

Please Pick My Call! University Students and Mobile Telephony in Kenya

Dr. Hezron Mogambi

Senior Lecturer

School of Journalism and Mass Communication

University of Nairobi

Abstract

This paper examined patterns of mobile phone usage by students in a large and top university in East and Central Africa- The University of Nairobi. The focus was on exploring the various mobile phone applications among students, the levels of mobile phone usage among university students for academic purposes and the gender difference between male and female students mobile phone usage for academic purpose. The respondents were 300 students from its various campuses. A self reported questionnaire was used to collect data for the study and was analyzed in figures and tables to represent the levels and the gender difference on mobile phone usage among students. The results of the study indicated that majority of the students (both male and female owned smart phones, and a small percentage of them (less than 25%) owned feature phones. Male students were more satisfied with their phones applications than their female counterparts, although the female students rated higher (very often users) for other purposes than academic. The study further showed that majority of the students were using their mobile phones to communicate with their classmates, and lecturers about lesson timetables, and exchanging other important academic information. Additionally, over 70% of the overall students sampled in this study confirmed to use their mobile phones applications to search important information in relation to academics and help in their assignments. Findings suggest a need to sensitize students and educators about the potential academic risks associated with high-frequency cell phone use.

Key words: Mobile phone, communication, academic use, university students, Kenya

1. Introduction

Mobile phone technology has revolutionized global lifestyles with the usage rates estimated to be that of 7 billion mobile subscriptions worldwide. (The International Telecommunication Union Report, May, 2014). Mobile phones are known to be very popular among university students, increasing their social inclusion and connectedness as well as providing a sense of security as they can contact others in times of distress or emergency (Balakrishnan & Raj, 2012)

Although there are many benefits of using a mobile phone, there can also be negative effects on the users and environment. Lectures are disrupted when mobile phones are used at inappropriate times (Walsh et al., 2010), and using a mobile phone whilst driving may lead to an increased risk of an accident (Hong, Chiu, & Huang, 2012; Walsh et al., 2010). Other negative consequences of mobile phone use include addiction, manifested as over dependency, which can cause problems such as emotional stress, damaged relationships, and falling literacy (Balakrishnan & Raj, 2012). According to Walsh et al. (2008, 2010) university students were reported to show signs of cognitive salience, whereby students think about their phones when they are not using them, as well as behavioral salience, whereby the students constantly check their mobile phones for missed calls or messages.

1.1 Mobile phone adoption in Africa

Sub-Saharan Africa has some of the lowest levels of infrastructure investment in the world. Merely 29 percent of roads are paved, barely a quarter of the population has access to electricity, and there are fewer than three landlines available per 100 people (ITU, 2009; World Bank, 2009a). Yet access to and use of mobile telephony in sub-Saharan Africa has increased dramatically over the past decade. There are ten times as many mobile phones as landlines in sub-Saharan Africa (ITU, 2009), and 60 percent of the population has mobile phone coverage. Mobile phone subscriptions increased by 49 percent annually between 2002 and 2007, as compared with 17 percent per year in Europe (ITU, 2008).

Mobile telephony has brought new possibilities to the continent. Across urban– rural and rich–poor divides, mobile phones connect individuals to individuals, information, markets, and services. In Mali, residents of Timbuktu can call relatives living in the capital city of Bamako—or relatives in France. In Ghana, farmers in Tamale are able to send a text message to learn corn and tomato prices in Accra, over 400 kilometers away. In Niger, day laborers are able to call acquaintances in Benin to find out about job opportunities without making the US\$40 trip. In Malawi, those affected by HIV and AIDS can receive text messages daily, reminding them to take their medicines on schedule. Citizens in countries as diverse as Kenya, Nigeria, and Mozambique are able to report violent confrontations via text message to a centralized server that is viewable, in real time, by the entire world (Jensen, 2007; Aker, 2008; Aker, 2010; Klonner and Nolen, 2008).

Mobile phones have greatly reduced communication costs, thereby allowing individuals and firms to send and to obtain information quickly and cheaply on a variety of economic, social, and political topics. An emerging body of research shows that the reduction in communication costs associated with mobile phones has tangible economic benefits, improving agricultural and labor market efficiency and producer and consumer welfare in specific circumstances and countries (Jensen, 2007; Aker, 2008; Aker, 2010; K lonner and Nolen, 2008).

The rapid adoption of mobile phones has generated a great deal of speculation and optimism regarding its effect on economic development in Africa. Policymakers, newspapers, and mobile phone companies have all touted the poverty-eradicating potential of mobile phones (Corbett, 2008).

1.2 Mobile phone usage in Kenya

A number of studies have been done on the use of mobile and smartphones. These studies typically looked at usage patterns on mobile devices (H. Falaki, D. Estrin, 2010), data traffic, battery life, interactions on servers and interactions with mobile applications (H. Verkasalo, C. López-Nicolás 010). This study however aims to investigate the level of mobile phone usage and the gender difference in Mobile phone usage among University of Nairobi Students.

