MOBILE PHONE AND CHAT APPS USAGE AMONG MALAWIAN UNIVERSITY STUDENTS:

LUANAR's Experience

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Abstract

Studies on mobile phone usage indicate a rising trend of the same in many countries. Studies furthermore show an increasing use of Messaging or Chat Apps, which makes SMS passé for many smartphone users. While the use of mobile phones and Chat Apps are observed to increase in different parts of the world, little is known from the empirical point of view concerning social and pedagogical use of the same amongst university students in Malawi. It is in this line that the present study was conducted. The study used a crosssectional research design, where Lilongwe University of Agriculture and Natural Resources (LUANAR) was used as a case study. A total of 125 respondents (undergraduate and Master's students), selected at random, were involved in this research. Questionnaires and interviews were used as instruments and methods for data collection. Findings showed that 99.2% of surveyed respondents own and use mobile phones, with more than half of them owning smartphones. Despite the fairly high extent of smartphone ownerships and usage, almost half of smartphone users have never used Chat Apps. Most of those who are using Chat Apps, use WhatsApp mainly for text messaging. Some of the identified social and academic uses of phones were searching for academic materials on the internet; communicating with lecturers, fellow students and families/friends; recording lectures and listening to them later; and storage device for academic materials. The study, among others things, recommends that higher learning institutions should consider the high rate of mobile phones ownership and usage among students as an opportunity that can be used to enhance delivery of academic matters.

Key words: Mobile phone, Chat Apps, University students, Malawi

1.0 INTRODUCTION

1.1 Background Information

Several studies indicate a growing adoption rate of Information and Communication Technologies (ICTs) in the developing world. A common instance for this is the use of mobile phones. According to the International Telecommunication Union (ITU) as cited by Blaschke, *et al.* (2009), mobile cellular networks cover nearly 90% of the world, with mobile phone penetration at approximately 50%. The use of mobile phones is growing particularly fast in Africa, with an estimate of 545 million mobile-cellular subscriptions in 2013, an increase from only 87 million in 2005 (ITU, 2014a). Adoption of mobile phones in Africa represents a "technology leap" in the sense that the continent has largely skipped land-based networks in favour of cellular networks (Berger, 2009).

There are essentially three types of mobile phones, namely smartphones, feature phones, and basic phones. Smartphones run Operating Systems that allow the installation of third party and vendor applications or "Apps" to offer a wide variety of features that use advanced computing capability and connectivity. Feature phones have features such as cameras, touch screen, Wi-Fi, and mobile broadband access, while basic phones allow users to perform basic features such as calls and Short Message Services (SMS) (Uys *et al.*, 2012; North *et al.*, 2014). Kreutzer (2009) pointed out that one of the commonly used Apps in smartphones is Chat or Messaging Apps. Userlike (2014) define Chat Apps as mobile applications created to run on smartphones,

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tablets and sometimes on computers, which allow users to exchange messages without having to pay for SMS. Walker (2014) pointed out that Chat Apps, such as WhatsApp, Viber, Hangouts, Black Berry Messenger (BBM) and many others have been increasingly used, especially among the youths, which include university students.

While mobile phone ownership is generally lower in Malawi as compared to many other African countries, the market and subscriptions of mobile phones are growing rapidly. In 2002, as shown in Figure 1, the country's mobile-cellular telephone subscriptions were only 55,730 (about 0.5% of the country's population which was estimated to be 11,174,648 people in 2002. However, these subscriptions have been continuously increasing; so that ten years later, in 2012, subscriptions reached 4,646,894 (about 29.9% of the country's population which was estimated to be 15,527,955 people in mid-2012) (ITU, 2014b; Government of Malawi (GOM), 2013). According to Matto (2013), the development of mobile communication technology has created a new possibility for information exchange; reaching out a greater number of people than traditional wired methods. Berger (2009) added that mobile telephones reach more people than any other ICTs in Malawi.



Figure 1: Malawi's population and mobile-cellular telephone subcriptions from 2002 to 2012 *Data source*: GOM, 2013 and ITU, 2014b

Malawi is a small land-locked country surrounded by Mozambique, Tanzania and Zambia. It has a territorial area of about 119,140 square kilometres. Agriculture accounts for about 61%, while forests occupy 38% of the total area. The agricultural sector is the backbone of the Malawi economy (GOM, 2012). During the 2008 population and housing census, a total of 7,636 Malawians under the age of 30 years were attending universities (GOM, 2009). A study by Aker and Mbiti (2010) indicates that although mobile phone ownership in Malawi, as in many other African countries, includes also the poor, elderly and rural individuals, the primary adopters of mobile phones were urban populations, the wealthy, the educated and the young. Hence, university students in Malawi are the primary adopters and, thus, users of mobile phones. This is also in line with North *et al.* (2014) who pointed out that university students are among fundamental users of mobile phones. A steady increase of mobile phone subscriptions in Malawi as presented by ITU (2014b) and the use of Chat Apps, especially among university students, have prompted the need to understand reasons for their uses, hence this study.

