

**UTILIZATION OF MOBILE PHONE IN ENHANCING LEARNER SUPPORT
SERVICES FOR DISTANCE EDUCATION PROGRAMMES:
A CASE OF MOUNT KENYA UNIVERSITY, KENYA**

BY

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DECLARATION

This research project report is my original work and has not been presented to any other University for any award or conferment of a degree.

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This research project report has been presented for examination with my approval as University supervisor.

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DEDICATION

I would like to dedicate this work to my parents Mary and Njaruba who have been an inspiration throughout my education and gave me the best foundation, character and taught me the essence of working hard. From early in life my parents taught me to value education and hard work. To my son Tony Mwenda who had to undergo a lot as I struggled to complete this work. Let it be an inspiration to him to take his studies even more seriously.

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ABSTRACT

Rapid advancement of information and communication technology enables to produce more mobile devices. Most of distance education students need access to study materials, communications tools and further learning materials not only at home and in their working places, but for example on travels. The purpose of this study was to examine the utilization of mobile phone in enhancing learner support services in distance education programmes at Mount Kenya University, in Kenya. In order to fulfill this purpose, the study was guided by four objectives. The objectives included: establish the utilization of text messages in enhancing learner support in distance education; examine utilization of email in enhancing learner support in distance education; determine the utilization of voice call in enhancing learner support in distance education; establish the utilization of social media in enhancing learner support in distance education. Reviewed literature indicates that mobile phones are gradually supporting distance education in many areas. However, there are some areas where the use of mobile phone as a learner support system can only be conceived in relation to the institutional values. This tends to limit exploration of the advantages of the mobile phones hence making distance education ineffective for some learners with phones that meet the needs of distance education. The study adopted descriptive survey research design that supported quantitative and qualitative approaches. This facilitated the use of questionnaires to collect data from sample comprising of 5 lecturers, 250 students and 03 administrators. Collected data was analysed quantitatively and qualitatively. Quantitative data was analysed descriptively by use of Statistical Package for Social Sciences (SPSS) while qualitative data was analysed thematically. The analysed quantitative data was presented using frequency distribution tables while analysed qualitative data was presented in themes based on the opinion given. Findings showed that the lecturers, students and administrators had phones that were used depending on their needs. However, utilisation was ineffective due to attitude and perceptions. In addition, although the information was related to learning, it had insignificant contribution to the entire learning process as a learner support tool. The study recommended that mobile phones should be fully integrated in the entire distance education learning system.

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ABBREVIATIONS AND ACRONYMS

DEI	Distance Education Institution
EL	E-Learning
LMS	Learning Management System
LSS	Learner Support Services
MP3	Media Player
ODL	Open and Distance Learning
PDA's	Personal Digital Assistants
SMS	Short Message Service
SPSS	Statistical Package for Social Sciences
TV	Television
WWW	World Wide Web

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The use of mobile phones to support distance education has two clear rationales. First, distance learners are in diverse geographical locations, and may be learning in isolation, so affordable technology is an appropriate means to help them communicate with the institution and with other learners. The mobile phone can be used to provide academic and administrative support for such learners, and therefore to reduce what Cavus, Bicen and Akçil (2008) refers to as transactional distance, one of the major constraints faced by distance education learners. Second, learners can conveniently carry their mobile device with them, meaning that they can learn wherever they are.

Current global developments have opened up mobile based learning in spite of its shortcomings in terms of small screen size, short battery life and uneven network access (Keegan, 2010). Learning delivered or supported solely or mainly by handheld and mobile technologies such as personal digital assistants (PDAs) and smart phones (Traxler 2010, Okunbor and Guy, 2012) has been picking up very quickly due to the access at 'any time, any place'. The mobile phone is being used for short messages alerts catering to various learner support activities like, registration, assignment submission, fee submission, examination dates and etcetera.

In Europe, mobile learning is beginning to develop. Students are using mobile phones for work, education and amusement. In India, the use of mobile technology services in supporting distance education was launched in 1995. At first, the adoption of mobile phones in India remained very slow, primarily due to poor infrastructure and high costs involved in purchasing and using 'mobile phones.' Favourable government policies and reduction in mobile tariffs, however, have led to explosive growth of mobile phone services in India.

The widening penetration of mobile services overtaking landline connections, increasing levels of band width, flooding of enriched handsets, decreasing user charges, and a growing tech-savvy learner population have a pushing effect on educational institutions to exploit the potential of the mobile technology for teaching-learning purposes besides being used as an effective communication means.

Mobile based learning has been constantly evolving with added features, in spite of its shortcomings in terms of small screen size, short battery life and uneven network access. Learning delivered or supported mainly by handheld and mobile technologies such as personal digital assistants (PDAs) and smart phones (Traxler 2007, Okunbor and Guy, 2007) has been picking up very quickly due to the access at 'any time, any place'. Mobile learning uses a collection of tools such as text messaging, learning from audio (iPods, MP3 player, Podcasting), Java-based quizzes, collection of pictures and video (using camera phone) which could be used by the tutors and instructional designers.

Mobile phone penetration in Africa is high and mobile devices such as phones and personal digital assistants (PDAs) like palmtop computers (ipads, Tablets) are available at much lower prices than desktop computers and therefore offer a less expensive means of communication. In Africa, the mobile technology has evolved as a boon for distance education institutions (DEI) with learners placed far off from the parent institutions struggling for and expecting every type of academic and administrative support and guidance in other personal matters (Dharankar, 2008).

In Nigeria, pervasive evidence of mobile penetration and adoption as a learner support service in distance education (DE) is irrefutable. Cell phones, PDAs, MP3 players, portable game devices and laptops all abound, and from toddlers to senior citizens, people are increasingly communicating in ways that would have been impossible to imagine only a few years ago. In addition, many claims have been made about the potential and benefits of mobile learning (M-learning) to make learning possible anywhere, anytime, in any way and by any means (Omotunde and Adelore, 2010).

Improving our understanding of the ways mobile phones can be used to support education is therefore crucial. A growing body of evidence (Hooper, Fitzpatrick and Weal, 2009) demonstrates that currently available hardware such as PDAs and mobile phones can indeed help to increase communication and interaction and enhance the quality of learning, particularly in distance education. Hooper et al. (2009) argue that mobile technologies are increasingly being used to create innovative mobile learning experiences for learners, with a key benefit being learners' ability to collaborate through the use of the PDAs and mobile phones. However, use of mobile phones in education by developing countries is still a challenge for the obvious reasons of cost of the high end devices and access to internet services.

In Kenya, there is a need to provide a more flexible educational system for students and distance learning techniques are being employed by a growing number of higher institutions (Darkwa, & Mazibuko, 2000). Even though distance education in Kenya is still in its infancy it has already been recognized that a learner support system needs to be put in place to assist students confronting the challenges of distance education to realize the potential of information technology as a means to take advantage of opportunities offered (Darkwa, 2000). Open and Distance Learning seems to be the most reliable means which combine accessibility and affordability for the individual and cost efficiency for government and providers.

However, issues like appropriate technology, acceptable academic culture and practices, enabling infrastructure, and various other factors that lead to success need to be attended to. One of the most significant challenges has been finding appropriate delivery methods that will help assure and ensure both success and completion for majority of the learners. The main challenge for open and distance learning providers is to ensure that an effective learner support system exists to help learners make the paradigm shift from traditional teacher-centred delivery mode to mediated distance learning.

Mount Kenya University is running several programmes under the distance learning programme. However, lack of digital library coupled by students' low Information Communication Technology (ICT) skills and scarcity of computing resources that include computers has seen students undertaking education through this mode grapple with inadequacies in terms of support.

Distance education learners have mostly sought help from cyber cafes to do their assignments and reading tasks. In the event of low internet connectivity, students are unable to meet the deadlines set by the university. In this case, mobile phone comes in handy as both students and lecturers communicate to each other circumventing the problems hitherto faced while using other channels of delivering instruction. It is against this background that this study was set to investigate the utilization of mobile phone in enhancing learner support services for distance education programmes in Mount Kenya University, Kenya.

1.2 Statement of the Problem

In Kenya, Distance Education relies heavily on print media to disseminate information to the learner. Learners in distance education programmes have expressed concerns regarding untimely dispatch of print materials, late assignment evaluation, non-declaration of results, and lack of information regarding vital schedules. Keeping this in mind, a facilitating step has been taken by the university to encourage the use of mobile phones as and when required.

Despite majority of students in possession of phones that support many applications, mobile phones have not been integrated in the Distance Education System. As the learners are widely spread in Kenya, mobile phone network coverage has not been used as strength to roll out comprehensive learner support in distance education through the mobile phones. This has limitation for learners to access timely learning content and other information related to their learning.

It is amply clear that learner support services are the channels in the delivery of a distance education programme; opportunities that have not been identified. In this context, it was felt necessary to check the utilization of mobile phones on the program delivery in the context of distance education in Mount Kenya University.

1.3 Purpose of the Study

The purpose of this study was to investigate the utilization of mobile phone in enhancing learner support services for distance education programmes in Mount Kenya University, Kenya.

1.4 Objectives of the Study

The focus of the study was to:

- i) Establish the utilization of text messages in enhancing learner support in distance education.
- ii) Examine utilization of email in enhancing learner support in distance education.
- iii) Determine the utilization of voice call in enhancing learner support in distance education.
- iv) Establish the utilization of social media in enhancing learner support in distance education.

1.5 Research Questions

This study sought to find answers to the following research questions:

- i) How was the utilization of text messages in enhancing learner support in distance education?
- ii) How was the utilization of email in enhancing learner support in distance education?
- iii) How was the utilization of voice call in enhancing learner support in distance education?
- iv) How was the utilization of social media in enhancing learner support in distance education?

1.6 Significance of the Study

First and foremost the findings would help personnel handling distance education in Mount Kenya University in making informed decisions regarding the design, development, and dissemination of effective student support services. The findings of this study may guide institutions in Kenya running distance learning programmes to initiate and carry out reforms and make appropriate changes in the education system to enhance effective delivery of programmes by developing and using quality learner-support systems.

Furthermore this study would benefit and motivate other researchers by encouraging further research in other areas of distance education to improve the delivery of distance learning programmes at Mount Kenya University. Finally, the study might contribute to the knowledge and scientific understanding of the learner support needs of the distance learner not only at Mount Kenya University but also in Kenya.

1.7 Limitation of the Study

It is anticipated that since majority of distance learning students reside out of campus, there might be some logistical problems in collecting data from them. To mitigate this problem the researcher collected data from them when they were back to the respective campuses for tutorials during holiday. Another limitation was non-response from some study participants. However, the researcher sensitized the respondents on the importance of the study to enable them to cooperate in returning the questionnaires.

1.8 Delimitations of the Study

Nyaga in Mwiria and Wamahiu (1995) contended that delimiting a study involves a purposive and conscious action in order to make the research manageable. The study focused on school based students enrolled for diploma and degree programmes in teacher education courses through distance education programme at Mount Kenya University. Two out of the five campuses of Mount Kenya University hosting in-service distance teacher education programmes in Kenya were sampled for this study. Students, lecturers and administrators provided information regarding the utilization of text messages, email, voice call and social media in supporting education for learners in distance education.

1.9 Assumptions of the Study

The researcher assumed that the respondents had engaged the mobile phone as a tool for learner support while undertaking their course at Mount Kenya University and therefore provided accurate information.

1.10 Definition of Terms

Mobile phone refers to electronic gadget used for communication between course instructors and learners in distance education programme.

Distance education refers to education provided to learners who are enrolled to receive education away from the main education institution.

Text message refers to short message in the form of text sent using mobile phone device

Voice call refers to verbal communication with someone by phone

Email refers to messages distributed by electronic means from one computer user to one or more recipients via a network.

Social media refers to websites and applications that enable users to create and share content or to participate in social networking.

Multimedia messaging service is a standard way to send messages that include multimedia content to and from mobile phones.

Enhancing refers to using of mobile phone to improve communication between learners and course providers in distance learning programmes.

Utilization skill of using mobile phone devices to deliver information in distance education programmes.

Learner support services refers to strategies which empower learners to establish and fulfill their learning in distance education

1.11 Organization of the Study

The study comprised Five Chapters. Chapter One, introduction, consists of background to the study, statement of the problem, purpose of the study, objectives and research questions, significance and limitations of the study, delimitations, basic assumptions and definition of key terms. Chapter Two contains a review of literature related to the study, theoretical framework and conceptual frame work. Chapter Three deals with the research methodology that comprises the research design, population, sample and sampling procedure, validity and reliability, procedures for data collection and data analysis. Chapter Four presents data analysis, interpretation and discussion of the study findings while Chapter Five deals with the summary, conclusion and recommendations for further research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

In this chapter the researcher presents literature reviewed under the following sub-headings; Concept of Enhance learner support services, Mobile Phone as a learner support device, Utilization of text messages in enhancing learner support in distance education. Utilization of email in enhancing learner support in distance education, Utilization of voice call in enhancing learner support in distance education and Utilization of social media in enhancing learner support in distance education. The chapter ends with presentation of the theoretical and conceptual frameworks.

2.2 The Concept of Enhanced Learner Support Services

Learner support in distance education is a fairly broad concept, and there are wide variations in how people and institutions conceptualize and define it (Allen & Seaman, 2014). The terms “guidance,” “counseling,” “advising,” “support services,” “student support,” and “learner support” have all been used interchangeably throughout distance education literature to indicate a variety of activities, strategies, and administrative systems that are designed to support and facilitate the learning process (Allen & Seaman, 2014). Because of such variation in terms and definitions, it will be helpful to begin with an examination of how learner support has been conceptualized in the distance education literature in order to provide a focus and a conceptual framework for the current study.

Learner support encompasses all of those interactive activities and services in education intended to support and facilitate the learning process. This includes tutoring and teaching, counseling and advising and related services, and administrative activities in service to learners such as admission and registration. In the context of distance education, learner support has taken on special importance because of the separation between learner and educational provider.

Tait (1995) defined learner support as the range of services both for individuals and students in groups which complement the course materials or learning recourses that are uniform for all learners, and which are often perceived as the major offerings of institutions using Open and Distance Learning .

