THE ROLE OF WHATSAPP IN LEARNING BY UNIVERSITY OF NAIROBI GRADUATE STUDENTS

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A Project Report submitted to the University of Nairobi, School of Journalism and Mass Communication (SOJMC) in partial fulfillment of the requirements for Masters of Arts Degree in Communication Studies

DECLARATION

This project report is my original work. No copies of this report have been submitted in part or whole to any other university for any award.



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DEDICATION

I dedicate this study to students, scholars, corporates and individuals interested in this area of study. May it add knowledge to the field of communication and journalism and also to your lives and contribute to the academic and professional success of many who will tread this academic journey.

ABSTRACT

Digital technology, without a doubt, plays a significant part in modern schooling. WhatsApp mobile technology is quite useful in this regard, as it is widely and extensively employed in virtual university instruction. It also provides students with more options and opportunities in the context of online learning. As its length, scope, and frequency of usage has risen, internet technologies have begun to impact the way people create and exchange content, as well as the way they communicate. Social networks, which are particularly popular among young people, are growing increasingly prominent as a result of their capacity to meet individual demands in terms of socializing. Their individualistic nature started to influence users' interaction processes and has since evolved into one of the most important components of daily life. The increasing number of people who are joining social networks, which are described as programs that help individuals and groups communicate more easily. The COVID-19-pandemic affected the education sector world over leaving many educational institutions closed and moving towards online teaching and learning. In this regard, a study was required to account for the advances and changes in the use of New Media in Learning. The main concern of this study was to assess the use of WhatsApp in Learning. The WhatsApp groups under this study were those formed by Graduate students from the School of Journalism at the University of Nairobi, Kenya. The Objectives of this study was to examine the frequency of use of WhatsApp in learning by Graduate students, the frequency of sharing attached academic documents on the students' WhatsApp groups and the effectiveness of WhatsApp use in learning. The study was guided by Uses and Gratification Theory and the Theory of Social Constructivism. A descriptive research design and mixed methods techniques using both qualitative and quantitative approaches were employed to analyze the data. Snowball and purposive sampling techniques were used in the study. Snowball was employed in establishing the different WhatsApp groups that were being utilized by the students, whereas purposive sampling procedure was employed to selectively gather text messages from the respective WhatsApp groups. The messages they shared between the months of March and June 2020 where learning was disrupted due to the covid-19 pandemic were the main content selected in line with the objectives of the study. Data from the shared messages were gathered through thematic extraction in line with the objectives of the study, from the respective WhatsApp Groups. The data was then analyzed. The study then drew conclusions and provided recommendations as well. The study established that many messages and learning materials were shared on WhatsApp by the graduate learners enrolled at the School of Journalism, the University of Nairobi. WhatsApp groups also formed an important channel that was used as a learning method since physical contact was restricted and the students were not able to meet for normal class learning. The platform can be an effective tool for learning although there were issues of clarity on some of the materials shared and sometimes students didn't understand what was being posted and there were instances that the students sought for clarity on the materials that had been posted. Lastly, the effectiveness of WhatsApp in learning was affected by accessibility challenges that included lack of internet bundles and inability of some students to use the platform at certain times. The study recommends that adoption of WhatsApp in educational process be encouraged as a supportive technology.

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LIST OF ACRONYMS

ICT Information Communication Technology

WAEL WhatsApp Enabled Learning

SNS Social Networking Sites

UGT Uses and Gratifications Theory

HOTS Higher Order Thinking Skills

UK United Kingdom

IHL Institutions of Higher Learning

LMS Learning Management Systems

CHAPTER ONE

INTRODUCTION

1.0 Overview

This chapter covers the background, problem statement, objectives, research questions, study justification, significance, limitations, scope of the study and the definition of terms.

1.1 Background

As of April 4th, 2020, nearly 1.5 billion students across the globe were unable to attend learning institution because to the COVID-19 pandemic (UNESCO, 2020). E-Learning is the utilization of information and communication technologies (ICTs) in the delivery of educational content. Institutions of Higher Learning (IHL) all over the globe have been pushed to implement and employ this cutting-edge technology in their teaching and learning. This has given learners access to comprehensive and vast learning resources. (Kalembera & Majawa, 2015). According to Nycz (2007), IHL need to incorporate ICTs into teaching and learning in order to compete effectively. Such technologies must be introduced so as to create a society that embraces technology and be able to fulfil society's ongoing requirement for rapid lifetime learning. This can be done in a more efficient and effective way (Nycz, 2007). Learning Management Systems(LMS) such as WebCT, Blackboard and Moodle are packaged technologies used in disseminating studies to learners. These LMS are available and can be adjusted to fit a variety of university models. E-learning can take many different forms. Asynchronous e-Learning, for example, is defined by Hrastinski (2008) as a type of e-Learning in which instructors use the Internet to give lectures, tests, and assignments that are accessible at any time and are supported via platforms like e-mail and discussion forums.

Simultaneous e-Learning, on the other hand, is defined by Romiszowski (2004) as the use of technology like video conferencing that require learners to be present and actively take part during learning. They are classrooms in which students and teachers must be online at a specified time in order to study. Lectures, presentations and discussions take place at a specific time and place where all of these individuals are present. Students can participate

in e-Learning from different locations, as in distance learning, or from the same location, while making use of online platforms to complete tasks. The asynchronous mode of e-Learning was used in this study. "Use of different ICTs has become inevitable for students' learning. By using modern ICTs, students can retrieve information they need within a short time. They can access and disseminate electronic information such as e-books, e-journals and can advance their learning by using innovative ICTs in the form of wireless networks, Internet search engines, databases, websites and web 2.0 technologies", (Khan, 2011). In addition, e-learning cannot replace the traditional face to face learning, however, it will simplify the entire process of learning by utilizing new educational content and innovative learning methods (Omwenga, 2003). ICTs by themselves cannot determine how learning should take place; rather, they are instruments that facilitate learning (Mbambo-Thata 2009). Adedokun & Hashim (2008), agree to the fact that teachers believe ICT is only beneficial when used in conjunction with other teaching aids. They suggests that technology not only enhances students' learning, but that an integrated system is also essential to support smooth teaching and learning process. The surge in numbers of learners and the corresponding rise in their needs as learners are some of the benefits for e-Learning. "Students increasingly require educational programs tailored to their own situations, rather than a traditional mode of delivery. These demands have forced universities to adjust their programs and mode of deliveries in order to meet these increasingly diverse cohorts", (Omwenga, 2003).

Africa still lags behind on remote learning as compared to other parts of the world with less than 25% of developing nations currently providing any form of remote learning and where some institutions use TV and radio stations. In contrast, in the industrialized world, about 90% of countries provide remote learning alternatives, with almost all of them being accessible online. (Chidambaram, 2020). In the Kenyan context, there are many challenges, with unequal access to the technologies by the low-income earners in the society (Communications Authority, 2020; DiMaggio, Hargittai, Celeste, & Shafer, 2004). However, two factors have encouraged the adoption of e-learning in Kenyan tertiary institutions such as; a large population of youths and the availability of inexpensive internet-connected cellphones (Communications Authority, 2020).

Akhter (2015) posit that online education is a type of education that offers learners with resources and learning materials while also allowing them to study at a certain time and location that is most convenient for them. According to Chan (2005), discussion forums via online effectively bolsters learning, removes learning obstacles, and allows for faster knowledge development and sharing. They are believed to be useful learning tools for building knowledge on some concepts and improving students' cognitive performance (Gillingham & Topper, 1999).

The use of new media is being extended to many other areas that include its usage as a learning method to instruct and teach students. New media covers a wide variety of webbased tools of communication, such as wikis, virtual worlds, blogs, online social networking and the rest (Linda & Friedman, Hershey. (2008). The affordability of smart phones has also bolstered the use of the WhatsApp platform as a means of sharing information by both tutors and students. Hence, it is quite simple for instructors to come up with groups for their students, which serves as a social network for the class. Given this orientation, this study will focus on WhatsApp as one of the New Media tools used in the learning process.

Mascolo (2009) opines that Traditional teacher-centered pedagogy is characterized as a teaching style in which the instructor is the primary communicator of knowledge to students. Teachers, in this opinion, are in the best position to decide the organization and substance of any specific classroom experience since they have a superior understanding of the subject area. Learner-centered pedagogy, on the other hand, allows learners to contribute actively during the learning process. It aids in the development of previously taught knowledge. The next level of learning is developed by drawing on existing information and incorporating fresh experiences. This learning strategy places teachers as a facilitators to the process or being part of the process rather than the main focus of it (Li, 2012).

Richard and Haya (2009) assert that students can utilize the Internet to construct and share their knowledge. In collaborative learning activities, it requires learners to socially interact

with each other. Sharing via mobile devices, such as discussion boards, is one of the activities that can be used (Gillingham & Topper, 1999). Multiple factors can influence learning, including the learner's cognitive and psychological state, instructor professionalism, and the complexity and nature of the educational approach. However, Zhao and Cziko (2001) posit that three requirements must be met before instructors may incorporate ICT into their classrooms: firstly, teachers must believe in the effectiveness of technology, secondly, that the use of technology will not cause any disruptions, and lastly that teachers have control over the technology.

The integration of ICT in educational process is not regarded as a method, however, it is a medium through which a number of approaches, methods and pedagogical philosophies can be executed (Garret. 1991). This remark implies that the adoption of ICTs is determined by how and why they are integrated and implemented (Salehi & Salehi, 2012). Mass media are able to alter the pace and mode of decision because they are consumed by everybody - which in turns creates a sphere of shared knowledge where each actor in the system knows what the other knows. Clearly, the mass media are good in steering attention, creating awareness and giving information (McCombs and Shaw 1977).

Mobile devices being utilized in tertiary institutions to improve online interactions by facilitating discussions in the class and knowledge sharing among students through various modes of mobile communication such as web-based learning, mobile social networks and instant messaging (Echeverra, et al., 2011). Gasaymeh (2017) also looked into students' using WhatsApp to determine their applicability in education or social use, as well as their perceptions of incorporating WhatsApp into teaching/learning, and found that students' utilization of WhatsApp for social and personal purposes was higher, but not for learning purposes.

As Onyema (2019) suggest that incorporating modern technology in education sector is not an option anymore, however it is becoming a prerequisite for all educators due to the dynamism in learning environment, which calls for innovative and creative models that make learning process more flexible. Many colleges and universities recently embraced

WhatsApp on their cellphones to improve their means of communication via forums, deliberations and dissemination of information, for example, text messaging, mobile social networking, and website-based learning (Echheverria, Nussbaum, Calderon, Infante & Bravo, 2011).

Among university students, social networking sites (SNSs) are extremely popular. Social networking sites are utilized for a number of reasons, including enhancing communication, entertainment needs and media exchange (Eid & Al-Jabri, 2016; Raza, Qazi & Umer, 2017). SNSs are simple to use, inexpensive, convenient, dependable, and amusing, and they can be easily accessible from any location (Krishnan & Hunt, 2015). The utilization of mobile phones as a platform for mobile learning provides a chance for new pedagogy for both students and lecturers (Sharples, Taylor, & Vavoula, 2007). Innovative pedagogy is generally the utilization of modern ICT technologies and in this case New Media for learning purposes. (Magaret Cox Et al. 2003) opined that there is a portion of teachers who are less confident in using a wide range of ICT resources, and this lack of confidence has an impact on how the lesson is delivered. Many teachers are still afraid of some types of technology, which inhibits them from incorporating it into their lessons. Even though there are many different types of Social Networking Sites for instance, Twitter, Facebook, LinkedIn plus many others, this study chose to focuses on WhatsApp.

Statista (2017) cited that available sources show there were approximately 1.2 billion active monthly WhatsApp users as at 2017 around the world and a variety of reasons present themselves why people use WhatsApp as their primary communication platform. According to Bouhnik and Deshen (2014), the reasons for many individuals utilizing WhatsApp is because its' cheaper, capable of sending unlimited messages, instant feedback, the ability to have a nonstop conversation with many friends concurrently, the ability to knit together friends and family, and has more privacy in comparison to other social media platforms.

Following the Covid-19 outbreak, Kenya's Ministry of Education took some initiatives to improve learning continuity, including educational content broadcast on television, radio,

and also YouTube (Masaviru, 2020). Accordingly, The University of Nairobi also ensured that learning continued virtually through various platforms. In a study by Achieng Aseey (2020) assert that in most African countries, including Kenya, instructors and leaners were caught unaware. Respondents described online learning platforms such as Microsoft Teams, Google Hangouts, Zoom and others as foreign, stating that they had to embrace the change and learn quickly how to use the new models and gadgets to deliver lectures and administer tests. Little attention however in Kenya has been devoted to the impact of WhatsApp in learning despite its usage before the other platforms and even post the Covid – 19 Period.

Existing policies in IHL particularly universities, had to be amended to accommodate online or distance learning as an emergency solution. Policymakers, service providers, students, and other stakeholders had conflicting opinions about the new teaching methods, but in order to save time and adjusting to the situation, solutions were established and virtual learning was used in most institutions (Aborode, Anifowoshe, Ayodele, Iretiayo & David, 2020). A case in point, the University of Nairobi Senate established guidelines and procedures for online examinations on May 8, 2020, in regard to the adverse effects brought by Covid-19. Following the government's restriction on meetings and gatherings to prevent the spread of the virus, the University implemented e-learning in March. (University of Nairobi, 2020).

While the traditional education pedagogies e.g. teacher centered pedagogy included more dissemination of a variety of knowledge which is being determined by the teacher, modern technology through Learner-centered pedagogy may be adapted where learners are also granted a more active and participative role in the process of learning that is more collaborative than before. But on the contrary, it also occupies students' lives and at times they end up being addicted to it which is difficult to control (Deshmak, 2015). The nature of discourse emerging from this form of interactions also needs further investigations especially in the Kenyan context.

Malecela (2016) on the use of WhatsApp in their academics revealed that students indeed appreciated the use of WhatsApp in their studies while (Gillingham & Topper 1999); and (Bansal and Joshi 2014) established that WhatsApp application has been adopted in aiding the learning and teaching processes. Bouhnik and Deshen, Gasaymeh et al. cited that the type of discourse that students engage themselves in especially in the Class WhatsApp Groups and the type of engagement after class hours as well, are to be considered as positive attributes given by ICT in bolstering teaching and learning.

Augustine Eberechukwu and Nwaizugbu Nkeiruka (2018), opined that some studies have been done on the impacts brought by use of WhatsApp in educational sector. For example, a research done in Uyo, Akwa Ibom State, on WhatsApp usage and educational outcomes of Geography students found that WhatsApp module usage had a substantial impact on geography students' overall performance in academics. Mingle and Adams (2015) looked into the relationship between Ghanaian high school students' participation in SM networks and their academic performance, and discovered that SM networks engagement had a detrimental impact on the students' performances (Etim, Idongesit and Ema 2016).