1.2 Problem Statement and Justification

Previous researches that studied mobile phone uses amongst university students have shown more interest on investigating social uses. This can be seen, for example, from Zulkefly and Baharudin (2009), Balakrishnan and Raj (2012), Chakraborty (2006), North *et al.* (2014) and Dresler-Hawke and Mansvelt (2008). These researches show that mobile phones provide an avenue to improve and maintain students' social relationships. However Gitonga *et al.* (2013), Ezemenaka (2013) and Yeboah and Ewur (2014) pointed out that mobile phones did have, as well, potentials to enhance students' academic progress. Unfortunately, there is lack of researches that investigate both social and academic uses of mobile phones. Moreover, Buhari *et al.* (2014) show that Chat Apps have been increasingly used among university students but researches that investigate on assorted usages of Chat Apps are also lacking. It is in this context that the present study was carried out to investigate the social and academic uses of mobile phones and Chat Apps amongst Malawian university students. Findings from this study will help higher learning stakeholders to establish and implement mechanisms to foster mobile phone usages as tools to enhance not only social but also academic progress of university students.

1.3 Study Objectives

The main objective of this research was to investigate the uses of mobile phones and Chat Apps amongst university students at Lilongwe University of Agriculture and Natural Resources (LUANAR), Malawi. Specifically, the research aimed at:

- i. Establishing the extent of phone ownerships and usages among students at LUANAR
- ii. Determining the commonly-used Chat Apps among LUANAR students and reasons for their uses and
- iii. Identifying the social and academic uses of mobile phones amongst LUANAR students.

1.4 Research Questions

In order to achieve the above objectives this study was set to answer the following research questions:

- i. To what extent are mobile phones owned and used by respondents in the study area?
- ii. What are the commonly used Chat Apps among LUANAR students? Why are they used?
- iii. What are the social and pedagogical reasons for phone usage among students at LUANAR?

2.0 LITERATURE REVIEW

2.1 Concepts Related to Mobile Phones

A mobile phone or cellular phone is a portable telephone that uses wireless cellular technology to send and receive phone signals. This technology works by dividing the earth into small regions called cells. Within each cell the wireless telephone signal goes over its assigned bandwidth to a cell tower, which relays the signal to a telephone switching network, connecting the user to the desired party (Goggin, 2006). Mobile network operators provide mobile phone services. According to Batzilis *et al.* (2010), a mobile phone operator or wireless provider is a telephone company that provides services for mobile phone users. The operator gives a Subscriber Identification Module (SIM) card to the customer who inserts it into the mobile phone to gain access to the service. As explained by Uys *et al.* (2012), mobile phones are of three types; smartphones, feature phones, and basic phones. Unlike featured and basic phones, smartphones allow the installation of third party and vendor Apps such as Chat Apps.

2.2 Mobile Phone Services in Malawi

There are two mobile phone operators in Malawi. These are TNM (Telekom Networks Malawi Limited) and Airtel. TNM was the first cellular operator, initially majority-owned by the Government of Malawi. This operator was licensed in 1995 by the Government agency - MACRA (Malawi Communications Regulatory Authority) - a government-appointed regulatory board. In the early years, growth in the network was concentrated in few urban areas and in tourist destinations. Network coverage in rural areas was slow, and

coverage rates were low. The slow growth and poor coverage prompted reform of the sector in 1998. At this point, a second private operator, Celtel, was awarded a government license. In 2008, Zain Company purchased Celtel, hence named Zain (Batzilis *et al.*, 2010). In 2010, Zain was rebranded to Airtel, which is currently operating (Airtel, 2014). By late 1999, both operators were active in establishing their networks across the country, and by 2007, the number of cellular phone subscribers (pre-paid and post-paid) had risen to over 1 million people (Batzilis *et al.*, 2010). Currently, mobile telecommunications services are available in 74% of Malawi, and Airtel claims to serve 72% of the current Malawian market (GSMA, 2012; Airtel, 2014). The availability of mobile telecommunication services to nearly three quarters of the country might be a contributing factor for many students to access mobile phone services.

