

## *Full Length Research*

# **Students Perception about the Educational and other Effects of Mobile Phone Usage in the University for Development Studies**

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This paper sought to look at the perception of the educational and other possible effects of mobile phones usage among students in tertiary institutions of Ghana. Specifically, it looked at the case of the University for Development Studies (UDS). We all know that communication can take many forms: verbal, gestures, facial expressions, written and through mobile phones usage. Currently, almost everyone has a mobile phone, so communication via mobile phones has become the most popular and fastest way to communicate. Nevertheless, like every good thing which comes with its associated effects, mobile phones are no exception. Research shows that excessive use of mobile phones has their corresponding results. Apart from the harmful effects of using mobile phones, there are lots of positive outcomes as can be seen in the literature on the use of mobile phones. The findings from the research showed that the three topmost educational impacts of mobile phones on students are that mobile phones can be used in cheating during examinations. Secondly, using mobile phones during lectures can cause distraction, and thirdly, students use mobile phones for their class assignments. Results of the investigation also showed that mobile phone usage has other possible effects which may either be positive or negative. Some adverse effects that are associated with mobile phones are that they can be used to engage in unacceptable behaviour. For example, hackers can track a phone's location and record calls by knowing the phone number. Texting while driving can also cause distraction and distracted driving can cause accidents. Despite these adverse effects of using mobile phones, the study also found lots of other positive results. Some of these are the location of a mobile phone can be determined when the phone is put on. Also, mobile phones can make one's life comfortable and secure while in an emergency, and can also be used as a safety device. The researchers confirmed these and many more effects of using mobile phones which are contained in the literature.

**Keywords:** mobile phone, cell phone, smart phone, positive effect, negative effect,

## **INTRODUCTION**

According to Rabiou et al. (2016), globalisation has led to changes in our lives. One of the ways in which globalisation is changing our lives through communication is as a result of development in Information and Communication Technology (ICT). The mobile phone is one of the ICT's tools used in communication. These mobile phones are not just for

voice communication, but it is also a tool for sending short message service (SMS) or texting (Rabiou et al., 2016). The mobile phone is an essential medium of communication among students. In India, all domestic items are communal, but it is the mobile phone which qualifies to become the first private, secluded and classified item of ownership.

Surprisingly, studies on the influence of mobile phone in our tertiary institutions of late have not been given a great deal of attention. However, it has been discovered that the usage of mobile phones by students in schools is problematic, since it has adverse effects on their academic performance. It has practically affected the society's ease of access, security and coordination of trade and community actions and hence, has become part of the customs of the world (Rabiu et al., 2016). Sundari (2015) indicated that "studies have proven that the rampant use of social networking, texting and chatting on mobile phones result in lower grades and poor academic performance of students" (p.899).

A mobile phone is a movable handset that can make and receive calls over a radio frequency link while the client is moving within a telephone service region. According to Wikipedia (n. d), modern mobile telephone services use a cellular network architecture which is called cellular phones or cell phones, in North America. Wikipedia (n. d) also adds that the 2000s-era mobile phones support a variety of other services, such as text messaging, MMS, e-mail, internet access, short-range wireless communications (infrared, Bluetooth), business applications, video games, and digital photography. Wikipedia (n. d) further adds that mobile phones offering only those capabilities are known as feature phones; mobile phones which significantly advanced computing capabilities are referred to as smart phones (Wikipedia, n. d).

There are different types of mobile phones; smart phones and feature phones. According to Wikipedia (n. d), smartphones have some distinguishing features. In the developed world, smartphones have now overtaken the usage of previous movable systems. However, they account for about 50% of mobile telephony in the developing countries (Wikipedia, n. d).

In its definition of a feature phone, PC Magazine Encyclopedia writes that a feature phone is a cell phone that contains a fixed set of functions beyond voice calling and text messaging. He adds that feature phones may offer Web browsing and e-mail, but they generally cannot download applications from an online marketplace. Again, according to PC Magazine Encyclopedia, the "'feature phone' moniker made sense when it was introduced in the late 1990's because they included more functions than a regular cell phone. Today, the gadget is more of a "featureless phone" compared to the ever-growing functionality of a smart phone".

Smartphones generally use a mobile operating system that often shares common traits across devices (Wikipedia, n.d). The third type of phone called the kosher telephone has restricted features and rabbinical approval for use in Israel and elsewhere by observant Orthodox Jews and is intended to prevent immodesty. Writing on the topic "Introducing: A Kosher Phone

Permitted on Shabbat", Rachel (2012) indicates that the kosher telephone released by the Zomet Institute can be used on Shabbat without breaking the Jewish laws of the day of rest. According to her, the 'kosher phone' can be dialed without technically connecting thus avoiding Shabbat prohibitions.