In a separate study, Bansal and Joshi (2014) asserted that the utilization of WhatsApp boosted students' social involvement among themselves and with their teachers, which later encouraged collaborative learning. Furthermore, the authors discovered that pupils were enthusiastic about using WhatsApp in their classrooms. WhatsApp, according to Bere (2013), can be used to "provide alternative dialogic spaces for students' collaborative interactions in informal circumstances, which can help to transform teaching and learning." However, according to a research by Santos and Bocheco (2014) feared that mobile technologies that learners carry to the classroom may disrupt lectures while (Kalz, Bayyurt and Specht 2014) observed that IHL continue to witness challenges on implementation of effective policies regarding the use of mobile device in the classroom.

Some research have looked into students' perspectives on the use of WhatsApp in the classroom. Malecela (2016) investigated students' perspectives on utilization of WhatsApp as a learning aid in a Malaysian institution. As per the findings, students thought WhatsApp

may help them study by improving communication among other students and with instructors, ease access to and sharing of educational content and foster collaborative learning, and to the contrary, a research by Wang, Chen, and Liang (2011), found that just 20% of the students polled agreed that social networking assists them with schoolwork. They discovered that students who utilized social media to post or interact while studying had their productivity and grades suffer. The study indicates that social media has an impact on college students' life, including their grades, because they fail to strike a balance between social media interaction and academic.

Regionally a study by (Bagarukayo et al 2019) pointed out that there are fewer research on the benefits brought by WhatsApp Enabled Learning (WAEL) to development of Higher Order Thinking Skills (HOTS) in African countries, Kamau (2018), though this study did not cover WhatsApp use, but acknowledged Facebook as type of SM which is a web-based tool that supports creating and sharing of content and information online. Oganji, Okoyeukwu, Wanjiru, and Osiri (2017) studied the pattern of usage of social media networking by Pharmacy students at Kenyatta University, the studies however did not cover University of Nairobi and therefore the findings cannot be applicable to the University.

Since the onset of Covid-19 people had to change the way they interact and this also affected the educational systems of learning. Imposition of lockdowns across the globe forced most learning institutions to close down, and students were unable to have face to face lectures (Tam & El-Azar, 2020). According to UNESCO (2020), university and school closures have a number of negative implications for pupils, including interference with learning, which deprives students of possibilities for growth and development. An assessment was needed as innovative ways of learning were being explored by many to adapt to the realities of the Covid-19 Pandemic.

According to Gajjala (2000) virtual ethnography is seen as a technique that can help us better understand virtual communities, communication and culture which fosters virtual environment. The ethnographic approach permits for an evaluation of the Graduate

students in their respective networks on the WhatsApp platform. The objective of this study is to determine ethnographic approaches that grasp the processes of learners' collaborative activities bolstered by online environment in their real contexts (Charnet and Veyrier, 2008).

Email groups, social networking groups and virtual chat rooms are becoming increasingly popular ways for people to communicate with one another (Gajjala, 2000; Tyagi, 2010; Wittel, 2000). Ethnographic research is said to be more effective technique that study these societies, which Castells (1996) refers to as the "network society." To grasp what is relevant and important in the lives of people, the ethnographer must "delve into" their lives. The researcher can gain an insider's view on how individuals repetitively handle everyday behaviors, what they find significant, how they live their lives, and how they develop these meanings using the "delving into" technique (Emerson et al., 2008).

Against this backdrop, the research intended to assess the usage of WhatsApp in learning amongst Graduate students at the University of Nairobi, assessing the advantages and challenges faced by learners and future impact of using WhatsApp in aiding the learning process. This assessment is also needed especially as innovative ways of learning are being explored to adapt to the realities brought about by the Covid-19 Pandemic. Therefore, the Objective of this study is to assess the usage of WhatsApp in learning among graduate students at the University of Nairobi with reference to The School of Journalism and Mass Communication Students.

1.2 Problem Statement

The background demonstrates that educational systems and teaching methods are embracing New Media technologies either formally or informally as opined by (Gillingham & Topper, 1999). Studies by Gillingham & Topper, (1999); and Bansal and Joshi (2014) established how WhatsApp application has been adapted in aiding the learning process.

WhatsApp continues to provide a new opportunity to the use of computer-based technologies in Learning. However, as indicated in the background by, the opportunities afforded by ICT to help teaching and learning are not without flaws (Gasaymeh 2017). If learners lack the abilities to filter information for relevance or construct a coherent organizing principle, the nearly endless chances for access to information in an educational context can lead to information overload. Despite many studies exhibiting that WhatsApp is indeed used in learning, the effectiveness of the use of WhatsApp in learning has not been quite elaborate in the studies conducted and especially during the Covid-19 period.

Bere (2013) talked about WhatsApp being a good tool for collaborative engagements for both learners and tutors and this would be of great benefit in the learning process. In a different study by (Bansal and Joshi 2014) also established that WhatsApp usage tend to increase students' interactivity among themselves and with their instructors and this boosted collaborative learning. This study seeks to find out how the Collaborative learning plays out especially on the WhatsApp platform. On the contrary, Mingle and Adams (2015) also studied students' engagement in SM networks and their respective academic performances in Ghana and established that students' performance were adversely affected by their participation in social media networks (Etim, Idongesit and Ema 2016). Therefore, this study intended to assess the use of WhatsApp in the learning process among the Graduate students in the school of journalism at the University of Nairobi during the Covid-19 Pandemic period.

1.3 Objectives of the Study

1.3.1 General Objective

The study objective sought to assess the use of WhatsApp in Learning amongst graduate students at the University of Nairobi.

1.3.2 Specific Objectives

The following objectives shall guide the study:

- 1. To establish the frequency of academic WhatsApp messages shared by the Graduate students.
- 2. To determine the frequency of attached academic documents shared in the WhatsApp Groups.
- 3. To establish the effectiveness of WhatsApp use in learning for the graduate students at the School of Journalism.

1.4 Research Questions

- 1. How frequent do graduate students at the University of Nairobi share academic WhatsApp messages?
- 2. How frequent do graduate students at the University of Nairobi share attached academic documents in their WhatsApp groups?
- 3. How effective is the use of WhatsApp in learning for graduate students at the School of Journalism?

1.5 Justification of the Study

Globally, education, training, and research are important platforms for national socioeconomic reform. As a result, the Kenyan government, like other governments around the world, recognizes that education and training for all citizens is critical to achieving Kenya's Vision 2030 and a gateway to the 'Big 4 agenda.' To meet the citizen development conditions of a rapidly transforming and more diverse economy, quality and appropriate education and training is critical for achieving national development goals. On the other hand, more challenges arise in the process of improving and ensuring education and training quality, equity, access, and relevance. The recent challenge being the covid-19

pandemic which was at its peak during 2019/2020 that disrupted normal learning as we know it.

In the Kenyan context, there are many challenges, with unequal access to the technologies by the low-income earners in the society (Communications Authority, 2020; DiMaggio, Hargittai, Celeste, & Shafer, 2004). Furthermore, Mingle and Adams (2015) focused on students' engagement in SM networks and their respective academic performance in Ghana and established that students 'educational performance was adversely affected by their participation in SM networks (Etim, Idongesit & Ema 2016). The benefits and challenges that have been highlighted in these studies need to be investigated further especially in Kenya and more so under the Covid-19 pandemic period where learning has been disrupted.

1.6 Significance of the Study

The study findings will be resourceful to University of Nairobi Management in formulating strategies and policies of incorporating New Media tools such as WhatsApp in the learning process, ICT Stakeholders would also benefit by knowing the needs of students and teachers so as to improve on the already existing technologies, Teachers and many more since they will help in providing a deeper understanding on whether WhatsApp can be effectively integrated into the academic activities which may impact learning. This study will also be valuable to those who may be willing to conduct comprehensive and detailed studies that relates to WhatsApp usage. The results of this study might enable lecturers, policy makers and other stakeholders to come up with policies that will guide how public universities can use WhatsApp and other new media tools to complement the learning process. This is quite timely especially now that the COVID-19 pandemic limits interactions.

Bagarukayo et al (2019) pointed out that there are limited number of studies taken on the benefits of WhatsApp Enabled Learning (WAEL) to development of Higher Order Thinking Skills (HOTS) in African countries. Therefore, academicians will benefit from

this study as it will enrich the existing pool of knowledge and will also help to carry out further studies related to WhatsApp usage in public universities.

1.7 Scope and Limitations

Despite there being many SNS's such as Facebook, Instagram and Twitter among others, this study only focused on WhatsApp. The study particularly focused on WhatsApp groups formed by University of Nairobi Graduate Students from the School of Journalism and Mass Communication. The study will make use of texts extracted from the Student WhatsApp groups. The study objectives are on the usage of WhatsApp by students in relation to their studies. The literature review provides the reader with an explanation of the theoretical justification of the problem under consideration, as well as what research has already been done. The study will focus on a period of 4 months while looking at data shared in the WhatsApp Groups from the months of March to June 2020 (when Universities were closed due to Covid-19 Pandemic).

The researcher will use the data collected from the WhatsApp Groups for academic purposes only and the data will remain highly confidential. The members of these groups will be notified of the intention and purpose of gathering the data from their respective WhatsApp Groups and their permission through their respective class representatives and WhatsApp Group Admins will be sought before carrying out the study. There are many other public universities that may not be part of the study as well.

1.7.1 Limitations

Study was limited by the fact that it was reviewed in a short period of 4 months (March 2020 – June 2020), and will rely heavily on data gathered from the Academic WhatsApp Groups from a selection of Graduate students of the University of Nairobi and not the entire university. Additionally, the information is sought from a university in urban settings whose profile may not be representative to experiences of a majority of graduate school learners. This study however opens up an opportunity to do more detailed studies.

1.8 Operational definition of terms

New Media – In this study New Media will also refer to Social media, which are interactive and computer-regulated models that boost the creation and exchange of ideas, sharing information, professional interests and other forms of expressions through virtual networks and communities.

WhatsApp – it's an ad-free instant messaging service that was founded in the year 2009 by Brian Acton and Jan Koum. WhatsApp make use of the Internet messaging system that allows users to send text, voice messages, images, documents and videos. The application has an end to end user message encryption that makes it safer to use with minimal hacking interceptions.

Learning – In this study, this term will refer to the process that takes place in a formal system of Education i.e. Primary or Secondary School and also colleges and Universities where skills and knowledge are shared in an educational perspective and it resonates to the communications that occur in the process which include the strategies employed in order for the student to acquire knowledge and master a certain course or subject.

Education – In this study it will refer to the process of giving or receiving systematic instruction, more so at a learning institution or the process of imparting or acquiring particular knowledge or skills, as for a profession.

Student - A student in this study refers primarily to a individuals enrolled in a learning institution and who attends courses to reach the appropriate mastery level of a specific subject under the guidance of an instructor and who spends time away from the class performing the activities that the instructor assigns to them.

CHAPTER TWO LITERATURE REVIEW

2.0 Overview

This chapter presents a review of various studies done by different scholars, theoretical framework; the uses and gratifications theory as well as the theory of social constructivism, conceptual framework, critique of existing literature and research gaps.

2.1 WhatsApp usage

Utilization of social media applications is being adapted in almost all spheres of life. For several reasons, online SM networks are rapidly being utilized not only by college students, but also by instructors (Mazer, Murphy, & Simonds, 2007; 2009). It's therefore imperative to study the way individuals behave in such platforms and this is an important source of information for different stakeholders and researchers. Jan Koum and Brian Acton, who were employees at Yahoo for about 20 years are the ones who developed WhatsApp. Thereafter, in 2014 WhatsApp merged with Facebook, however they are separate apps with the goal of creating a messaging service that is fast and reliable anywhere on the planet (WhatsApp 2021).

WhatsApp is an instant messaging app for smart phones that enables users to transmit information such as text, audio, videos, and photographs utilizing the internet as a platform, according to Barhoumi (2015). WhatsApp, according to Bouhnik and Deshen (2014), is a social network program that allows users to exchange and receive immediate messages and feedback. WhatsApp has quickly evolved into a "communication hub" for social networking, changing the way people connect (Susilo, 2014). It's one of the evolutions that's been widely employed on specific mobile phones and desktops (Yeboah & Ewur, 2014).

Educational mobile technologies have evolved, and they show a lot of promise in terms of assisting students in constructing and sharing information, ideas and knowledge for learning via cellphone or computers (Pence, 2007). These applications are being

incorporated both formally and informally by many institutions of learning in their everyday teaching and learning activities. Educators are exploring with these technology in the hopes of encouraging critical thinking, cooperation, and knowledge creation.

According to Barhoumi (2015), WhatsApp is useful for forming feasible social groupings in which members can remain in different locations and still share infinite ideas via text messaging, phone conversations, and document and image uploads. When compared to the cost of transportation required for members to join on their classes for discussion, the cost of social media for social organizations is quite low (Browne, 2003; Rogers, 2000; Rich & Hibbert, 2004; Bober & Paz Dennen, 2001; Bodzin & Park, 2002). Other scholars, including Gillingham and Topper (1999) and Chan (2005), agree that social media functionalities allow students to engage, develop, and exchange knowledge regardless of their geographic location (Chan, 2005).

The ability to create a group and chat within its borders is one of the app's standout features. The group's creator takes on the role of manager, with the authority to add and/or remove members without the need for consent from the rest of the group. Aside from that, all members of the group share similar rights. Participants can choose to receive an alert for each message delivered or to mute the incoming alerts for a period of 8 hours, a day, or a week using the program. These features help in creating a platform that can be used similarly to a formal class setup and thus learning can take place.

2.2 Role of WhatsApp in Learning

According to Bere (2012), the conventional technique of learning via blackboard, also known as e-thutho, is slowly losing favor among students, who prefer to learn via WhatsApp. Educators see the potential benefits of adopting social media for academic reasons as their learners become more accustomed to it (Hughes, 2009; Nellison, 2007). Unfortunately, little research has been done on how social media affects students, particularly how it affects their learning experience (Hew, 2011; Mix, 2010). Despite the fact that there are other instant messaging apps that can be used on mobile gadgets, the WhatsApp remain one of the most popular (Statista, 2016).

The academic trend that began in the late 1990s and early 2000s spawned mobile learning (Stowe, 2013). Vygotsky (1978) underscored that "social constructivist theory attempts to improve social interactions between students to construct and share knowledge." Access to learning materials at any time, in any location, and in a variety of media has the capacity to encourage profound student learning enhancement and give students chance to construct their own knowledge (Blehch, 2014). The primary building blocks of knowledge are social interactions between online students (Vygotsky, 1978). WhatsApp application allows for these activities to take place through the sharing of videos, weblinks, attached documents, audio files and even video conferencing.

Around the world, educational systems are being pressured to employ ICTs to teach students the knowledge and skills that are essential in the twenty-first century. These media are having an increasing impact on learning and teaching contexts. Message apps like WhatsApp can help students remember what they learned in class and have a good impact on discussions, collaboration, and publishing. Collaborative learning, according to Dennis (1996), is a learning approach in which learners actively engage in learning by exchanging, debating, and negotiating ideas related to their learning interests. Individuals who are actively involved in a community in which learning occurs through explicit or implicit collaborative effort are said to be participating in collaborative learning. In this regard, there is a need to explore the challenges and benefits of WhatsApp usage in collaborative learning.