In Kenya, the studies on mobile phone usage have cut across the demographics with some on students and others on rural populations. Ng’ethe (2010) in “Mobile Phones Usage in Rural Kenya for Business: A Survey Study in Machakos District” sought to find out how the rural populations in Machakos District perceived the relationships between mobile phones and incomes. The research investigated mobile usage patterns among the poor, what the phones are used for, the source of income from mobile running expenses, use of mobile phones for business and information access.

Mobile phone usage trends and statistics among Kenyans are by and large based on the figures on the number of connections and subscriptions. There is limited empirical research on how people in Kenya use the mobile phones and the data available is usually not specific in terms of demographics. For instance, the Communications Authority of Kenya noted that there are 31.8million mobile subscribers, but no data on specific age groups (CAK, 2014).

In Kenya, mobile phone technology usage is reported to have hit 31 million subscriptions by April 2014 (CCK 2014). This signifies an increase in the uptake of mobile telephony services in the country. Students are depicted as the category in the world populations and they value their electronic gadgets for certain gratifications. Students who used e-learning were much more positive to m-learning (Trifonova et al., 2006). Of course, it is essential to take into account not only the changes of mobile use and communication, but also the effects of those changes for various social groups, organizations and individuals (Green, 2002; Lee & Whitley, 2002).

2.1 Theoretical Framework

This paper was modeled on the Uses and Gratification theory of communication. The theory became prevailing in the late 1950s till 1970s when television had grown up. Some basic assumptions of the approach were proposed when it was rediscovered during that era. Uses and gratifications theory is an alternative to the other classical communication theories to which cannot suffice the emphasis of mobile phone (media) usage in this study because they fail shot to explain what the user does with the media.

Most of the theories on media explained about the effects media had on people. It is the uses and gratification theory which explains of how people use media for their need and gratification. In other words we can say this theory states what people do with media rather than what media does to people. Also this theory is contradictory to the magic bullet theory which states the audience is passive.

According to uses and gratification theory, it is not so people make use of the media for their specific needs. This theory can be said to have a user/audience-centered approach. Even for communication (say interpersonal) people refer to the media for the topic they discuss with themselves. They gain more knowledge and that is knowledge is got by using media for reference.

However in adopting the uses and gratifications theory in this study, the researcher is not ignorant to its shortcomings. The impacts of the uses and gratifications of the mobile phones to the students have to be recognized in their bid to fulfill their needs and gratifications. Another factor that ought to be recognized is the social structure, context and the status of the mobile technology in the whole structure. This is the status of mobile phone technology in academic discourse and not just the priority given to the students (media users) in gratifying their needs.

