is, however, a potential challenge in policy implementation and considers system problems like incompatible databases and blocked sites to be barriers to social media adoption. Bandwidth management is a process of allocating bandwidth resources to critical applications on a network which is used as a policy to control social media tools use. Bandwidth management aims to improve performance of an internet connection by removing unnecessary traffic. The goal of managing network capacity is to have the right amount of bandwidth in the right place at the right time for the right set of users and applications. Effective bandwidth management can only happen by applying a combination of technical computer skills, effective network monitoring, and a sensible policy that is understood by all users.

6.1.6 Appropriate use of Social Media Tools in Knowledge Sharing

The study established that cyber-bullying, hacking and misuse of information are challenges in appropriate usage of social media tools for knowledge sharing. Another serious issue is the ability of young individuals to use social media applications appropriately and carefully. However, it was established that social media tools can be used for knowledge sharing such as group discussions, online conferencing, and library access and sharing of resource materials by students.

6.2 Conclusion

The study investigated the utilization of social media tools for knowledge sharing. There is a potential for significant utilization of social media tools for knowledge sharing by students and staff at the University of Nairobi, meaning that it is possible to improve access to and utilization of the tools if suitable measures are understood and considered.

Based on the study findings, it can be concluded that University of Nairobi staff and students attach some value on social media tools as they use them. The study however revealed that lack of enough computers, Site blocking by the ICT department and inadequate time allocated were the challenges experienced in utilization of social media tools. In addition, it was further revealed that respondents do not have adequate skills in access of the social media tools. Learning is at the core of knowledge societies. The expansion of digital networks opens fantastic opportunities to facilitate education and learning at all levels. The guidelines for UNESCO strategy towards knowledge societies emphasize that the social media tools enable networked learning. The guidelines include giving priority to learning processes and the organization of networked learning.

It is inappropriate to look only to ICTs – the internet, mobile phones and broadband or software apps-to understand societal transformation (Archambault, 2011). There continues to be signs of a fascination with technology, which is seen as the solution to the development problems. But whether it is the ‘always with your camera’ or multiple YouTube channels, it is clear that these become meaningful in people’s lives in ways that differ enormously across the world and that the social and economic consequences of the use of these technologies are varied as well (Hanna, 2010). The best strategy is to enable people to empower themselves through knowledge to shape how requirements for their well-being are met. This means looking beyond ‘uses’ of networks and applications to the conditions institutional, regulatory, financial, political and cultural that frame these uses, whether these are uses of mobiles, social media, or other forms of mediated interaction (Samarajiva, 2011). Social networking is essential for the filtering, referral and adaptation as well as for sharing information involved in generating and applying knowledge. It

offers many new means for sustaining collective action and market-led activities, but not necessarily ones that are fit for building peaceful and sustainable knowledge societies. It does not always follow that particular uses of social networking will be related to the generation and sharing of useful or relevant knowledge, especially as perceived by individuals in their lives.

6.3 Recommendations

Below are the study recommendations:

6.3.1 Awareness of the Social Media Tools

Awareness should be raised on the use of social media tools for knowledge sharing at the universities in Kenya and elsewhere. From the study there was an indication that there were respondents who did not use the social media tools. Raising awareness of the social media tools can be done to ensure that all the respondents use the social media tools. This can be done by making information distributed through social media engaging and interactive so users feel the need to get involved, thereby creating content of their own and building a self-sustaining flow of information. In addition, the institution should be mindful that users ignore sites that expect them to be passive; instead, social media should be used to answer questions, provoke conversation and have fun.

6.3.2 Structures to Advice Social Media Tools

There is need to establish a long-term committee in higher education institutions to advice on new developments in social media. For example, in consultation with institutions of higher learning, they should consider adopting sprout social advocacy platform for curating content so that students and staff can read and share messages

across social networks as advocated by. Social media is growing rapidly and has the potential to revolutionize many aspects of the academic life, including teaching and learning hence knowledge sharing. It also has the potential to be harmful to the teaching and learning process. There is a need to sustain an approach of continually seeking responses with the understanding that trust takes time to build. This is born from the findings that social media tools includes the aspect of trust, brings valuable knowledge and supports the library in knowledge sharing. This means that responsive information flow in social media platforms does not happen immediately and which should be addressed accordingly.