Tait regarded learner support as a subsystem, distinguishing it from the most well-known element in distance education, which is the mass-production of instructional materials. The rationale for such a distinction, according to Tait (1995), is that the focus of the learner support is on individual learning of the student whether alone or in groups, whereas the focus of the mass-produced materials is on the mass of students.

Mills (2003) defined learner support as: the totality of the provision by an institution to support the learner, other than generic teaching materials produced by instructional designers or course producers (p. 104). This definition also treats course material production and learner support as two distinct subsystems. Again, the underlying assumption for such a distinction is that learner support is designed to help an individual student learn from the mass-produced teaching material, whereas learning materials are produced uniformly for the mass of students.

Carranza (2009) defines learner support as the resources that learners can access in order to carry out the learning processes (p.7). To summarize, at the broadest level, the term learner support is a broad term, referring to the services provided to distance learners so that they can overcome barriers to learning and complete their studies successfully. Learner support consists of three subsections: learning or academic support, personal support and administrative support (Simpson 2002; Tait 2000; Thorpe 2002).

In practice, it is difficult to separate the three subsections. The provision of learner support, which is imperative in distance education, aims to enhance the academic performance of distance learners. Learning support (as a subset of learner support) is the academic assistance given to a learner enrolled for a distance education course in order to enhance academic performance (Simpson 2002; Tait 2000; Thorpe 2002). The activities that make up learning support delivered to distance learners include orientation seminars, tutorials, assignment feedback and individual help by tutors. These activities are currently core in supporting distance learners in Kenya. The main challenge for open and distance learning providers in Kenya is to ensure that an effective learner support system exists to help learners make the paradigm shift from traditional teacher-centred delivery mode to mediated distance learning.

2.3 Mobile phone as a learner support device

Basically, a mobile or cellular telephone is a long-range, portable electronic device for mobile communication. In addition to the standard voice function, current mobile phones can support many additional services such as SMS (Short Message Service) for text messaging, e-mail, packet switching for access to the Internet, MMS (Multimedia Messaging Service) for sending and receiving images, rich text, audio, photos and video and EMS (Enhanced Messaging Services) which allows user to integrate text, audio, pictures, video and animation.

In trying to understand how mobile technology can be appropriated for teaching and learning at a distance, we should start by looking at how different mobile learning is from other technologies that are used in teaching and learning (Laurillard, 2007). The strength of using mobile technologies is that they offer learning that is intimate, spontaneous, pervasive and versatile. Mobile learning provides an enhanced cognitive environment in which distance learners can interact with their instructors, their course materials, their physical and the virtual environment (Koole, 2009). Sharples (2005) argues that mobile learning is more strongly mediated by its context than the content of the study material.

The most significant attribute of mobile technologies, according to Kukulsa-Hulme and Traxler (2005), is their ability to support situated learning. In this context, students are able to explore, share and interact with each other as they try to learn together. Mobile learning, by nature tends to ascribe to the student-centred approach because of its ability to connect people wherever they are. This pedagogical approach assumes that students come into the learning environment with their own perceptual framework and, therefore, they need to be encouraged to construct their own meaning by talking and listening to each other, through writing and reading as well as reflecting on content. When students are in control of their learning, they are able to link up with other students in collaborative learning networks.

Through peer collaboration, according to Laurillard (2007), students are more likely to be motivated to share their work with each other as well as to augment their conceptual understanding with others. In the distance education context, social interaction relates to the socio-emotional aspect of group forming and group dynamics (Kreijns, Kirschner & Jochems, 2003). Mobile learning facilitates this process through building communities of learners who are committed to working together to achieve a goal. Collaborative learning leads to deeper level learning, critical thinking, shared understanding and long term

retention of the learned material” (Kreijns, et al., 2003) as well as developing communication and social skills. The question is: How do we harness mobile technological features to support learning in distance education?

Yousuf (2007) found that mobile learning can improve the entire distance education by enhancing ways of communication among distance learners, tutors and supporting staff. The biggest advantage of this technology is that it can be used anywhere, anytime and its usage is easy access to a larger number of distance learners.

2.4 Utilization of text messages in enhancing learner support in distance education

The Short Messaging Services (SMS) provided by the Mobile phones could be used effectively as a supporting tool for teaching-learning process. Kadirire (2005) showed that SMS can be successfully used in group discussions, be it in schools or business. It preserves anonymity, which allows people to articulate their views without fear of being criticized and is relatively easy to use.

Stone (2004) studied ‘Mobile scaffolding to support first year university students’. In this study, SMS (text messaging) was used as an experimental method of providing a form of "mobile scaffolding" at a fundamental level to support students in managing their time and activities in both physical and virtual space and guide them towards independent self-management; that is, creating a personal mobile support context for learning and doing. The experiment suggested that such provisional guidance can be supported partially with consideration.

In a study of utilization of using short message services (SMS) in delivering information to university students in distance learning in Makerere University, Mbarika and Mbarika (2006) observed that out of the 58 students reached, (96.6%) have mobile phones with only 2 (3.4%) without mobile phones. This level of access implies the mobile phone has huge potential to improve communication between lecturers and its students and therefore the deliberate exploitation of this avenue by Mount Kenya University in Kenya to provide learners with this support service.

Caudill (2007) proposed three possible models of information exchange via SMS, one that involves the educational institution sending out information about their schedule, one in which the student requests information as they need it, and third where the student is involved interactively with the learning environment.

Shih, (2007) combined an innovative learning model for mobile learning with an established literature class and the results proved that this model was effective for teaching learning process. Young, (2007) concluded that SMS text messaging provides the most appropriate technology to address the issues to support students in distant placements and reduce feelings of isolation whilst on practice.

A study was carried out in Makerere University, Uganda by Kajumbula (2009) to establish what the students wished to be sent to them via Short message Services (SMS) and the following were the key types of information they wished to receive using SMS: Information on results, information on tests, exams: time and venues, and information on course works. Others' included course units to be covered, timetables, fees updates, answers to questions on subject matter and new textbooks.

From these responses, it is clear that the kind of information required covers critical areas in the life of a distance learner. This is in line with the findings in the Philippines where students, especially in modes of education like open learning and distance education that have less face-to-face and classroom interaction, use SMS and email to foster interaction and learning. As Pabico (2003) noticed, the use of these messaging systems in education has become an indispensable communication system and an important aspect of teaching and learning. Mobile phone users, especially youths, are willing to use their phones for learning (Yerushalmy and Oshrat, 2004; Broddason, 2006).

Mobile technologies provide an affordable and easily accessible technology that lecturers can use effectively to assist students with their studies. The popularity of SMS (short message service) messaging among students provides opportunities to exploit the possibilities of using SMS for teaching and learning (Ng'ambi 2005). A research project undertaken at the University of Cape Town has given some insight into the way mobile devices can be used effectively at a minimum cost to assist educators in student support (Ng'ambi 2005).

Mobile support has the potential to improve students' success rates and enhance the quality of the learning experience. Tutors and administrators commented that SMS communication can enhance both academic and administrative support to students. Students can know, for example, whether their marks are missing, the dates for tutorials, face-to-face sessions and examinations, and the venues and meeting times with research

supervisors, which clearly enhances the utilization of communication between students and staff as Briggs and Smith (2001) also emphasized.

SMS communication creates a one-to-one teaching/learning interaction as students can study the learning material for many hours and then pick a phone and send text messages to their tutors; and the tutors can then respond to the various queries raised by students. One tutor commented that; SMS can be used to give students reminders about assignment questions and deadlines. SMS therefore facilitates interaction among tutors, between tutors and administrators, between administrators and students, and among both students and administrators (Kajumbula, 2006).

Traxler and Riordan (2003) contend that Short Message Service (SMS) is highly cost-effective and very reliable method of communication. It is less expensive to send an SMS than to mail a reminder through regular postal mail, or even follow-up via a telephone call. Further, no costly machines are required (which is clearly the case in terms of owning a personal computer). Research by Traxler and Riordan (2003) indicates that SMS is very effective, especially if the communication is short, personalized, and focused. Besides SMS, voice mail and pre-recorded MP3 files can also be used to broaden and enhance student learning. Students can use mobile phones and MP3 players to listen to their course lectures, and for storage and data transfer. Clearly, new technologies give rise to many new opportunities. These developments in mobile technologies are now challenging the concept of traditional DE, simply because distance learners no longer need to learn in isolation.

Mobile SMS information service allow students to receive updated information about exam results, important registration dates, registration status, account balance, program schedules, face-to-face counseling schedules, and their student status through SMS messages, Ramos (2006). While all the above-mentioned information is sent automatically, students are also able to request this information by sending a short SMS to service. This service is not free, though. For each message sent or received, one SMS fee is assessed to the student's mobile phone account.

Findings from summative evaluations of the SMS initiative at Open University Malaysia conducted by Tina, Mansor, and Norziati (2011) have shown that learners appreciated the text messages and felt that the SMSes had helped them to stay focused and engaged in

their studies. The messages were also useful in providing important information related to the course.

Additionally, in general, the learners agreed that the messages had allowed them to learn anytime and anywhere and had helped them manage their studies better (Singh, 2010). Every semester over 95% of the learners involved expressed their wish that Mobile Learning via SMS be extended to other courses as well. While it is noted that a proper cost-utilization study on the use of SMS in retaining students and recouping costs would be able to shed light on how viable the initiative is, it ought to be also emphasized that not all things valued may be measured in monetary terms. Helping even a single learner to enjoy and succeed in learning is what counts for a responsible distance education provider. This study investigated the utilization of mobile phone in enhancing learner support services in distance education programmes in Mount Kenya University, Kenya.

2.5 Utilization of email in enhancing learner support in distance education

To meet the challenges of distance learning, ICT based tools have developed both in synchronous (occurring at the same time) and in asynchronous (occurring at different times) modes. Asynchronous learning is a student-centered teaching method that uses online learning resources to facilitate information sharing outside the constraints of time and place among a network of people. The online learning resources used to support asynchronous learning include email.

Email has been used in a variety of instructional contexts. Obvious benefits of email include efficiency, convenience, and cost. However, academic use of email is often limited; for example, when Alexander (2002) analyzed educators' email messages, they found only half of the messages contained course-related information and most were used only for coursework assignments instead of for more purposeful academic communications (encouragement of collaborative work, discussion of individual performance). They indicated that there should be more studies to identify teaching strategies in order to harness the potential advantages of email for learning and instruction.

Some studies have addressed the use of email for specific academic purposes, such as mentoring, collaboration, counseling, and supervision. For example, De Montes and Gonzales (2000) investigated the utilization of email in an online course of professional

development for secondary school teachers. They found that email allowed the instructor to maintain close relationships with learners and provide ongoing support.

Grünberg and Armellini (2004) examined the potential of email for the exchange of professional resources and information and for the formation of collegiality. They found that email was used more for sharing information than for requesting it and private exchanges were more frequent than public ones. Van der Meij and Boersma (2002) utilized email for elementary school students collaborating on a project. They found that email stimulated reflection on the assigned tasks probably as a result of a time lag between receiving a message and developing and sending a response.

A study was conducted by Clingerman and Bernard (2004) on using email as a supplemental method of supervision in a college counseling practicum course. They analyzed students' weekly email messages to instructors. The email messages were found to have and retain a personalization focus, often reporting personal experiences and feelings with regard to the counseling practicum. The researchers concluded that email encouraged intimacy between instructors and students, which was a result of 'a sense of psychological safety'. Also, they reported email increased the students' thoughtfulness, interest in the class, awareness of others' attitudes, and active participation in the course.

The patterns of conversations on an electronic mailing list in a teacher education course on instructional technology were analyzed by Overbaugh (2002). He reported that electronic mailing lists were an efficient way to communicate with and among groups. He also argued that email communication can improve 'reflective and critical thinking' (p. 119) because of more time for reflection and permanence of the written words. Interestingly, Overbaugh (2002) reported levels of cognitive engagement from his analysis of individual student email messages.

Research on e-mentoring was done by Harris and Jones (1999), during a 15-week period in an academic enrichment program on research topics of special interest in a high school where face-to-face mentoring was impractical. They reported on the flow and functions of the email messages between teachers and subject matter experts. There were many informal conversations in addition to academic correspondences regarding class project inquiries and reports. They found that a prominent benefit from the email messages was fostering more social exchanges than face-to-face interactions typically allow. This free

flow of personal as well as content information enabled SMEs to provide effective individual help to teachers.

Brown and Dexter (2002) utilized a mentoring program for teachers to help improve fifth and sixth graders' writing skills through email conversations. They found that students' interpersonal skills were improved in addition to their writing skills. Boxie (2004) also introduced an e-mentoring writing project between high school students and pre-service teachers. The pre-service teachers were trained in advance to provide strategic student feedback via email, such as 'social acknowledgement, cognitive task structuring, explanations, and elaborations, fostering reflections, etc.' (p. 134). The students became enthusiastic about schoolwork, showed better attendance, planned about colleges, in addition to appreciating the quality of writing.

In Davenport's study (2006), pre-service teachers were partnered with second graders to communicate via email with regard to writing projects. Her study also showed increased development of students' writing skills as well as their motivation, self-esteem, enthusiasm, and self-confidence. In addition, she found that pre-service teachers' knowledge in teaching writing was also improved.

An e-mentoring project was conducted by Cifuentes and Shih (2001), between American pre-service teachers and Taiwanese students of English. The project, based on social constructivist foundations, focused on pre-service teachers' facilitative role, students' authentic experiences of English writing, and collaborative learning about culture. They found that the email correspondences allowed individualized instruction leading to students' improvement of English, communication skills, and cultural understandings. Likewise, Lawrence (2002) also found that email could be an effective teaching tool in learning foreign languages – French in his study – because interactions with native speakers via email maximized authentic, interpersonal, and learner-centered context with comfort due to the asynchronous nature of email.