2.3 Related Studies

2.3.1 Mobile phone usages

Mobile phones are equipped with various features that enable communication and entertainment for its users. These features range from simple text messages to various internet-based applications. For instance, as cited by Zulkefly and Baharudin (2009), a previous study found that the most popular feature used among young users is text messaging or Short Message Service (SMS) (Lie, 2004). This is in line with Matto (2013) who said that although mobile phones can include many features and may seem overly complex, many phones which are aimed at new users in developing and developed countries are simple devices that emphasize voice calls and SMS. Text messaging is preferred because the service is quick, cheap and convenient (Lie, 2004). North *et al.* (2014) also report that text messaging (Instant Messaging (IM) and SMS) was found to be the most prevalent use of mobile phones by university students in the USA, with the majority of students sending and receiving between 30 and 80 text messages a day. Students in the USA prefer to text rather than call (Brown *et al.*, 2011).

A study by North *et al.* (2014) found that mobile phones have become web-enabled devices that may be constantly connected to the internet, providing more communication such as social media and IM than just phone calls and SMS. This is also supported by Zulkefly and Baharudin (2009) who said that today mobile phones are equipped with other features that allow further communication and entertainment such as the MP3 player, games, internet and videos. According to Brown *et al.* (2011), University students in the USA and South Africa access websites through mobile phones, especially amongst the lower income youth who do not own computers.

Studies, furthermore, indicate an increasing use of social media and Chat Apps among smartphone users. For example, a study by Buhari *et al.* (2014) that investigated the use of social media among students of Nigerian Polytechnic found a high usage of social media by students whereby Facebook and WhatsApp emerged the most popular and widely used social media among students. The same trend of increased social media usages among mobile phone users is also seen in Blackman and Manda (2011), Uys *et al.* (2012), Bicen and Kocakoyun (2013) and Ezemenaka (2013). Findings from these studies reveal that trends of mobile phone usages, especially among the young adults, are shifting from just calls and SMS to Chat Apps and other social media.

2.3.2 Reasons for phone usage among university students

Zulkefly and Baharudin (2009) assert that mobile phones were designed to allow communication between family members and peers. In connection with this, a study by Chakraborty (2006) shows that among students who participated in that study, 38% in India and 46% in USA use mobile phones for staying in touch with friends. The same study also showed that 48% of those students in India and 40% in USA use their mobile phones for staying in touch with their families. Balakrishnan and Raj (2012), as cited by North *et al.* (2014), found out that university students in Malaysia make between 1 and 5 calls per day, with the majority of calls going to friends and families. According to Dresler-Hawke and Mansvelt (2008), most of

the mobile phone calls by university students in New Zealand occurred to maintain friendships, keep in contact with family and, most commonly, to make social arrangements. This demonstrates that mobile phones facilitate, rather than disrupt, social communication. Another study reported that the presence of cell phones provides a higher sense of security in potentially harmful situations. This has contributed to an increase in cell phone value, leading cell phone users to perceive cell phones as a must-have tool (Ezemenaka, 2013).

The foregoing cited literature reveal that there is lack of thorough studies on academic uses of mobile phones. For instance, a study by Balakrishnan and Raj (2012) conducted in Malaysia generalized the reason for mobile phone usage among university students as information exchange, conversation and socializing, information viewing, entertainment, education, escape and diversion, reassurance, fashion and status. This study mentioned education as one of the uses but it didn't investigate on what are the specific academic uses. Yeboah and Ewur (2014) attempted to survey on the use of Chat Apps in Ghana, but their study was only limited to WhatsApp Messenger. Lack of such studies is more serious in the case of Malawi. Blackman and Manda (2011) investigated the use of social media by university student but with specific focus to the social media solutions in use, the choice and types of devices and market context. This is why Buhari *et al.* (2014) pointed out in their study that even though there is high usage of Social Media by students, there is no reflection that students are using it for academic pursuit. Thus, a research that assesses both social and pedagogical use of mobile phones and Chat Apps will serve to fill the identified gap.

3.0 METHODOLOGY

The study involved the use of a cross-sectional research design to generate data. Among the many benefits of a cross-sectional study design is the fact that the design allows researchers to compare many different variables at the same time. By using this study, therefore, the researcher was able to take into account several variables in investigating the use of mobile phones and Chat Apps among university students in the study area.

The study was conducted at Lilongwe University of Agriculture and Natural Resources (LUANAR) between July and November 2014. LUANAR is located a few kilometres from Lilongwe city centre. Lilongwe is Malawi's capital city located in the Central region. LUANAR was chosen because, at the time of conducting this research, the researcher was working there. This coincidence, thus, provided the convenience for data collection.

Simple random sampling method was used to obtain a representative sample of 125 students; 105 pursuing bachelor degree studies and 20 Master's studies. Simple random sampling was used to provide an equal chance for all respondents to be involved in the study. Self-administered questionnaires (comprising both open-ended and close-ended questions) and interviews were used as research instrument and method, respectively, for data collection. Both qualitative and quantitative data collected were analyzed by using the Statistical Package for the Social Sciences (SPSS), Version 18.