2.2 Conceptual Framework

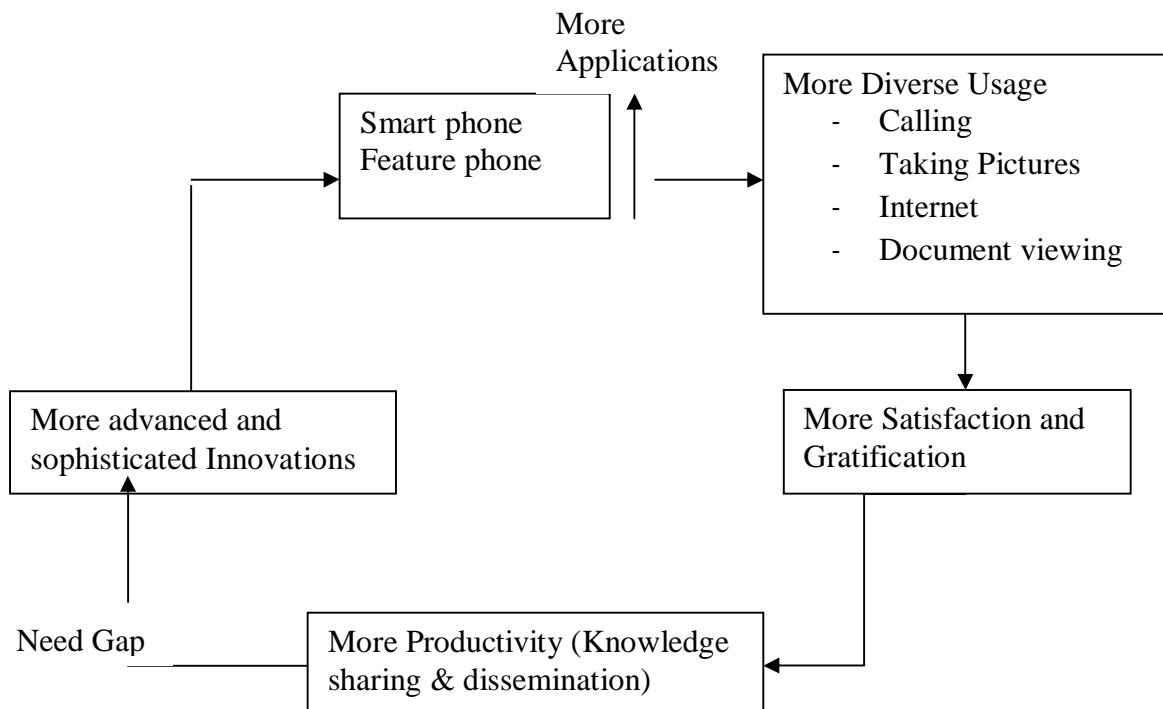


Figure 1: Conceptual Framework

Source: Researcher, 2015

The figure above illustrates the conceptual framework of the paper on mobile phone usage by university students. The researcher conceptualization is that with increase in the mobile phone applications which go in handy with the type of phones (Smart phones, feature phones), there is more diverse usage of mobile phones in calling, texting, internet, document viewing among many other uses to be denoted by the data collected from the field. With increase in the mobile phone applications there is more diverse usage of mobile phones which go in handy with satisfactions and the many gratifications achieved by students from their mobile phone usage. This improves productivity in knowledge sharing and dissemination. As there will be more productivity the innovations becomes more sophisticated and as the level of productivity increases there will be more innovation which is the radical change in mobile phone applications. Further to this is the need gap that is created by the adverse usage which indicates increase in productivity and hence the continuing innovations in mobile phone applications to satisfy the needs and gratifications of mobile phone users.

3.1 Methodology

The study was descriptive in nature, with the use of a survey to gather the data. The research method selected survey approach because it allowed for a larger sample to be gathered, as opposed to interviews or other forms of data gathering (Welman et al., 2005). The survey was used to obtain the patterns of mobile phone usage among University of Nairobi students.

3.2 Research Design

The research design to be employed is that of a quantitative study. The research was conducted through a survey methodology in which self reported questionnaires were issued out to 300 university students who had been carefully sampled. The study was conducted within a four month period, September-December, 2014.

3.3 Population and Sampling

The target population for this study consisted of 300 students from the top and largest university in East and Central Africa. These students were undergraduates selected from the entire university. This target population was chosen to represent all university students in Kenya because the University of Nairobi has a total population of about 70,000 students. The sample size for this study was 300 respondents who are all undergraduate students. The self reported questionnaires were issued out to all University of Nairobi Campuses, in and out of Kenya's capital city, Nairobi. The study employed probability sampling techniques in which simple random sampling was used to collect data among the University of Nairobi undergraduate students in all campuses. The technique enabled the researchers to produce a random sample that informed the understanding of the whole population. The instrument for data collection used in this study was the questionnaire.

4.1 Findings

4.1.1 Basic Applications and the Levels of Usage

Feature phones among the sampled population were relatively fewer compared to the number of smart phones, with the 1st years having the highest number (21). Most of the applications of the feature phones, which are categorized as basic in this study, were found in almost all the phones including smart phones. These applications include notes memo, alarm clock, calendar, phone book, organizer, calculator, SMS and games.

Table 7: Levels of Basic Applications

			Gender		Total
			Male	Female	
Basic Apps ^a	Notes Memo	Count	108	73	181
		% within GEN	85.0%	80.2%	
	Alarm Clock	Count	119	89	208
		% within GEN	93.7%	97.8%	
	Calendar	Count	120	91	211
		% within GEN	94.5%	100.0%	
	Phone Book	Count	125	88	213
		% within GEN	98.4%	96.7%	
	Organizer	Count	112	82	194
		% within GEN	88.2%	90.1%	
	Calculator	Count	121	91	212
		% within GEN	95.3%	100.0%	
	SMS	Count	122	88	210
		% within GEN	96.1%	96.7%	
	Games	Count	116	75	191
		% within GEN	91.3%	82.4%	
Total	Count	127	91	218	

Calendar and calculator are some of the basic applications that were used by virtually all students across the various campuses and years of study, with each taking 100% usage levels. The females are the most users of the basic applications of phones as indicated by the relatively higher percentages of the female users. The count cannot be used in determining the levels of usage in this case, because the numbers of male versus female are varied, and therefore percentages will describe the proportions of users between the two genders. The key concern here is that the percentages of male and female users of the various applications are based on the totals of male and female, that is 176 and 124 respectively, and not the total sample population, that is 300.

4.6 Advanced Applications and the Levels of Usage

In the study, advanced applications were mostly found on smart phones. Mobile phone scanner was the most used by students with the male and female count of 260 as compared to Google Drive and Drop box that recorded only 153. Male students are the most users of the internet browser (99.3%) with the female students recording 99.1% on the same.

Compared to the basic applications use, advance applications in some cases records less than 80% user-ship, while in basic applications the usage level is always above 80% across the two genders. Virtually all mobile phones possess basic applications, and their applications will definitely record higher than advance applications which some may even lack in some smart phones.