2.2.1 Sharing of Academic Messages on WhatsApp

Tutors all over the world are considering ways that they can use WhatsApp as not only a communication medium but also as a tool to aid in delivering lessons. This is not only happening at Tertiary level but also at basic level. Bansal and Joshi (2014) investigated experiences by college students with WhatsApp mobile learning in the United States. According to the Descriptive study, using WhatsApp boosted students' social involvement with one another and with their teachers, which encouraged collaborative learning.

Furthermore, the authors discovered that pupils were enthusiastic about using WhatsApp in their classrooms.

A study by Gheileron(2017) on ways to use WhatsApp in teaching in Upper Classes in Peru, used interviews to collect data from sample group of teachers in middle school where the study established that teachers by allowing their students to communicate using texts as self-study, a lot of time in the classroom is utilized well in discussions, complete exercises related to it, or developing concepts in greater detail. The study also established that this can be a terrific method for teachers whose pupils have limited time to help them make the most of it.

Bsharah, Gasaymeh and Abdelrahma (2014) assessed the association between WhatsApp and academic performance among the students of Saudi medical school. Almost 99% of the participants declared that they were using WhatsApp (more than 53% is used for academic activities). The results of the study were that there exist no significant link between GPA and students using WhatsApp. The amount of time being spent on WhatsApp, however, was directly proportional to the signs and symptoms of addiction. Almost 99% of the participants declared that they were using WhatsApp and more than 53% is used for academic activities.

Eberechukwu and Nwaizugbu(2018) carried out a study on the link between WhatsApp and academic performance in Education Trainee Teachers, utilized both descriptive and experimental survey designs. The study sample size composed of 72 EDM Geography /Accounting and 65 EDM Economics trainee teachers that were selected randomly from the general population to form the experimental and control groups respectively. At the post-test level, the study found no major link exist between the mean of the two groups. As a result, instructors need to complement often their classroom instruction with modern technologies such as WhatsApp group discussions and other SM networking platforms, which provide students with learning chances at all times and on-the-go.

Bouhnik and Deshen (2014) evaluated the mobile instant messaging among teachers and students through WhatsApp in Uruguay, through interviews that included 78 teachers. The study through descriptive studies established that oral practice in classroom presented a complicated issue. The study established most often than not, classrooms in poor countries tend to have more students, many topics to cover and have little class time. The study also established that WhatsApp has become really handy and just by sending an audio message, learners are able to do the task fast. The results also indicated that WhatsApp allows teachers to verify pronunciation and fluency, as well as giving students the opportunity to be evaluated individually.

Devi and Tevera (2014) studied the role of social networks in student unrest in public universities in Kenya. The study interviewed students in University's campuses in Nairobi. They used descriptive methods where the results showed that social network is a problem for the university students and advised that the document must be used as an organizational infrastructure. The study also advised that the university curriculum should be reviewed to complement these emerging issues and members to join these social media student groups and act as moderators and mentors for young people, as this can help to avert strikes in the planning phase.

2.2.2 Sharing of attached Academic Documents on WhatsApp

Malecela (2016) study on the perceptions of students on the use of WhatsApp in their academics revealed that students indeed appreciated the use of WhatsApp in their studies. The students believed that it aided in the collaborative learning and sharing of learning materials but a different study conducted by Wang, Chen and Liang (2011) established that only 20% of learners assessed agreed to the fact that SNS's help them with assignments. The contradiction that comes to fore from these two different studies that were looking at the student's perception on the using WhatsApp in their studies and raises the question of where can the line be drawn when it comes to using WhatsApp for academic purposes and for socializing.

Some research have looked into students' perspectives on making use of WhatsApp in the classroom. Malecela (2016) investigated students' perspectives on adopting WhatsApp as a learning aid in a Malaysian institution. As per the findings, students thought WhatsApp may help them study by improving communication with their fellow students and instructors, collaborative learning, and access to and sharing of educational content. To the contrary, a research by Wang, Chen, and Liang (2011), found that just 20% of the students polled agreed that social networking assists them with schoolwork. They discovered that students who utilized social media to post or interact while studying had their productivity and grades suffer. The study indicates that social media has an impact on college students' life, including their grades, because they fail to strike a balance between social media interaction and academic.

Alderman (2017) on the 5 ways that WhatsApp can be used in the ELT classroom in UK, while using desk reviews from data across the UK established that despite their attitude towards technology adoption, most teachers are at least somehow familiar with WhatsApp and its usage. The study established that many other teachers have adopted it so as to keep in touch with their students and collogues which meant that while this is just a minor step towards embracing WhatsApp as a teaching tool, the method is proving to be one of the most popular channels for complementing other traditional teaching methods.

Chesnay (2014) studied the impact of WhatsApp on studying habits amongst university students in Ghana. The purpose of this study is to contribute to a general set of knowledge in ICT by evaluating the influence of WhatsApp on university students in the metropolis of Kumasi in Ghana. They used a descriptive design and sampling method of quotas, 200 interviewees were chosen from four of the universities that include two public and two private varsities. The results showed that 46.7 per cent of students use WhatsApp ten or more times a day. 40 per cent spend between 15 and 30 minutes per visit, 20 per cent spend between 30 and 45 minutes per visit. 40 per cent use WhatsApp on campus and during lessons, 33.3per cent use WhatsApp in their shelters.

Another study was carried by Mbukusa (2018) on students' perspectives on the application of WhatsApp in English language as a second language teaching methods at the University of Namibia. The research assessed 99 students from the same class who completed self-administered questionnaires. The study found, among other things, that WhatsApp can have a negative impact on tertiary students' performance, particularly those who do not have access or own cellphones. The platform fails to balance online activities (WhatsApp) and academic preparation, causing students to be distracted from completing projects and sticking to their private study schedule. Students, on the other hand, like utilizing WhatsApp as a study tool and advocate on colleges to provide internet access as a major priority in distant education.

Oganji, Okoyeukwu, Wanjiru and Osiri (2017) carried out a study on the pattern of usage of SM by Pharmacy students at Kenyatta University. The information was collected by a questionnaire as it was a descriptive research. According to the findings, WhatsApp was more popular amongst students, and it was mostly used to interact with real friends, as opposed to Facebook, which was primarily used to contact with both real and virtual friends. The survey revealed a reasonable attitude to the usage of social networking by Pharmacy students, who consider social media networks as less official platforms. As a result, most students engage in social networking on weekends rather than during school days.

2.2.3 The effectiveness in the use of WhatsApp in Learning

Schroeder and Greenbowe (2009) carried out a study to assess the impact of using WhatsApp Messenger among University of Mangalore students. To achieve this goal, students from various departments were given 200 questionnaires. There were 188 questionnaires which were completed and returned. The method of detection was used. The study's findings revealed that the majority of users are familiar with WhatsApp Messenger and use it for academic purposes. As a result, an impression could be formed among all people, regardless of their age, academic background, sexual orientation, occupation, or other factors. If at all possible, the usage of WhatsApp Messenger could help not only students at the higher education institution, but all individuals.

Pixel (2016) studied the imposition of the WhatsApp messenger to Students at the Begum Rokeya University, in, Bangladesh the yearn 2015. This empirical study was carried out with 200 questionnaires, which was used as a data collection tool for the poll. According to the findings, WhatsApp has a significant detrimental impact on pupils, negatively affecting their education, conduct, and daily life. The study revealed that most of the study time and tasks completion distractions leading to the methods not being ineffective. The study concluded that time management was crucial in using effectively the online platforms such as WhatsApp for learning.

Okwuchukwu and Ngozi (2014) studied WhatsApp's usefulness as a collaborative learning tool among graduate students at the University of Uyo in Akwa Ibom State. The investigation was conducted using a quasi-experimental design. The mean and standard deviation were utilized to answer the study questions, while the null hypotheses were tested using the Z-test and T-test. The study's population comprised of sixty (60) students from the University of Uyo's faculty of education's 400-level science education students. The findings demonstrated a significant difference in retention levels between students taught using WhatsApp and those taught using traditional methods, as well as no significant difference exist between female and male students who utilize WhatsApp for learning.

Another study by Gashegu, Mfashingabo and Shingiro(2019) evaluated the use of WhatsApp Discussion Groups in Learning at Higher Education Institutions at the University of Rwanda. The study through a discussion group evaluated the use of WhatsApp to form discussion Groups in Learning at IHL in exchanging lesson contents. The findings of the study established that during two days of online conversation via the WhatsApp discussion group, 312 messages were exchanged. With 31.1 percent of those conversations being about one of the 14 themes in the Gross Anatomy 1 module (spinal cord anatomy), and that topic being the most complex one, the eminence of exchanged messages on that issue indicated that those students' talks were relevant.

Bagarukayo et al. (2019) carried out a research in Uganda on the use of WhatsApp in teaching Higher Order Thinking Skills (HOTS). Using the Activity Theory (AT)

framework and a broad literature review, the study looked at how WAEL can help in the development of HOTS. The findings indicated that WhatsApp has a lot of prospective to help with HOTS development because of its features like ubiquity, and AT gives a methodical and practical methodology to show this potential and how it may be used.

Tondeur (2019) explains why Kenyan secondary schools are failing to adopt technology. A total of 64 teachers participated in the study, which included teacher questionnaires and focus group talks. The goal was to see how many teachers were still using technology in their classes two years after the program finished. According to the findings, some teachers were only starting adopt technology in presenting knowledge. The majority were utilizing it to assist their educational practice outside of the classroom, though those who were using it to prepare email or lessons with colleagues did so.

Sirohi (2016) investigated the perceptions of Arabic language teachers before the service on the impact of mobile instant messaging integration in improving their educational interaction in Ukraine. The data collected was through semi-structured interviews and also an analysis was done of the publications on the WhatsApp platform. Study findings showed that WhatsApp has the power to improve all three types of interactions. 71 per cent of participants reported that interaction with students improved, 54 per cent reported that interaction with student content has improved and 42% reported that the participants stated that the student-instructor interaction has improved. The findings of the study established although the expenses associated with the use of WhatsApp and were able to manage the additional workloads from teachers, the use of WhatsApp in teaching showed that there were high levels of distraction from learners. The study also found the lack of commitment of the students for an effective participation have been identified as the greatest challenges of using WhatsApp effectively for learning purposes.

The Impact of WhatsApp Messenger Use on Students' Performance in Ghanaian Tertiary Institutions was studied by Yeboah and Ewur (2014). A total of 50 students from five tertiary universities were interviewed, and 500 students from the same institutions were given questionnaires. According to the findings, WhatsApp has had a negative influence

on performance of students in Ghana, rather than facilitating the process of communication and thereby boosting effective flow of information and idea sharing among students. In Tanzania, Mwakapina and Mhandeni (2016) investigated the WhatsApp tools in second language learning looking at the potentials, challenges and opportunities in IHL. The research employed descriptive methodologies. According to the findings, WhatsApp may be fully employed for educational objectives. As part of their particular faculty needs, the government is being requested to grant loans to students among IHL for online mobile learning devices. Instructors are also encouraged to use the tool in their classes synchronously because it is effective at establishing an engaged learning environment.

Raza, Qazi and Umer (2017) carried out a study on how millenials from African consume media, their usage habits and how they use mobile applications. The study that applied a rapid survey that was conducted amongst 2,861 respondents aged between 18 and 34 in Kenya, Tanzania, Ghana, Uganda and Nigeria. The study used the GeoPoll application to conduct the survey across all the five countries. The study established that while the old were trying to understand this affinity for technology and especially, mobile technology among African millennials, they were afraid that their uses that were not effective.

Oganji, Okoyeukwu, Wanjiru and Osiri (2017) also established that at when it came to integrating technology into their classes, secondary school instructors faced a variety of obstacles. The technological challenges included the use of WhatsApp, Facebook, Twitter among others. Other none technical challenges cited in the study included lack of electricity, infrastructure and connectivity. The study also cited that the training needed for technical adaptation was so complex and the required resources to implement it were scarce.

2.2.4 Studying virtual Communities

Instead of physically interacting with research participants, virtual ethnographers help them better understand written and visual data. Because of the anonymity afforded by virtual space and the absence of a physical presence, the process of entering the virtual environment employs a variety of strategies. Virtual ethnography's research phase follows the six steps of traditional ethnography. Planning the research, going into the field, collecting data, analyzing data, meeting ethical guidelines, and writing a report are the steps involved. If the researcher is collecting data both online and offline, then he/she must first understand how and when to connect the data acquired via both online and face-to-face interviews.

Virtual worlds and games can be considered as a virtual social system because of its cultural structures, authentic economies, technological equipment, means of communication, value systems, that allows user involvement and avatars created by users. Offline and online data collection tools can be used to acquire comprehensive and rich data in this subject. Many research have been conducted on the application of ethnography in virtual environments. Participant observations can be used to collect data. Paccagnella (1997) spent 18 months observing the Italian cyberpunk subculture, recording and analyzing the messages posted there. Hine (2000) used the ethnographic analysis method in a virtual environment to analyze the murder of Louise Woodward.

Kendall (2004) conducted face-to-face interviews with 30 participants after spending two years observing them on the social networking site BlueSky. The researcher, like other participants, became a one of the member of the group and took part in specific events. Uzun (2011) used participant observation to collect data in the virtual world platform Second Life for two years, comparing the users' virtual daily lives and performances to their real-life counterparts via face-to-face interviews.

In virtual ethnography, data is collected in a virtual environment through virtual observation. This aids in both a better understanding of the online community and its members as well as a better analysis of the events and interactions that occur inside it (Garcia et el., 2009). Many researchers start out as observers in their research environment. A lurker keeps track of all activities going on in chat rooms, discussion groups and email lists without participating. To avoid influencing the participants, they are not active in group discussions.

In virtual ethnography, data can also be gathered using emails. Email interviews are a type of asynchronous internet interviewing. The same is also applicable in other virtual platforms such as WhatsApp. This style of interviewing might be more intimate and thorough (Kivits, 2005). Virtual ethnography is a powerful tool for interpreting and comprehending virtual communication and communities. Virtual ethnography is primarily focused on participant observing phenomena, but it can also be supplemented with and offline and online interviews. Getting to know and entering the virtual community and culture, and also gaining trust of users, requires passive observation.

2.2.5 Virtual Learning during Covid-19 pandemic

UNICEF (2020), report show that 106 nations implemented lockdowns in the whole country and 55 implemented local closure, affecting approximately 98.6% of the student population worldwide. Schools in 48 nations are currently open. Because of the Coronavirus outbreak in Africa, most social, political, and economic activity have come to a halt (Jacob, Abigeal & Lydia, 2020). Homeschooling, radio, remote learning, television, online learning, and distant learning are some of the methods that have been utilized to provide education to learners. In Africa, remote learning is still in its infancy compared to other continents, with less than a quarter of low-income countries offering any form of remote learning, with the bulk relying on television and radio. In contrast, about 90% of countries in the developed world offer remote learning alternatives, with almost all services available online (Chidambaram, 2020).