6.3.3 More Research on the Utilization of Social Media Tools

More research should be done to explore through a comparison, the utilization of social media tools for knowledge sharing among students and staff in all public universities in Kenya. This would help policy makers pay attention to these Universities and raise them at the same standard so as to recognize the value of the social media tools for knowledge sharing. Communication will also require ongoing attention, since each year brings a new cohort of students. The education programmes should focus on talking with users about fairness, why all users need adequate bandwidth to do their research, the impact of bandwidth consumption on the cost of tuition and the need for accountability in the use of the internet. The overall aim of the user education program should focus on the net gains for the campus community of using bandwidth responsibly.

6.3.4 Awareness Education Programmes

Awareness education programmes should be used to address issues such as; encouraging positive behavior from users, encouraging appropriate use, establishing rules and securing agreements as to what constitutes appropriate use of the Internet bandwidth, informing users about appropriate use policies and providing training to users as to how to effectively use the social media tools and conserve bandwidth. From the study, social media tools can be used appropriately for knowledge sharing if the internet costs can be reduced, proper language can be enhanced and more skills given to the users for the use of social media tools.

6.3.5 Studies on Benefits of the Utilization of Social Media Tools

Studies should be carried out to determine the positive outcome of the utilization of social media tools for knowledge sharing. In this regard, studies should be carried out regarding the utilization of social media tools for knowledge sharing based on age and gender. The study recommends the formulation of a university wide IT policy, which will provide guidance on user access and usage policy. The policy should be used to determine and govern issues such as monitoring internet use and enforcing the appropriate use of social media tools on the internet, downloading and installation of “internet enhancing” software. The policy must be continually communicated to stakeholders in a meaningful way, especially as many stakeholders will not be familiar with the technical jargon that such a policy will inevitably contain.

6.3.6 Framework for Social Media Tools Use

The figure 6.1 below illustrates a framework showing the best ways of using social media tools for knowledge sharing at the University of Nairobi.