Table 8: Levels of Advanced Applications

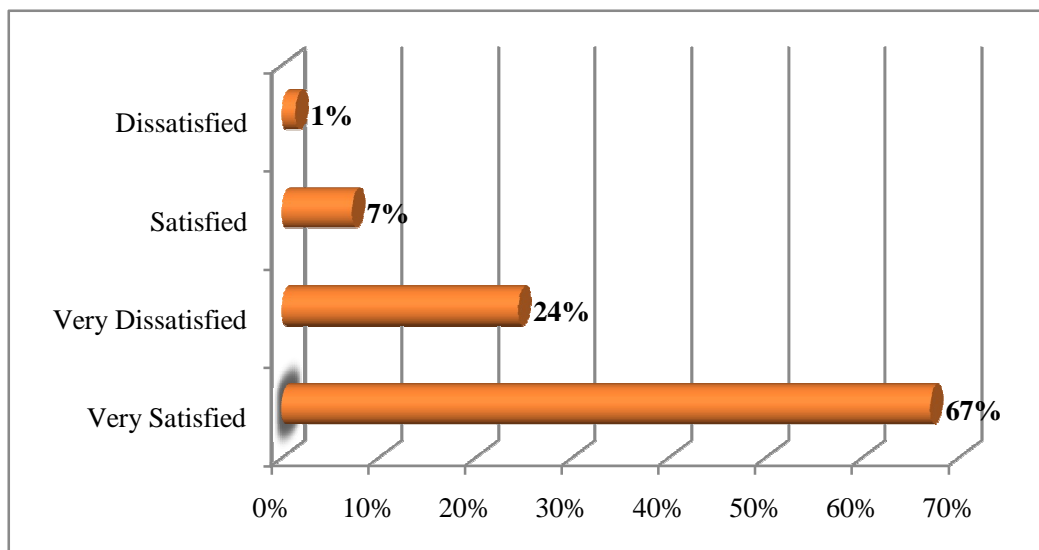
			Gender		Total
			Male	Female	
Video Audio Recording	Count		133	100	233
	% within GEN		87.5%	92.6%	
Internet Browser	Count		151	107	258
	% within GEN		99.3%	99.1%	
Google SMS	Count		117	81	198
	% within GEN		77.0%	75.0%	
Social Networks	Count		138	102	240
	% within GEN		90.8%	94.4%	
Maps GPS	Count		126	91	217
	% within GEN		82.9%	84.3%	
Camera	Count		149	106	255
	% within GEN		98.0%	98.1%	
Advanced Apps ^a Memory Card	Count		143	102	245
	% within GEN		94.1%	94.4%	
Bluetooth	Count		141	101	242
	% within GEN		92.8%	93.5%	
Cloud Storage Google Drive Drop box	Count		96	57	153
	% within GEN		63.2%	52.8%	
Document Viewer	Count		104	68	172
	% within GEN		68.4%	63.0%	
Email	Count		135	107	242
	% within GEN		88.8%	99.1%	
Play Store Google Store	Count		123	94	217
	% within GEN		80.9%	87.0%	
Mobile Phone Scanner	Count		95	59	154
	% within GEN		62.5%	54.6%	
Total	Count		152	108	260

Among the 300 sample of students, majority of the respondents were satisfied with their phones and the applications and few were dissatisfied. The satisfaction level was categorized into two levels: very satisfied and satisfied, and each took 67% and 7.2% respectively. The dissatisfaction level was categorized into two: dissatisfied and very dissatisfied, and each took 1.4% and 24.4% respectively.

Table 9: Levels of Satisfaction

	Frequency	Valid Percent
Very Satisfied	195	67.0%
Very Dissatisfied	71	24.4%
Satisfied	21	7.2%
Dissatisfied	4	1.4%
Total	291	100.0%
Missing System	9	
Total	300	

Table 9 shows that 195 students were very satisfied with their phones, 21 of them were satisfied, 4 were dissatisfied and 71 were very dissatisfied. These figures are summarized as percentages in the graph below.

Figure 3: Percentages on Students Levels of Satisfaction

The satisfaction levels however vary between the two genders. The data shows that 124 male students are categorized as 'very satisfied' compared to the female counterpart recorded 71. In the 'satisfied' category, 7 male students as compared to 14 female students are classified as such. 3 male students as compared to 1 female student are classified as dissatisfied and finally 36 male versus 35 female students are classified as very dissatisfied. Therefore, 131 male students are overall classified as satisfied regardless of the levels, while their female counterparts records 85. The dissatisfaction levels records a lower count: overall of 39 male and 36 female students.

How would you rate your satisfaction of your mobile phone applications? Cross tabulation.

Table 10: Gender difference in Satisfaction with mobile phone applications

		How would you rate your satisfaction of your mobile phone applications?				Total
		Very Satisfied	Very Dissatisfied	Satisfied	Dissatisfied	
Gender	Male	124	36	7	3	170
	Female	71	35	14	1	121
Total		195	71	21	4	291

4.7 Mobile Phone Usage for Academic Purposes

In this study, the mobile phone type (feature phone or smart phone) influenced the usage purposes. When asked to rate how frequent they use their phones for academic purposes, most students recorded 'very often' use, while the least number recorded 'never' use. A frequency of 770 by male students recorded 'very often' for using their mobile phones for academic purpose(s) as compared to 561 by the female students. 717 by male versus 511 by female students recorded 'often' use, 401 by male versus 270 by the female students recorded 'rarely' use while 322 by male and 231 by female students recorded 'never' use.