Cascio and Gasker (2001) studied the utilization of mentoring in a social work program. They put master's program students and undergraduate students in pairs and had them communicate with each other via email for a semester. The students discussed social work as a profession, their schoolwork, and field experiences as well as personal lives. The study showed that the undergraduates changed, to being able to identify personal values in

social work. Cascio and Gasker concluded that mentoring was a process of finding and satisfying ‘mutual needs and desires’ and the semester-long email interactions successfully facilitated the process.

Poole (2000) used email to help reduce the levels of pre-service teachers’ anxiety about teaching mathematics and develop their teaching strategies through conversations on problem-solving activities with elementary school students. His study was based on the assumption that novice teachers with little background knowledge tend to use behaviorist pedagogy. Poole found that email could be an effective tool for the novice teachers to improve their teaching skills through the acquisition of authentic experiences and social interactions with the students, which were grounded in a constructivist viewpoint.

Cook-Sather and Mawr (2007) also utilized email to give a chance for pre-service teachers to experience pedagogical practices through communications with teachers and high school students. The participants were required to exchange email messages weekly. Dialogue about viewpoints, challenges and issues in learning and teaching, permitted teachers immediate, frequent, individualized communication, careful analysis and reflection, and insights into others’ perspectives. The researchers concluded that such email interactions had the potential to narrow the gaps between the knowledge and skills learned from college and actual teaching contexts, in a convenient way that was achieved without class observations and visits.

In summary, researchers have described the following advantages of email use along with contributions to academic achievement: Enabling immediate, frequent support for individual needs; learner-centered context; individualized instruction; exchange of resources and information (Cook-Sather and Mawr, 2007), Fostering psychological comfort; intimacy; expression of personal ideas, opinions and emotions; informal conversations; social content exchanges; interpersonal context (Davenport, 2006),

Building interpersonal skills; collegiality; awareness of others’ attitudes; insights into others’ perspectives; close relationship (Cook-Sather and Mawr, 2007), Developing thoughtfulness; cognitive task structuring; careful analysis; critical thinking; reflection; planning (Boxie, 2004), Encouraging interest; enthusiasm; motivation; self-esteem; self-confidence; change in personal values; active participation (Davenport, 2006) and

Permitting authentic but convenient context; gap reduction between knowledge and practice; real-world anxiety decrease (Cook-Sather and Mawr, 2007; Davenport, 2006).

Thus email via phone may be considered in this context as a reusable motivational object that is scalable in terms of instructional efficiency in distance education as in other contexts. The studies highlighted have however focused on the delivery of course-related information or assignments by email rather than focus on the conceptual basis and utilization on learning outcomes. There have been inadequate investigations of the specific components of email messages that contribute to improved learner support in distance education. This study therefore will seek to investigate the utilization of using email for learner support in distance education.

2.6 Utilization of voice call in enhancing learner support in distance education

In a study investigating utilization of phone call communication in Virtual High Schools in Malaysia conducted by Marley (2012), interviewed teachers said they had difficulty in reaching students by phone and the lack of student responses to phone-call attempts. The teachers in the study provided additional data regarding their regular communication patterns. Archival records from more than 100 contact attempts showed that approximately 20% of the students responded to teacher phone calls and less than half of these students completed the work requested. The interview data revealed that teachers believe written communications or multiple forms of communication may be more effective than regular phone calls.

The ways in which teachers choose to communicate vary based on the objectives of the communication according to LaPointe and Reissetter (2008). They further posit that teachers use personal phone calls to make contact with struggling learners in order to discover issues that may have been preventing success for these learners. Teachers use phone calls much more frequently in order to address the majority of their students more quickly and to encourage students in good academic standing to maintain their academic progress.

Adedoja, Adelore, Egbokhare and Oluleye (2013) posit that students using mobile devices for learning are in great need of both technical and academic support. Students call frantically because they are frustrated with matters ranging from inability to login to other technical issues such as navigating the web, network connectivity and inability to partake

in quizzes. Therefore, there is need to support use of phones to make calls in distance learning.

2.7 Utilization of social media in enhancing learner support in distance education

In recent years, there has been a rapid growth in the use of social networking tools such as *Facebook* and social media in general, mainly for social, recreational, and entertainment purposes (Smith, Salaway, and Caruso, 2009). Many educators believe that these tools offer new educational affordances and avenues for students to interact with each other and with their teachers or tutors.

Considering the traditional dropout rate problem documented in distance courses (Rovai, 2003; Woodley, 2004), these tools may be of special interest for distance education institutions as they have the potential to assist in the critical “social integration” associated with persistence (Sweet, 1986). However, as distance students are typically older than regular on-campus students (Rovai, 2003), little is known about their expertise with social media or their interest in harnessing these tools for informal learning or collaborating with peers.

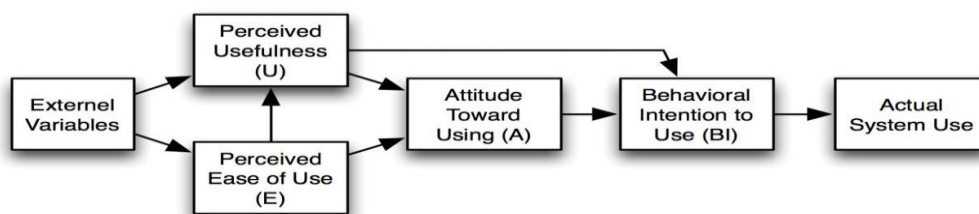
McClatchey (2006) argues that the Web has been radically transformed, shifting from an information repository to a more social environment where users are not only passive receivers or active harvesters of information, but also creators of content, or producers (Bruns, 2008). The use of social networking has been growing exponentially with applications in social, gaming, media, business, and education contexts. For example, *Facebook* is now the second most frequented site (just after Google) in North America (Alexa, 2011) and claims over 750 million members (*Facebook*, 2011).

Advanced Internet technologies have revolutionized the delivery of distance learning education. As a result, the physical proximity between learners and the learning providers has become less important. However, whilst the pervasiveness of these technological developments has reached unprecedented levels, critics argue that the student learning experience is still not as effective as conventional face-to-face delivery. In this regard, surveys of distance learning courses reveal that there is often a lack of social interaction attributed to this method of delivery, which tends to leave learners feeling isolated due to a lack of engagement, direction, guidance and support by the tutor.

2.8 Theoretical Framework

This study's framework is based on Davis's (1986) Technology Acceptance Model (TAM), which makes use of the Theory of Reasoned Action (TRA). TRA postulates that an individual's attitude toward behavior is influenced by his/her beliefs. Notably, this model deals with the acceptability of an information system/tool, predicting acceptability of the system/tool and modifications to be made, if necessary, for acceptability. TRA assumes that acceptability is primarily determined by two factors: Perceived Usefulness (PU) and Perceived Ease of Use (PEU). PU can be described as the degree to which an individual believes that the use of a system/tool will improve his/her performance, while PEU refers to the degree to which an individual believes the use of a tool/system will be effortless or require minimum effort. TRA postulates that use of a system/tool is Davis (1986) posits that the attitude of an individual is not the only factor that determines his/her use of new technology, as the impact the tool or system will have on his/her performance is also significant. The key factors in the Technology Acceptance Model are illustrated in Figure 2.1.

Figure 1: The TAM Relationship between Perceived Usefulness, Perceived Ease of Use and Actual Use (Davis, 1986)



Many studies have been carried out using Davis's (1986) TAM. Most conclude that the model is incomplete because it fails to account for social influence in the acceptance, adoption, and utilization of a new tool/system (Misiolek, Zakaria and Zhang, 2002; Malhotra and Galletta, 1999). It is important to take this into account because human beings are strongly influenced by their social environment. Nonetheless, many studies have used the constructs of PU, PEU, and subjective norms (the influence of instructors, mentors, and peers) to explain technology acceptance and usage for a variety of instructional systems including online learning.

Mun and Yujong (2003) exposed students to Microsoft end-user applications for a period of eight weeks. After a two-week trial period, they found that learners' self-efficacy,

enjoyment and learning goal orientation determined the actual use and acceptance of the system. Shen, Laffey, Lin and Luang (2006) explored the extent to which subjective norms influence and shape the perception of learners towards the use of different course delivery modes. Their results showed that instructors' influence made a significant contribution to students' PU, while mentors' influence was significant for PEU.

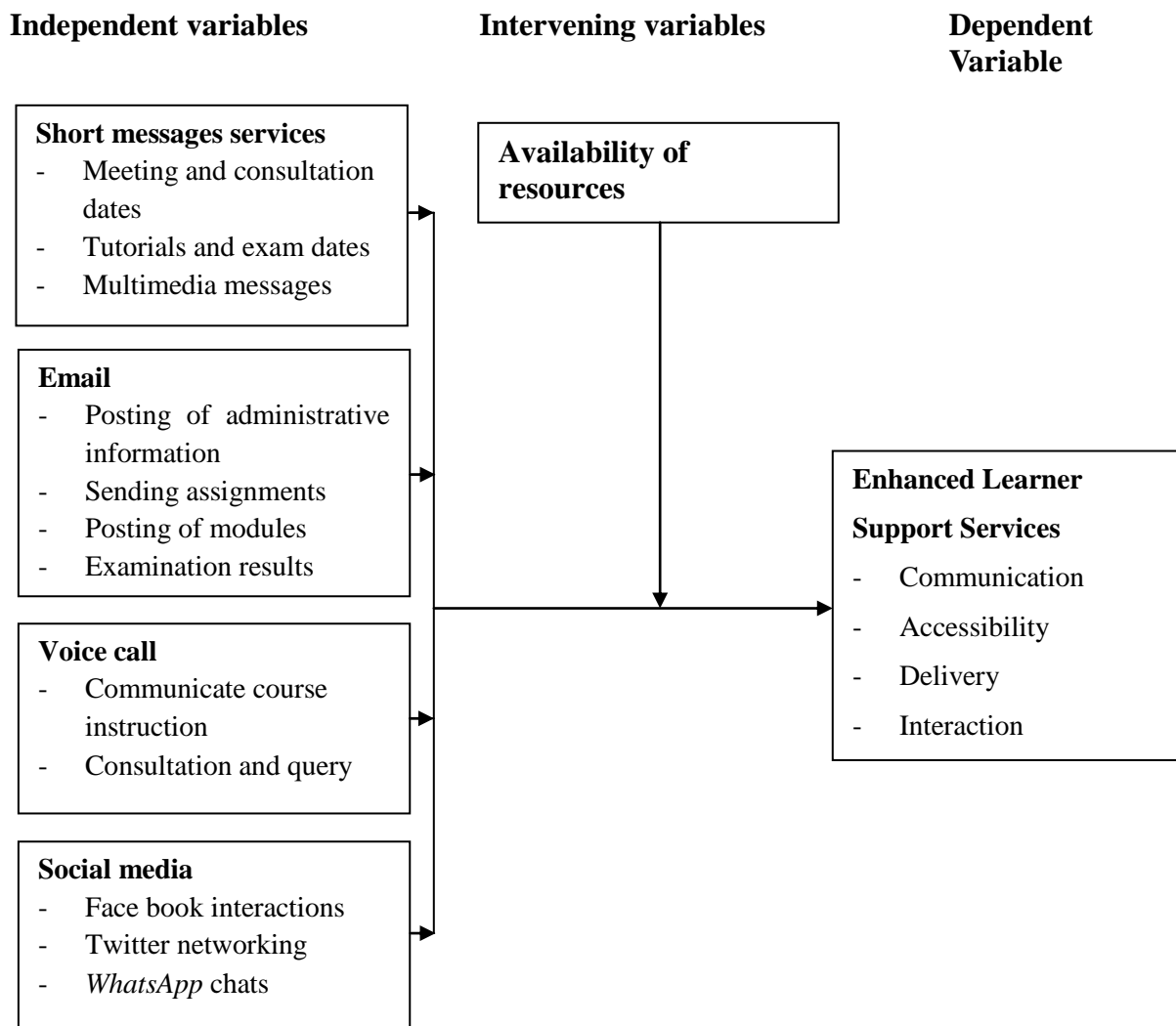
This result suggests the importance of the instructor's role in shaping learners' impressions of the value of using a course delivery system. Miller, Rainer and Corley (2003) found that PEU and PU had a significant positive relationship with the amount of time students spend on a course. They also noted that both are significant factors for predicting intention to use the technology. Sumak, Hericko, Pusnik and Polamcic (2011) found that the use of Moodle, a learning management system, by learners depended on behavioral intentions and attitude, and PU was the strongest and most important predictor of attitude.

This study uses Davis's (2006) TAM model as an analytical framework to examine how distance education students at Mount Kenya University perceive the utilization of mobile phone use in learner support services for distance education programmes. Davis's (1986) Technology Acceptance Model can also be applied to the prediction of learners' acceptance of using mobile phone applications such as SMS, email, voice call and social media as a learner in distance education.

2.9 Conceptual Framework

According to Orodho (2009:120) a conceptual framework is a type of model that employs the use of drawing/diagrams to explain the interrelationship between variables, especially the independent and dependent variables. The conceptual framework that presents the interrelationship of the study variables is shown in Figure 2.2.

Figure 2.2: Conceptual Framework



2.10 Summary of Literature Review

The literature indicates that use of mobile phone as a learner support system can only be conceived in relation to the institutional values (Brindley, 1995; Sewart, 1993). The focus of this study was to gain an insight on the utilization of mobile phone use for learner support in DE in Mount Kenya University. In a study of the utilization of mobile short messaging service (SMS) technologies in the support of selected distance education students of Makerere University, Uganda Kajumbula (2006) found that mobile communication was effective. However, in other studies (Pabico, 2003; Coronel-Ferrer, 2002) mobile phones were found to support delivery of low data. This study investigated the Utilization of SMS, email, voice call and social media in enhancing learner support services in distance education.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

In this chapter the researcher presented the methodology that was adopted in carrying out the research. It focused on the research design, target population, location of the study, sampling procedure and sample size, research instruments, validity of instruments, reliability of instruments, data collection procedure and data analysis.