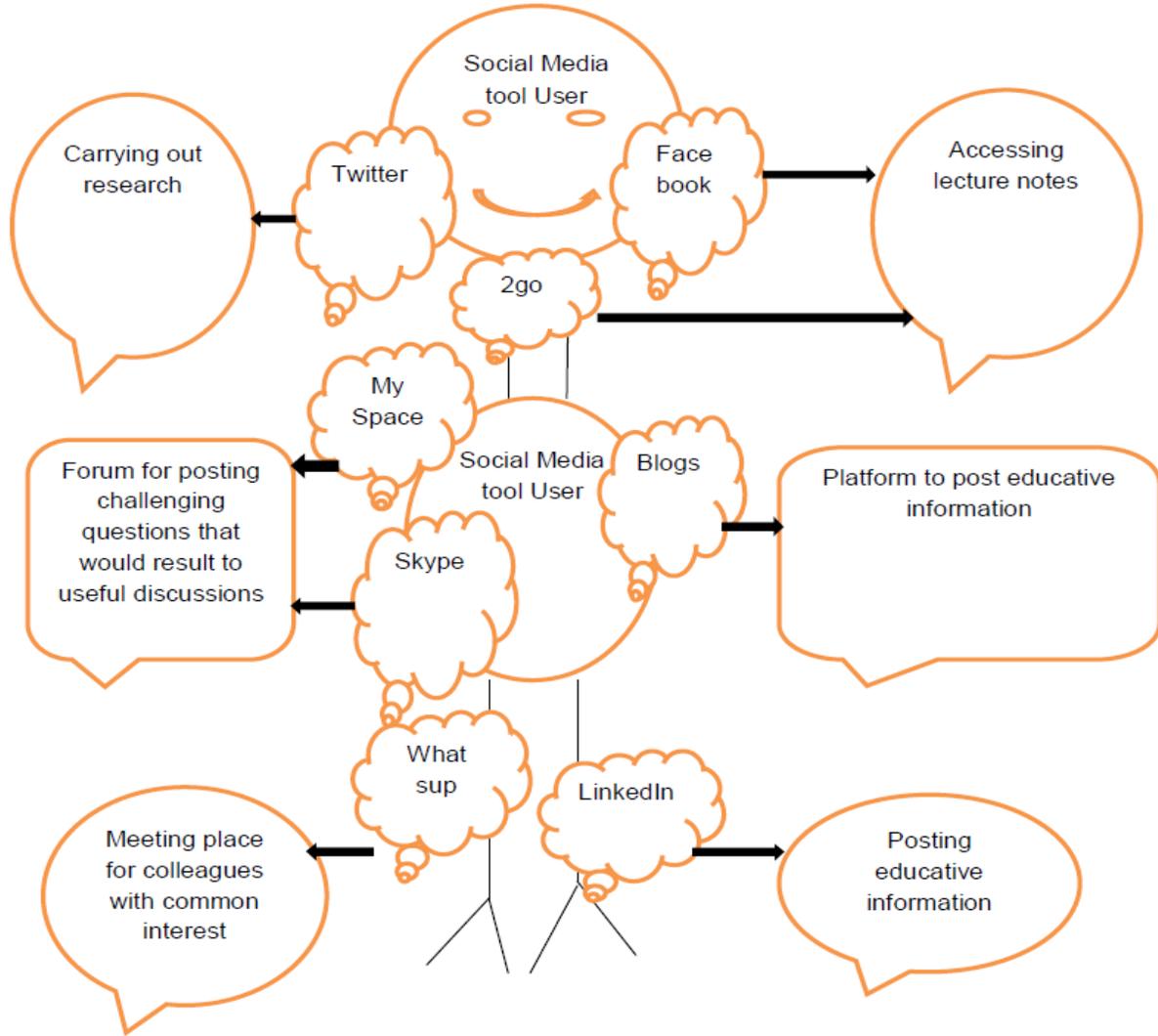


Figure 6.1: Framework for Improving Utilization of Social Media Tools for Knowledge Sharing

Source: Researcher (2014)

The social media tools in institutions of learning should assist in carrying out research, posting educative information and accessing lecture notes. Social media tools should be used as a platform to have useful discussions and as a meeting place for colleagues with similar area of interest. Using social media tools should ensure knowledge sharing as it supports educational endeavors and improves the benefits of in-person learning communities with the benefits of using technology to support student engagement. The institutional presence on social media marks the latest innovation by universities. Students should be helped to create and maintain university-affiliated connections by communicating social media tools such as MySpace, Twitter, and FaceBook. The fact that the site offers unprecedented access to personal information suggests that it is a valuable institutional resource. Social media tools are a domestic technology that has spread to institutions. Increasingly, technology is recognized as a primary way to stay in touch and take control of one's own learning. It gives students a public voice and a means to reach beyond the classroom for interaction and exploration. It is a method for communicating and socializing and has become a transparent part of their lives. Social media tools have become a platform for unparalleled creativity as educators and students create new content on the web. As well as locating information for research, social media tools promote contribution, creation, and collaboration. They allow the university social community to become a 'hybrid environment' where students are able to interact with their social networks both on and offline. Social media tools should provide a unique opportunity for students to connect with multiple, intersecting tools.

6.4 Areas for Further Research

Since this study explored the utilization of social media tools for general knowledge sharing in Universities, it recommends that:

- i. Similar research should be carried out investigating the utilization of social media tools in the E-learning programs in Kenyan Universities.
- ii. In addition, further research should be done to find innovative ways to enable developments in terms of portability, interoperability and openness of the social media tools to support knowledge sharing in Universities.