The present study is not without its limitations. The findings are very specific to university students and could only be generalized to a population with the same characteristics. Furthermore, the questionnaires were self-administered. Thus, the reliability and validity of the information obtained from them depended solely on the honesty of the respondents in responding to the questionnaire.

4.0 FINDINGS AND DISCUSSIONS

4.1 Demographic Data of Respondents

The study involved a total of 125 students; 76 (60.8%) were males and 49 (39.2%) were females. Out of these respondents, 105 were undergraduate students and 20 were Masters' students. Three (2.4%) of these respondents were aged below 18 years, 95 (76.0%) were from 18 to 25 years, 23 (18.4%) were from 26 to 35 years, and four (3.2%) were aged from 36 to 45 years. None of them was aged above 45 years. This finding is in some way similar to that of Waithaka (2013) who found that most of university students (98.5% of her study's sample size) were aged between 16 and 35 years. The present research, furthermore, observed that 54 (43.2%) respondents were living on campus while 71 (56.8%) were living off campus. Table 1 presents a summary of these findings. The blend of respondents' categories was necessary for providing generalized findings.

4.2 Extent of Mobile Phone Ownerships

Findings on the extent of respondents' phone ownerships revealed that only one respondent (equivalent to 0.8%) did not own a mobile phone. The rest, that is, 124 respondents (99.2%), indicated to own at least one mobile phone. Of those owning mobile phones, 85 (68.6%) had one phone, 35 (28.2%) two phones, and 4 (3.2%) three phones. The main reason for some of respondents to own more than one phone was identified to be the cost of cross-network communication. It was observed, for example, that it was more costly for a TNM subscriber to make a call to Airtel subscriber than to another TNM subscriber, and vice versa. Hence, most of the respondents with two phones, one was with a TNM SIM card and the other with an Airtel SIM card. Even those respondents with one phone, most of them had SIM cards of each of the two network operators.

The study went further to identify the types of phones used by respondents. As explained by North *et al.* (2014), there are three types of mobile phones; smartphone, feature phone, and basic phone. Because the features of smartphone and feature phone are not easy to differentiate by many ordinary users, respondents were only asked to state whether they were using smartphone or basic phone. Findings revealed that 81 (65.3%) respondents were using smartphones, 37 (29.9%) were using basic phones and 6 (4.8%) said they didn't know the type of phones they were using. The observed findings reveal that a big share of LUANAR students own mobile phones, with most of them using Smartphones; and thus potential users of Chat Apps. It is, thus, likely that mobile phones affect LUANAR students significantly both socially and pedagogically.

Table 1: Demographic data of respondents (n=125)

Variable	Category	Frequency	Percentage
Sex	Male	76	60.8
	Female	49	39.2
	Total	125	100.0
Study Programme	Bachelor	105	84.0
	Masters	20	16.0
	Total	125	100.0
Age (Years)	Below 18	3	2.4
	18 - 25	95	76.0
	26 - 35	23	18.4
	36 - 45	4	3.2
	Above 45	0	0.0
	Total	125	100.0
Respondents'	On Campus	54	43.2
Residence	Off Campus	71	56.8
	Total	125	100.0

Source: Survey, 2014

4.3 Phone Usage Scenarios

The study sought to find out phone usage scenarios among respondents. To achieve this, eleven common mobile phone applications were listed and respondents were asked to rank their extent of use on each of them. A four point Likert scale, "very often", "often", "rarely" and "never used", was presented to respondents to measure their extent of use on each of the listed applications. As Figure 2 shows, clock and alarm was the leading "very often" used phone application as 61 (49.2%) respondents indicated to use it very often. The second was Text Messaging/SMS mentioned by 47 (37.9%) respondents, followed by 42 (33.9%) respondents making and/or receiving calls, 40 (32.3%) using Chat Apps, 33 (26.6%) listening to music and radio, 30 (24.2%) surfing on the internet, 27 (21.8%) using phones as calculator, 24 (19.4%) using phone for academic affairs and camera, while 14 (11.3%) respondents indicated to very often use mobile phones to access emails, and 6 (4.8%) to play games.

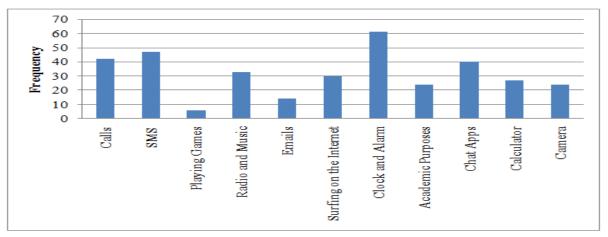


Figure 2: Phone applications that are "very often" used by respondents

In the case of "never used" phone applications, findings show that most of LUANAR students, 56 (45.2%), have never accessed emails on their phones. The other applications that respondents never used in their mobile phones were games and Chat Apps 51 (41.1%) responses each, 48 (38.7%) surfing on the internet, 43 (34.7%) camera, 20 (16.1%) listening to radio and music, 15 (12.1%) calculator, 14 (11.3%) never using phone for academic purposes, and 4 (3.2%) indicated to have never used their phones for clock and alarm. None of the respondents mentioned to have never used their phones for making and/or receiving calls and for SMS, as shown in Figure 3.