3.2 Research Design

The study adopted a descriptive survey research design utilizing quantitative and qualitative approaches. According to Orodho (2009) descriptive research studies are designed to obtain pertinent and precise information concerning the status of phenomena and where possible to draw valid general conclusions from the facts discovered. The design was considered ideal for this study because the researcher was interested in establishing utilization of mobile phone in enhancing learner support service. The rationale for adopting descriptive survey research design was that it allowed a multi-method (both quantitative and qualitative) approach to triangulate the data, as well as to solicit rich data from respondents using a questionnaire at a particular point in time from a sample of participants from a target population.

3.3 Target Population

The target population for this research was 2545 subjects comprising of 30 lecturers, 15 distance education campus administrators and 2500 students in two campuses of Mount Kenya University

3.4 Sample Size and Sampling Procedures

Orodho (2009) refers a sample as a small representative portion of a target population. Mugenda and Mugenda (2008) recommend drawing a 10-30 percent sample from the population when the research uses a descriptive survey. To obtain the sample of lecturers, the researcher used simple random sampling to select 5 lecturers out of the 30 in the distance education programme accounting for 17% representation to participate in the study. The lecturers were deemed key informants as they are the ones involved in implementing the delivery of instruction through mobile phones to the students in distance education programme.

Three out of the 15 administrators in distance education programme in the selected campuses were sampled using simple random sampling to participate in the study. The administrators in distance education programme were also deemed key informants as they are involved in the administration and management issues in the programme.

To obtain the sample of students to participate in the study the researcher employed simple random sampling using a list of third year students in distance education programme in the faculty of education obtained from admissions office that constituted the sampling frame. The researcher stratified the students' population so as to select 100 males and 150 females to constitute a sample of 250 students. Students were deemed appropriate to provide the information required since they are the ones utilizing learner support services. The entire sampling matrix yielded a total sample size of 258 respondents for the study. Table 3.1 shows the distribution of the sample size.

Table 3.1: Distribution of Sample Size

Category	Target population	Sample	% sample representation
Lecturers	30	5	17
Administrators	15	3	20
Students: Males	1000	100	10
Females	1500	150	10
Total	2545	258	57

Source: Dean Faculty of Education, 2013

3.5 Research Instruments

The data for this study was collected using three questionnaires namely; questionnaire for students in distance education (DE) questionnaire for lecturers in DE programme and questionnaire for administrators in DE programme. The questionnaires were used for data collection because they offered considerable advantage in administration and gave respondents freedom to express their views or opinion. This view is supported by as Kiess and Bloomquist (1985).

3.5.1 Questionnaire for students in DE programme

The questionnaire for students in distance education programme (Appendix B) was organized into five sections. Section A sought general information, Section B established the Utilization of text messages in enhancing learner support in distance education, Section C investigated the utilization of email in enhancing learner support in distance education,

Section D determined the utilization of voice call in enhancing learner support in distance education and Section E established the utilization of social media in enhancing learner support in distance education.

3.5.2 Questionnaire for lecturers in DE programme

The questionnaire for lecturers in distance education programme (Appendix C) was organized into four sections. Section A established the utilization of text messages in enhancing learner support in distance education, Section B investigated the utilization of email in enhancing learner support in distance education, Section C determined the utilization of voice call in enhancing learner support in distance education and Section D established the utilization of social media in enhancing learner support in distance education.

3.5.3 Questionnaire for administrators in DE programme

The questionnaire for lecturers in distance education programme (Appendix D) was organized into four sections. Section A establishes the utilization of text messages in enhancing learner support in distance education, Section B investigated the utilization of email in enhancing learner support in distance education, Section C determined the utilization of voice call in enhancing learner support in distance education and Section D established the utilization of social media in enhancing learner support in distance education.

3.6 Validity of the Research Instrument

To assess content validity the supervisors and other experts in the Department of Distance Education at University of Nairobi were requested to assess the items in the instruments and give their inputs to enhance content validity.

3.7 Reliability of the Research Instrument

The research questionnaires were piloted on a sample of 27 respondents comprising two lecturers, two administrators and 23 students in two campuses that were not be involved in the final study. Wiersma (2000) observed that piloting of research instruments is important in helping the researcher to identify misunderstanding, ambiguities and useless or inadequate items. Through piloting, the researcher was able to determine whether there were ambiguities in the items developed and ensured that the instruments elicits the type of data anticipated to answer the research questions. Items in the questionnaire that failed

to measure the variables intended were modified or discarded. Split half formula $\rho = 1 - \left[\frac{6\sum D^2}{N(N_{2-1})} \right]$ was used to estimate the reliability of the questionnaire. Gay (1992) recommends a correlation coefficient of at least 0.7 to consider the instrument as reliable for use in data collection. The pilot findings indicated a 0.85 correlation coefficient which was considered suitable for the study.

3.8 Procedure for Data Collection

A permit to carry out the research was obtained from the National Commission for Science, Technology and Innovation. The permit was presented to the Dean Faculty of Education of Mount Kenya University to be allowed to collect data from the respondents. The researcher will visit and book appointments with the respondents to administer the questionnaires. The researcher will personally administer the instruments to all the respondents. The data for this study will be collected when in-service school based distance education students are in session for tutorials.

3.9 Data Analysis Procedure

The field data was cleaned by checking for any missing or inaccurate data and correcting it appropriately. After data cleaning, the quantitative data was coded and entered in the computer for analysis using Statistical Package for Social Sciences (SPSS) Version 21 for windows. The quantitative data obtained from the questionnaires was analysed using descriptive statistics such as frequency counts and percentages. The results of data analysis were presented using frequency distribution tables according to the study objectives and research questions.

3.10 Ethical considerations

This refers to the strategies and precautions that the researcher engaged to ensure confidentiality and security of the respondents' information is protected from the public. The research did this by asking the respondents not to indicate their personal identity on the questionnaires as they answered the questions.

3.11 Operationalisation of Variables

Table 3.2 represents the operationalisation of variables.

Table 3.2: Operationalisation of Variables

Objectives	Variables	Indicators	Measurement	Scale	Data collection method	Data analysis
To establish the utilization of text messages in enhancing learner support in distance education.	Independent variable Short messages services	<ul style="list-style-type: none"> - Alerts on meeting and consultation dates. - Alerts on exams and class venues. - Alerts on feedbacks. 	<ul style="list-style-type: none"> - Sending and receiving of information on important dates. - Sending and receiving messages on exam and class venues. - Frequency of feedback messages. 	Ordinal	Questionnaire	Descriptive statistics
To examine utilization of email in enhancing learner support in distance education.	Independent variable Email	<ul style="list-style-type: none"> - Administrative information. - Assignments - Modules - Examination results. 	<ul style="list-style-type: none"> - Posting and sending of administrative information, Modules and Examination results. - Frequency of sending and receiving information and other materials. 	Ordinal	Questionnaire	Descriptive statistics
To determine the utilization of voice call in enhancing learner support in distance education.	Independent variable Voice call	<ul style="list-style-type: none"> - Communication of course instruction - Consultation and queries. 	<ul style="list-style-type: none"> - Availability of resources with the personnel. - Frequency of making, responding and receiving voice calls. 	Ordinal	Questionnaire	Descriptive statistics
To establish the utilization of social media in enhancing learner support in distance education	Independent variable Social media	<ul style="list-style-type: none"> - <i>Facebook</i> interactions. - Twitter networking - <i>Watsapp</i> chats 	<ul style="list-style-type: none"> - Availability of infrastructure - Frequency of social interactions. 	Ordinal	Questionnaire	Descriptive statistics

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

The main purpose of this chapter is to analyse the data obtained from the research questions regarding the topic. The analysis was analyzed as per the study variables. The researcher selected a sample size of 258 respondents drawn from two campuses of Mount Kenya University for the study.

The findings of this research was to enable the researcher establish the utilization of mobile phone in enhancing learner support services in distance education programmes in Mount Kenya University. The analysis was presented through the use of frequency distribution tables.

4.2 Questionnaire Return Rate

The sample comprised of 250 students, 05 lecturers and 03 distance education campus administrators. From the questionnaires distributed for each respondent, only 182 were returned from students representing 72.8% while all questionnaires for lecturers and distance education campus administrators were returned. The average return rate was 90.93% as illustrated in Table 4.1 below.

Table 4.1: Questionnaire Return Rate

Respondents	Sample size	Questionnaires distributed	Questionnaires returned	Questionnaire Return Rate
Lecturers	5	5	5	100%
Campus administrators	3	3	3	100%
Students	250	250	182	72.8%
Average Return Rate				90.93%

4.3 Utilisation of Short Message Services in Enhancing Learner Support

In this section, lecturers, campus administrators and students provided their opinion on the extent to which short message service was utilized in distance education. The information provided answer to the research question on: What is the utilization of text messages in enhancing learner support in distance education. The following information was obtained:

4.3.1 Use of Text Messages by Students, Lecturers and Administrators

Students, lecturers and administrators provided varied opinion on extent to which they used short service message on their phones related to distance learning. The information obtained was classified as that which supports uses of SMS and that which does not support use of SMS as illustrated in Table 4.2.

Table 4.2: Use of Text Messages

		Utilized SMS		Not utilized SMS	
		F	%	F	%
Students	Sending inquiries regarding important dates and venues from lecturers or departments.	85	38	113	62
Lecturers	Information on dissemination of learning content.	2	40	3	60
Administrators	Sending support information of learning process e.g. results, venue and timetables	1	33	2	67
Mean (n=190)		29.33	37	39.33	63

Findings in Table 4.2 indicate that majority of students (62%), lecturers (60%) and administrators (67%) did not utilize the SMS as a learning support tool for distance learning. These findings imply that students could not access services such as exam results through SMS, receive SMS on tutorial schedules, receive SMS regarding study guides for various courses, receive SMS regarding meeting times with research supervisors, receive SMS regarding face-to-face session dates, receive SMS regarding missing marks from lecturers and receive SMS giving reminders about deadlines for submitting assignments

from lecturers. This was associated to their attitudes and perceptions about the convenience and privacy of the SMS service as illustrated in Table 4.3.

4.3.2 Attitude and perceptions on the use of SMS

As the students, lecturers and administrators were aware of the use of SMS in communication, their attitude towards use of SMS varied. Their attitude provided explanation on why some used the SMS while others did not as illustrated in Table 4.3.

Table 4.3: Attitude and perceptions on use of SMS

		Utilized SMS				Not utilized SMS			
		Convenience and speed		Privacy		Convenience and speed		Privacy	
		F	%	F	%	F	%	F	%
Students	Sending inquiries regarding important dates and venues from lecturers or departments.	49	57.7	36	42.3	72	63.7	41	36.3
Lecturers	Information on dissemination of learning content.	2	100	0	0	1	33	2	67
Administrators	Sending support information of learning process e.g. results, venue and timetables	1	100	0	0	1	50	1	50
Mean (n=190)		17.33	85.9	12	14.1	24.67	48.9	14.7	51.1

Findings in Table 4.3 indicate that attitude and perceptions on uses of SMS depended on convenience, speed and privacy. Findings indicate that 57.7% resorted to it because of convenience and speed while 42.3% considered SMS for transmitting their personal inquiries to the lecturers and administrators related to learning such as exam results and fee statements. In contrary, 113 students who did not utilize the SMS 63.7% had reservations about the service due to lack of promptness and quick feedback while 36.3% considered SMS not to be private.

The findings in Table 4.3 also show that all lecturers (02) who utilized SMS had the justification of SMS to be convenient and quick in sending information on dissemination of learning content. In contrary, out of those who did not utilize the SMS only 33%

considered it convenient while 67% considered it to affect their private lives. This was not similar to administrators as one who utilized it considered it to be convenient while 50% had reservations on convenience and privacy.

These findings imply that decision of utilizing SMS depended on privacy and convenience of students, lecturers and administrators. For example, while we acknowledge that SMS was beneficial to some students, lecturers and administrators, the system was ineffective. From the analysis, most students did not utilize the SMS based on their perceptions that Mobile phone has not enabled them to receive course outlines and module notes from lecturers promptly through SMS. According to the students, lecturers have insufficiently given instant feedback on queries through SMS. Low utilization of the SMS by students was also attributed to lack of promptness in receiving SMS on important dates via mobile phone which has been ineffective due to network problem their areas.

The students did not rely on SMS to transmit their results, receive tutorial schedules from lecturers and receive information regarding missing marks from lecturers. Due to convenience and speed, students demonstrated bad attitude towards use of SMS in reminding them of deadlines for submitting assignments from lecturers. However, students perceived that mobile phone has helped them to receive personalized messages from the lecturers. In this case, their privacy was not compromised by use of SMS for personal information hence feeling comfortable to share the information with lecturers.

From Table 4.3, good utilization of SMS by lecturers was attributed to convenience and speed in informing students about time for lecturers, notifications about exam dates, assignment deadlines and dissemination of course materials via other platforms such as email. The message dispatched via SMS was one and sent to many students. At other times, the lecturer sent the message to the student's class representative who then sent to other students. However, as mobile phones used by lecturers were personal, privacy limited the utilization of the SMS.

From the analysis in Table 4.3, most administrators did not use SMS sending course outlines and module notes from lecturers promptly, sending instant feedback on the queries through SMS, prompt sending of SMS on important dates, sending examination results, tutorial schedules and notifications on exams and fee payments. The low usage of SMS by administrators was due to network problem for some students. Instead, the

administrators cited that despite the university using website, newspapers and notices, students had the greatest responsibility of finding out from the administration about their individualized needs.

4.4 Utilization of Email in Enhancing Learner Support Services

In this section, lecturers, campus administrators and students provided their opinion on the extent to which email was utilized in distance education. The information provided answer to the research question on: What is the utilization of email in enhancing learner support in distance education. The following information was obtained:

4.4.1 Use of Email by Students, Lecturers and Administrators

Students, lecturers and administrators provided varied opinion on extent to which they used E-mail on their phones related to distance learning. The information obtained was classified as that which supports utilization and that which does not support utilization as illustrated in Table 4.4.