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APPENDIX A:QUESTIONNAIRE FOR THE UNDERGRADUATE STUDENTS

I am a final year student pursuing a Masters Degree in library and information science at Moi University. I am carrying out a study on the Utilization of Social Media tools for knowledge sharing. I have chosen you as a respondent. The information given in the questionnaire will be handled confidentially. Your co-operation and positive response is highly appreciated.

Please tick and fill the blank spaces provided appropriately

1. Do you use Social media tools?

a) Yes

b) No

a. If yes, which social media tool do you commonly use? (Multiple choice)

a) Facebook

b) MySpace

c) Twitter

d) LinkedIn

e) 2go

f) Blogs and Wikis

g) Skype

h) What sup

i) Others(Please Specify)

.....

b. If No, Give Reasons(multiple choice)

a) Not Interested

b) I Don't like them

c) A waste of Productive Office/Class Hour

d) Slow Internet Access

e) Access is Blocked by Institution

f) Privacy Not Guaranteed

g) Others(Please Specify).....

.

2. To what extent are you familiar with the following social Media tools?

- a) **Facebook** []
 Not at all knowledgeable [] somewhat knowledgeable []
 Knowledgeable [] Very knowledgeable []
- b) **MySpace** []
 Not at all knowledgeable [] somewhat knowledgeable []
 Knowledgeable [] Very knowledgeable []
- c) **Twitter** []
 Not at all knowledgeable [] somewhat knowledgeable []
 Knowledgeable [] Very knowledgeable []
- d) **LinkedIn** []
 Not at all knowledgeable [] somewhat knowledgeable []
 Knowledgeable [] Very knowledgeable []
- e) **2go** []
 Not at all knowledgeable [] somewhat knowledgeable []
 Knowledgeable [] Very knowledgeable []
- f) **Blogs and Wikis** []
 Not at all knowledgeable [] somewhat knowledgeable []
 Knowledgeable [] Very knowledgeable []
- g) **Skype** []
 Not at all knowledgeable [] somewhat knowledgeable []
 Knowledgeable [] Very knowledgeable []
- h) Others Please Specify
-
-

3. How long do you spend on a Social Media tools?

- a) One Hour []
- b) All Day Long []
- c) 30 Minutes []
- d) Several times a Week []
- e) Others(Please Specify).....

4. For what purpose do you use the social Media tools? (Multiple choice)

- a) Knowledge Sharing []
- b) Leisure/Chat []
- c) Communicate with Lecturers []
- d) Invite People to Events []
- e) Search Friends/Family []
- f) Engage in professional activities []
- g) Gain popularity in the cyber world []
- h) Express opinions and views []
- i) Others(Please Specify)

.....

5. In your opinion what would you site as security problems in use of the Social media tools? (Multiple choice)

- a) Cyber-Bullying []
- b) Hacking []
- c) Lack of Privacy []
- d) Misuse of Information []
- e) Others(Please Specify)

.....

6. In Your Opinion, how can the social media tools be used appropriately for Knowledge Sharing?

.....

7. Do you agree with the concept of trust in access and use of the social media tools?

- a. Strongly Agree []
- b. Agree []
- c. Strongly Disagree []
- d. Disagree []

- e. Don't Know/Not Sure []
8. Do you agree that Social media tools bring you valuable knowledge?
- a. Strongly Agree []
- b. Agree []
- c. Strongly Disagree []
- d. Disagree []
- e. Don't Know/Not Sure []
9. a) If you came across your university library in MySpace or Facebook, or whatever social media tool you frequent, would you add them as a friend?
- a. Yes []
- b. No []
- c. Not Sure []
- b) If you did add your local library as a friend what services might interest you? (multiple choice)
- a. Information on local community events []
- b. Information on interest groups, e.g. a reading group []
- c. Access to good quality information for research []
(e.g. genealogy or personal interest)
- d. Help with research either in person or via internet communication []
- e. Updates on what services the library's own web site can offer, e.g. improved search options and new electronic services []
- f. Library updates, e.g. new stock, events, book signings etc []
- g. Other (please specify)
-
10. What Challenges do you face when accessing the Social Media tools? (Multiple choice)
- a) Lack of adequate skills []
- b) Site blocked by ICT Department []
- c) Inadequate time allocated []
- d) Lack enough computers in library []
- e) Others(Please Specify).....