According to Olanrewaju (2015), different types of mobile phones have been produced by different phone manufacturers; each of which comes with various features for different/ specific function(s). He writes that different variety of mobile phones as named by their manufacturers include: Nokia, Samsung, Motorola, Sagem, Sendo, Siemens, T-mobile, Thuraya, Vodafone, Sony Ericsson, Bluebird, Alcatel, Tecno, Blackberry, and so on. We now have those that can make video calling, beep, take more precise pictures/photographs, surf the internet and lots more. They are also built/installed in with different capacities, mode of operation and features/ applications. For example, 17-megapixel phones usually will produce clearer pictures/ photographs. Examples of Android-enabled devices such as HTC, Tecno, and many others are the most modern kinds of mobile phones extensively used by both young and the aged, particularly among students (Olanrewaju, 2015).

### **Statement of the problem**

Cell or mobile phones have become an integral part of us so much that when somebody loses a phone, it is like losing something so significant. Our daily lives cannot be complete without access to a cell or mobile phone. As Suryanarayana (2015) posits, it is very challenging to imagine how our lives would have been without a cell phone since most of our work is done using cell phones. The presence of cell phones presents a host of options and challenges for today's students. It can be a helpful academic tool or a harmful educational disruption depending on the attitude and use pattern of the student or owner (Suryanarayana, 2015).

Effects of mobile phones can either be positive or negative, as well as potential or absolute. Compared to the delay in sending out important messages and the faster it can be, one can say kudos to the upsurge in mobile phones usage because of the numerous benefits.

Research has shown that mobile phones have numerous uses. They are used for a variety of purposes, such as keeping in touch with family members, for conducting businesses, and in the event of an emergency, one needs to have a mobile phone to reach out for help. Currently, in Ghana, it is impossible for a student in a tertiary institution not to own a phone. It will be highly unlikely to come across such a student, and even if there are such students, it is possible that their phones may be temporarily malfunctioning. One can also see people carrying with them more than one

mobile phone at a time which they use for different purposes, such as for business and personal use. Multiple SIM cards may be used to take advantage of the benefits of different calling plans.

According to Wikipedia (n. d), mobile phones have been used in a variety of diverse contexts in society. Such examples include:

- Motorola carried out a study and found out that one in ten mobile phone subscribers have a second phone that they keep secretly from other family members, which they use to engage in activities such as extramarital affairs or private business dealings.
- Some organisations assist victims of domestic violence by way of providing them with refurbished phones which they use in emergencies.
- The advent of unlimited text-messaging has resulted in the cell-phone novel, by the use of text messaging to a website which takes the novels in its entirety.
- Mobile telephony facilitates activism and public journalism which are explored by Reuters, Yahoo and small independent news companies such as Jasmine News in Sri Lanka.

### Significance of the Study

The study is significant in that it would make students know the implications of spending too much of their time using mobile phones. Students are also expected to see the effect of excessive use of their cell phones. The study would also make students understand the added advantage of using mobile telephones aside from social media.

### Objectives

The principal object of this research was to ascertain students' perception about the educational and other effects of mobile phone usage among students in tertiary institutions of Ghana. The specific objectives that the study sought to achieve were:

- a. To discover whether students know the educational effects of using a mobile phone.
- b. To ascertain other possible effects of mobile phones

### Research Questions

Two research questions guided the study, and these are:

- a. Do students have any knowledge about the educational effect(s) of using a mobile phone?
- b. Do students have any knowledge about other possible effects of using a mobile phone?

## LITERATURE REVIEW

In this section, studies relating to students perception about the educational and other effects of mobile phone usage on tertiary institutions of Ghana was reviewed. The literature is reviewed under the following sub-topics:

- Educational Effects, and
- Other possible effects of mobile phones.

### Educational Effect

Writing on "a sociological outlook of mobile phone use in society" Chatterjee (2014), indicated that "whether the phone is just ringing or the student is texting a friend, there has been proven negative consequences on the students' academic performance" (p. 60). He argued that when the ring of a mobile phone is loud during a class, it can distract diligent note takers. Chatterjee (2014), further argued that "as mobile phone use grows, the communication skills and academic success of students around the globe will begin to decline"(p. 60). Another critical observation by Chatterjee (2014) was that it would be harder and harder for academic success to be achieved in schools with mobile phones becoming more advanced.