Table 4.4: Use of Email

		Utilized Email		Not utilized Email	
		F	%	F	%
Students	Sending class assignments or inquiries to lecturers and administrators.	168	92	14	8
	Receiving inquiry and class assignment feedback from lecturers and administrators.	62	34.1	120	65.9
Lecturers	Sending information concerning learning content e.g. clarification, course outlines, exam requirements etc.	4	80	1	20
	Receiving students' assignments, feedback on assignments and inquiries.	3	60	2	40
Administrators	Sending support information of learning process e.g. results, venue and timetables.	2	67	1	33
	Receiving inquiries and feedback on learning process e.g. results, venue and timetables.	2	67	1	33
Mean (n=190)		40.17	66.68	23.17	33.32

Findings in Table 4.4 indicate that majority of students, lecturers and administrators with mean of 66.68% utilized email as a learning support tool for distance learning compared to mean of 33.36% of unutilized email inform of sending and receiving information related to distance learning.

Students who utilized email by sending class assignments or inquiries to lecturers and administrators are represented by 92% compared to 34.1% who utilized through receiving inquiry and class assignment feedback from lecturers and administrators. Lecturers who utilized email through sending information concerning learning content e.g. clarification, course outlines, exam requirements etc. were represented by 80% compared 60% who utilized through receiving students' assignments, feedback on assignments and inquiries. In addition, 67% of administrators send and received emails on venues, results and timetables.

The findings imply that email is relatively used in sending content material, submission and sharing of assignments, reminders of timetable changes and other relevant material. However those who did not utilize the service were not accessible to the service due to network coverage and inability to use email applications. Other reasons were attributed to attitude and perceptions as illustrated in Table 4.5.

4.4.2 Attitude and Perceptions on use of Email

As the students, lecturers and administrators were aware of the use of email in communication, their attitude towards utilizing the service varied. Their attitude provided explanation on why some utilized the Email while others did not as illustrated in Table 4.5.

Table 4.5: Attitude and perceptions on use of Email

		Utilized Email				Not utilized Email			
		Convenience and speed		Privacy		Convenience and speed		Privacy	
		F	%	F	%	F	%	F	%
Students	Sending class assignments or inquiries to lecturers and administrators.	145	86.3	23	13.7	11	78.6	3	21.4
	Receiving inquiry and class assignment feedback from lecturers and administrators.	42	67.7	20	32.3	101	84.2	19	15.8
Lecturers	Sending information concerning learning content e.g. clarification, course outlines, exam requirements etc.	3	75	1	25	1	100	0	0
	Receiving students' assignments, feedback on assignments and inquiries.	2	75	1	25	1	50	1	50
Administrators	Sending support information of learning process e.g. results, venue and timetables.	2	100	0	0	1	100	0	0
	Receiving inquiries and feedback on learning process e.g. results, venue and timetables.	2	100	0	0	1	100	0	0
Mean (n=190)		32.6	84	7.5	16	19.3	85.4	3.8	14.5

Findings in Table 4.5 indicate that attitude and perceptions on utilization of email depended on convenience, speed and privacy. The findings indicate that mean of 84% of students, lecturers and administrators utilized email by sending or receiving because of convenience and speed compared to mean of 16% for those who did not utilize because of privacy. Also, findings indicate that 85.4% of students, lecturers and administrators did not utilize email for sending or receiving because of convenience and speed as compared to 14.5% who did not due to lack of privacy.

These findings imply that those who used benefited from the service because e-mail has helped them to receive personalized messages from the lecturers. However, students who did not utilize the system considered the service as inconvenient and lack privacy. For example, they disagreed that e-mail has provided a means for quicker receiving of feedback from the course instructors, and another. The e-mail has insufficiently enabled them to receive and send take away tests and assignments to lecturers. Others cited lack of confidence to succeed in the distance education programmes. The system was also slow to access course outlines and module notes from lecturers promptly. E-mail was ineffective in sharing of notes and ideas as it wasted their time because it takes a lot of time to load.

Table 4.5 also shows that lecturers were of the opinion that e-mail has helped them to send personalized messages to DE students. However, lecturers who did not utilise the service cited that: e-mail has not provided a means for quicker receiving of feedback from DE students; e-mail has not enabled them to send take away tests and assignments to DE students; e-mail learning has not given them confidence to DE students that they can succeed in the distance education programmes; e-mail has not helped them to receive course outlines and module notes from lecturers promptly; that course mates are not able to help them through the e-mail sharing of notes and ideas and that e-mail wasted their time because it takes a lot of time to load.

For administrators, they agreed that e-mail has helped them to send personalized messages to DE students. Administrators also disagreed that e-mail has provided a means for quicker receiving of feedback from DE students, and others disagreed that e-mail has enabled them to send take away tests and assignments to DE students, that e-mail learning has given them confidence to DE students that they can succeed in the distance education programmes, that e-mail has helped them to receive course outlines and module notes

from lecturers promptly, that course mates are able to help them through the e-mail sharing of notes and ideas and that e-mail wasted their time because it takes a lot of time to load.

4.5 Utilization of Voice Call in Enhancing Learner Support

In this section, lecturers, campus administrators and students provided their opinion on the extent to which voice call was utilized in distance education. The information provided answer to the research question on: What is the utilization of voice call in enhancing learner support in distance education. The following information was obtained:

4.5.1 Use of Voice Call by Students, Lecturer and Administrators

Students, lecturers and administrators provided varied opinion on extent to which they used voice calls on their phones related to distance learning. The information obtained was classified as that which supports utilization and that which does not support utilization as illustrated in Table 4.6.

Table 4.6: Use of Voice Calls

		Utilized Email		Not utilized Email	
		F	%	F	%
Students	Making phone calls to lecturers and administrators on distance learning process.	126	69.2	56	30.8
	Receiving phone calls from lecturers and administrators on distance learning process.	12	6.6	170	93.4
Lecturers	Making phone calls to students on distance learning process.	2	40	3	60
	Receiving phone calls from students on distance learning process.	4	80	1	20
Administrators	Making phone calls to students on distance learning process.	1	33	2	67
	Receiving phone calls from students on distance learning process.	2	67	1	33
Mean (n=190)		24.5	49.3	38.83	50.7

Findings in Table 4.6 indicate that majority of students, lecturers and administrators with mean of 50.7% did not utilize voice calls as a learning support tool for distance learning compared to mean of 49.3% of those who utilized voice calls for sending and receiving information related to distance learning. Students who utilized phone cited that such calls were made seeking clarifications on some matters in the learning process. However, when lecturers made the calls to some students, they were meant for dissemination to others especially through the class representatives.

Findings in Table 4.6 also show that administrators used phone calls for dissemination of information concerning fees payments, opening and closing dates and other exam and result related dates or requirement. However, this was made through the class representatives on rare occasions.

The reasons for underutilizations were attributed to privacy and convenience. For example, due to high costs, all students could not be reached via direct phone from the lecturers or administrators. Instead, few calls were made to class representatives then the information disseminated through the class representatives. In most cases, class representatives disseminated such information through email, SMS and social media. In these cases, attitude and perceptions critically affected the utilization. For example, privacy and convenience determined frequency of using phone calls as illustrated in Table 4.7.

4.5.2 Attitude and Perceptions on use of Voice Calls

As the students, lecturers and administrators were aware of the use of voice calls in communication, their attitude towards utilizing the service varied. Their attitude provided explanation on why some utilized the voice calls while others did not as illustrated in Table 4.7.

Table 4.7: Attitude and perceptions on use of Voice Calls

		Utilized Email				Not utilized Email			
		Convenience and speed		Privacy		Convenience and speed		Privacy	
		F	%	F	%	F	%	F	%
Students	Making phone calls to lecturers and administrators on distance learning process.	118	93.7	8	6.3	42	75	14	25
	Receiving phone calls from lecturers and administrators on distance learning process.	10	83.3	2	16.7	148	87.1	12	12.9
Lecturers	Making phone calls to students on distance learning process.	1	50	1	50	1	33	2	67
	Receiving phone calls from students on distance learning process.	3	67	1	33	0	0	1	100
Administrators	Making phone calls to students on distance learning process.	1	100	0	0	1	50	1	50
	Receiving phone calls from students on distance learning process.	2	100	0	0	1	100	0	0
Mean (n=190)		22.5	82.3	2	17.7	32.17	57.5	5	42.5

Findings in Table 4.7 indicate that attitude and perceptions on utilization of voice calls depended on convenience, speed and privacy. The findings indicate that mean of 82.3% of students, lecturers and administrators utilized voice calls by sending or receiving phone calls because of convenience and speed compared to mean of 17.7% for those who did not utilize. Also, findings indicate that 57.5% of students, lecturers and administrators did not utilize voice calls by sending or receiving phone calls because of convenience and speed to 42.5% who did not due to lack of privacy.

These findings imply that students, lecturers and administrators who utilized the service due to convenience had confidence in the service. However, privacy and high costs inhibited use of the service.

4.6 Utilization of Social Media in Enhancing Learner Support

In this section, lecturers, campus administrators and students provided their opinion on the extent to which social media was utilized in distance education. The information provided answers to the research question on: What is the utilization of social media in enhancing learner support in distance education. The following information was obtained:

4.6.1 Use of Social Media by Students, Lecturers and Administrators

Students, lecturers and administrators provided varied opinion on extent to which they used social media on their phones related to distance learning. The information obtained was classified as that which supports utilization and that which does not support utilization as illustrated in Table 4.8.

Table 4.8: Use of Social Media

		Utilized Email		Not utilized Email	
		F	%	F	%
Students	Socially interacting with administrators and lecturers on learning process of distance education.	27	14.8	155	85.2
Lecturers	Socially interacting with administrators and students on learning process of distance education.	1	20	4	80
Administrators	Socially interacting with students and lecturers on learning process of distance education.	2	67	1	33
Mean (n=190)		10	33.93	53.33	66.07

Findings in Table 4.8 indicate that majority of students, lecturers and administrators with mean of 33.93% who utilize social media as a learning support tool for distance learning

compared to mean of 66.07% of those who do not utilize social media for sending and receiving information related to distance learning.

Students, lecturers and administrators used the social media for social interactions on learning process of distance education. However, this was limited to the form of social media platform. For example, while some were on *facebook*, others were on *linkedin* and *whatsapp*. The problem was that the students, lecturers and administrators were not on common social media platform.

These findings in Table 4.8 imply that students, lecturers and administrators who used the service were members to common social media platform such as *facebook*. However, those who did not utilize the service were neither registered on any social media platform nor had personal reservations about joining such social media platforms. The justifications depended on convenience and privacy of the services as illustrated in Table 4.9.

4.6.2 Attitude and Perceptions of Use of Social Media

As the students, lecturers and administrators were aware of the use of social media in communication, their attitude towards utilizing the mobile phone service varied. Their attitude provided explanation on why some utilized the social media service while others did not as illustrated in Table 4.9.

Table 4.9: Attitude and perceptions on use of Social Media

		Utilized Email				Not utilized Email			
		Convenience and speed		Privacy		Convenience and speed		Privacy	
		F	%	F	%	F	%	F	%
Students	Socially interacting with administrators and lecturers on learning process of distance education.	19	70.4	8	29.6	17	11	138	89.0
Lecturers	Socially interacting with administrators and students on learning process of distance education.	1	100	0	0	1	33	3	67
Administrators	Socially interacting with students and lecturers on learning process of distance education.	1	50	1	50	0	0	1	100
Mean (n=190)		7	73.4	3	26.5	6	14.67	47.3	85.3

Findings in Table 4.9 indicate that attitude and perceptions on utilization of social media depended on convenience, speed and privacy. The findings indicate that mean of 73.4% of students, lecturers and administrators utilized social media by socially interacting through comments, photos and video because of convenience and speed compared to mean of 26.5% for those who utilize due to privacy. Also, findings indicate that 14.67% of students, lecturers and administrators did not utilize social media by socially interacting through comments, photos and video because of convenience and speed compared to mean of 85.3% for those who did not utilize due to privacy.

The students agreed that they use the social media through the phone to connect with other distance learners. On the other hand they disagreed that; they use the phone to see video lectures or notes, chat with lecturers on various course issues on social media through the phone, use the social media through the phone to post educative information and share ideas through social media on the phone. Around 43% use *Facebook*, at most 36% use *WhatsApp*, around 14% use *Twitter* and 7% use *LinkedIn*. At most 31% do not use any social media software, 24% use profiles, around 23% use blogs, 14% use Interactive multimedia online (IMM) and 8% use Social bookmarking. 89% used the social media

through the phone to connect with other distance learners, but rarely use the phone to network with your lecturers in distance education, share ideas through social media on your phone and use the social media through the phone to post educative information.

Students agree that mobile phone has made it possible for them to share ideas through social media with course mates and lecturers in distance education and have used the social media through the mobile phone to connect with other distance learners to share ideas. On the other hand, they disagree that; Mobile phone has helped them see video lectures and notes from the department, that Mobile phone has helped them to network with the lecturers in distance education, that they have been able to chat with lecturers on various course issues through the mobile phone on social media and that they have effectively used the social media through the mobile phone to post educative information.

From the analysis, around 80% use the social media through the phone to connect with DE students, but rarely use the phone to network with your lecturers in distance education, share ideas through social media on the phone and use the social media through the phone to post educative information.

From the analysis, lecturers agreed that mobile phone has made it possible for them to share ideas through social media with course mates and lecturers in distance education and have used the social media through the mobile phone to connect with other distance learners to share ideas. On the other hand, they disagree that; Mobile phone has helped them share video lectures and notes from the department, that Mobile phone has helped them to network with DE students in distance education, that they have been able to chat with DE students on various course issues through the mobile phone on social media and that they have effectively used the social media through the mobile phone to post educative information.

From the analysis, 67% of administrators agreed that they use the social media through the phone to connect with DE students. On the other hand they disagreed that; they use the phone to send video lectures or notes, chat with DE students on various course issues on social media through the phone, use the social media through the phone to post educative information and share ideas through social media on the phone.

From the analysis, 40% use *Facebook*, 40% use *WhatsApp* and 20% use *Twitter* and from the analysis, 20% use profiles, 20% use blogs, 20% use Interactive multimedia online

(IMM) and 40% use social bookmarking. From the analysis, 40% use social media for Chatting, 20% use Social networking and socialization and 20% claimed to use social media for photo and video sharing, 20%.