11. Comment on any improvements that can be done to facilitate the social media tools so that they can be appropriately used for Knowledge Sharing

.....
.....
.....

Thank you for taking time to fill in this questionnaire.

Grace Karanja

0724263598

APPENDIX B: INTERVIEW SCHEDULE FOR THE PRINCIPLE OF THE COLLEGE

I am a final year student pursuing a Masters Degree in library and information science at Moi University. I am carrying out a study on the Utilization of Social media tools for knowledge sharing. Your organization has been selected to form part of this study. The information provided will be used exclusively for academic purposes and will be held in strict confidence. Your co-operation and positive response will be highly appreciated.

Kindly answer the following questions.

1. Are you currently or have you been a member of any of these social networks? (Facebook, MySpace, Twitter, LinkedIn, 2go, Blogs and Wikis.
2. How many hours per week does the College spend maintaining the College's Social Media presence?
3. Do your colleagues share their knowledge (among themselves and with the students) using the social media tools?
4. In your opinion, is there a possibility that the social media tools can create a knowledge-sharing culture?
5. If the social media tools were integrated into the workplace, would they significantly increase the ability to get things done?
6. How do students use the social media tools for knowledge sharing?
7. Do Social media tools enhance the learning process? If Yes, How?
8. What are the College policies regarding the use of social media tools among staff and students?

9. What challenges do you experience in using the social media tools?

10. Comment on any improvements that can be done to facilitate the social media tools so that they can be appropriately used for Knowledge Sharing

NB: Brochures or other materials relevant to this study will be appreciated

Thank you

Grace Karanja

0724263598

APPENDIX C: INTERVIEW SCHEDULE FOR THE LIBRARIAN

I am a final year student pursuing a Masters Degree in library and information science at Moi University. I am carrying out a study on the Utilization of Social Media tools for knowledge sharing. Your organization has been selected to form part of this study. The information provided will be used exclusively for academic purposes and will be held in strict confidence. Your co-operation and positive response will be highly appreciated.

Kindly answer the following questions.

- 1) Are you currently or have you been a member of any of these social networks?

- 2) a) Do you use any of the Social media tools in the Library? (e.g. a Facebook page for the library)

b) If you do, what purpose do you use the social media tools within the library?

- 3) a) Do you allow the users to access the social media tools within the library?

b) If yes, for what purpose do the users use the social media tools within the library?

- 4) Do You Interact with the users using the social media tools in sharing information about the library?

- 5) Approximately how much time do you spend participating on a social network?

- 6) Do you build professional relationships through social networks? If Yes, How?

- 7) What feedback have you had from students about the use of social networking skills?

(Positive feedback (e.g. 'likes' on Facebook announcements, Negative feedback (e.g. a complaint from users)

- 8) How many hours per week does your library spend maintaining your library's Social networking presence?
- 9) Do Social media tools help to build/strengthen a sense of community within a learning environment? If Yes, How?
- 10) Based on your experience, do you have any advice on the likely benefits / drawbacks of the library setting up a social media presence, and would you recommend any social media in particular?

NB: Brochures or other materials relevant to this study will be appreciated

Thank you

Grace Karanja

0724263598

APPENDIX D: INTERVIEW SCHEDULE FOR THE DEAN

I am a final year student pursuing a Masters Degree in library and information science at Moi University. I am carrying out a study on the Utilization of Social Media tools for knowledge sharing. Your organization has been selected to form part of this study. The information provided will be used exclusively for academic purposes and will be held in strict confidence. Your co-operation and positive response will be highly appreciated.

Kindly answer the following questions.