Table 11: Summary of Students Academic Usage per Gender

			Gender		Total
			Male	Female	
Academic use	Very often	Count	770	561	1331
		% within GEN	452.9%	463.6%	
	Often	Count	717	511	1228
		% within GEN	421.8%	422.3%	
	Rarely	Count	401	270	671
		% within GEN	235.9%	223.1%	
	Never	Count	322	231	553
		% within GEN	189.4%	190.9%	
Total	Count	170	121	291	

These figures are inflated because of the multiple responses in this question. The students were responding to 13 statements of academic functions: discuss with/pass information about class assignments to course mates; exchange information about lecture timetable; seek/exchange research information; enquire about the welfare of friends/course mates; communicate with lecturers; social networks; seek information from the internet for learning activities; search for materials from the internet to complete my assignment; use email to communicate with lecturers; use the internet as the main source of information for my studies; seek the latest information online to enhance my knowledge related to the courses taken in the university; use forums to exchange opinions on academic matters with my friends as well as access the library website to search for academic books. Among these statements, majority of the students stated that they used their mobile phones for the different academic functions.

In detail, 82 students (40 male and 42 female) use their mobile phones to discuss and/or pass information about class assignments with their course mates very often. 137 students (84 male and 53 female) often use. Overall 219 students (very) often use their mobile phones for the aforementioned function compared to 72 students who either rarely or never use their phones for such purpose (See Table 12).

Table 12: Phone use to discuss with/pass information about class assignments to course mates (Cross-tabulation)

		How often do you use your mobile phone for academic purposes?				Total
		Very often	Often	Rarely	Never	Very often
Gender	Male	40	84	30	16	170
	Female	42	53	14	12	121
Total		82	137	44	28	291

According to Table 13, majority (214) of the students (very) often use their mobile phones to exchange information about lecture timetable, with the male having a relatively higher numbers (104) and female students following at 90. A smaller number of students (73) would rarely or never use their mobile phones to exchanging information about lecture timetable.

Table13: Phone use to Exchange information about lecture timetable

		How often do you use your mobile phone for academic purposes?				Total
		Very often	Often	Rarely	Never	Very often
Gender	Male	40	84	30	16	170
	Female	42	53	14	12	121
Total		82	137	44	28	291

The use mobile phones to seek/exchange research information among students indicated a frequency of 212 very often use, with the male students taking the lead with 123. Additionally, 82 students report to rarely or never use of the mobile phones for such purpose (See Table 14).

Table 14: Phone use to seek/exchange research information

		How often do you use your mobile phone for academic purposes?				Total
		Very often	Often	Rarely	Never	Very often
Gender	Male	56	64	34	16	170
	Female	41	48	19	13	121
Total		97	112	53	29	291

As can be seen in table 15, 64 male and 53 female students use their mobile phones to enquire about the welfare of friends/course mates 'very often', 67 male and 39 female students 'often' use their mobile phones on the same. In the category of 'rarely', 20 male as compared to 19 female were classified as such while 58 male and 41 female were classified as 'never'.

Table 15: Phone use to enquire about the welfare of friends/course mates

		How often do you use your mobile phone for academic purposes?				Total
		Very often	Often	Rarely	Never	Very often
Gender	Male	64	67	20	19	170
	Female	53	39	19	10	121
Total		117	106	39	29	291

As can be seen in table 31 male and 20 female students use their mobile phones to communicate with lecturers 'very often'. In the 'often' category, 41 male students as compared to 27 female students were classified as such. 40 male and 33 female reported that they 'rarely' use their mobile phones for the same and finally 58 male students versus 41 female students are classified as 'never' (Table 16)

Table 16: Phone use to Communicate with lecturers

		How often do you use your mobile phone for academic purposes?				Total
		Very often	Often	Rarely	Never	Very often
Gender	Male	31	41	40	58	170
	Female	20	27	33	41	121
Total		51	68	73	99	291

As the data in table 17 shows, majority of students (246) confirmed (very) often using their mobile phones for social networking, with the male having 149 frequencies and female with 97. Further, 45 students had rarely or never used their mobile phones for accessing social networks.

Table 17: Phone use to connect to social networks

		How often do you use your mobile phone for academic purposes?				Total
		Very often	Often	Rarely	Never	Very often
Gender	Male	104	45	10	11	170
	Female	73	24	10	14	121
Total		177	69	20	25	291

Most students (92 male and 62 female) use their mobile phones to seek information from the internet for learning activities very often. In the 'often' category, 52 male students as compared to 42 female students were classified as such. 12 male and 7 female reported that they 'rarely' use their mobile phones for the same and finally 14 male students versus 10 female students are classified as 'never' (See table 18).