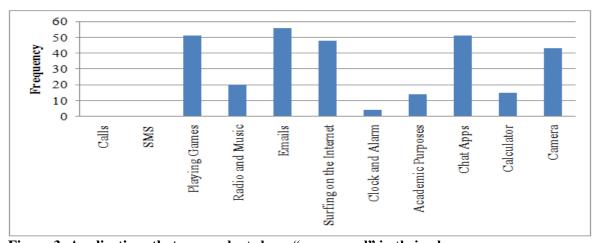


Figure 3: Applications that respondents have "never used" in their phones

Generally, results show that alarm and clock are the applications that are mostly used by respondents in their phones. This is informed by respondents' responses where 61 (49.2%) of them said that they used it very often, 42 (33.9%) used it often, 17 (13.7%) rarely used it, and 4 (3.2%) never used it at all. On the other hand, playing games is generally the least used phone application among respondents. This is so because only 6 (4.8%) respondents said they used it very often, while 11 (8.9%) respondents said they often used it,

56 (45.2%) said they rarely used it, and 51 (41.1%) said they never used it. Although many respondents (51 (41.1%)) said they had never used Chat Apps in their phones, Chat Apps was not a generally least used phone application because many respondents (33 (26.6%)) also indicated that they used it very often. Other applications and the extent of their use are as shown in Figure 4. This finding tells that mobile phones have got diverse uses and a varying magnitude across the uses amongst students.

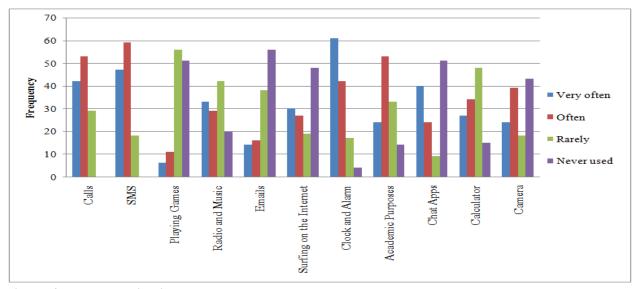


Figure 4: Phone applications as generally used by respondents

As part of phone usage scenarios, respondents were also asked to indicate as to when they switch off their phones. Findings tell that, generally, more female students switch off their phones than males. However, most of the respondents (67; 44 males and 23 females) never switch off their phones. Moreover, while they are in class, 12 female students switch off their phones as compared to 4 male students. The same pattern was observed when they are in the library where 8 female students switch off their phones as compared to only one male student. It was found that 21 females and 18 males switch off their phones in churches, mosques or other religious places, and during funerals; 3 females and 2 males indicated that they do switch off their phones occasionally. More males' phones are off when they go to sleep (5 males) and when their phones run out of battery (8 males) as compared to 3 and 1 female respondents, respectively, as Table 2 shows. One female respondent indicated that she only switches off her phone while she is with her boyfriend. This tendency of phone usages might be leading to making unnecessary noises and disturbance to others in places where phone uses are prohibited.

Table 2: Circumstances in which respondents switch off their phones

Despenses to "When is your phone off?"	Sex of Respondent		—— Total
Responses to "When is your phone off?"	Male Fema		
My phone is never switched off	44	23	67
While I'm in class	4	12	16
While I'm in library	1	8	9
While I'm sleeping	5	3	8
While I'm in Church/Mosque	18	21	39
When it runs out of battery	8	2	10
While I'm at funeral	2	3	5
While with my boyfriend		1	1
Total	82	73	156**