From the analysis, 67% use the social media through the phone to connect with DE students, but rarely use the phone to network with your lecturers in distance education, share ideas through social media on the phone and use the social media through the phone to post educative information have effectively used the social media through the mobile phone to post educative information.

From the analysis, most administrators agree that mobile phone has made it possible for you to share ideas through social media with course mates in distant education and have used the social media through the mobile phone to connect with other distance learners to share ideas. On the other hand, they disagree that; Mobile phone has helped them see video lectures and notes from the department, that Mobile phone has helped them to network with the lecturers in distance education, that they have been able to chat with lecturers on various course issues through the mobile phone on social media.

CHAPTER FIVE
SUMMARY OF FINDINGS, DISCUSSION, CONCLUSION AND
RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of research findings, discussion, conclusion and recommendations.

5.2 Summary of Findings

This section describes summarized findings of the study on utilization of SMS, email, voice calls and social media in enhancing learner support for distance education programmes.

5.2.1 Utilisation of SMS in Enhancing Learner Support

Findings on SMS indicate that majority of students (62%), lecturers (60%) and administrators (67%) did not utilize the SMS as a learning support tool for distance learning. On attitude and perceptions of utilizing SMS, findings indicate that 85.9% utilized SMS due to convenience and 14.1 due to privacy. Those who did not utilize SMS attributed their decisions to lack of convenience and privacy as represented by 48.9% and 51.1% respectively.

The significant findings indicate that students insufficiently utilized SMS because they believed that lecturers and administrators were key persons to provide them with information in Distance Learning. In this case, they were recipients hence placed to receive information. Comparatively, lecturers did not sufficiently send SMS regarding important dates and venues to DE students; send results, tutorial schedules and study guides to DE students. The lecturers did not use SMS to provide research supervision meeting information, information on face-to-face session dates, information on missing marks and reminders of deadlines for submitting assignments to DE students. This was associated to their attitudes and perceptions about the convenience and privacy of the SMS service.

Findings on utilization of SMS also indicate that administrators insufficiently send SMS regarding important dates and venues, examination results, tutorial schedules and study guides for various courses to DE students. The administrators did not utilize the SMS fully through providing information regarding research supervision meeting, face-to-face

session dates missing marks and reminders of deadlines for submitting assignments. This was associated to their attitudes and perceptions about the convenience and privacy of the SMS service.

Therefore, low utilization of SMS was due to lack of promptness in receiving SMS by students on important dates via mobile phone which has been ineffective due to network problem their areas. Secondly, as mobile phones used by lecturers were personal, privacy limited the utilization of the SMS. Third, the administrators relied on the university website, newspapers and notices to provide information to students.

5.2.2 Utilisation of E-mail in Enhancing Learner Support

Findings on utilization of email indicate that majority of students, lecturers and administrators with mean of 66.68% utilized email as a learning support tool for distance learning compared to mean of 33.36% of unutilized email inform of sending and receiving information related to distance learning. This was attributed to convenience and speed of transmission as supported by mean of 84% of students, lecturers and administrators. This is compared to mean of 16% for those who did not utilize because of privacy, inaccessibility to the service due to network coverage and inability to use email applications.

The significant findings on utilization of email indicate that high utilization of email among students is attributed to their receiving of personalized messages from the lecturers. However, students who did not utilize the system considered the service as inconvenient and lack privacy, slow transmission and low internet coverage.

In addition, high utilization of email by lecturers was attributed to convenience of sending large information such as course materials to many students in a single click. This was also supported by administrators who sent other learner support information such as fee statements, course requirements and exam information to individuals. However, there were no reservations from lecturers and administrators on utilization of email.

5.2.3 Utilisation of Voice Calls in Enhancing Learner Support

Findings on utilization of voice calls indicate that majority of students, lecturers and administrators with mean of 50.7% did not utilize voice calls as a learning support tool for distance learning compared to mean of 49.3% of those who utilized voice calls for sending and receiving information related to distance learning. This was attributed to type of

information to be transmitted. Students sought clarifications; lecturers used voice calls for follow-ups and emergency cases while administrators made use voice calls for urgent issues.

Influencing the decision on use of voice calls was privacy, convenience and speed. The findings on voice calls indicate that mean of 82.3% of students, lecturers and administrators utilized voice calls by sending or receiving phone calls because of convenience and speed compared to mean of 17.7% for those who did not utilize. Also, findings indicate that 57.5% of students, lecturers and administrators did not utilize voice calls by sending or receiving phone calls because of convenience and speed to 42.5% who did not due to lack of privacy.

5.2.4 Utilisation of Social Media in Enhancing Learner Support

Findings on utilization of social media indicate that majority of students, lecturers and administrators with mean of 33.93% who utilize social media as a learning support tool for distance learning compared to mean of 66.07% of those who do not utilize social media for sending and receiving information related to distance learning.

Students, lecturers and administrators used the social media for social interactions on learning process of distance education. However, this was limited to the form of social media platform. For example, while some were on *facebook*, others were on *linkedin* and *whatsapp*. The problem was that the students, lecturers and administrators were not on common social media platform.

These findings on social media indicate that students, lecturers and administrators who used the service were members to common social media platform such as *facebook*. However, those who did not utilize the service were neither registered on any social media platform nor had personal reservations about joining such social media platforms. These findings imply that students, lecturers and administrators agreed that mobile phone has made it possible for them to share ideas through social media due to convenience and speed. However, not all information was shared to all people in the network due to privacy and incompatibility of different social media platforms they belonged to.

5.3 Discussion

Findings illustrate that students, lecturers and administrators use mobile phones for communication in learning process through support tools such as SMS, Email, Voice Calls and social media. Mobile phone has support tools such as SMS, Email, Voice Calls and social media. These tools have been found to support learners although not effectively. These findings are supported by findings of Carranza (2009); Simpson (2002); Tait (2000); Thorpe (2002) who indicate that learner support services are the resources that learners can access in order to carry out the learning processes. In this case, SMS, Email, Voice Calls and social media have helped some learners to share learning materials, inquire on timetables, exam results and assignments.

Findings of this study indicate that some students, lecturers and administrators use SMS, Email, Voice Calls and social media. This study has found that this is attributed to convenience and positive attitude and perceptions. These findings are supported by Koole (2009) who noted that the strength of using mobile technologies is that they offer learning that is intimate, spontaneous, pervasive and versatile. Mobile learning provides an enhanced cognitive environment in which distance learners can interact with their instructors, their course materials, their physical and the virtual environment (Koole, 2009).

The need for enhancing learning also is supported by Sharples (2005) who argues that mobile learning is more strongly mediated by its context than the content of the study material. This is where attitude and perceptions determine the utilization frequency for SMS, Email, Voice Calls and social media.

Students and lecturers who utilized the SMS, Email, Voice Calls and social media considered the services to help them in realizing part of the learning objectives. These findings are supported by Kukulsa-Hulme and Traxler (2005) who noted that the most significant attribute of mobile technologies, is their ability to support situated learning. In this context, students are able to explore, share and interact with each other as they try to learn together.

Those who used the services considered it convenient in relation to costs and location. Mobile learning, by nature tends to ascribe to the student-centred approach because of its ability to connect people wherever they are. This pedagogical approach assumes that

students come into the learning environment with their own perceptual framework and, therefore, they need to be encouraged to construct their own meaning by talking and listening to each other, through writing and reading as well as reflecting on content. When students are in control of their learning, they are able to link up with other students in collaborative learning networks. These findings are supported by Laurillard (2007) and Kreijen, 2003 who indicated that students are more likely to be motivated to share their work with each other as well as to augment their conceptual understanding with others. This is illustrated in the use of email and social media as part of group dynamics in learning.

5.3.1 Utilisation of SMS in enhancing learner support

Findings on SMS indicate that majority of students, lecturers and administrators did not utilize the SMS as a learning support tool for distance learning. The use of SMS is not convenient and compromises privacy of the users. However, some students who utilized the service benefited from making inquiries on their personal information such as exam results, fees and clarification on learning content.

As this service was not fully utilized by students, the benefits were missed by many students. Kajumbula (2009) found that students required SMS to get information on results, information on tests, exams: time and venues, and information on course works. Others' included course units to be covered, timetables, fees updates, answers to questions on subject matter and new textbooks. This indicates that many students who do not utilize the SMS are not enhancing distance learning through use of SMS.

In anticipation to this, Kadirire (2005) showed that SMS can be successfully used in group discussions, be it in schools or business. It preserves anonymity, which allows people to articulate their views without fear of being criticized and is relatively easy to use. This indicates that those who do not utilize this system have not been informed of the advantages and process to learning. It also indicates that the institution has not made SMS usage as part of the communication strategy.

Thus, Caudill (2007) proposed three possible models of information exchange via SMS, one that involves the educational institution sending out information about their schedule, one in which the student requests information as they need it, and third where the student

is involved interactively with the learning environment. This seems to support the full utilization of this service among students, lecturers and administrators.

Research by Traxler and Riordan (2003) indicates that SMS is very effective, especially if the communication is short, personalized, and focused. This explains why learning, modules, course outlines and other large documents could not be used by lecturers in utilizing this service. This indicates that information on change of timetables and venues or fees was suitable, but, to few people.

5.3.2 Utilisation of Email in enhancing learner support

Findings on utilization of email indicate that majority of students, lecturers and administrators utilized email as a learning support tool for distance learning. The findings indicate that students, lecturers and administrators utilized email by sending or receiving because of convenience and speed compared. However, privacy limited use of email to some of the students, lecturers and administrators.

These findings indicate that those who utilized the service considered it as effective distance learning tool due to efficiency, convenience, and cost. However, those who did not utilize the service considered it to be ineffective due to network coverage, privacy and use of email tools. These findings are supported by Alexander (2002) who indicated that email content is course-related information and most is used only for coursework assignments instead of for more purposeful academic communications (encouragement of collaborative work, discussion of individual performance. Thus, those who utilized it were prompted only when there is an assignment or course materials.

5.3.3 Utilisation of Voice Calls in enhancing learner support

Findings on utilization of voice calls indicate that majority of students, lecturers and administrators did not utilize voice calls as a learning support tool for distance learning. Students, lecturers and administrators utilized voice calls by sending or receiving phone calls because of convenience and speed. Lack of network coverage, privacy and high costs limited use of voice calls to some students, lecturers and administrators.

These findings are supported by Marley (2012) who observed that there is difficulty in reaching students by phone and the lack of student responses to phone-call attempts. Those who do not utilize the service based on attitude in perception expressed in form of privacy limits the usage of the service. LaPointe and Reisetter (2008) say that the ways in which

teachers choose to communicate vary based on the objectives of the communication. Privacy is manifested in the context of the information intended and the target. Where privacy is breached, this service is not widely used. This explains why lecturers consider phones to be personal hence not useful for everyone as the ones used are not provided by the institution.

5.3.4 Utilisation of Social Media in enhancing learner support

Findings on utilization of social media indicate that majority of students, lecturers and administrators utilize social media as a learning support tool for distance learning. They are part of millions of people using platform such as *Facebook*. These findings are supported by Alexa (2011) who observes that *Facebook* is now the second most frequented site (just after Google) in North America (Alexa, 2011) and claims over 750 million members. The justification for those utilizing social media is based on Smith, Salaway, and Caruso, (2009) argument that many educators believe that these tools offer new educational affordances and avenues for students to interact with each other and with their teachers or tutors.

However, this has not been utilized effectively. Utilization of social media was limited to the form of social media platform. For example, while some were on *facebook*, others were on *linkedin* and *whatsapp*. The problem was that the students, lecturers and administrators were not on common social media platform.

This shows that whilst the pervasiveness of these technological developments has reached unprecedented levels, critics argue that the student learning experience is still not as effective as conventional face-to-face delivery. In this regard, surveys of distance learning courses reveal that there is often a lack of social interaction attributed to this method of delivery, which tends to leave learners feeling isolated due to a lack of engagement, direction, guidance and support by the tutor.

5.4 Conclusion

Most students have a smartphone and have installed applications that enable them to access the internet, but they ended up using their phones for social network and not learning purposes. Despite the fact that the phones are able to check and send emails, majority of those interviewed preferred using the computer over the phone. Most students and lecturers did not communicate over the phone in case of clarity on a certain subject even the sending of results, missing marks and such.

Most administrators sent SMS regarding important dates and venues to DE students but rarely and did not send results through SMS, do not send SMS on tutorial schedules and never sent SMS giving reminders about deadlines for submitting assignments to DE students. Most lecturers disagreed that Mobile phone has enabled them to send course outlines and module notes from lecturers promptly through SMS. The most frequent activity on the phone was making phone calls and sending SMSes, the other part mostly was on social networking. Most students agreed that mobile phone has made it possible to share ideas through social media with course mates and lecturers in distance education and have used the social media through the mobile phone to connect with other distance learners to share ideas. There was a strong disagreement that the prompt receiving of SMS on important dates via mobile phone had been ineffective due to network problem in an area.

These findings indicate that mobile phone is a learner support tool that is not fully used in distance education learning. This is due to attitudes and perceptions of students, lecturers and administrators despite their possession of the phones that support SMS, Email, voice calls and social media. This study supports the Davis's (1986) Technology Acceptance Model (TAM), which makes use of the Theory of Reasoned Action (TRA). TRA postulates that an individual's attitude toward behavior is influenced by his/her beliefs. Thus, it is a limitation clearly found by this study. However, as the distance learning relies on technology it is improper to ignore the usefulness of mobile phones in enhancing distance learning. Otherwise, exploring best practices in distance learning is curtailed.