Table 18: Phone use to seek information from the internet for learning purposes

		How often do you use your mobile phone for academic purposes?				Total
		Very often	Often	Rarely	Never	Very often
Gender	Male	92	52	12	14	170
	Female	62	42	7	10	121
Total		154	94	19	24	291

139 students (77 male and 62 female) (very) often use their mobile phones to search for materials from the internet to complete their assignment. In the 'often' category, 53 male students as compared to 39 female students were classified as such. 22 male and 8 female reported that they 'rarely' use their mobile phones for the same and finally 18 male students versus 12 female students are classified as 'never' (See Table 19)

Table 19: Phone use to search for materials from the internet to complete my assignment

		How often do you use your mobile phone for academic purposes?				Total
		Very often	Often	Rarely	Never	Very often
Gender	Male	77	53	22	18	170
	Female	62	39	8	12	121
Total		139	92	30	30	291

Additionally, 62 students (36 male and 26 female) (very) often use their mobile phones to use email to communicate with lecturers. In the 'often' category, 37 male students as compared to 30 female students were classified as such. 48 male and 32 female reported that they 'rarely' use their mobile phones for the same and finally 49 male students versus 33 female students are classified as 'never' (See Table 20)

Table 20: Phone use to use email to communicate with lecturers

		How often do you use your mobile phone for academic purposes?				Total
		Very often	Often	Rarely	Never	Very often
Gender	Male	36	37	48	49	170
	Female	26	30	32	33	121
Total		62	67	80	82	291

In a different function, 85 students (50 male and 35 female) use their mobile phones to Use the internet as the main source of information for my studies 'very often'. Majority of the students (58 male and 40 female) were using the applications for the aforementioned function often. 42 male and 31 female reported that they 'rarely' use their mobile phones for the same and finally 20 male students versus 15 female students are classified as 'never' (See Table 21)

Table 21: The Use the internet as the main source of information for my studies?

		How often do you use your mobile phone for academic purposes?				Total
		Very often	Often	Rarely	Never	Very often
Gender	Male	50	58	42	20	170
	Female	35	40	31	15	121
Total		85	98	73	35	291

Majority of the students (72 male and 45 female) use their mobile phones to Seek the latest information online to enhance my knowledge related to the courses taken in the university 'very often'. In the 'often' category, 51 male students as compared to 48 female students were classified as such. 30 male and 15 female reported that they 'rarely' use their mobile phones for the same and finally 17 male students versus 13 female students are classified as 'never' users (See Table 22).

Table 22: Phone use to seek the latest information online to enhance my knowledge related to the courses taken in the university

		How often do you use your mobile phone for academic purposes?				Total
		Very often	Often	Rarely	Never	Very often
Gender	Male	72	51	30	17	170
	Female	45	48	15	13	121
Total		117	99	45	30	291

A total of 76 students (49 male and 27 female) very often use their mobile phones as forums to exchange opinions on academic matters with their friends. In the 'often' category, 52 male students as compared to 40 female students were classified as such. 42 male and 38 female reported that they 'rarely' use their mobile phones for the same, while 27 male students versus 16 female students are classified as 'never' (See Table 23).

Table 23: Phone use to Use forums to exchange opinions on academic matters with my friends?

		How often do you use your mobile phone for academic purposes?				Total
		Very often	Often	Rarely	Never	Very often
Gender	Male	49	52	42	27	170
	Female	27	40	38	16	121
Total		76	92	80	43	291

Overall 134 students (78 male and 56 female) use their mobile phones to access the library website to search for academic books (very) often while 92 male and 65 female reported that they either rarely or never use their mobile phones for the same (See Table 25).

Table 24: Phone use to Access the library website to search for academic books?

		How often do you use your mobile phone for academic purposes?				Total
		Very often	Often	Rarely	Never	Very often
Gender	Male	39	39	51	41	170
	Female	27	29	33	32	121
Total		66	68	84	73	291

4.8 Discussion

This study aimed at examining the mobile phone usage among university students in Kenya with the case study of University of Nairobi students. The target population was the undergraduate students at their different years of study, and who were enrolled for either full-time or part-time programs. In examining the satisfaction levels on mobile phone usage among male and female students, the researcher carried out a cross-tabulation of the various levels of satisfaction (very satisfied, satisfied, dissatisfied and very dissatisfied) and the gender variable. The researcher found out that 58.6% of the female students were very satisfied with their mobile phones applications compared to 72.9% of the male counterparts. Yet, the trend in mobile phone application usage shows that the female students use their phones more often for academic purposes and social networking, their levels of dissatisfaction was relatively higher (28.9%) compared to the male students at 21.1%.

In exploring the mobile phones applications and their frequencies, the researcher based the study on two broad mobile phone types: feature phones and smart phones. The feature phones have the basic applications while the smart phones have the advanced applications. Majority of the students owned smart phones with advanced applications with a record of 244 as compared to feature phone ownership. This indicates more productivity by students in using the advanced applications for academic purposes. Further, majority of male students have more smart phones applications and are very satisfied with their mobile applications as compared to their female counterparts. However, the percentages of mobile phones usage for academic purposes among students are relatively high among the female students with a record of 463.6% as compared to that of their male counterparts (452.9%). Female students recorded that they use their mobile phones 'very often' which has a relatively higher shift in the percentages.