Source: Survey, 2014

^{**} Total Frequency does not sum up to 125 because of multiple responses

4.4 Chat Apps

To identify which Chat Apps are commonly used by respondents, eight selected Chat Apps from a list of top 22 Chat Apps in the world as presented by the Next Web (2014), were availed to respondents. These Chat Apps were BlackBerry Messenger (BBM), Chaton, Facebook Messenger, Hangouts, Skype, Tango, Viber and WhatsApp, arranged in alphabetical order. Respondents were asked to rank the extent of their use on each of them. They were also allowed to add any other Chat Apps they were using. A four-point Likert scale, "very often", "often", "rarely" and "never used", was used on each of the Chat Apps. Results showed that WhatsApp was the mostly used Chat App among LUANAR students, followed by Facebook Messenger and BBM. This was informed by the fact that "very often" usage was only indicated on WhatsApp (46 responses, 37.1%), Facebook Messenger (16 responses, 12.9%) and BBM (6 responses, 4.8%). None of the remaining presented Chat Apps were indicated to be 'very often' used by respondents. In the case of the "never used", Tango was the leading (119 responses, 96.0%) and Facebook Messenger was the last (57 responses, 46.0%). Figure 5 gives more details on these findings. In some ways, these findings concurred with the Next Web (2014) which mentioned WhatsApp as the leading Chat Apps in the world in terms of usage which makes it an important and a 'must have' App for smartphone's Chat Apps users.

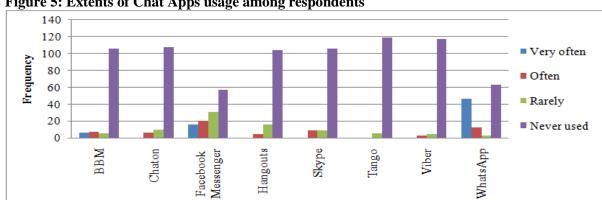


Figure 5: Extents of Chat Apps usage among respondents

A multiple response question was set out to capture specific uses of Chat Apps among respondents. Results show that 77 (97.5%) respondents indicated that they used Chat Apps for text messaging, 73 (92.4%) respondents indicated that they used them for sending and receiving photos and images, 67 (84.8%) respondents for sharing of music and other audio files, 64 (81.0%) for sharing of academic matters and 24 (30.4%) respondents for making free calls, as shown in Table 3. This finding informs that among other reasons, respondents use Chat Apps for sharing of academic stuffs.

Table 3: Chat Apps uses

Chat Apps uses among respondents	Frequency	Percent
Making free calls	24	6.5
Sending and receiving text messages	77	20.8
Sending and receiving photos	73	19.7
Sending and receiving audio files and music	67	18.1
Sending and receiving videos	66	17.8
Sharing of academic matters	64	17.3
Total	371**	100.0

Source: Survey, 2014

^{**}Frequency does not sum up to 125 because of multiple responses

4.5 Uses of Mobile Phones amongst Respondents

4.5.1 Social uses

Respondents were asked to indicate how they use their phones on social grounds. Results showed that 112 (90.3%) respondents use their phones for communicating with friends, 97 (78.2%) for communicating with their families, 56 (45.2%) for entertainment and refreshment, 54 (43.5%) for chatting and gossiping, 37 (29.8%) for searching news and updates, and 9 (7.3%) use their phones as status symbol to show that they are better off as compared to their fellow students. It can thus be deduced from these findings that the central social use of mobile phones among university students in Malawi is to support communications.

4.5.2 Academic uses

To capture respondents' academic uses of phones, an open-ended questionnaire was used. As shown in Table 4, findings showed that the top three academic uses of mobile phones were: searching for academic materials on the internet (63 respondents, which is equivalent to 55.8%), communicating with fellow students (42 respondents which is equivalent to 37.2%), and communicating with lecturers (33 respondents which is equivalent to 29.2%). However, a slight divergence was observed in trends of responses on calculators and alarm from the findings in section 4.3 above. This divergence may have been caused by two main reasons; first, a question that led to this finding (unlike that for section 4.3, which was close-ended) was open-ended; thus, respondents were free to fill in anything, and second, respondents might be using calculators and clock/alarm for reasons other than academic.

Table 4: Academic uses of mobile phones among LUANAR students

Academic uses of mobile phones	Frequency	Percent
Searching for academic materials on the internet	63	24.1
Communicating with fellow students on academic matters	42	16.1
Communicating with lecturers	33	12.6
Downloading academic materials	22	8.4
Searching for scholarships	2	0.8
Reading electronic copies of academic materials	9	3.4
Setting alarm for studies	27	10.3
Storage device for education materials like books and hand-outs	11	4.2
Searching for answers to assignments	15	5.7
Calculator	22	8.4
Record lectures and listen to them later	4	1.5
Watching videos of online lectures and tutorials	6	2.3
Accessing Students Academic Records Information System (SARIS)	5	1.9
Total	261**	100.0

Source: Survey, 2014

4.6 Negative Effects of Mobile Phones to Students

The research went further to explore if respondents experienced any negative effects associated with their phone uses. An open-ended question was used, and the following were found to be the negative effects of mobile phones to students:

- Students are becoming addicted to phones; hence, spend much of their time on phones than on studies (69 respondents, 62.7%),
- Uncontrolled phone uses distract class sessions/lectures (45 respondents, 40.9%) and private studies (35 respondents, 31.8%),
- Phones expose students to immoral behaviours such as pornography (24 respondents, 21.8%),