Education institutions and students both had to make necessary adjustments. Existing policies in higher education, particularly universities, had to be re-drafted to accommodate the emergency pedagogical approach of remote learning. Policymakers, service providers, students, and other stakeholders had conflicting opinions about the new teaching methods, but in order to save time and normalize the situation, solutions were established and remote learning was used in most educational institutions (Aborode, Anifowoshe, Ayodele, Iretiayo & David, 2020). Learning progressed in both synchronous and asynchronous modes, and institutions were able to meet termly and semester requirements while also

providing reading resources remotely, as the University of Nairobi did through the use of electronic resources, which included thousands of learning resources.

Kenya's Ministry of Education took a number of initiatives to enhance learning continuity, including educational content broadcast on television and radio, as well as on YouTube (Masaviru, 2020). The Kenyan government, in collaboration with Telkom Kenya and the Kenya Civil Aviation Authority (KCAA), also installed Google's Loon Balloons carrying 4G base stations across Kenyan airspace. While these admirable initiatives are intended to ensure student are not missing on education, it is true to say that accessibility to these services are not that perfect, and many learners are in both urban and rural regions have been unable to benefit. Kenyan educational institutions would close abruptly on March 15, 2020 in reaction to COVID-19, affecting almost 17 million students across the country (Lugonzo, 2020).

2.3 Theoretical Framework

This study will be based on two types of theories. These include; the Uses and Gratifications Theory by Elihu Katz, and the Theory of Social Constructivism by Russian psychologist Lev Vygotsky.

2.3.1 Uses and Gratification Theory (UGT)

This theory was developed to assess user motivations and the gratifications of a specific media (Katz et al. 1973). The theory has the assumptions that the use of a specific medium is goal oriented and that people who use these media seek to satisfy some desires. New Media tools such as WhatsApp are considered as important platforms for networking and communicating. Other related uses of SM are to obtain gratifications especially in passing time, socializing and getting information (Quan-Haase & Young, 2010). The gratification achieved from the use of these New Media tools normally influence frequency, the selection, and intensity of using that medium.

The UGT entails understanding what and how individuals actively approach specific means to meet certain needs. It is assumed that members of the public are not passive consumers

of the media. However, people generally have control over what they consume in SM and take part actively in interpreting and integrating media into their life. In contrary to other theoretical approaches, UGT contends that the public is responsible for selecting the methods to gratify their wishes and requirements. This theory would therefore imply that the media is in competition with other sources of information for spectator gratification. Today the UGT has an empirical value since it offers scholars in the field of communication a platform that makes it possible to see various ideas and theories on the choice of media, consumption and even impact (Bansal & Joshi, 2014).

The rewards sought from social media might range from a location for information distribution to a platform for feedback or even the possibility to join in a community of linked persons (Stassen, 2010). In relation to this study, the following observations are worth mentioning for instance, Bouhnik and Deshen (2014) the ability to send unlimited number of text messages, the cheaper cost of using the application, the ability to conduct an ongoing conversation with many friends at the same time, binding together family and friends, the immediacy and a sense of privacy when compared to other social networks. Malecela (2016) on the use of WhatsApp in their academics revealed that students indeed appreciated the use of WhatsApp in their studies while Gillingham & Topper, (1999); and Bansal and Joshi (2014) established that WhatsApp application has been adopted in aiding the learning and teaching processes. Therefore, these findings seem to agree with the observation of the theory that, the public seeks means or medium that will satisfy their immediate needs and therefore be gratified.

This theory aligns with this study since New Media technologies such as WhatsApp are numerous, and users get to pick those that are more likely to satisfy their needs in different contexts. It is in this regard that this study will seek to understand the gratifications that are fulfilled with the WhatsApp application in learning amongst the target population.

2.3.2 Theory of Social Constructivism

Social constructivism entails a social learning theory founded by Lev Vygotsky, a Russian psychologist who holds that people actively take part in the development of their own

knowledge (Schreiber & Valle, 2013). Vygotsky suggest that learning takes place largely in cultural and social contexts, rather than entirely inside individuals (Schreiber & Valle, 2013). The theory emphasizes on small groups and dyads (Johnson & Bradbury, 2015). Students, in this case, learn more by interacting with their classmates, parents and instructors, whereas teachers promote and facilitate dialogues in the classroom by harnessing the natural flow of conversations (Powell & Kalina, 2009). According to social constructivism, effective teaching and learning are rely greatly on interpersonal conversation and contacts, focusing mainly on the students' interpretation of the topic (Prawat, 1992).

Social constructivism is a philosophy in which learners may engage in social activities to boost their knowledge (Vygotsky, 1978). Vygotsky underscored the significance of social interaction in the process of developing knowledge and understanding and held that learning cannot be divorced from its social environment (Pritchard & Woollard, 2010).

Constructivism holds that learners are not passive consumers of information; rather, they actively create their knowledge depending with the past experiences and interaction with the environment (Piaget, 1971). Dewey (1916) saw the teacher's duty as a facilitator and guide of learning rather than a director of learning or a transmitter of information. According to Bruner (1961), the objective of education is to enhance learners' thinking and problem-solving skills rather than to teach knowledge.

Human beings are inherently social and even when they can't meet in person as is the case during the Covid-19 Pandemic period, platforms such as WhatsApp are able to give a somewhat similar kind of interaction. Instead of just accepting knowledge, the learner seeks meaning from a range of sources and via dialogue with other learners. The teaching style changes away from lectures and other modalities of transmittal and toward problem-

Therefore, in an online learning environment, student connect with others and building their new knowledge with existing information, they may therefore have access to a wide range of online resources. This theory therefore aligns itself with this study by exploring benefits and drawbacks of the social interactions on the various Students' WhatsApp groups being studied.

2.3.3 Conceptual Framework

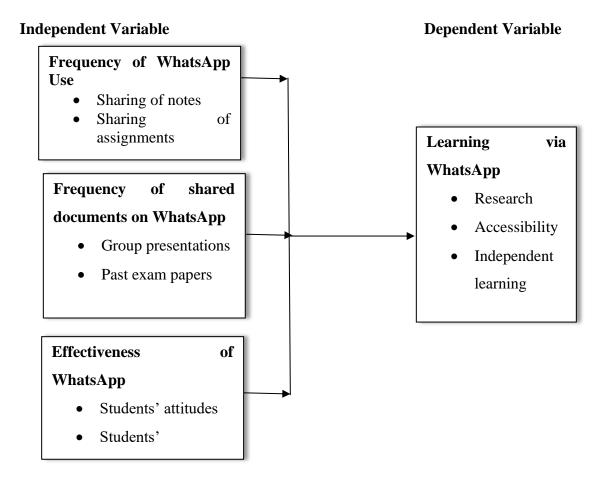


Figure 2.1: Conceptual Framework

2.4 Critique and Research Gaps

For quite some time, increased social media usage has been a worldwide phenomena. What began as a hobby for a few computer-literate people has evolved into a social standard and a lifestyle for individuals across the world. According to Ellison (2007), youths and teenagers have particularly identified social media as a way to connect their classmates, share information, revive their characters, and promote their social life. While the

advancement of technology has made it easier to connect with others and get notoriety on social media, it is now mostly a web-based activity, with Websites (Coyle, 2008).

The biggest percentage in this area of study shows that studies on the use of WhatsApp as a tool of research and learning is concentrated in countries outside Africa and with a few in Africa but with concentration of the use of SNS in libraries. There are no known baseline studies carried out in Kenya concerning leveraging of WhatsApp as a tool of research. Africa and Kenya in particular, face unique challenges as they try to implement ICT services in their daily activities for instance, the cost of availing enough bandwidth and technological phobia. The studies which have been carried out around the world concentrate more on learning outcomes ignoring the research bit of it. In Kenya the studies carried out concentrates more on the library and mass communication. This study adopted the use of cross-sectional descriptive survey which survey intends to find out certain facts concerning an existing phenomenon will produce an in depth understanding on the use of WhatsApp as a tool for research which the current research will fill and have a Kenyan perception.

Table 2.1: Research Gaps

Author	Study	Methodology	Findings	Study Gap
Bouhnik and	"Mobile	Applied	WhatsApp has proven	While the study
Deshen	instant	descriptive	quite useful, and students	highlighted the increased
(2014)	messaging	studies through	may finish a job simply	use of WhatsApp between
	between	interviews that	by sending an audio	students, the study did not
	teachers and	included 78	message.	cover its use academic
	students	teachers.		work. The study settings
	through			are also different and
	WhatsApp in			therefore cannot be
	Uruguay"			generalized.
Devi and	"The role of	The	The study interviewed	While the study was
Tevera	social	Descriptive	students in Universities	focused on the role of
(2014)	networks in	study	campuses in Nairobi	social networks in student
	student unrest	interviewed		unrest in public
	in public	students in		universities in Kenya, it
	universities in	Universities		was not specific on
	Kenya."	campuses in		WhatsApp or its use in
		Nairobi		academic work among
				students

Alderman (2017)	"5 ways to use WhatsApp in the ELT classroom in UK"	The study used desk reviews from data across UK	WhatsApp as a teaching tool, the method is proving to be one of the most popular channels for complement other traditional teaching methods.	The study settings are also different and therefore the findings cannot be generalized.
Oganji, Okoyeukwu, Wanjiru and Osiri (2017)	"Pattern of use of SM networking by Pharmacy students at Kenyatta University"	The study used interviews	The study revealed that WhatsApp remains most common among students, since it was used mostly to interact with actual friends, as opposed to Facebook, which was used primarily to contact with both virtual and real friends.	The study did not cover the use of WhatsApp in academic work among students.
Bagarukayo et al (2019)	"The use of WhatsApp in Teaching and Developing Higher Order Thinking Skills (HOTS) in Uganda."		Due to its affordances such as ubiquity, WhatsApp has a significant ability to promote development of HOTS, and AT provides a methodical and practical means to deliver this possibility and how it may be applied	Although the study was focused on WhatsApp usage in education, it was based on Develop Higher Order Thinking Skills (HOTS). The study settings are also different and therefore the findings cannot be generalized.
Yeboah and Ewur(2014)	"Impact of WhatsApp Messenger Usage on Students' Performance in IHL in Ghana."	interviewed 50 students from five IHL and administered another 500		Although the study was focused on WhatsApp usage in education, it did not cover the use of WhatsApp in academic work among students. The study settings are also different and therefore cannot be generalized.

CHAPTER THREE

METHODOLOGY

3.0 Overview

The chapter outlines the methodology adopted. It discusses: The design of the study, the study population, the sample and sampling procedure, data collection. Additionally, the chapter discusses data analysis, interpretation and presentation procedures.

3.1 Research Design

The case study method was employed in this research. A case study entails an in-depth examination of a person, phenomena or institution. It entails a thorough examination of phenomena or social units (Kothari, 2004). It provides also a thorough comprehension of the social units or phenomena under consideration. Case study is a type of in-depth research rather than breadth that focuses on the entire contextual examination of a small number of events or situations as well as other inter-relationships and depends on qualitative data (Cooper & Schindler, 2005). Case studies have been utilized successfully in research by researchers such as Bita (2011) and Chepkwony (2012). The study to be conducted is a case study of University of Nairobi. The UON will allow for an in-depth investigation of the problem and also help in giving insights and proper understanding the use of WhatsApp in Learning.

3.2 Study Population

The target population is the aggregate of elements that has one or more feature in common (Williamson 2001). The target population in this study were all the messages sent and received within Public Relation MA-2019 WhatsApp group, 2019 SOJMC MA WhatsApp group and DEV COMM.2019 WhatsApp group. The study focused on the three WhatsApp Groups due to the purpose and intension of their formation and their inclusivity in members (at least all the students undergoing their course work in the year 2020 at the SOJMC at the University of Nairobi belonged to one of the groups).

3.3 Sampling Techniques

The researcher used Snowball sampling technique. The researcher also purposively selected The University of Nairobi for this study since it's a public university in Kenya that admits students from all over the country and therefore have similar attributes. The manner in which learners utilize social media in their interactions is quite similar. Given that these university students are expected to display comparable features in their social media usage, any of Kenya's institutions had an equal probability of being chosen to participate in this study. As a result, the researcher chose The University of Nairobi, School of Journalism in the same way that he would have chosen any other public university in Kenya.

3.4 Sample Size

The study investigated data extracted from the three WhatsApp groups; Public Relation MA-2019 WhatsApp group, 2019 SOJMC MA WhatsApp group and DEV COMM.2019 and included all the messages and the materials shared in the three groups from March 2020 to June 2020 which was considered to be the period during which the Covid 19 Pandemic disrupted normal learning in all learning institutions the world over.

The group members of the three WhatsApp Groups were all Graduate Students at the University of Nairobi, School of Journalism. The WhatsApp Groups had different compositions of members depending on what the students were specializing in i.e. DEV COMM.2019 for those specializing in Development Communication (88 participants), Public Relation MA-2019 for those specializing in Public Relations (33 participants) & 2019 SOJMC MA for the whole Cohort (93 participants). To ensure that the messages were not compromised, the researcher extracted the messages from the respective Groups and selected only those from the beginning of the month of March 2010 to the end of June 2020 (Appendix III). Only the messages shared between March and June were analyzed in all the groups.

3.5 Data Collection Procedures

So as to get the appropriate data for the study, the researcher asked the respective group Admins to include him in the WhatsApp groups so as to acquire the necessary messages for analysis. These groups were the ones that were identified through the Snowball sampling procedure. The researcher was not an active member of these groups but rather just an observer or "lurker". The researcher made a formal request to the respective group admins via email (**Appendix I**) and reassured them that the inclusion of the researcher in the respective groups was purely for academic purposes and that the confidentiality of all the members and their respective messages would be observed. This request was then shared with the group members for consensus and the researcher was allowed to continue with the study. Data based on the students' WhatsApp interactions was mined. The data gathering strategy allowed for the collection of raw data created by students in their social surroundings over a longer period of time. Therefore, data gathered for analysis was unbiased.

With the assurance of confidentiality and anonymity, the chat history of last one year (2020) was taken from the respective groups. In order to make use of the collaborative learning opportunities and identify the limitations and benefits of utilizing WhatsApp in learning, thematic content analysis was used. Thematic content analysis, according to Taylor-Powell and Renner (2003), enables meaning-making by identifying themes. These themes are then organized into coherent classes, and sub-category themes are identified and labeled until all relevant topics have been found and labeled. Themes were created using downloaded WhatsApp conversations, then classified based on thought similarity, resulting in inter-related categories. For consistency, the sub-categories that formed from the raw data (WhatsApp messages) were regularly compared to learning ideas (major themes and categories) extracted from the theoretical framework. The matching was done continuously until all sub-categories were matched to themes and categories that helped in coming up with a code book to guide the study.

The research phase of virtual ethnography is structured similarly to the six phases of traditional ethnography. These phases are planning the research which was done during the initial stages by identifying the study gaps arising from already existing research studies, entering the field by requesting to be added into the respective WhatsApp groups, collecting data by extracting all the chats from 1st January 2020 to December 2020,

analyzing data between the months of March and June 2020, fulfilling ethical criteria and preparing a report. In contrary to offline ethnographic research, the researcher gains advantage from the archival nature of Internet messages which can be retrieved at any point in time.