1. a. Do you use Social Media tools?
 - c. If yes, which Social Media tool do you commonly use?
 - b. If No, Give Reasons
2. To what extent are you familiar with the social Media tools?
3. How long do you spend on a social Media tools?
4. For what purpose do you use the social Media tools for knowledge sharing?
5. If online social networking were integrated into the workplace, would it significantly increase the ability to get things done?
6. How do students use the social media tools for knowledge sharing?
7. Do Social media tools help to build/strengthen a sense of community within a learning environment?
8. Do Social media tools enhance the learning process? If Yes, How?
9. What Challenges do you face when accessing the social Media tools?

10. Comment on any improvements that can be done to facilitate the social media tools so that they can be appropriately used for Knowledge Sharing

NB: Brochures or other materials relevant to this study will be appreciated

Thank you

Grace Karanja

0724263598

APPENDIX E: INTERVIEW SCHEDULE FOR THE ICT DIRECTOR

I am a final year student pursuing a Masters Degree in library and information science at Moi University. I am carrying out a study on the Utilization of Social Networks for knowledge sharing. Your organization has been selected to form part of this study. The information provided will be used exclusively for academic purposes and will be held in strict confidence. Your co-operation and positive response will be highly appreciated.

Kindly answer the following questions.

1. Are you currently or have you been a member of any of these social networks?
2. Do you Provide Social media presence for staff and students within the College?
3. How many hours per week does your library spend maintaining your College's Social media presence?
4. What are the ICT policies regarding the use of social media tools within the College among staff and students?
5. If online social networking were integrated into the workplace, would it significantly increase the ability to get things done?
6. How do students use the social Media tools for knowledge sharing?
7. Do Social media tools help to build/strengthen a sense of community within a learning environment
10. Do Social Media tools enhance the learning process? If Yes, How?
11. Comment on any improvements that can be done to facilitate the social Media tools so that they can be appropriately used for Knowledge Sharing

NB: Brochures or other materials relevant to this study will be appreciated

Thank you

Grace Karanja

0724263598

APPENDIX F: INTERVIEW SCHEDULE FOR THE REGISTRAR

I am a final year student pursuing a Masters Degree in library and information science at Moi University. I am carrying out a study on the Utilization of Social Media tools for knowledge sharing. Your organization has been selected to form part of this study. The information provided will be used exclusively for academic purposes and will be held in strict confidence. Your co-operation and positive response will be highly appreciated.

Kindly answer the following questions.

1. a. Do you use Social Media tools for knowledge sharing?
 - b. If yes, which Social Media tools do you commonly use?
 - c. If No, Give Reasons
2. To what extent are you familiar with the Social Media tools?
3. How long do you spend on a Social Media tool?
4. For what purpose do you use the Social Media tools?
5. If online social networking were integrated into the workplace, would it significantly increase the ability to get things done?
6. How do students use the social media tools for knowledge sharing?
7. Do Social media tools help to build/strengthen a sense of community within a learning environment?
8. Do Social media tools enhance the learning process? If Yes, How?
9. What Challenges do you face when accessing the social media tools?
10. Comment on any improvements that can be done to facilitate the social media tools so that they can be appropriately used for Knowledge Sharing

NB: Brochures or other materials relevant to this study will be appreciated

Thank you

Grace Karanja

0724263598

APPENDIX G: INTERVIEW SCHEDULE FOR THE HEAD OF DEPARTMENT

I am a final year student pursuing a Masters Degree in library and information science at Moi University. I am carrying out a study on the Utilization of Social Media tools for knowledge sharing. Your organization has been selected to form part of this study. The information provided will be used exclusively for academic purposes and will be held in strict confidence. Your co-operation and positive response will be highly appreciated.

Kindly answer the following questions.