5.5 Recommendations

From the findings of the study, the following recommendations have been derived in order to improve communication between students and course providers in distance education:

1. The study recommends that administration of Mount Kenya University and other higher learning institutions in conjunction with policy makers and researchers should develop communication policy for distance education learning. The policy should integrate mobile phones in distance learning process. Tools to be used include SMS, Email, Voice Calls and Social Media.
2. The learner support system using mobile phones should have platforms. The administration of Mount Kenya University and other higher learning institutions in conjunction with policy makers and researchers should develop communication platforms such as registering SMS center that synchronization to all mobile service providers in Kenya.
3. The universities and colleges not utilising mobile phones should develop common email center that does not compromise privacy of the users. The service should be of high speed and able to support large data exchange.
4. The administration of Mount Kenya University and other higher learning institutions underutilizing mobile phones should establish common mobile numbers that are accessible to lecturers and administrators. The use of private lines should be discouraged but public mobile phones in custody of administrators to be used for purposes of documenting information exchange and monitoring feedbacks.
5. The universities should establish common social media network by registering on leading social network such as *facebook* or *google+*. The common social platform center should be administratively controlled to monitor the exchange of information for purposes of learning and support.
6. The knowledge and scientific understanding accruing from this study should be considered by policy makers when laying down guidelines for learner support systems in distance education programmes in Kenya and Globally.
7. For purpose of advocacy, the institution of higher learning underutilizing mobile phones should involve all concerned parties through awareness, training and upgrades. In this case, students, lecturers and administrators should be involved in problem definition, design and planning of the communication strategy, implementation monitoring and evaluation.

5.6 Suggestions for Further Research

The following recommendations for further study are made:

1. This study to be replicated in finding out students, lecturers and administrators readiness for pedagogical usage of mobile phone technology in enhancing learner support systems in distance education programs.
2. A study can also be carried out to explore to which extent this readiness is affected by the lecturers, students and administrators acceptance of mobile phone technology in enhancing learner support systems in distance education programmes.
3. A researcher can also investigate challenges faced in implementing mobile phone services for learner support system in distance education programme

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APPENDICES

Appendix A: Introductory Letter

TO WHOM IT MAY CONCERN

REQUEST FOR PERMISSION TO CONDUCT A RESEARCH

The researcher is a student enrolled with the University of Nairobi and presently conducting a study whose purpose is to investigate the utilization of mobile phone in enhancing learner support services in distance education programmes in Mount Kenya University, Kenya as part of the requirement for the award of a degree in master of Distance Education.

The researcher promises confidentiality on the information that will be provided by the respondents.

Thanking you in anticipation for a positive response.

Yours Faithfully

Stella Wanja

APPENDIX B: QUESTIONNAIRE FOR STUDENTS IN DISTANCE EDUCATION

The purpose of this instrument is to enable the researcher establish the utilization of mobile phone in enhancing learner support services in distance education programmes in Mount Kenya University. Kindly give your honest responses.

Section A: Information

Please answer the following questions by either ticking (✓) or filling the spaces provided where applicable.

1. What is your gender? Male Female

2. Do you own a hand phone? Yes No

If yes what is the model of your phone.....

3. Does your phone have applications which enable you to access the Internet?

Yes No

4. What common activities do you use your phone for in distance education and learning?

Making phone calls

Sending SMSes

Surfing the Internet

Sending e-mails

Checking e-mails

Use MP3 player to listen to course lecturer

Use memory card for storage of information received from lecturers

Social networking with course mates

All the above ()

Others (specify.....)

Section B: Utilization of text messages in enhancing learner support in distance

Education

For each of the following statements seeking to determine your regularity of receiving SMS (text message) on the type of information shown from your lecturers or the Department, give your responses by ticking in the correct box after each question their responses using the following scale: Never (**N**), Always (**A**), Sometimes (**S**), Rarely (**R**), and Very Frequently (**VF**).

	N	A	S	R	VF
1. You receive SMS regarding important dates and venues from your lecturers or department?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. You are sent results through SMS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. You receive SMS on tutorial schedules	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. You receive SMS regarding study guides for various courses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. You receive SMS regarding meeting times with research supervisors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. You receive SMS regarding face-to-face session dates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. You receive SMS regarding missing marks from your lecturers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. You receive SMS giving reminders about deadlines for submitting assignments from your lecturers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

In this section the researcher is interested in getting your attitude and perceptions on the utilization of SMS (text message) in enhancing learner support in distance education. Use the scale of “Strongly Agree” to Strongly Disagree” to tick your appropriate response to each of the statements. Strongly Agree (**SA**), Agree (**A**), Undecided (**UN**), Disagree (**D**) or Strongly Disagree (**SD**).

		Your level of agreement				
		SA	A	UN	D	SD
1	Mobile phone has enabled you to receive course outlines and module notes from lecturers promptly through SMS					
2	Through your phone lecturers have given instant feedback on your queries through SMS					
3	Through your phone course materials are able to help you in your studies through sharing of notes and ideas through SMS					
4	You feel comfortable to study by receiving important information via SMS through your mobile phone					
5	Prompt receiving of SMS on important dates via your mobile phone has been ineffective due to network problem in your area					
6	Mobile phone has helped you to receive personalized messages from your lecturers					
7	Mobile phone has provided a means for quicker receiving of examination results through SMS					
8	Mobile phone has helped you receive SMSes on tutorial schedules from your lecturers					
9	Mobile phone has enabled you receive SMSes regarding meeting times with research supervisors					
10	Mobile phone has made it possible for you to receive SMSes regarding face-to-face session dates					
11	Mobile phone has helped you to receive SMSes regarding missing marks from your lecturers					
12	Mobile phone has helped you to receive SMSes reminding you of deadlines for submitting assignments from your lecturers					

Section C: Utilization of email in enhancing learner support in distance education

For each of the following statements seeking to determine your regularity of receiving e-mail on the type of information shown from your lecturers or the Department, give your responses by ticking in the correct box after each question their responses using the following scale: Never (**N**), Always (**A**), Sometimes (**S**), Rarely (**R**), and Very Frequently (**VF**).

	N	A	S	R	VF
1. You receive e-mail on your phone regarding important dates and venues from your lecturers or department	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. You receive examination results through e-mail on your phone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. You receive e-mail on tutorial schedules through your phone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. You receive e-mail on your phone regarding study guides for various courses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. You receive e-mail on your phone regarding meeting times with research supervisors?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. You receive email regarding meeting times with research supervisors?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. You receive email regarding face-to-face session dates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. You receive email regarding missing marks from your lecturers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. You receive email giving reminders about deadlines for submitting assignments from your lecturers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

In this section the researcher is interested in getting your attitude and perceptions on the utilization of email in enhancing learner support in distance education. Use the scale of “Strongly Agree” to Strongly Disagree” to tick your appropriate response to each of the statements. Strongly Agree (**SA**-scored 5), Agree (**A**-scored 4), Undecided (**UN**-scored 3), Disagree (**D**-scored 2) or Strongly Disagree (**SD**-scored 1).

		Your level of agreement				
		SA	A	UN	D	SD
1	e-mail has helped you to receive course outlines and module notes from lecturers promptly					
2	e-mail wasted your time because it takes a lot of time to load					
3	Your course mates are able to help you through the e-mail sharing of notes and ideas					
4	You feel comfortable to study by receiving important information to the course via e-mail					
5	e-mail learning has given you confidence that you can succeed in the distance education programmes					
6	e-mail has helped you to receive personalized messages from your lecturers					
7	e-mail has enabled you to receive and send take away tests and assignments to lecturers					
8	e-mail has provided a means for quicker receiving of feedback from your course instructors					

9. Do you prefer using Internet for sending and receiving e-mail by using computer or Mobile Phone? Computer Mobile phone

Section D: Utilization of voice call in enhancing learner support in distance education

For each of the following statements seeking to determine your regularity of receiving phone call on the type of information shown from your lecturers or the Department, give your responses by ticking in the correct box after each question their responses using the following scale: Never (**N**), Always (**A**), Sometimes (**S**), Rarely (**R**), and Very Frequently (**VF**).

	N	A	S	R	VF
1. You receive phone calls from the department regarding important dates and venues from your lecturers or department	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. You receive phone calls from the department informing you of your examination results	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. You receive phone calls from your lecturers informing you of tutorial schedules	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. You receive phone calls from your lecturers regarding study guides for various courses from your lecturers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. You phone calls regarding meeting times with research supervisors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. You receive phone call regarding face-to-face session dates with the lecturers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. You receive phone call regarding missing marks from your lecturers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. You receive phone call giving reminders about deadlines for submitting assignments from your lecturers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

In this section the researcher is interested in getting your attitude and perceptions on the utilization of using phone call in enhancing learner support in distance education. Use the scale of “Strongly Agree” to Strongly Disagree” to tick your appropriate response to each of the statements. Strongly Agree (**SA**), Agree (**A**), Undecided (**UN**), Disagree (**D**) or Strongly Disagree (**SD**).

		Your level of agreement				
		SA	A	UN	D	SD
1	Mobile phone has enabled you to receive calls on course outlines and module notes from lecturers					
2	Through your mobile phone, lecturers have called you to give feedback on your queries					
3	Through your mobile phone, course mates are able to call and share ideas					
4	Receiving of important dates through phone calls has not been effective due to network problem in your area					
5	Mobile phone has helped you to receive personalized calls from your lecturers					
6	Mobile phone has provided a means for quicker receiving of calls on examination results					
7	Mobile phone has helped you receive calls from lecturers regarding tutorial schedules					
8	Mobile phone has enabled you receive calls regarding meeting times with your research supervisors					
9	Mobile phone has made it possible for you to receive calls regarding face-to-face session dates					
10	Mobile phone has helped you to receive calls regarding missing marks from your lecturers					
11	Mobile phone has helped you to receive calls reminding you of deadlines for submitting assignments from your lecturers					

Section E: Utilization of social media in enhancing learner support in distance

Education

In this section the researcher is interested in getting information about your use of social media (*Facebook, Twitter, WhatsApp*) among others in interacting with your lecturers and course mates and also seeks your attitude and perceptions on the utilization of social media through your phone as a learner support in distance education.

1. Which is your most popular social network avenue for distance learning?

- Facebook Twitter WhatsApp BBM MXit MySpace Too
 LinkedIn None

2. Which social media software functions do you use on your phone?

- Profiles Wikis Blogs Social bookmarking Interactive multimedia online (IMM) None

3. What do you prefer using the social media for?

- Social networking and socialization
 Photo and video sharing
 Notes sharing
 Chatting
 Archive received and sent information
 Wall posting
 Tagging
 Nothing

Below are some of task you use social media through your phone. For each of the statements seeking to determine your regularity of using social media on the activities shown, give your responses by ticking in the correct box after each question their responses using the following scale: Never (**N**), Always (**A**), Sometimes (**S**), Rarely (**R**), and Very Frequently (**VF**).

- | | N | A | S | R | VF |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1. You use your phone to network with your lecturers in distance education | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. You use your phone to see video lectures or notes | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. You share ideas through social media on your | | | | | |

- phone?
4. You chat with lecturers on various course issues on social media through your phone?
5. You use the social media through your phone to connect with other distance learners
6. You use the social media through your phone to post educative information

What is your attitude and perceptions on the utilization of social media through your phone as a learner support in distance education? Use the scale of “Strongly Agree” to Strongly Disagree” to tick your appropriate response to each of the statements. Strongly Agree (**SA**), Agree (**A**), Undecided (**UN**), Disagree (**D**) or Strongly Disagree (**SD**).

	Your level of agreement				
	SA	A	UN	D	SD
1. Mobile phone has helped you to network with your lecturers in distance education					
2. Mobile phone has helped you see video lectures and notes from the department					
3. Mobile phone has made it possible for you to share ideas through social media with course mates and lecturers in distance education					
4. You have been able to chat with lecturers on various course issues through your mobile phone on social media					
5. You have used the social media through your mobile phone to connect with other distance learners to share ideas					
6. You have effectively used the social media through your mobile phone to post educative information					

APPENDIX C: QUESTIONNAIRE FOR LECTURERS IN DISTANCE EDUCATION PROGRAMME

The purpose of this instrument is to enable the researcher establish the utilization of mobile phone in enhancing learner support services in distance education programmes in Mount Kenya University. Kindly give your honest responses.

Section A: Utilization of text messages in enhancing learner support in distance

Education

For each of the following statements seeking to determine your regularity of sending SMS (text message) to your distance education learners on the type of information shown, give your responses by ticking in the correct box after each question their responses using the following scale: Never (**N**), Always (**A**), Sometimes (**S**), Rarely (**R**), and Very Frequently (**VF**).

	N	A	S	R	VF
1. You send SMS on important dates and venues to DE students	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. You send students in DE results through SMS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Your send SMS to DE students on tutorial schedules	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. You send SMS on study guides for various courses to DE students	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. You send SMS regarding research supervision meeting to DE students	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. You send SMS regarding face-to-face session dates to DE students	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. You send SMS to DE students with missing marks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. You send SMS to DE students to remind them of deadlines for submitting assignments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

In this section the researcher is interested in getting your attitude and perceptions on the utilization of using SMS (text message) in enhancing learner support in distance education. Use the scale of “Strongly Agree” to Strongly Disagree” to tick your appropriate response to each of the statements. Strongly Agree (**SA**), Agree (**A**), Undecided (**UN**), Disagree (**D**) or Strongly Disagree (**SD**).

		Your level of agreement				
		SA	A	UN	D	SD
1	Mobile phone has enabled you to send SMS to DE students on course outlines and module notes					
2	Mobile phone have enabled you to provide instant feedback to queries of students in DE					
3	You feel comfortable sending important information via SMS through your phone to DE students					
4	Prompt receptions of SMS sent to DE students in some areas has been ineffective due to network problem					
5	Mobile phone has helped you send personalized messages to DE students					
6	Mobile phone has provided a means for quicker sending of examination results through SMS to DE students					
7	Mobile phone has helped you to send SMSes on tutorial schedules to DE students					
8	Mobile phone has enabled you to send SMSes regarding meeting times with DE students you are supervising in doing research					
9	Mobile phone has made it possible for you to send SMSes regarding face-to-face session dates to DE students					
10	Mobile phone has helped you to send SMSes regarding missing marks DE students					
11	Mobile phone has helped you to send SMSes reminding DE students of deadlines for submitting assignments					

Section B: Utilization of using email in enhancing learner support in distance education

For each of the following statements seeking to determine your regularity of sending e-DE students mail on the type of information shown, give your responses by ticking in the correct box after each question their responses using the following scale: Never (**N**), Always (**A**), Sometimes (**S**), Rarely (**R**), and Very Frequently (**VF**).