3.6 Data Collection Instrument

Data was collected using a code book (Appendix II). This code book was used to capture texts in their original form. Data was collected through thematic extraction where the researcher closely examined the messages shared on the respective WhatsApp groups to identify ideas, common topics and patterns of meaning that repeatedly came up. A theme is a section of facts that informs the reader something about it. It depicts data patterns that are supported by a core notion that organizes the analytic observations. The researcher then categorized the data as per the study objectives. The data included messages shared on the three WhatsApp groups (Public Relation MA 2019, 2019 SOJMC MA and DEV COMM.2019). The data analyzed was the WhatsApp groups messages sent or received from March to June 2020 sent through the Students' WhatsApp groups.

3.6.1 Data Analysis

Analysis of data was done by use of content analysis. Nachmias and Nachmias (1996) post that this model entails drawing conclusions by carefully and objectively identifying certain qualities of communications as the foundation for relating trends. Through text analysis, it gives vital historical and cultural insights. It is also a non-intrusive way of evaluating interactions and providing insights into complicated models of human mind and language usage. In this study the messages exchanged between the students were the ones under investigation upon their extraction from the respective WhatsApp groups.

Content analysis method helped to make valid and replicable inferences by interpreting and coding text element and systematically evaluating messages from the WhatsApp Groups. The method permitted the researcher to sort out huge amounts of textual info and systematically identifying its characteristics, including the frequencies of most used keywords by locating the most important structure of its communication content (Cooper and Schindler, 2001). Thematic contextual analysis was applied and used to draw conclusions according to the study objectives (WhatsApp usage in Learning) under investigation.

3.6.2 Unit of Analysis

According to Baker (1994) units of analysis are entities in social nature that form the basis of the study. In this study, the units of analyses were the WhatsApp messages shared by the Graduate Students at the University of Nairobi, School of Journalism in their Learning between the months of March and June 2020.

3.7 Validity

Validity is the quality procedure of gauging the correctness and accuracy of the tool used. Validity came about as a means of standardizing the instrument to be used by carrying out a pre-test on a sample population which is similar to the target population. This helped the researcher to identify inappropriate items in measuring the variables for modification or discard. This improved the quality of the research instruments hence increasing validity. Validity also entails degree to which tools of data collection can measure correctly what they intend to measure (Oso *et al*, 2009).

3.8 Reliability

Reliability is when a particular research tool is able to provide consistent results (Saunders et al, 2009). Reliability was arrived by computation of Cronbach's Coefficient Alpha of 0.7 which assumed to reflect the internal consistency of the instrument as suggested by Kothari (2011). This was done by calculating the correlation of each item with every other item to yield the average of all the correlation coefficients (alpha (α)).

3.9 Ethical Guidelines

The researcher had an introduction letter from the department of Library and Information Science, for permission to collect data. Assurance was given to respondents that all information shared was to be handled with confidentiality and be utilized solely for that research. A letter of introduction was sought from University of Nairobi. The membership of the selected WhatsApp Groups was not disclosed, and they were assured of their confidentiality and that the findings of the research were to be utilized solely for academic purposes. The researcher, kept a high level of integrity while conducting study, analyzing and presenting the data. The research findings and interpretations were undertaken objectively and honestly. There was no doctoring of the results and the confidentiality of the messages shared in the respective WhatsApp Groups was maintained.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSIONS

4.1. Introduction

This chapter presents results and discussions of the study from the data gathered from the WhatsApp Groups that were targeted by the study. It provides detailed interpretations of the finding on the use of WhatsApp in Learning amongst graduate students at the University of Nairobi.

4.2 The Research Questions

The study had sought to establish whether graduate students at UoN shared academic WhatsApp messages; how frequent do graduate students at the UoN share attached academic documents in their WhatsApp groups; and how effective is the use of WhatsApp in learning for graduate students at the School of Journalism, in the University of Nairobi.

4.3 Content Categories developed from the Study

The study looked at various categories of messages according to the study themes and included WhatsApp sharing of academic messages among graduate students, frequency of sharing of academic material among graduate students; and lastly the effectiveness of the use of WhatsApp in learning for graduate students at the School of Journalism.

This is the outcome of paraphrasing same information. Thereafter, all data associated with previously categorized patterns was discovered. The identified patterns were subsequently expanded upon (Tracy, 2013). All concepts associated with a certain pattern were recognized and grouped with the matching patterns. Following that, the linked patterns were merged and cataloged into sub-themes. Themes were then found by bringing together components of thoughts that are generally meaningless when evaluated personally. Themes and patterns that emerged from the students' communications were combined to produce a thorough picture of the collective experience. Researcher can quickly notice patterns arising when he gathers sub-themes to create a thorough information picture (Tracy, 2013).

Table 4.1: Content Categories developed from the Study

Code	Content	Content Unit/Sub-	
#1	Category Sharing of WhatsApp	Sharing of learning messages	Students use of WhatsApp in Learning;
	messages in Learning	Learning Materials	Notes; Articles, journals shared on WhatsApp
		Exclusive use of WhatsApp as a learning tool	All lectures and topics are discussed on WhatsApp; no other method for learning is available; and notes are shared by all
#2 Frequency of students use of WhatsApp in learning		Frequency of questions /queries posted on the WhatsApp group:	Numbers of queries sent on WhatsApp/Week/Day
		Frequency of academic Answers posted on WhatsApp messages;	Number of Answers posted on WhatsApp messages/Week/Day
		Frequency of positing detailed assignments/learning material to the lecturer;	Number of assignments/learning material /Week/Day
#3	The effectiveness of WhatsApp use	Agreement / Agreeability	Agreement on the use of WhatsApp as an effective tool in Learning; Agreement with the messages sent
	in Learning	Appreciation of the use of WhatsApp messages by students	Appreciation of the material shared; Acknowledged the messages shared (Thank You)
		Clarity of the Messages	The student's clarity on the learning materials being share; the materials shared is clear; the method is clearer as in a classroom
		Understandability of the messages and the material being shared.	Disagreement on whether the students understand; sometimes students do not understand the content of the material shared;
		Timelines sharing of the messages Accessibility of the messages or materials	Timely sharing of assignments; sharing of messages in good time. Expensive to access WhatsApp for some students; Can participate
			because cannot have internet bundles;
#3.1	Relevance	Other non-academic related messages	Some messages are distractive; the method is not effective as some students do not concentrate;

The study categorized the responses according to the study objectives / themes. The findings of the study established that the students' use of WhatsApp in learning and that among the learning materials shared on the WhatsApp groups included class notes; articles, journals and other academic materials that were shared on the platform. The study also established that while lectures and topics were not done through WhatsApp messages, most of the learning materials and related messages was shared on students WhatsApp groups. Results of the study established that lecturers also used WhatsApp to give notes.

The findings of the study also established the frequency of questions and queries posted on the WhatsApp groups, frequency of academic answers posted on WhatsApp messages and the frequency of posting detailed assignments or learning material shared. The study also established how often and frequently the platform was used by the students for academic and learning purposes.

In terms of the effectiveness of WhatsApp use in learning by graduate students at the school of journalism, the findings of the study established the levels of agreement on the use of WhatsApp as an effective tool in learning; the level of appreciation of the materials shared; the understandability of the messages and the materials being shared on the platform; the students clarity and comprehension of the learning materials being shared; timely sharing of assignments, academic materials and related messages in good time; the accessibility of the messages or materials and the non-academic related messages that is shared on the WhatsApp Groups by the students.

4.4 Findings of the study per objectives

Objectively, the study had sought to establish whether graduate students at UoN shared academic WhatsApp messages; how frequently did graduate students at UoN shared attached academic documents in their WhatsApp groups; and how effective was the use of WhatsApp in learning for graduate students at the School of Journalism, in the University of Nairobi.

4.4.1 Sharing of academic Messages through WhatsApp

The first objective was to establish whether graduate students at the University of Nairobi shared academic WhatsApp messages. The following are the findings.

Table 4.2: Sharing of learning Materials through WhatsApp

WhatsApp Group	Sub Theme	No. of Messages
	Sharing of learning messages	14
Public Relation MA	Other related materials (These are the	15
2019	reading materials; Please share the	
	reading materials: I have done so)	
DEV COMM. 2019	Sharing of learning messages	21
	Other related materials (These are the	28
	reading materials; This is what the	
	lecturer shared; Please share the	
	reading materials; Everyone should	
	check in order to understand the	
	instruction provided)	
2019 SOJMC MA	Sharing of learning messages	56
	Other related materials (These are the	29
	reading materials; Please share the	
	reading materials; Are these all or	
	there are more to be shared; I will	
	confirm with the lecturer; Ok; Thank	
	you)	

The results indicated that WhatsApp was being used by students for the purpose of leaning as supported by Schroeder and Greenbowe (2009) that established that using WhatsApp for educational needs on this basis a perception could be created among all individuals, regardless of their age, academic background, sexual category, profession among others. The extensive use of WhatsApp also supports the findings by Malecela (2016) that revealed that students indeed appreciated the use of WhatsApp in their studies.

The students shared documents from lecturers and also some that they got from the internet. Upon sharing of these messages, discussions regarding those shared materials ensued in the respective groups. Some of the groups had more interactions compared to others and this could be as a result of the number of members whereby; groups with many members had more interactions while those with few had less.

The findings indicated that the least number of messages that were shared, were by Public Relation MA 2019 and were on learning on various topics, DEV COMM. 2019 WhatsApp group followed in the least sharing of learning messages while 2019 SOJMC MA WhatsApp group indicated the highest sharing of academic messages that were shared within the three groups. The findings of the study also indicated that Public Relation MA 2019 WhatsApp Group shared the highest percentage of material related to academics, while DEV COMM. 2019 WhatsApp group also indicated that a good number of academic messages were shared, while academic related materials shared through the 2019 SOJMC MA group WhatsApp group comprised the least percentage of the total messages shared within the groups. This also indicated that 2019 SOJMC MA and DEV COMM. 2019 WhatsApp groups shared the highest percentage of learning or academic related messages as compared to Public Relation MA 2019.

On the other hand, sharing of learning messages and forwarding of learning materials to personal numbers through WhatsApp was also seen across the three groups.

"... these are the reading materials; please share the reading materials" was highly used in the three WhatsApp groups. Below shows the various common sharing by the students from the three WhatsApp groups.

A: Please class Rep. share the reading materials (All the WhatsApp groups)

B: These are the reading materials.

C: I have Shared (All the WhatsApp groups)

D: Everyone should check to understand the instruction provided (DEV COMM. 2019).

E: Ok Thanks (various students) (All the WhatsApp groups).

F: This is what the lecturer shared; (All the WhatsApp groups).

G: Are these all or there are more to be shared (2019 SOJMC MA groups).

H: I will confirm with the lecturer (2019 SOJMC MA groups).

The findings also indicated that there was sharing of learning materials among the students in all the WhatsApp groups, although there was more sharing of learning material in 2019 SOJMC MA and DEV COMM. 2019 WhatsApp groups compared to **Public Relation MA 2019.** Additionally, in terms of the number of messages and learning material shared, was registered by 2019 SOJMC MA which had a bigger number of students compared to other two WhatsApp groups.

4.4.2 Frequency of sharing of attached learning materials by students

The study had sought to establish how frequent do graduate students at the University of Nairobi share attached academic documents in their WhatsApp groups. These documents included Past exam papers, Lecture notes/handouts, groups work assignments and others such as power point presentations and web links. The findings of the study are as shown below.

Table 4.3: Frequency of sharing attached learning materials by students

WhatsApp Group	Sub Theme	No. of
		Messages
Public Relation MA 2019	Frequency assignments (I have shared the	9
	Assignment; Please upload your	
	Assignments; Please share the assignments;	
DEV COMM. 2019	Frequency assignments (I have shared the	8
	Assignment; Please upload your	
	Assignments; Please share the assignments;	
	can you share again;	
2019 SOJMC MA	Frequency assignments (I have shared the	33
	Assignment; Please upload your	
	Assignments; Please share the assignments;	
	please confirm receipt.	

The findings indicated that 2019 SOJMC MA shared more frequently academic and related learning materials than the other two WhatsApp groups. Results also indicated that sharing of learning materials was less frequent in DEV COMM. 2019 group followed by Public Relation MA 2019. The findings also indicated that frequently the platform was also used

for uploading assignments by students and sharing of assignment. Below shows the various common sharings by the students from the three WhatsApp groups.

A: I have shared the Assignment (All three groups from the class representative)

B: Please upload your Assignments (All three groups, the class representative)

C: I have uploaded; please check (various respondents and the class representative)

D: Can you share again (various respondents). This response was specifically from DEV COMM. 2019).

E: Please confirm the receipt

While there was more frequency of sharing of assignments by the students, the sharing varied from one WhatsApp group to the other. This showed that WhatsApp groups form an important platform that can be used as a learning tool and especially where physical contact is restricted and situations where the students are not able to meet one on one. These findings support the findings by Mwakapina and Mhandeni (2016) that established that WhatsApp can be fully utilized for education purposes. The findings also indicated that while there was high sharing by 2019 SOJMC MA group, the group had more members compared to the other two WhatsApp groups.

The documents that were mostly shared were past exam papers, weblinks to PDF documents and group work assignments plus notes from lecturers. The frequency of these shared documents and links is indicative of how the students were learning amongst themselves and also lead to discussions that help them grasp better on their class activities. The fact that the students also didn't have time restrictions on when they could interact on their class matters. This comes out from looking at the timings of their online activities which were most busy in the evening going on till late as is indicative on the **APPENDIX**

4.4.3 The effectiveness of WhatsApp use in Learning

The study had also established the effectiveness of WhatsApp use in learning at the School of Journalism during the COVID-19 period. The findings were as follows.