In the study, the students were asked to rate their frequency of use of mobile phones for the various academic purposes which were 13 sets of statements. This was to show how students across use their mobile phones for academic purposes. In the findings of this research, 219 of the students (very) often use their mobile phones to discuss with/pass information about class assignments to course mates. As Cui and Roto (2008) observed, smart phone usage among students for studies is majorly task oriented with goals of information seeking, communications, online transactions and managing personal information. As the communication function of a mobile phone can be varied, 'passing information' and 'exchanging information about lecture timetables is classified as such. In the latter case, more than 75% of the respondents reported to use their mobile phones to communicate academic related information.

A survey conducted at the University of Colorado and several other Universities in 2010 found that text messaging and emailing are two of the most commonly used functions on smart phones among college students, followed by reading news, watching video and reading books (Dean, 2010).

The same functionality of mobile phones has been evident in the findings of this study as majority of the students (both male and female) reported to use their mobile phones to search for materials from the internet to complete their assignments, use the internet as the main source of information for their studies, seek the latest information online to enhance their knowledge related to the courses taken in the university and use forums to exchange opinions on academic matters with their friends as well as access the library website to search for academic books.

A study conducted by FHA. Shibly and M. Riswan(2008) on the Impact of Mobile Phone Usage on Muslim Students Learning at The University Level in 2008 however revealed that the students at the university level utilize the mobile phone technology in a better way by sharing useful information with their classmates and teachers. These results are also substantiated in this study as majority of the students exchange information about lecture timetables, seek and exchange research information, enquire about the welfare of friends/course mates and use their email to communicate with lecturers.

The use of mobile phones for academic purposes in the university may however be affected by the availability of computers and laptops, in that student(s) may consider assessing information or publications from a desktop computer or laptop thus lowering the frequencies for mobile phone usage. Other external factors that may affect the study have to do with the background of the students as a university draws students from a diverse universe. These students may have or lack skills to keep abreast with the unprecedentedly advancing technology. With all these factors taken into account, the findings of this research affirm that majority of the university students use their mobile phones in the academic discourse and arena.

Based on the above findings, the data prove that there is a high level of mobile phone usage for academic purposes among University of Nairobi students. The level of satisfaction also differs significantly between male and female students, with male students being more satisfied with their mobile phone applications. There is no significant difference between mobile phone usage between male and female students as the percentages do not show significant variations.

5.1 Conclusion

The study has reported that majority (60%) of the students use smart phones and has access to advanced applications which they use for academic purposes. The study, which explored various mobile phones functionality for academic purposes, showed that students use their mobile phones to communicate with their course mates, lecturers and to keep their social networks.