Sundari (2015) observed that mobile phone enable students to exchange useful information with their classmates concerning their studies. He argued that this practice can positively influence the academic performance of students. According to Sarwar and Soomro (2013), smartphone users have the opportunity to utilize their phones to get educational benefits within their available time irrespective of their location. They indicated that "smartphone within and without the classroom make it easier for students and teachers to collaborate" (Sarwar and Soomro (2013; p.220). They argued that students who would have missed out of classes or lectures due to some unforeseen circumstances such as sick leave or other health issues, are able to attend the lectures through their smartphones and keep up with their work without falling behind.

Kuznekoff and Titsworth (2013) examined the impact of mobile phone usage, during a class lecture, on student learning. They observed participants in three different study groups (control, low-distraction, and high-distraction), watched a video lecture, took notes on that lecture, and took two learning assessments after attending the lecture. Their findings showed that students who were not using their mobile phones wrote down 62% more information in their notes and were also able to take more detailed notes. Their findings also revealed that those students who were not using their

mobile phones were able to memorise more detailed information from the lecture. Further and as presented by Kuznekoff and Titsworth (2013), students who were not using their mobile phones were able to score a full letter grade and a half higher on multiple-choice tests than students who were actively using their mobile phones.

Writing on the effects of Mobile Phones on Students, Schreiner (2018) argued that mobile phones link students to one another. She also posited that mobile phones link students to educational resources and other potential hosts of distractions. She speculated that the presence of cell phones presents both opportunities and challenges for today's students. Schreiner (2018) further argued that depending upon the attitude and use pattern of the students and the policies of the school they attend, mobile phones could be a helpful academic tool or a harmful academic disruption. She added that the technology available to cell phones allow students to create more polished academic products with less effort than before. Further, she acknowledged that most students use their cell phones as a safety device and for any form of unforeseen emergency.

On the other hand, Olanrewaju (2015) argued that the internet enabled phone usage does not affect the academic performance of students but rather the distractions by the usage of the phone. He concluded from his research that there was no vast influence of mobile phone use on students' academic performance. Also, he alluded that even though an overly significant number of the students had access to mobile phones, their academic achievement was not significantly affected by their use of the mobile phones.

The introduction of cell phones could be seen as a mixed blessing. Adolescents say that phones make their lives safer and more convenient (Pew Research Center, 2010). Accordingly, many more teens are increasingly grabbing cell phones because of their availability, and also because these handsets are now loaded with capabilities which range from video recording and sharing to music playing and internet access, unlike before. The Pew Research Center (2010) is certain that we are moving into an era where mobile devices are not just talking and texting, but can also access the Internet and all it has to offer.

### **Other Possible Effects of Mobile Phones**

Chatterjee (2014), was of the view that mobile phones have other effects. He indicated that "aside the constructive and positive impact of the mobile phones there are negative ones also like, using mobile phones for kidnapping and blackmailing, capturing blue films, images and capturing porn images" (Chatterjee, 2014; p.

60). He further argued that people were using the camera functions of mobile phones to cause privacy problems, especially when they use the hidden camera to take pictures deemed to be private.

Suryanarayana (2015) also came up with a list of positive and negative effects of cell phones. Under positives, he listed; communication, more convenience, greater technology availability, entertainment, improved personal security, beneficial in studies, and finally, beneficial in business. He explained to them as follows:

The very first positive point of mobile phones is communication because access to a mobile phone can allow one to communicate with anyone from anywhere at any time. Secondly, mobile phones are undeniably convenient because they enable students to reach their peers and their parents instantly. Thirdly, picture taking and internet surfing, which are readily available on most cell phones, assist students to collect the information that they need for school or assessing their e-mail or school website. Fourthly, mobile phones have become a source of unlimited entertainment because it helps one to stay entertained by allowing him/her to play games, listen to music and do lots of other stuff. Fifthly, cell phones keep students safe because the presence of a cell phone makes it possible for students to call their parents or personnel from the emergency service in the case of an emergency situation or an unforeseen contingency.

Also, smart phones with Android, Apple iOS and Windows Phone operating system come with educational applications which one can use while in school. Also, mobile phones can help students in studies if they use them wisely.

Under negatives, Suryanarayana (2015) listed; more distraction, engaging in inappropriate behaviours, bad impact on studies, and finally accidents. He explains that when cell phones ring during classes, they draw everyone's attention away from the lesson and can disrupt the flow of learning. He argues that this added distraction has adverse effects on students' school performance as it prevents them from committing their full attention to their studies. Secondly, he thinks that teens and young adults often fail to recognise the long-term implications of inappropriate behaviour without considering the consequences. He cites the example of teenagers and young adults taking inappropriate pictures and sending them to their boyfriends or girlfriends.