^{**} Frequency does not sum to 125 because of multiple responses

- They increase cost of living because money for airtime is needed (17 respondents, 15.5%),
- Mobile phones may lead to stress, depression or frustrations if a phone is lost, stolen or when the owner gets inferiority complex associated with a feeling that his/her phone is cheaper as compared to his/her peers' and colleagues' (16 respondents, 14.5%),
- Use of phones in aiding and facilitating cheating during exams (12 respondents, 10%),
- Phones may cause health problems (5 respondents, 4.5%),
- Competition of buying expensive phones (6 respondents, 5.5%),
- Procrastinating school assignments (9 respondents, 8.2%), and
- Phones make students lazy because they can get answers of assignments on internet (2 respondents, 1.8%).

What is referred to as bizarre results is a package of the critical educationally related issues that though they are rated with lower percentages do have a far-reaching negative impact in the pursuit for academic excellence.

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The empirical evidence of the study shows that mobile phones are owned and used by LUANAR students to a very large extent. This was shown by a significant percentage (99.2%) of respondents who indicated to own mobile phones, with more than half of them owning smartphones. However, despite the large number of smartphone ownerships, almost half of smartphone users have never used Chat Apps. For those using Chat Apps, the top three Apps were WhatsApp, Facebook Messenger and BBM. Respondents use Chat Apps mostly for text messaging. Concerning the general use of mobile phones, the study identified reasons for their usages among respondents to be both social and academic. Students always need to be in touch with their families and friends, but they also use their phones for entertainment and refreshment. On academics, the top usages were searching for academic materials on the internet, communicating with their fellow students, and communicating with their lecturers.

Although relatively more female students occasionally switch off their phones, generally, more than half of LUANAR students do not switch off their phones in various places that demand silence. In connection with this, respondents indicated a number of negative effects associated with mobile phone uses. Academically-related negative effects include: mobile phones make students spend more time on phones than on studies; some students use them in class and in other study areas such as library thus being distracted from class sessions and private studies; students spend much of their money on airtime than on academic materials; phones aid and facilitate cheating during exams, and they may lead to procrastinating school assignments. Those academically related factors are evidence of improper use of mobile phones.

5.2 Recommendations

The study, therefore, recommends the following:

- LUANAR and other similar institutions should consider the higher rate of mobile phone ownership among students as an opportunity that can be used academically. They can achieve this by creating environments in which students can use their mobile phones to gain entry to digital academic information to enhance their learning.
- Students must learn to balance the use of their mobile phones and expenditures on air time. This will help them to avoid addiction and overspending on phones. The office of Dean of Students can help in doing guidance and counselling on this.
- Mobile phones should either be forbidden in lecture halls or switched off if allowed in instead of the prevailing practice of allowing them in only when muted. This allows students to chat during lectures.
- Mobile phone companies should harmonize the service charge rates across their networks so that there
 should be no extra charges for cross network services.

6. AREAS FOR FURTHER RESEARCH

We suggest further research to correlate phone uses and academic performance of university students. As we observed that respondents prefer some of the Chat Apps more than others, we also recommend further research to investigate on the underlying reasons for that.

REFERENCES

- Airtel (2014). http://www.africa.airtel.com/Malawi. Retrieved on 10th August, 2014.
- Aker, J. C. and Mbiti, I. M. (2010). Mobile Phones and Economic Development in Africa, Journal of Economic Perspectives—Volume 24, Number 3—Summer 2010.
- Balakrishnan, V., and 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.
- Batzilis, D., Dinkelman, T., Oster, E., Thornton, R. and Zanera, D. (2010). New Cellular Networks in Malawi: Correlates of Service Rollout and Network Performance, NBER Working Paper Series.
- Berger, E. (2009). Expanding Outreach in Malawi: OIBM's Efforts to Launch a Mobile Phone Banking Program, The SEEP Network and Opportunity International.
- Bicen, H. and Kocakoyun, S. (2013). The Evaluation Of The Most Used Mobile Devices Applications By Students. 2nd Cyprus International Conference on Educational Research, (CY-ICER 2013), 1877-0428, Elsevier Ltd.
- Blackman, L. G. and Manda, T. D. (2011). Use of Mobile Devices to interact on social media: University of Oslo vs. University of Malawi. Social Mobile INF5261: Spring 2011.
- Blaschke, S., Bokenkamp, K., Cosmaciuc, R., Denby, M., Hailu, B. And Short, R. (2009). Using Mobile Phones to Improve Child Nutrition Surveillance in Malawi, UNICEF Malawi and UNICEF Innovations.
- Brown, K., Campbell, S. W., and Ling, R. (2011). Mobile phones bridging the digital divide for teens in the US? *Future Internet*, *3*(4), 144–158.
- Buhari, S. R., Ahmad, G. I. and HadiAshara, B. (2014). Use of Social Media among Students of Nigerian Polytechnic, International Conference on Communication, Media, Technology and Design.
- Chakraborty, S. (2006). Mobile phone usage patterns amongst university students: A comparative study between India and USA, A Master's Paper for the M.S. in I.S degree.
- Dresler-Hawke, E., & Mansvelt, J. (2008). *Mobile phones: Enhancing social communication in young adult's lives?* Presentation at the Australian and New Zealand Marketing Academy Conference (pp. 1–7). Sydney, Australia.
- Enon, J. C. (1998), Educational Research, Statistics and Measurement, Department of Distance Education: Makerere University.
- Ezemenaka, 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. *International Journal of Education and Development using Information and Communication Technology (IJEDICT)*, 2013, Vol. 9, Issue 3, pp. 162-173.
- Gitonga, R. K., Ndirangu, M. and Githeko, J. M. (2013), The perceived extent of ICT integration in intrauniversity communication among the Kenyan Universities, Science Publishing Group.
- Goggin, G. (2006). Cell Phone Culture: Mobile technology in everyday life, Routledge.