References

- Akinyemi, W. (2014). Have You Moved Beyond the Standards. *Daily Nation*, October, p. 5.
- Al-Khlaiw, T., & S., A. M. (2004). Association of mobile phone radiation with fatigue, headache, dizziness, tension and sleep disturbance in Saudi population. *Saudi Med J* 6 , 732–736.
- Alzaza, N., & Yaakub, A. R. (2011). Students' awareness and requirements of mobile learning services in the higher education environment: *American Journal of Economics and Business Administration*, 3(1) 95-100.
- Anderson, P. ((2007). What is Web 2.0? Ideas, technologies and implications for education. JISC Technology and Standards Watch.
- Auter, P. J. (2007). Portable social groups: Willingness to communicate, interpersonal communication gratifications, and cell phone use among young adults. *International Journal of Mobile Communications*, 5(2), 139–155.
- Badu, E., & Markwei, E. (2005). Internet Awareness and Use in The University Of Ghana. *Information Development Journal* 21(4), 260–268.
- Beaver, T., Knox, D., & Zusman, M. (2010). "Hold the phone!": Cell phone use and partner reaction among university students. *College Student Journal*, 44(3), 629–632.
- alakrishnan, V., & Raj, R. G. (2012). Exploring the relationship between urbanized Malaysian youth and their mobile phones: A quantitative approach. *Telematics and Informatics*, 29(3), 263–272.
- Baron, N., & Campbell, E. (2010). Talking takes too long: Gender and cultural patterns in mobile telephony. In conference of Association of Internet Researchers. Göteborg, Sweden.
- Berge, Z. I., & Lin, M. (2013). *Handbook of Mobile Education*. Routledge.
- Chowdhury, R., & Honkiat, .. (2012). Evolution of Mobile Phones:1995 – 2012. pp. <http://www.hongkiat.com/blog/evolution-of-mobile-phones/>.
- Campbell, S. W. (2006). Perceptions of mobile phones in college classrooms: Ringing, cheating, and classroom policies. *Communication Education*, 55(3), 280–294.
- Cui, Y., & Roto, V. (2008). How people use the Web on mobile devices. In: Proceedings of the 17th International Conference on World Wide Web. (P. Fröhlich, R. Simon, L. Baillie, & H. Anegg, Eds.) New York: ACM.
- Carbonell, X., Oberst, U., & Beranuy, M. (2013). The cell phone in the twenty-first century: A risk for addiction or a necessary tool? In P. M. Miller (Ed.), *Principles of addiction* (pp. 901–909). San Diego.
- Chen, Y.-F., & Katz, J. E. (2009). Extending family to school life: College students' use of the mobile phone. *International Journal of Human-Computer Studies*, 67(2), 179–191.
- Chigona, W., Kamkwenda, G., & Manjoo, S. (2008). Uses and gratifications of mobile Internet among South African students. *SA Journal of Information Management*, 10(3). Retrieved from <http://www.sajim.co.za/index.php/SAJIM/article/view/329/321>
- Dahlstrom, E., Tom, d. B., Peter, G., & Martha, V. (2011). *The ECAR National Study of Undergraduate Students and Information Technology*.
- Dhir, A. (2004). *The Digital Consumer Technology Handbook: A Comprehensive Guide to Devices, Standards, Future Directions, and Programmable Logic Solutions*. Xilinx, Inc.
- dictionary, C. E. (2009). Glasgow: Harper Collins.
- E, E. (2013). The usage and impact of Internet enabled phones on academic concentration among students of tertiary institutions: A study at the University of Ibadan, Nigeria. *Institute Français de Recherche en Afrique (IFRA)*.
- Falaki, H., et. al . (2010). Diversity in smart phone usage . Proceedings of the 8th international conference on Mobile systems applications and services MobiSys.
- FHA. Shibly, M. R. (2008). *The Impact of Mobile Phone Usage on Muslim Students Learning At the University Level*. University of Sri Lanka.
- J.G., B., & Katz, E. (1974). *The uses of mass communications: Current perspectives on gratifications research*. Beverly Hills CA: Sage.
- JP, B., Birkets, S., Kelly, K., & Slouka, M. (1995). *What are we doing online?* Harpers .
- Kangethe, F. (2011). *The Cultural, Economic and Political implications of New Media: A Case Study on Mobile Telephony among University Students in Kenya*. Kenya: United States International University.

- Katz, E. J. (1974). *Uses of Mass Communication by the Individual*. Mass Communication Research: Major Issues and Future Directions. (W. Davidson, & Y. Fredrick, Eds.) New York: Praeger.
- Katz, E., Jay, B., & Michael, G. ((1974). *The Use of Mass Communication*. Beverly Hills, California: Sage.
- Lenhart, A., Purcell ., K., Smith, A., & Zickuhr, K. (2010). Social media and mobile internet use among teens and young adults. *Pew Internet and American Life Project* .
- Leung, L., & Wei, R. (2000). More than just talk on the move: Uses and gratifications of the cellular phone. *Journalism & Mass Communication Quarterly*, 77(2), 308–320.
- Ling, R., & Horst, H. (2011). Mobile communication in the global south. *New Media & Society*, 13(3), 363–374.
- Lobo, D., & Joshma, P. J. (2013). A study to assess the impact of mobile phone use on various dimensions of students' life in a selected institution of Mangalore. *International Journal of Nursing Education*, 5(2), 62-65.
- Littlejohn, & Stephen. (2002). *Theories of Human Communication* (Seventh Edition. ed.). Albuquerque, , New Mexico: Wadsworth.
- McHoney, R. (2011). *The New Digital Shoreline: How Web 2.0 and Millenials are Revolutionizing Higher Education*. LLC: Stylus Publishing.
- Rice, & Ronald. (1984). *The New Media*. Beverly Hills, California: Sage.
- Shibly, F., M, R., & MIM, I. (2008). *The Impact of Mobile Phone Usage on Muslim Students Learning At the University Level*. University of Sri Lanka.
- Walsh, S., White, K., & Young, R. (2008). Over-connected? A qualitative exploration of the relationship between Australian youth and their mobile phones. *Journal of Adolescence*, 31(1), 77–92.
- Walsh, S., White, K., & Young, R. (2010). Needing to connect: The effect of self and others on young people's involvement with their mobile phones. *Australian Journal of Psychology*, 62(4), 194–203.
- Wei, R. (2008). Motivations for using the mobile phone for mass communications and entertainment. *Telematics and Informatics*, 25(1), 36–46. Welman, C., Kruger, F., & Mitchell, B. (2005). *Research methodology*. Oxford: Oxford University Press.
- Wanjiku, N. J. (2010). *Mobile Phones Usage in Rural Kenya for Business: A Survey Study in Machakos District*. Nairobi: University of Nairobi, School of Computing and Informatics.
- Zulkefly, S. N., & Rozumah, B. (2009). Mobile Phone use Amongst Students in a University in Malaysia: Its Correlates and Relationship to Psychological Health. *European Journal of Scientific Research* , 206-218.