	N	A	S	R	VF
1. You send DE students email regarding important dates and venues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. You send DE students examination results through email	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. You send DE students email on tutorial schedules through your phone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. You send DE students email regarding study guides for various courses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. You send DE students email regarding meeting times on research supervision	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. You send DE students email regarding face-to-face session dates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. You send DE students email regarding missing marks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. You send DE students email to remind them about deadlines for submitting assignments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

In this section the researcher is interested in getting your attitude and perceptions on the utilization of email in enhancing learner support in distance education. Use the scale of “Strongly Agree” to Strongly Disagree” to tick your appropriate response to each of the statements. Strongly Agree (**SA**-scored 5), Agree (**A**-scored 4), Undecided (**UN**-scored 3), Disagree (**D**-scored 2) or Strongly Disagree (**SD**-scored 1).

		Your level of agreement				
		SA	A	UN	D	SD
1	e-mail has helped you send course outlines and module notes to DE students					
2	Sending e-mail to DE students wastes your time because it takes a lot of time to write					
3	You feel comfortable sending DE students important information to the course via e-mail					
4	e-mail learning has given DE students confidence that they can succeed in the distance education programmes					
5	e-mail has helped DE students to receive personalized messages from you					
6	e-mail has enabled you to receive and send take away tests and assignments to DE students					
7	e-mail has provided a means for quicker sending and receiving of feedback from your DE students					

8. Do you prefer using Internet for sending and receiving e-mail to DE students by using computer or mobile phone? Computer Mobile phone

Section C: Utilization of voice call in enhancing learner support in distance education

For each of the following statements seeking to determine your regularity of making phone call to DE students on the type of information shown, give your responses by ticking in the correct box after each question their responses using the following scale: Never (**N**), Always (**A**), Sometimes (**S**), Rarely (**R**), and Very Frequently (**VF**).

	N	A	S	R	VF
1. You make phone calls to DE students to inform them of important dates and venues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. You make phone calls to DE students to inform them about their examination results	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. You make phone calls to DE students to inform them of tutorial schedules	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. You make phone calls to DE students to inform about study guides for various courses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. You make phone calls to DE students to inform them of meeting times for research supervision	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. You make phone calls to DE students to inform them of face-to-face session dates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. You make phone calls to DE students to inform them of missing marks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. You make phone calls to DE students to remind them about deadlines for submitting assignments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

In this section the researcher is interested in getting your attitude and perceptions on the utilization of phone calls in enhancing learner support in distance education. Use the scale of “Strongly Agree” to Strongly Disagree” to tick your appropriate response to each of the statements. Strongly Agree (SA), Agree (A), Undecided (UN), Disagree (D) or Strongly Disagree (SD).

		Your level of agreement				
		SA	A	UN	D	SD
1	Mobile phone has enabled you to make calls to DE students to inform them of course outlines and module notes					
2	Mobile phone has enabled you to call DE students to give feedback on their queries					
3	Network problems in some areas has impeded you from reaching some DE students on phone to pass important information					
4	Mobile phone has helped you make personalized calls to DE students					
5	Mobile phone has provided a means for quicker making of calls to DE students to give feedback on examination results					
6	Mobile phone has helped you to make calls to DE students to inform them of tutorial schedules					
7	Mobile phone has enabled you make calls to DE students regarding meeting times for research supervision					
8	Mobile phone has made it possible for you to call DE students to inform them of face-to-face session dates					
9	Mobile phone has helped you to call DE student and inform them of their missing marks					
10	Mobile phone has helped you to make calls to DE students to remind them of deadlines for submitting assignments					

Section D: Utilization of social media in enhancing learner support in distance

Education

In this section the researcher is interested in getting information about your use of social media (*Facebook, Twitter, WhatsApp*) among others in interacting with your DE students and also seeks your attitude and perceptions on the utilization of social media through your phone as a learner support in distance education.

1. Which is your most popular social network avenue for interacting with students in distance education?

- Facebook Twitter WhatsApp BBM MXit MySpace Too
LinkedIn None

2. Which social media software functions do you use on your phone?

- Profiles Wikis Blogs Social bookmarking Interactive multimedia online (IMM) None

3. What do you prefer using the social media for?

- Social networking and socialization
Photo and video sharing
Notes sharing
Chatting
Archive received and sent information
Wall posting
Tagging
Nothing

Below are some of task you use social media through your phone. For each of the statements seeking to determine your regularity of using social media on the activities shown, give your responses by ticking in the correct box after each question their responses using the following scale: Never (**N**), Always (**A**), Sometimes (**S**), Rarely (**R**), and Very Frequently (**VF**).

- | | N | A | S | R | VF |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1. You use your phone to network with your DE students | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. You use your phone to post video lectures and notes | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. You share ideas with DE students through social media on your phone? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. You chat with DE students on various course issues on social media through your phone? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. You use the social media through your phone to connect with other lectures in distance education | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. You use the social media through your phone to post educative information to DE students | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

What is your attitude and perceptions on the utilization of social media through your phone as a learner support in distance education? Use the scale of “Strongly Agree” to Strongly Disagree” to tick your appropriate response to each of the statements. Strongly Agree (**SA**), Agree (**A**), Undecided (**UN**), Disagree (**D**) or Strongly Disagree (**SD**).

	Your level of agreement				
	SA	A	UN	D	SD
1. Mobile phone has helped you to network with DE students					
2. Mobile phone has helped you post video lectures and notes to DE students					
3. Mobile phone has made it possible for you to share ideas with DE students through social media					
4. You have been able to chat with DE students on various course issues through your mobile phone on social media					
5. You have used the social media through your mobile phone to connect with other lecturers in distance education programmes to share ideas					
6. You have effectively used the social media through your mobile phone to post educative information to DE students					

APPENDIX D: QUESTIONNAIRE FOR ADMINISTRATORS IN DISTANCE EDUCATION PROGRAMME

The purpose of this instrument is to enable the researcher establish the utilization of mobile phone in enhancing learner support services in distance education programmes in Mount Kenya University. Kindly give your honest responses.

Section A: Utilization of text messages in enhancing learner support in distance education

For each of the following statements seeking to determine your regularity of sending SMS (text message) to distance education learners on the type of information shown, give your responses by ticking in the correct box after each question their responses using the following scale: Never (**N**), Always (**A**), Sometimes (**S**), Rarely (**R**), and Very Frequently (**VF**).

	N	A	S	R	VF
1. You send SMS on important dates and venues to DE students	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. You send students in DE results through SMS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Your send SMS to DE students on tutorial schedules	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. You send SMS on study guides for various courses to DE students	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. You send SMS regarding research supervision meeting to DE students	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. You send SMS regarding face-to-face session dates to DE students	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. You send SMS to DE students with missing marks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. You send SMS to DE students to remind them of deadlines for submitting assignments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

In this section the researcher is interested in getting your attitude and perceptions on the utilization of SMS (text message) in enhancing learner support in distance education. Use the scale of “Strongly Agree” to Strongly Disagree” to tick your appropriate response to each of the statements. Strongly Agree (**SA**), Agree (**A**), Undecided (**UN**), Disagree (**D**) or Strongly Disagree (**SD**).

		Your level of agreement				
		SA	A	UN	D	SD
1	Mobile phone has enabled you to send SMS to DE students on course outlines and module notes					
2	Mobile phone has enabled you to provide instant feedback to DE student queries from the department					
3	You feel comfortable sending important information via SMS through your phone to DE students					
4	Prompt receptions of SMS sent from the department to DE students in some areas has been ineffective due to network problem					
5	Mobile phone has helped you send personalized messages from the department to DE students					
6	Mobile phone has provided a means for quicker sending of examination results through SMS to DE students					
7	Mobile phone has helped you to send SMSes on tutorial schedules to DE students					
8	Mobile phone has enabled you to send SMSes regarding meeting times with research supervisors to DE students in your department					
9	Mobile phone has made it possible for you to send SMSes regarding face-to-face session dates to DE students					
10	Mobile phone has helped you to send SMSes regarding missing marks to DE students in your department					
11	Mobile phone has helped you to send SMSes reminding DE students of deadlines for submitting assignments to the respective lecturers					

Section B: Utilization of email in enhancing learner support in distance education

For each of the following statements seeking to determine your regularity of sending e-mail to DE students’ on the type of information shown, give your responses by ticking in the correct box after each question their responses using the following scale: Never (**N**), Always (**A**), Sometimes (**S**), Rarely (**R**), and Very Frequently (**VF**).

	N	A	S	R	VF
1. You send DE students e-mail regarding important dates and venues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. You send DE students examination results through e-mail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. You send DE students e-mail on tutorial schedules through your phone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. You send DE students e-mail regarding study guides for various courses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. You send DE students e-mail regarding meeting times on research supervision	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. You send DE students e-mail regarding face-to-face session dates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. You send DE students e-mail regarding missing marks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. You send DE students e-mail to remind them about deadlines for submitting assignments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

In this section the researcher is interested in getting your attitude and perceptions on the utilization of email in enhancing learner support in distance education. Use the scale of “Strongly Agree” to Strongly Disagree” to tick your appropriate response to each of the statements. Strongly Agree (**SA**-scored 5), Agree (**A**-scored 4), Undecided (**UN**-scored 3), Disagree (**D**-scored 2) or Strongly Disagree (**SD**-scored 1).

		Your level of agreement				
		SA	A	UN	D	SD
1	e-mail has helped you send course outlines and module notes developed by lecturers to DE students					
2	Sending e-mail to DE students wastes your time because it takes a lot of time to write to all of them					
3	You feel comfortable sending DE students important information from the department via e-mail					
4	e-mail learning has given DE students confidence that they can succeed in the distance education programmes					
5	e-mail has helped DE students to receive personalized messages from the department					
6	e-mail has provided a means for quicker sending and receiving of feedback from your DE students					

7. Do you prefer using Internet for sending and receiving e-mail to DE students by using computer or mobile phone? Computer Mobile phone

Section C: Utilization of voice call in enhancing learner support in distance education

For each of the following statements seeking to determine your regularity of making phone call to DE students on the type of information shown, give your responses by ticking in the correct box after each question their responses using the following scale: Never (**N**), Always (**A**), Sometimes (**S**), Rarely (**R**), and Very Frequently (**VF**).

	N	A	S	R	VF
1. You make phone calls to DE students to inform them of important dates and venues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. You make phone calls to DE students to inform them about their examination results	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. You make phone calls to DE students to inform them of tutorial schedules	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. You make phone calls to DE students to inform about study guides for various courses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. You make phone calls to DE students to inform them of meeting times with their research supervisors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. You make phone calls to DE students to inform them of face-to-face session dates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. You make phone calls to DE students to inform them of their missing marks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. You make phone calls to DE students to remind them about deadlines for submitting assignments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

In this section the researcher is interested in getting your attitude and perceptions on the utilization of phone calls in enhancing learner support in distance education. Use the scale of “Strongly Agree” to Strongly Disagree” to tick your appropriate response to each of the statements. Strongly Agree (**SA**), Agree (**A**), Undecided (**UN**), Disagree (**D**) or Strongly Disagree (**SD**).

		Your level of agreement				
		SA	A	UN	D	SD
1	Mobile phone has enabled you to make calls to DE students to inform them of course outlines and module notes					
2	Mobile phone has enabled you to call DE students to give feedback on their queries					
3	Network problems in some areas has impeded you from reaching some DE students on phone to pass important information					
4	Your mobile phone has helped you make personalized calls to DE students					
5	Your mobile phone has provided a means for quicker making of calls to DE students to give feedback on examination results					
6	Your mobile phone has helped you to make calls to DE students to inform them of tutorial schedules					
7	Your mobile phone has enabled you make calls to DE students regarding meeting times for research supervision					
8	Your mobile phone has made it possible for you to call DE students to inform them of face-to-face session dates					
9	Your mobile phone has helped you to call DE student and inform them of their missing marks					
10	Your mobile phone has helped you to make calls to DE students to remind them of deadlines for submitting assignments					

Section D: Utilization of social media in enhancing learner support in distance

Education

In this section the researcher is interested in getting information about your use of social media (*Facebook, Twitter, WhatsApp*) among others in interacting with DE students in your department and also seeks your attitude and perceptions on the utilization of social media through your phone as a learner support in distance education.

1. Which is your most popular social network avenue for interacting with students in distance education?

- Facebook Twitter WhatsApp BBM MXit MySpace Too
LinkedIn None

2. Which social media software functions do you use on your phone?

- Profiles Wikis Blogs Social bookmarking Interactive multimedia online (IMM) None

3. What do you prefer using the social media for?

- Social networking and socialization
Photo and video sharing
Notes sharing
Chatting
Archive received and sent information
Wall posting
Tagging
Nothing

Below are some of task you use social media through your phone. For each of the statements seeking to determine your regularity of using social media on the activities shown, give your responses by ticking in the correct box after each question their responses using the following scale: Never (**N**), Always (**A**), Sometimes (**S**), Rarely (**R**), and Very Frequently (**VF**).

	N	A	S	R	VF
1. You use your phone to network with DE students in the department	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. You use your phone to post video lectures and notes to DE students	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. You share ideas with DE students through social media on your phone?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. You chat with DE students on various course issues on social media through your phone?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. You use the social media through your phone to connect with DE students in the department	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. You use the social media through your phone to post educative information to DE students	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

What is your attitude and perceptions on the utilization of social media through your phone as a learner support in distance education? Use the scale of “Strongly Agree” to Strongly Disagree” to tick your appropriate response to each of the statements. Strongly Agree (**SA**), Agree (**A**), Undecided (**UN**), Disagree (**D**) or Strongly Disagree (**SD**).

	Your level of agreement				
	SA	A	UN	D	SD
1. Your mobile phone has helped you to network with DE students					
2. Your mobile phone has helped you post video lectures and notes to DE students					
3. Your mobile phone has made it possible for you to share ideas with DE students through social media					
4. You have been able to chat with DE students on various course issues through your phone on social media					
5. You have used the social media through your phone to connect with other lecturers in distance education programmes to share ideas					
6. You have effectively used the social media through your phone to post educative information to DE students					