Table 4.4: The effectiveness of WhatsApp use in Learning

WhatsApp Group	Sub Theme	No. of Messages
Public Relation MA 2019	Agreement /I agree; I also agree with the answer, the shared answer is correct, I also thought so, I like this platform, it helps in revision	8
	Appreciative messages (Thank you; well done;	12
	Clarity /understanding of the academic issue being shared (I now Understand; it is clearer now)	8
	Understandability: (I did not understand; I wish there was more clarity: Please whoever has understood please elaborate)	6
	Lack of Clarity: Message is not Clear; Please clarify; can you resend;	13
	Timelines: (You did not send in time; You did not answer in time; You always send the assignments late, can we kindly have them in good time; Kindly respond in good time)	8
	Accessibility: (Lack of Bundles; I was offline; I was waiting to get home; I was in a meeting; I'm working, and I will look at it later; I will log in later	6
DEV COMM. 2019	Agreement /he is correct; kindly check your answer. I agree with him, he has given a correct answer	8
	Appreciative messages (Thank you; well done; Thank you it is now clear, I now understand	9
	Clarity (It is now clear, I now understand; can someone put more clarity; can someone make it clearer; I'm getting confused)	10
	Understandability: (I did not understand; I wish there was more clarity: Please whoever has understood please elaborate)	6
	Lack of Clarity: Message is not Clear; Please clarify; can you resend;	6
	Timelines: (You did not send in time; You did not answer in time)	11
	Accessibility:(Lack of Bundles; I was offline; I was waiting to get home; I was in a meeting; I'm working I will look at it later	3
2019 SOJMC MA	Agreement: hey I knew the answer, I was almost confused, but I know now, is anyone benefiting from this platform? Hey I'm benefiting too.	7
	Appreciative messages (Thank you; well done; I'm not satisfied can someone clarify, I now understand; I appreciate your response	5
	Clarity (This is not clear; Please elaborate)	13

Understandability: (I did not understand; I wish there was more clarity: Please whoever has understood please elaborate; It is different when being taught in class)	4
Lack of Clarity: Message is not Clear; Please clarify; can you resend;	5
Timelines: (You did not send in time; You did not answer in time)	5
Accessibility:(Lack of Bundles; I was offline; I was waiting to get home; I was in a meeting; I'm working I will look at it later /Technical issues	8

Agreeability/Acknowledgement

The findings showed that many of the messages shared indicated agreeability or acknowledgement with the messages or the materials shared. Agreement on the use of WhatsApp indicated some levels of effectiveness of the platform as a tool that can be used in learning by students in the institutions of higher learning. The findings indicated that there was a high number of agreeable messages on the learning materials and the answers provide by the fellow students. Below shows the various common comments by the students from the three WhatsApp groups.

A: I agree (Public Relation MA 2019),

B: I also agree with the answer (Public Relation MA 2019)

C: the shared answer is correct (Public Relation MA 2019)

D: I also thought so (Public Relation MA 2019)

E: I like this platform; it helps in revision (Public Relation MA 2019),

F: hey I knew the answer (Public Relation MA 2019, 2019 SOJMC MA),

G: I was almost confused, but I know now (2019 SOJMC MA)

I: is anyone benefiting from this platform? (2019 SOJMC MA)

J: Hey I'm benefiting too (2019 SOJMC MA).

K: he is correct; kindly check your answer (DEV COMM. 2019).

L: I agree with him (DEV COMM. 2019),

M: he has given a correct answer (DEV COMM. 2019)

The findings indicated that there were messages of agreement and acknowledgement of the usefulness of the WhatsApp groups that were used by the students from the School of Journalism. This indicated that the students were very satisfied with the various answers that were being given by the various students that were sharing messages on the three WhatsApp groups that were covered by the study. While the satisfaction of the students indicates the effectiveness of the use of WhatsApp in learning, the findings contradicts Yeboah and Ewur(2014) that established that WhatsApp, apart from making communication simpler and faster by improving the effective flow of information and idea exchange among students, it also has had a detrimental influence on the performance of Ghanaian university students.

Appreciation/Satisfaction Messages on WhatsApp

While there were messages of appreciation in all the WhatsApp groups that were used for learning by the students in SOJ at The University of Nairobi, the findings of the study indicated that there was more sharing of appreciation and satisfaction messages on the materials shared in Public Relation MA 2019 WhatsApp group, followed by DEV COMM. 2019 and then MA Communication. Below shows the various common sharing's by the students from the three WhatsApp groups:

A: Thank you (All WhatsApp group)

B: well, done (All WhatsApp group)

C: Thank you for sharing (All WhatsApp group)

D: I appreciate your response (DEV COMM. 2019)

E: Thank you it is now clear (2019 SOJMC MA and DEV COMM. 2019)

F: I'm not satisfied can someone clarify (2019 SOJMC MA only)

The findings also indicated that WhatsApp groups are effective as a method of teaching given the levels of appreciation and the messages shared on the materials and messages that students shared in these groups. This indicated that although COVID-19 restricted physical contact and this meant that normal class learning could not be conducted, the

platform still provided a method that the lecturers and the students could still share learning materials and continue the academic year without stopping or postponement.

Clarity of the Message

The study intended to find out the extent to which the learning materials and messages shared on the different WhatsApp groups were clear for the various group members. The findings of the study show that messages shared on DEV COMM. 2019 WhatsApp group, followed by Public Relation MA 2019 and then MA Communication were clearer respectively. The extents to which the learning materials and messages shared on the WhatsApp groups were clear for the various group members indicated the extent to which the platform was effective in delivering learning among the students. Below shows the various common sharings by the students from the three WhatsApp groups:

A: I now Understand (Public Relation MA 2019, DEV COMM. 2019);

B: It is now clear (DEV COMM. 2019);

C: This is not clear (2019 SOJMC MA);

D: Please elaborate (2019 SOJMC MA)

E: Can someone put more clarity (2019 SOJMC MA);

F: Can someone make it clearer (DEV COMM. 2019),

G: I'm getting confused (DEV COMM. 2019)

H: wish it was in class it could have been clear (Public Relation MA 2019),

While the sharing of messages and learning materials was present in the three WhatsApp groups used by the students at the School of Journalism and there was clarity in the messages and learning materials shared in the groups, the clarity of these messages and materials varied from one WhatsApp group to another. There were clarity issues indicated by the study that included messages and request for clarity and elaboration on the messages shared. The findings also indicated that there was confusion with the messages or material shared in the DEV COMM. 2019 group.

Understandability

The study findings sought to establish whether the materials and the messages shared on the WhatsApp groups were understandable to the students that were in these groups. The results indicated that DEV COMM. 2019 and Public Relation WhatsApp groups indicated that the materials and the messages shared on these WhatsApp groups were understandable to the students although there were low levels of understandability of these messages by the members in 2019 SOJMC MA group. Below shows the various common sharings by the students from the three WhatsApp groups:

A: I did not understand (Public Relation; DEV COMM. 2019)

B: I wish there was more clarity (Public Relation MA 2019, DEV COMM. 2019)

C: It is different when being taught in class (2019 SOJMC MA only)

D: Please whoever has understood elaborate (Public Relation MA 2019, DEV COMM. 2019)

The findings indicated that although the platform was considered effective and was highly used during COVID-19, it also indicated that there are understandability issues that were raised that included lack of understanding while the wish for more clarity was raised in the Public Relation MA 2019, DEV COMM. 2019 WhatsApp groups. There was also a request for more elaboration in both Public Relation MA 2019and DEV COMM. 2019 groups.

Accessibility:

The findings also sought to establish whether WhatsApp was effective in terms of the extent to which it was accessible to the group members and whether the levels of accessibility would have an effect on the extent to which the method would be an effective method in learning among the students in the School of Journalism. Below shows the various common sharings by the students from the three WhatsApp groups:

A: Lack of Bundles (Public Relation MA 2019, DEV COMM. 2019, MA Communication)

B: I was offline (Public Relation MA 2019, DEV COMM. 2019, 2019 SOJMC MA)

C: I was waiting to get home (Public Relation, DEV COMM. 2019, MA Communication)

D: I was in a meeting (Public Relation MA 2019, DEV COMM. 2019)

E: I'm working (DEV COMM. 2019, 2019 SOJMC MA)

F: I will look at it later (Public Relation MA 2019, DEV COMM. 2019, 2019 SOJMC MA)

G: I will log in later (Public Relation MA 2019),

H: I have technical issue can't access the materials now (2019 SOJMC MA).

The findings indicated that accessibility issues to some extent affected the effectiveness of WhatsApp as a method that is used for learning among students of the School of Journalism. While the platform could be used as a method of learning by the students, lack of bundles to access WhatsApp, being offline, some students waiting to access the platform when they got home and students being in a meeting affected the accessibility which was crucial in the effectiveness of the use of WhatsApp as a learning tool for students. The results also showed that some students would look at the messages and the materials shared in the group later with only members in the 2019 SOJMC MA group cited technical issue that made them not able to access the learning materials when they are sent. The effects of accessibility continue to remain a challenge on the effectiveness of the use of WhatsApp in learning. The study supports the findings by Oganji, Okoyeukwu, Wanjiru and Osiri (2017) that highlighted that lack of electricity, infrastructure and connectivity affected the use of social media-based learning.

Timelines:

The study had also sought to assess the extent to which the use of WhatsApp messages in learning was effective in terms of how they were timely. While normal classes learning arrangement was planned and would take time in a particular place and time, sometimes the inability to timely get the necessary materials and messages shared in the students' WhatsApp groups was a challenge. The findings indicated that timeliness of the message

and learning materials shared was more experienced in Public Relation MA 2019 group than in DEV COMM. 2019 or 2019 SOJMC MA WhatsApp groups. Below shows the various common sharing's by the students from the three WhatsApp groups:

A: You did not send in time (Public Relation MA 2019, DEV COMM. 2019, MA Communication)

B: You did not answer in time (Public Relation MA 2019, DEV COMM. 2019, MA Communication)

C: You always send the assignments late (Public Relation MA 2019)

D: Can we kindly have them in good time (Public Relation MA 2019

E: Kindly respond in good time (Public Relation MA 2019)

The findings indicated that not sending in good time and not responding in good time was an issue of concern raised by the students from the three WhatsApp groups. Request for timely sending of assignments and learning materials was raised by the 2019 SOJMC MA group indicating that it was more of an issue of concern in the group compared to the other two groups.

Non-Academic Related Shared Messages

The study also sought to establish the non-academic related messages that were shared in the groups. The study acknowledges that as far as the groups are meant for academic purposes, sometimes the members shared messages that are not relevant to the academics or learning process. The findings were as follows:

Table 4.5: Non-Academic Related Shared Messages

WhatsApp Group	Sub Theme	No.	of
		Messages	
Public Relation MA 2019	Can we have lunch; I was just saying	4	
	hi; Uliona hiyo game ya Manchester;		
	Naenda wedding)		
DEV COMM. 2019	Tuonge nikifika home; Mmmmm	6	
	yule mtu wako ni kitu; Tupataneni		
	kwa mtandao to discuss; Siwezi		
	patikana leo; Hata mimi niko na		
	shughuli)		
2019 SOJMC MA	Sinikubuyie chai jioni; Naenda	9	
	pahali; Tutapatana siku ingine; I wish		
	hakukuwa na Curfew tungepatana;		
	haki hi Curfew ya Uhuru		

The findings of the study indicated that Public Relation MA 2019 group indicated the lowest percentage of the non-academic messages, followed by DEV COMM. 2019 group and then the 2019 SOJMC MA group. This indicated that over time the three groups, members had developed a close relationship and therefore shared more than academic work. Below shows the various common sharing's by the students from the three WhatsApp groups:

Public Relation MA 2019

A: Can we have lunch.

B: I was just saying hi;

C: Uliona hiyo game ya Manchester; **Translated: Did** you watch the Manchester match?

D: Naenda Wedding: **Translated**: I'm going to the wedding

DEV COMM. 2019

A: Tuonge nikifika home; **Translated: Can** we talk when I reach home

B: Mmmmm yule mtu wako ni kitu; **Translated:** *Mmmm your lady is beautiful*

C: Tupataneni kwa mtandao to discuss; **Translated:** Let's meet online and discuss

D: Siwezi patikana leo; **Translated:** *I cannot be found today*

E: Hata mimi niko na shighuli; **Translated:** *I'm also busy today*

MA Communication

A: Sinikubuyie chai jioni; **Translated:** Can I buy you tea in the evening?

B: Naenda pahali; **Translated:** I'm going somewhere

C: Tutapatana siku ingine; **Translated:** We can meet another day

D: I wish hakukuwa na Curfew tungepatana; Translated: I wish there was no

curfew

E: haki hi Curfew ya Uhuru: **Translated:** Surely this Uhuru's (President's) curfew

The sharing of none-academic messages and materials in the various groups indicated that many of the students were distracted by none-academic issues. This is supported by a study by (Deshmak, 2015) which stated that it also occupies students' lives and at times they end up being addicted to it which is difficult to control. The findings of the study also concur with the findings by Sirohi (2016) that highlighted that lack of commitment of the students for an effective participation have been identified as the greatest challenges of using WhatsApp effectively for learning purposes.

4.4.4 Conclusion

The findings of the study in alignment to the analytical framework guided by the study tool indicated that there was use of WhatsApp in learning among students at the School of journalism. The study established that there was sharing of messages and learning materials in the three WhatsApp groups although the sharing was more in 2019 SOJMC MA group, followed by DEV COMM. 2019 and then Public Relation MA 2019. During the time of the study, it was established that WhatsApp was a one of the most used tools of learning as the three groups experienced a significant number of messages and learning materials.

The findings also indicated that there was frequent use of WhatsApp platform as a tool for learning considering the number of messages that were being sent through the three WhatsApp groups during the period that was covered by the study. The findings also

indicated that the frequency of sharing differed from one WhatsApp group to another depending on the total number of group members and the frequency of the learning materials required to be shared.

On the extent to which the platform was effective as a learning tool, the findings indicated that in terms of understandability that although the platform formed part of the learning during the COVID-19 Period and as much as the tool was effective as a learning method; understandability, timeliness of message and learning material sharing presented a challenge to the effectiveness of the platform as a tool for learning among the School of Journalism students covered by the study. Other factors raised by the students included accessibility in terms of internet accessibility, cost, timelines of the messages and learning materials being shared on the WhatsApp groups and the clarity of the messages and learning materials being shared by students in the three WhatsApp groups.

The findings also showed that there were messages that were in Swahili that were non-academic related. The frequency of these messages varied from one group to another where different groups shared different messages. This indicated that over time the three group members had developed a close relationship and therefore shared more than academic work on the respective WhatsApp groups. This study also indicated that most of the messages that were shared on the WhatsApp groups were in Swahili which can be considered as a more casual relationship.

Institutions should embrace the use of SM platforms by developing rules on how to utilize them. This will guarantee that material provided on social media platforms is regulated and verified, making the information legitimate to be used by scholars for research and education purpose. Institutions of higher learning should create active channels for feedback on raise of social media platforms so as to have interactive sessions to share best practices and ideas on how to support SM and research. The use of SM platforms to aid in research, learning and teaching will only be fully recognized when there's knowledge to manage users to use social media for education purposes through sensitization and training.

The time of the messages is noticed to be the most critical issue that students refer to as bad in connection to delivering information messages via WhatsApp program. Though in small numbers, some student remarks, particularly concerning untimely information that may create distraction, demonstrate that great attention must be made in message timing. The messages inside the group are another source of negativity in the implementation process.

Despite the fact that the students were told about the group's aim, there were superfluous and distressing messages; nonetheless, this was handled in the group without the researcher's intervention. This demonstrates that the group has self-control and that students can overcome such problems among themselves. Bouhnik and Deshen (2014) report comparable issues in their WhatsApp research, however unlike this study, the students' answer was to silence the group. At this moment, it has been highlighted in studies on social networks and the usage of mobile devices that students' untimely and needless communications may generate distraction among students and negatively impact their study process (McCoy, 2013, 2016; Kusnekoff, Munz, & Titsworth, 2015).