- Government of Malawi (2009), Population and Housing Census 2008 Main Report, National Statistical Office, Zomba.
- Government of Malawi (GOM) (2012). Integrated Household Survey 2010-2011: Household Socio-Economic Characteristics Report.
- Government of Malawi (2013), Population Projections for Malawi, www.nsomalawi.mw/images/stories/data_on_line/demography/projections/ProjbyDist.xls, Retrieved on 20th June, 2014.
- GSMA (2012). TNM Malawi Feasibility Study, GSMA Head Office Seventh, London, UK.
- International Telecommunication Union (ITU) (2014a). Key ICT indicators for developed and developing countries and the world (totals and penetration rates), www.itu.int/en/ITU-D/Statistics/Documents/statistics/2013/ITU_Key_2005-2013_ICT_data.xls, retrieved on 17th June, 2014.
- International Telecommunication Union (ITU) (2014b). Statistics: Time Series by Country, www.itu.int/en/ITU-D/Statistics/Documents/statistics/2013/Mobile_cellular_2000-2012.xls, retrieved on 23rd June, 2014.
- Kreutzer, T. (2009). Internet and online media usage on mobile phones among low-income urban youth in Cape Town. *International Journal of Education and Development using ICT*, 5(5),1-21.
- Lie, E. (2004). Shaping the Future Mobile Information Society: The Case of the Kingdom of Norway. International Telecommunication Union Workshop on Shaping the Future Mobile Information Society.
- Matto, G. (2013). SMS-Based Systems: Towards Implementation of Mobile Discussion Groups. IST-Africa 2013 Conference Proceedings, ISBN: 978-1-905824-38-0.
- Ng'ambi, D. (2005). Mobile Dynamic Frequently Asked questions (DFAQ) for students and learning support, Presented at the 4th World conference on M-Learning.
- North, D., Johnston, K., and Ophoff, J. (2014). The use of mobile phones by South African university students. *Issues in Informing Science and Information Technology*, 11, 115-138.
- Userlike (2014), Chat App as a smart solution for instant communication, https://www.userlike.com/en/article/chat app retrieved on 20th June 2014
- Uys, W., Mia, A., Jansen, G. F., Van Der Schyff, H., Josias, M. A., Khusu, M., Gierdien, M., Leukes, N. A., Faltein, S., Gihwala, T., Theunissen, T. And Samsodien, Y. (2012). smartphone Application Usage amongst Students at a South African University, IST-Africa 2012 Conference Proceedings, ISBN: 978-1-905824-34-2.
- Waithaka, M. W. (2013). Internet use among University Students in Kenya: A Case Study of the University of Nairobi, Masters' Thesis Submitted in Accordance with the requirements for the Degree of Master of Arts in Information Science at the University of South Africa.
- Walker, L. (2014). 10 Best Mobile Messaging Apps, http://personalweb.about.com/od/mobile-messaging/tp/8-Mobile-Messaging-Apps.htm, retrieved on 25th June 2014.
- Yeboah, G. and Ewur, G. D. (2014), The Impact of WhatsApp Messenger Usage on Students Performance in Tertiary Institutions in Ghana, Journal of Education and Practice, ISSN 2222-1735, Vol.5, No.6, 2014
- Zulkefly, S. N. and Baharudin, R. (2009). Mobile Phone use Amongst Students in a University in Malaysia: Its Correlates and Relationship to Psychological Health, European Journal of Scientific Research, ISSN 1450-216X Vol.37 No.2 (2009), pp.206-218.