1. a. Do you use Social Media tools?
 - b. If yes, which Social Media tools do you commonly use?
 - c. If No, Give Reasons
2. To what extent are you familiar with the Social Media tools?
3. How long do you spend on a Social Media tools?
4. For what purpose do you use the Social Media tools?
5. If online social networking were integrated into the workplace, would it significantly increase the ability to get things done?
6. How do students use the social media tools for knowledge sharing?
7. Do Social media tools help to build/strengthen a sense of community within a learning environment?
8. Do Social media tools enhance the learning process? If Yes, How?
9. What Challenges do you face when accessing the Social Media tools?
10. Comment on any improvements that can be done to facilitate the social media tools so that they can be appropriately used for Knowledge Sharing

NB: Brochures or other materials relevant to this study will be appreciated

Thank you

Grace Karanja

0724263598

APPENDIX H: RESEARCH PERMIT

PAGE 2 **PAGE 3**
Research Permit No. NCST/RCD/13/013/89
THIS IS TO CERTIFY THAT: **Date of issue** **18th July, 2013**
Prof./Dr./Mr./Mrs./Miss/Institution **Fee received** **KSH. 1000**
Grace Wanja Karanja
of (Address) Moi University
P.O. Box 63050-00200, Nairobi,
has been permitted to conduct research in
Location
District
Nairobi County
on the topic: Utilization of social media
tools for knowledge sharing among staff
and education students in public
universities: A case study of the
University of Nairobi, Kenya.
for a period ending: 31st December, 2013.
Applicant's Signature **For Secretary**
National Council for
Science & Technology



APPENDIX I: RESEARCH CLEARANCE PERMIT

CONDITIONS

1. **You must report to the District Commissioner and the District Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit.**
2. **Government Officers will not be interviewed with-out prior appointment.**
3. **No questionnaire will be used unless it has been approved.**
4. **Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.**
5. **You are required to submit at least two(2)/four(4) bound copies of your final report for Kenyans and non-Kenyans respectively.**
6. **The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice.**

REPUBLIC OF KENYA

RESEARCH CLEARANCE PERMIT

GPK6055(3m)10/2011 (CONDITIONS—see back page)

APPENDIX J: RESEARCH AUTHORIZATION

REPUBLIC OF KENYA



NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

Telephone: 254-020-2213471, 2241349, 254-020-2673550
 Mobile: 0713 788 787 , 0735 404 245
 Fax: 254-020-2213215
 When replying please quote
 secretary@ncst.go.ke

P.O. Box 30623-00100
 NAIROBI-KENYA
 Website: www.ncst.go.ke

Our Ref: **NCST/RCD/13/013/89**

Date: **18th July 2013**

Grace Wanja Karanja
 Moi University
 P.O. Box 63050-00200
 Nairobi.

RE: RESEARCH AUTHORIZATION

Following your application dated **12th July, 2013** for authority to carry out research on *“Utilization of social media tools for knowledge sharing among staff and education students in public universities: A case study of the University of Nairobi, Kenya.”* I am pleased to inform you that you have been authorized to undertake research in **Nairobi County** for a period ending **31st December, 2013**.

You are advised to report to **the Vice Chancellor, University of Nairobi** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.

DR. M. K. RUGUTT, PhD, HSC.
DEPUTY COUNCIL SECRETARY

Copy to:

The Vice Chancellor
 University of Nairobi.

**APPENDIX K: INTRODUCTION LETTER TO NACOSTI BY MOI
UNIVERSITY**



**MOI UNIVERSITY
SCHOOL OF INFORMATION SCIENCES**

Tel. 053-43720, 43620, 43231 (Dean)
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NAIROBI
Kenya

Our Ref: MU/NRB/IS/SA/14

7th May, 2013

The Secretary
National Council for Science and Technology,
P.O. Box 30623-00100,
Nairobi

Dear Sir/Madam,

RE: GRACE WANJA KARANJA -REG. NO. IS/MPHIL/076/11

The above named person is a bona fide student of Moi University, Nairobi Campus, School of Information Sciences Pursuing Master of Philosophy in Information Sciences.

Grace has successfully defended her Thesis proposal entitled: "Utilization of Social Media Tools for Knowledge Sharing among Staff and Education Students in Public Universities: A Case Study of University of Nairobi."

Any assistance accorded her will be highly appreciated.

For further information, please contact the undersigned.



James Kimutai
School of Information Sciences
Nairobi Programme Coordinator