When there is a human aspect in virtual settings, conflicts are unavoidable, just as they are in face-to-face contact. However, by correctly controlling the process and identifying potential difficulties, problems may be minimized. Social networks, on the other hand, are apps that have begun to become a part of education in the natural flow of daily life. In general, investigations on these applications focus issue minimization and the exploitation of their potential to help educational processes. In addition, it was indicated in this study that they create an unstructured learning environment and may be employed as useful educational tools. However, it is too early to tell what influence the WhatsApp program, which has a significant presence in the everyday lives of young people and has the characteristics of a social network, will have on education. As a consequence of this research, it has been found that the application has a favorable influence on success and that its use is highly valued. It should not be overlooked that WhatsApp technology has the potential to be a natural educational technology, as well as the capabilities to contribute to education as a supporting technology.

According to the findings of the study, the whole University need to teach their lecturers on how to utilize mobile gadget effectively for furthering digital education. This is consistent with Aishareef's (2018) research on the relevance of employing mobile learning to assist secondary English teaching and learning. Among the recommendations made by the researcher were the consistent utilization of mobile gadgets and the implementation of training courses for supervisors and teachers... Other impediments, such as high data costs and high power costs, should be investigated by the Faculty and the University as a whole. This is also consistent with Aljehani (2013), who voiced worry about users who need to download huge files which consume a lot of time, as mobile data providers will overcharge consumers for exorbitant data prices. As a result, the availability of the aforementioned facilities may improve the efficient use of mobile technology in the process of advancing education.

The primary purpose of using a smartphone application such as WhatsApp is not to communicate and share information. Its role of linking individuals and characteristics need to be investigated for educational purposes. The' ownership of cellphones by learners and their regular usage of this program reveal that this opportunity is now constantly available. This program is mostly used by people to connect with one another. According to Sushma (2012), WhatsApp Inc. processed over 27 billion messages per 24 hours in 2013. It also has around 450 million monthly active users, 700 million photographs shared daily, and 10 billion messages sent (Parny, 2013). As evidenced by the fact that this application is one of the most popular, its usage in education must be considered.

As a result, the students' desire for using WhatsApp because most of the time they are online, and also examining the preferred features and its support, it's leveraging into learning, must be considered. Amry (2014) states that "WhatsApp instant messaging is very easy to use. The majority of students use this mobile system for academic and other purposes. Students are quickly informed of every update and any message inserted by a member of a group." Furthermore, the learning via WhatsApp helped to the enhancement of English abilities. Because learning has become more personal as a result of the use of

WhatsApp, there is no need to push pupils to love their studies. They can read the paragraph that the lecturers sent them several times. Students can grasp the book with the help of group discussions. This application's real-time technology allows students to obtain feedback from the instructor on how to fix typing errors and how to mend them. It has relation with Amry (2014) who claims "learning is becoming ubiquitous, durable and increasingly at odds with formal education. Increasingly, different types of learning happen outside of the classroom through social cooperation and collaboration between students to improve construction and knowledge sharing." Nevertheless, challenges that arise must also be catered for.

According to Bouhnik and Deshen (2014), WhatsApp continue to provide academic benefits. The content is available to the pupils at all times. They are helped because the teacher is there so that the learning can continue outside of class. Furthermore, the enhancement of students' listening and reading skills, and its applicability on content courses such as Research on ELT course and Phonology concur with a study by Etim et al. (2016) who discovered that the use of WhatsApp affects educational performance of Geography students. This research highlighted the experience of instructors with using WhatsApp, in the learning process. Despite minor glitches, the implementation revealed that the majority of pupils appreciate their learning. The principal source of contention was the connection of internet, which is provided by the learners themselves.

Based on the findings from this study the researcher would like to recommend that strategies ought to be developed for integrating WhatsApp into the official channels of communication inside universities in order to satisfy the formal communication demands that are now not being met fully by the medium. Since there is no significant relationships between the demographics and the satisfaction levels, the strategies and policy that the company formulates to govern WhatsApp use can cover all demographic categories.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter contains the summary of findings obtained, conclusions made and recommendations. The study analyses the findings and provides recommendations. The study further draws conclusions, recommendations and gives suggestions for future research on the use of WhatsApp in Learning amongst graduate students.

5.2 Answers to research questions

5.2.1 Sharing of Academic Messages through WhatsApp

The findings of the study indicated that 2019 SOJMC MA and DEV COMM. 2019 WhatsApp groups shared the highest percentage of learning or academic related messages as compared to Public Relation MA 2019. On the other hand, the group that shared the highest percentage of academic related materials that included journal; articles among other reading materials was Public Relation MA 2019, followed by 2019 SOJMC MA. The findings also indicate that there was more sharing of learning materials among the graduate students in all the three WhatsApp groups. Comparably in terms of the total number of messages and learning materials shared, 2019 SOJMC MA had the highest number of students compared to other two groups and therefore they shared more.

5.2.2 Frequency of sharing of attached learning materials by students

The findings also indicated that while there was more frequency of sharing of assignment by the graduate students, the sharing varied from one WhatsApp groups to the other. This indicated that WhatsApp groups form an important channel that can be used in learning especially where physical contact is restricted and situations where the students are not able to meet for normal class learning. The findings also show that while there was high sharing by 2019 SOJMC MA group, the group had more members compared to the other two.

5.2.3 The effectiveness of WhatsApp use in Learning

The study findings indicated that there were messages of agreement and acknowledgement of the usefulness of the WhatsApp groups that were being used by the students of The School of Journalism. This indicated that the learners were very satisfied with the various answers that were being given by the various students that were sharing messages on the three WhatsApp groups.

The findings indicated that WhatsApp groups are effective as a method of learning given the levels of appreciation and the messages that students shared in these groups. This indicated that although COVID-19 restricted physical contact and normal class learning could not be conducted; the platform still provided a method that the students could still share learning materials and continue the academic year without disruption. In terms of clarity, the findings showed that there were clarity issues of the messages and sometimes the students requested for clarity and elaboration on the messages shared. The study results also indicate that there was confusion with the messages or materials shared although this cut across all the groups except DEV COMM. 2019 group. As much as this platform was highly used during COVID-19 pandemic period, the findings indicated that there are understandability issues such as lack of understanding, (wish for more clarity) as raised by Public Relation MA 2019, DEV COMM. 2019 WhatsApp groups.

While the platform can be used as a tool of learning by the students, lack of internet bundles to access WhatsApp, members being offline with many waiting to joining when they get home affected it's use as an effective tool of learning among graduate students at The School of Journalism. Results indicated that only members in the 2019 SOJMC MA group cited technical issue that made them not able to access the learning materials when they were sent. The results also indicate that not sending the materials in good time and not responding in good time was an issue of concern raised by the students from the three WhatsApp groups. Last but not least, requests for timely sending of assignments and learning materials was raised by the 2019 SOJMC MA group with an indication that this was more of an issue of concern in the group compared to the other two groups.

5.3 Conclusion

There is no doubt that digital technology is of significance in education today. Whatsapp mobile technology ia extremely valuable in this regard, as it is widely and extensively employed in online university education. It also provides students with more options and possibilities in the context of online learning. Almost everything in the world has gone digital. Most countries around the world have begun to embark on a digitized education system as a result of modern technological advances, and Kenya, particularly at this time of democratization of education and subsequent admission quandary, cannot afford to fall behind and watch the world as their education system goes digital. As a result, WhatsApp, as one of the technological advances, must be completely welcomed in Kenyan schools for effective electronic teaching and learning. In order to compete with time, the Faculty and the University as a whole must offer the necessary resources; raise sufficient awareness and provide enough training to improve electronic education delivery in this area of the world. Despite the fact that the majority of professors and students have Internet-enabled mobile phones, they are not designed only for academic reasons, according to the survey. The WhatsApp mobile application technology has been discovered to be one of the most helpful methods for learning.

A lot of messages and learning materials are shared on WhatsApp platforms by the graduate students of Journalism, at the University of Nairobi. WhatsApp groups also form an important channel that can be used as a learning tool especially where physical contact is restricted and situations where the students are not able to meet for normal class learning. It provides a podium where the learners are able to discuss with their lecturers and provide a podium where the learners are able to share skills and knowledge on the various topics. WhatsApp provides a platform that can be used in student centered learning. The platform is also frequently used to share learning materials by students that are members of the WhatsApp groups. The three WhatsApp groups indicated a great number and frequency sharing on various topics.

The platform can be an effective tool for learning although there are issues of clarity of the materials shared and sometimes students do not understand what has been posted and there

are instances that the students seek for clarity on the materials that have been posted by fellow students. There are also issues of understandability of the materials or the messages shared and sometimes require clarity or further explanation. Lastly, the effectiveness of this tool of learning is affected by accessibility challenges that include lack of internet bundles, inability of certain students to use the platform at certain times and must wait until they get home in the evening.

One of the objectives of this research was to establish the effectiveness of WhatsApp usage in facilitating students' learning. Going by the many changes brought about in trying to combat the Covid-19 pandemic, there is a need to integrate New Media technologies such as WhatsApp so as to bolster social and active learning which is learner-centered in all institutions of learning.

The use of SM such as WhatsApp in learning and many other spheres is an emergent area for research and study. The platform has indeed provided space for students to discuss their academic matters without any hesitation or time restriction. This confirms the assertion by According to Bere (2013), WhatsApp may be used to provide alternative dialogic venues for students' collaborative interactions in informal circumstances, which can gainfully bolster teaching and learning.

WhatsApp group participation can be considered to be more suitable for students in comparison to classroom learning especially since students have chance to communicate without the limitation of geographical distance or time constraints. It's also easy to share class and lesson materials on WhatsApp group since WhatsApp supports PPT videos, files, images. Students can therefore share important videos or website links. The findings are in line with the findings of Bouhnik and Deshen (2014), who asserts that the application's ability to send an unlimited number of messages, lower cost, the ability to conduct an ongoing conversation with many friends at the same time, the immediacy, the knitting together of a community of friends or family, and a sense of privacy in comparison to other social networks.

The study is key for future researchers to better understand how ICT's can be utilized in different sectors in improving the lives of many. These factors provide a basis for different stakeholders including; educators, learners, governments, policy makers and ICT firms to come up with ways in developing and implementing WhatsApp or other mobile applications usage in learning in the future.

5.4 Recommendations

The study makes the following recommendations:

1. Sharing of Academic messages;

- There is need to evaluate the various ways that WhatsApp can be used as a tool of learning. The students that have not embraced the use of WhatsApp for learning and need to be educated on the advantages of using WhatsApp for learning amongst each other
- There is need for more clarity on what is shared to ensure that all the members understand what has been shared and what is required. None Academic Messages cannot be done away with entirely due to the bonds formed amongst the students but should be regulated to ensure there is minimal disruption for those seeking to learn
- While there may be cost implications, WhatsApp still remains the most widely used platform and therefore there is need to be further explored in order to ensure that students can explore the ease of sharing academic messages amongst themselves and also their lecturers
- The researcher recommends among other things, that instructors and students need to get access to mobile gadgets that has internet in order to make the most use of WhatsApp in advancing education and to ensure that the institution's education is appropriately digitalized. The Faculty is required to offer trainings to its instructors and students so as to improve their knowledge and competence in the effective utilization of phones, notably the WhatsApp. As a matter of importance, instructors

ought to engage students intellectually by assigning them homework on a regular basis via WhatsApp. Thus, researchers have agreed with this recommendation.

2. Sharing of Attached Academic Documents;

- The sharing in cases of assignments or other learning materials needs to be explained in order to ensure that all the students understand what needs to be done or what those attachments entail
- Universities should encourage the use of online learning tools which are compatible with devices such as smartphones as they are largely available to students and it's easy to access and share academic documents as compared to less portable devices such as laptops and desktop computers
- Instructors need to recognize the importance and also incorporate New Media Technology in their day to day lectures and also embrace more of student-centered techniques.
- Instructors need to encourage and incorporate WhatsApp usage in order to enhance students' learning experiences.
- Learning institutions need to embrace the fact that learning is not only one on one and realize that students utilize social networking platforms as collaborative tools that enhance their learning experiences.
- This study was carried out during the onset of Covid-19 Pandemic restrictions the world over and later on there were many measures put in place in trying to salvage the situation which had grounded many things including learning activities at almost all levels. The study recommends further research to uncover the challenges and benefits experienced through the online learning process and the use of New Media in mitigating those challenges.

3. Effectiveness of WhatsApp in Learning;

The students need to establish the easiest ways that they can access internet in order to ensure that WhatsApp is effective in providing a platform for learning even as there is continued improvement in technology and the use of social media platforms as channels and methods of learning.

- WhatsApp Should be used as an optional tool in learning both outside and inside classes but there is also a need to impact knowledge to the students on the security and privacy issues so as to safeguard all participants of such forums and works shared therein.
- The study also recommends for institutional changes that can bolster experimentation by members of the faculty who wish to determine the efficacy of social media tools in both teaching and learning.
- Lecturers and students should be encouraged to embrace use of technology so as to accelerate especially during these exceptional times of the COVID 19 pandemic.
- Public universities should also get into more partnerships with telecommunication network service providers so that they may provide internet bandwidths at a cheaper rate for students. This will help many not to miss out on the learning process
- Institutions of higher learning should set and implement social media policies to aid in securing information and facilitate easy flow and dissemination of information from various scholars across the divide and world. This will create confidence among the users hence promoting social media platforms value in enhancing research and learning. This will also ensure regulation and monitoring of content posted in the platforms consequently ensuring authenticity of the sites.
- Institutions of higher learning should embrace new advanced modern technologies and systems as a way to propel immense and fast communication between scholars. Increase in bandwidth, development of powerful servers, expansion of space for storage of computer hardware and enhance remote access will greatly enhance the practice off use of social media platforms at institutions. The facilities should also be adequate to cater for the growing number of student population in institutions. ICT department of UON should consider putting research contents online and issue users with accounts/passwords for access. This will allow a 24/7 access and also enable postgraduate researchers to access the information without location restriction. In addition the bandwidth should be increased to alleviate the problem of low internet connectivity which affects users' access to e-resources. ICT

- personnel should also design user friendly interfaces for users for ease of use, and install more internet stations to allow access by more users.
- Information literacy sessions should be carried out frequently so as to equip the students with skills and advice on possible ways social media platforms can be used as avenues for peer discussions, posting assignments, creation of groups in the social media sites that promote education practices. This will promote the use of social media platforms as apart from entertainment and leisure, the channels will be used as ways to generate video of class presentations in YouTube and share discussions on relevant issues regarding research and learning.
- Mechanisms put in place to give feedback on use of social media platforms are effective. Ongoing communication between, administrator and users is important in supporting the social media as tools for research. Citing an example of the University of Cape Town in South Africa, they have adopted the use of face book in learning.

5.5 Suggestion for Further Studies

There is need for a quantitative survey to establish the statistical significance effect of the use of WhatsApp as a method of learning for graduate school students. There is also need for a comparative study on the effectiveness of the use of WhatsApp in learning and traditional form of learning.

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APENDIX I: Introduction Letter to Group Admins

Dear Sir/Ms.

RE: PERMISION TO STUDY YOUR CLASS WHATSAPP GROUP

I am a Graduate Student at The University of Nairobi, School of Journalism and Mass

Communication Reg. No. K50/88056/2016. I am writing to you in regard to my academic

research whereby I wish to conduct a case study on WhatsApp usage in Learning by the

Graduate students at the school of journalism and mass communication as part of my MA

- Communication Studies project.

I request you to grant me access to carry out this study on your respective Class WhatsApp

Group of which you are the Admin/Class Representative. I would like to analyze the

messages/content of the Various Academic WhatsApp groups currently in use by the

Students at the School of Journalism and also request you to introduce me to the any other

Graduate Student WhatsApp group that currently exist at the School of Journalism.

I also wish to assure you that this is purely for academic purposes and I want to reassure

you of strict confidentiality and protection of the messages shared in the respective

WhatsApp Groups and that of the members of those groups.

I shall be highly grateful for your support and cooperation.

Best Regards

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APPENDIX II: Code Book

0	Variable	Level of interaction	
#1	Frequency of WhatsApp use in Learning		
Sub#1	Please share it on WhatsApp		
Sub#2	Who has the notes?		
Sub#3	Did the lecturer share the notes on WhatsApp?		
Sub#4	What was the topic?		
Sub#5	I haven't received on email. Please share on WhatsApp		
Sub#6	The notes are in PDF		
#2	Frequency of attached documents on WhatsApp		
Sub#1	I have the past exam papers if you want to go through		
Sub#2	Group 2 please share your PowerPoint presentation		
Sub#3	Here is the link to the soft copy of the book		
Sub#4	Group 5 please share your assignment here		
Sub#5	Here is the handout from the lecturer		
#3	The effectiveness of WhatsApp use in Learning		
Sub#1	This document has really helped in my revision.		
Sub#2	Thanks for helping me understand better. I didn't grasp		
	a thing during class time.		
Sub#3	Brilliant, I was worried since I missed the class. Thanks		
	for recording the lecture Class rep.		
Sub#4	This method may work for some students but not all		
Sub#5	I have a feeling that the lecturer should find a way to		
	elaborate. Can we add him to the group?		
Sub#6	Did anyone understand the concept? Kindly elaborate		
Sub#7	Please share your feedback on our assignment		
Sub#8	I was caught up in traffic. This group has really helped		
	me catch up.		
Sub#9	I don't have enough internet bundles to download the file		
Sub#10	Can the lecturer please expound on this topic?		
Sub#11	Thanks Class rep for moderating the group		

APPENDIX III: WhatsApp Chats

```
WhatsApp Chat with PUBLIC RELATIONS -M.A 2019 .txt
                                                                                                                                                     Open with TextEdit
[03/03/2020, 10:08:54] Dama Bonareri Comm: Tell daktari that we have no problem waiting until next week.....😛
[03/03/2020, 10:00:19] Dama Bonareri Comm: Meanwhile let's have notes for yesterday's class please....
[03/03/2020, 11:43:00] Nai: Next week please I can't make it to class at 4
[03/03/2020, 16:21:49] Kizito: There being no changes by now, i take it is safe to say the class is adjourned by mutual
[03/03/2020, 16:27:36] +254 727 492861: Watu wa PR mko na class leo? Hii advisory inatatuliwa aje ama malec wame
[03/03/2020, 16:56:31] +254 711 790124: Following up on this, is there class?
[03/03/2020, 16:58:21] Brian Class Rep removed +254 727 492861
[03/03/2020, 17:02:14] Brian Class Rep: This message was deleted.
[03/03/2020, 17:03:27] Brian Class Rep: Hello everyone, yesterday we agreed with Dr. Oriaso that if it's not possible for us to meet at 4PM then we postpone the class to next week. He hasn't responded to me since morning. I DON'T THINK
THERE'S A CLASS
THERE'S A CLASS
[03/03/2020, 17:10:15] +254 722 994177: @254719173020 go on and clean up the membership of this group. We have members here who are not taking PR. Why are they eavesdropping on our discussions
[03/03/2020, 17:10:29] Brian Class Rep: I have dealt with them
[03/03/2020, 17:10:37] Brian Class Rep removed Hildah Mwenesi
[03/03/2020, 17:10:40] Brian Class Rep removed JP
[03/03/2020, 17:10:57] Brian Class Rep removed +254 710 117673
[03/03/2020, 17:18:14] Nobert Ndisio: ⊜⊜⊜
[03/03/2020, 17:22:03] Brian Class Rep: *DR. ORIASO CONFIRMS THERE'S NO CLASS* [03/03/2020, 17:22:25] +254 711 790124: Thank you Brian. [03/03/2020, 20:57:42] Diana Okuso: Alaa
[03/03/2020, 20:59:14] Brian Class Rep: She was taken care of. Don't even
[03/03/2020, 20:59:29] Diana Okuso: I can see wote wametumiliwa
[04/03/2020, 13:54:45] Njeri Kamau: https://coschedule.com/blog/public-relations-examples/
[04/03/2020, 14:37:48] +254 727 611994: Resourceful...thank you. Kindly if you come across any material related to
Kamau's notes, plz share.
[04/03/2020, 15:46:42] Brian Class Rep: KPR 608 GROUP.docx • 7 pages document omitted
[04/03/2020, 15:47:23] Brian Class Rep: Good afternoon, this is what our group presented last week on the use of
Semiotics in advertising.
[04/03/2020, 15:51:06] +254 727 611994: Asante
[04/03/2020, 15:51:43] Nobert Ndisio: 🙏
[04/03/2020, 15:57:40] Dama Bonareri Comm: Thank you....share for the theories too
[04/03/2020, 15:58:23] Brian Class Rep: KPR 602 GROUP WORK.docx • 9 pages document omitted [04/03/2020, 15:58:31] Brian Class Rep: There you go [04/03/2020, 16:01:19] Dama Bonareri Comm: Thank you
[04/03/2020, 16:46:02] +254 712 023212: Where is today's class?
[04/03/2020, 16:46:10] +254 712 023212: It seems there's another class
[04/03/2020, 16:46:55] Dama Bonareri Comm: I guess that class will be done before ours commences
[04/03/2020, 17:05:04] +254 715 476733:
[04/03/2020, 21:54:09] Ngonzo: Hi good people,kindly share your group assignment on this platforms this will help every
group that had a different question for presentation, however take note exams may come from this presentation, its
important to share knowledge.
[04/03/2020, 22:03:01] +254 722 994177: Also share the assignments on the email where it's easy to retrieve
[04/03/2020, 22:10:42] +254 722 778266: Untitled • 21 pages document omitted
[04/03/2020, 22:11:07] +254 722 778266: stoday's presentation
[04/03/2020, 22:27:59] +254 727 611994: Plus the questions plz for those who joined late if with all of them kindly
@254719173020
[04/03/2020, 22:28:40] +254 727 611994: Thanks Faith [04/03/2020, 22:33:24] +254 722 778266: image omitted
[04/03/2020, 22:34:02] +254 722 778266: Previous Questions for Wednesday's class
[04/03/2020, 22:34:49] +254 727 611994: You are a blessing.
[04/03/2020, 22:35:37] +254 722 778266: Asante gal
[04/03/2020, 22:36:03] +254 722 778266: Improving my self-concept
[04/03/2020, 22:38:03] +254 727 611994: Sharing is caring....you are a great creature. Thank you. Sharing ours too ones
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WhatsApp Chat with MA IN COMMUNICATION 2019.txt
                                                                                                                                                 Open with TextEdit
01/04/2020, 09:34 - SoJ Fridah: I guess we are on now. Has anyone managed to stream anything?
01/04/2020, 09:34 - SoJ Fridah: <Media omitted>
01/04/2020, 09:35 - +254 725 539391: This thing is not working.
01/04/2020, 09:36 - +254 725 539391: I thought am the only one getting that message
01/04/2020, 09:38 - +254 727 611994: Ours will be active from 2. That is what I understood from our Class rep. It is
only activated ki-faculty.

01/04/2020, 09:39 - +254 725 539391: Ok. Well guided

01/04/2020, 09:47 - SoJ Nduthu: Our stream will be at 2pm. I understand every department have their time. Ama
sikuelewa!
01/04/2020, 09:48 - SoJ Nduthu: Is their a code for joining or you join automatically by clicking the link? 01/04/2020, 09:48 - +254 717 084069: How does the link identify the faculty I belong 01/04/2020, 09:51 - SoJ Nduthu: Wendy should explain this... 01/04/2020, 09:51 - Bernard Ogoi: I think streaming shou be after the training.
01/04/2020, 09:51 - SoJ Nduthu: Can someone call her?
01/04/2020, 09:54 - +254 722 641617: Wondering the same 01/04/2020, 09:57 - +254 721 993025: Thought so too
01/04/2020, 10:01 - SoJ Nduthu: Pls note that the schedule has been cancelled due to a technical issue 01/04/2020, 10:01 - SoJ Nduthu: From Wendy 01/04/2020, 10:01 - +254 722 641617: You are chapchap my fren
01/04/2020, 10:02 - SoJ Nduthu: 📥
01/04/2020, 12:22 - +254 722 778266: <Media omitted>
01/04/2020, 12:23 - +254 722 778266: dAbout trainings...might help kiasi...
01/04/2020, 12:26 - +254 722 778266: Don't log in to stream while in vests or from beds 🌝 💬 🙊
01/04/2020, 12:29 - SoJ Fridah: You can just disable your camera. I'm not removing my bonnet today.
01/04/2020, 12:30 - SoJ Nduthu: 😏 🥹 😏 mmeanza vituko! 🥹 🥹
01/04/2020, 12:31 - +254 728 133666: <Media omitted>
01/04/2020, 12:31 - SoJ Nduthu: Is the 2 o'clock training be session still on? The one that was cancelled was for the morning ama? There is no clear guide. Feeling lost
01/04/2020, 12:31 - SoJ Nduthu: 🍪 🥹 🥹 🤡
01/04/2020, 12:31 - Bernard Ogoi: <Media omitted>
01/04/2020, 12:32 - +254 780 696490: 🥹 🥹 Ata mimi siezi kubali kupata sup na bundles 🛚 zangu
01/04/2020, 12:33 - +254 703 406865: I saw #UonBoycottonlineclasses trending on Twitter 🥹
01/04/2020, 12:37 — SoJ Nduthu: Hao lazima ni regulars! Sana sana 3rd and 4th yrs纱纱纱
01/04/2020, 12:40 - SoJ Nduthu: To access the training
*1. Open eclass.uonbi.ac.ke*
*2. Scroll and click on trainings*
*3. Click on ele11 eLearning Tools, then access classes on*
-Google meet, -classroom and -e-learning platforms user guide
01/04/2020, 12:41 — SoJ Nduthu: 🖕 who has managed to find our training materials here? Our course isn't available 👑
How do we go about it?
01/04/2020, 12:42 - SoJ Nduthu: <Media omitted>
01/04/2020, 12:43 - Tim Uon: this is small hard 😃
01/04/2020, 12:45 - Bernard Ogoi: <Media omitted> 01/04/2020, 12:45 - Bernard Ogoi: <Media omitted>
01/04/2020, 12:45 - Bernard Ogoi: Follow Wendy's instructions you'll get there 01/04/2020, 12:52 - SoJ Nduthu: <Media omitted>
01/04/2020, 12:53 - SoJ Nduthu: Just found this!
Polepole
01/04/2020, 13:08 - Bernard Ogoi: Share widely within your networks http://www.nationalgeographic.org/funding-opportunities/grants/what-we-fund/covid-19-emergency-fund/01/04/2020, 13:25 - SoJ Mulama: This stands ama there is a session after logging in steps given? 01/04/2020, 13:30 - SoJ Nduthu: Aki mimi sijui. We are not getting any update from the right source so each for
themselves and God for us all!∰♀
                                                T think ADEA710172A2A chauld call Wondy ant class undata stan by stan hafara 2nm
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WhatsApp Chat with DEV COMM.2019.txt
                                                                                                                                                                Open with TextEdit
04/03/2020, 08:37 — +254 720 292029: dmorning guys hesabu pap 🙊 04/03/2020, 09:36 — SoJ Nduthu: Hahaha truth
 04/03/2020, 09:37 - SoJ Chrispinus Juma: 50% +1 😄
04/03/2020, 14:56 - SoJ Chrispinus Juma: Media omitted>
04/03/2020, 14:56 - SoJ Chrispinus Juma: Gathigi is there too.
04/03/2020, 18:06 - +254 728 133666: *NO CLASS TODAY. EMERGENCY.*
 *SENDS HIS APOLOGIES*
**SENDS HIS APOLOGIES**

04/03/2020, 19:10 - +254 716 560379: Did Dr. Ngigi give another assignment apart from the previous one?

04/03/2020, 19:27 - Bernard Ogoi: Yes Carro

04/03/2020, 21:52 - +254 716 560379: Which one?

05/03/2020, 18:15 - +254 727 268352: Class has started?

05/03/2020, 18:18 - +254 711 331123: Yes

05/03/2020, 20:29 - +254 704 977142: This message was deleted

06/03/2020, 09:43 - +254 751 988699: <Media omitted>

06/03/2020, 11:32 - +254 751 988699: <Media omitted>
06/03/2020, 16:16 - SoJ Bosiboru: <Media omitted>
06/03/2020, 16:16 - SoJ Bosiboru: <Media omitted>
06/03/2020, 16:16 - SoJ Bosiboru: <Media omitted>
06/03/2020, 16:17 - +254 724 961745: ****
06/03/2020, 17:08 - : We begin early 😭
06/03/2020, 17:09 - SoJ Bosiboru: ❷��� utajisort
06/03/2020, 17:10 - : I can help with the projector €
06/03/2020, 17:56 - SoJ Bosiboru: We are presenting to the seats 60/03/2020, 18:18 - +254 711 331123: Class has started presentation will start in a few minutes. 06/03/2020, 18:28 - SoJ Julie: Media omitted> 06/03/2020, 18:28 - SoJ Julie: Media omitted> 06/03/2020, 18:28 - SoJ Julie: Media omitted> 06/03/2020, 18:28 - SoJ Julie: Media omitted>
06/03/2020, 19:10 - SoJ Classmate: Thanks @254729895767. Kindly share the specific readings too. 06/03/2020, 19:10 - SoJ Julie: <Media omitted> 06/03/2020, 19:16 - SoJ Julie: <Media omitted> 06/03/2020, 19:16 - SoJ Julie: See the above screenshot 06/03/2020, 20:26 - +254 720 292029: Eehh total shift nani at a saidia team chelewa 06/03/2020, 21:00 - SoJ Classmate: Thank you.
06/03/2020, 21:18 - +254 780 696490: 🥹�� God for us all
06/03/2020, 21:30 - +254 777 897630: Atajipanga
 06/03/2020, 22:43 - +254 716 560379: Hi someone please post Dr Ngigi's 2nd assignment
06/03/2020, 22:48 - +254 777 897630: Na 1st
06/03/2020, 23:04 - +254 720 292029: dkindly
 06/03/2020, 23:05 - +254 777 897630: ∗Good evening everyone! So, Lynda Bosire is unwell. She's at Mater hospital. She
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