Cell phones can be used for surveillance and mobile phone tracking. Research has shown that mobile phones are commonly used to collect location data because as the phone is turned on, the geographical position of a mobile phone could be determined readily (whether it is being used or not). According to Wikipedia (n. d), the movements of a mobile phone user with a SIM card and the handset on can be tracked by their service provider and if desired by law enforcement agencies. It

adds that in the United Kingdom (UK) and United States (US), law enforcement and intelligence agencies possess technology that enables them to activate the microphones in mobile phones so that they will be able to listen to conversations which take place near the phone (Wikipedia, n.d). Hackers are also able to track a phone's location, read messages, and record calls, just by knowing the phone number.

Research on mobile phones and driving safety as well as texting while driving has shown that using one's mobile phone including talking on the phone, texting, or operating the phone, is common but controversial. It is also considered dangerous due to distracted driving. Being distracted while operating a motor vehicle has been shown to increase the risk of accidents. As reported by Wikipedia (n. d), the United States National Highway Traffic Safety Administration (NHTSA) in September 2010 said that 995 people were killed by drivers distracted by cell phones. It argues that it is for this reason that many jurisdictions prohibit the use of mobile phones while driving. Countries such as Egypt, Israel, Japan, Portugal, and Singapore ban the use of both handheld and hands-free use of mobile phones. The United Kingdom, France and many states in the US also ban handheld phones but permit hands-free use when driving. Wikipedia (n. d) further shows in a 2011 study which reported that over 90% of college students' surveyed text (initiate reply or read) while driving. It stated that a simulation study at the University of Utah found a six-fold increase in distraction-related accidents when texting but concludes that the scientific literature on the dangers of driving while sending a text message. Wikipedia (n. d) again writes that accidents involving a driver being distracted by talking on a mobile phone have begun to be prosecuted. It cites measures that countries such as the UK, Japan, New Zealand and some states in the United States have introduced towards helping to address the canker of accidents involving motorists due to the distraction of using mobile phones while driving.

There is also possible danger of using your mobile phone while driving. Research shows that there is a high risk of traffic accidents when mobile phones (either handled or with a "hands-free" kit) are used while driving. According to Frei et al. (2011) there is about 3-4 times greater chance of an accident due to the distraction from driving and using your mobile phone.

Geoff (2013) writes that mobile phones have changed how we negotiate our relationships with family, spouses and close friends. He argues that increased levels of mobile phone subscriptions are linked with improvements in education, gender equality and political participation, particularly in developing countries. He posits that they are also associated with higher economic growth. The effects of increasing mobile phone subscriptions on Gross Domestic Product (GDP)

growth across all the countries were all positive for the years, 2010 to 2020. The countries concerned were the UK, Germany, Italy, Spain, China, India, Turkey, Egypt, Kenya and South Africa. The findings by Geoff (2013) touched on four thematic areas: relationships, health, political participation, and economic growth.

On relationships, the findings of the study by the Cologne Institute for Economic Research, and reported was that mobile phones had altered our relationships with family, spouses and close friends. It also enabled women to maintain three roles within the household, simultaneously being wives, mothers and wage earners. On political participation, their findings were that more mobile phones subscriptions are correlated with more democratic participation, less gender inequality and longer time spent in education. In all three areas, the Cologne Institute for Economic Research concluded from their study that, the impact of mobile phones on social development indicators was stronger in developing countries. On economic growth, the findings from the Institute as reported by Geoff(2013) was that mobile technologies contribute significantly to GDP growth, with a forecast range between 1.8% in the UK and 24.9% in Egypt over the years from 2010 -2020 as compared with today's GDP.

## **MATERIALS AND METHODS**

### **Overall Research Design:**

The research design used for the study was the survey research. The research sought to find out the perception about the effect of mobile phone usage among students in tertiary institutions of Ghana. This type of research involves collecting data through self-administered questionnaires or interviews. This design is particularly useful in describing the characteristics of a larger population. It is also flexible, and this allows many questions to be asked on a given topic, and this provides the researcher with considerable flexibility in his/her analysis.

### **Time of Study and Project Area**

The study was conducted on the Tamale Campus among undergraduate students of the University for Development Studies. The population of undergraduate students of the Tamale Campus is 6,729 (Academic Affairs Section, University for Development Studies, 2018).The student population of UDS for the 2017/2018 Academic Year stood at 17,144 (Academic Affairs Section, University for Development Studies, 2018).

The justification for selection of the study area was to solicit for responses from all categories of students on the campus. The fieldwork was conducted from January to March 2018 over a period of twelve weeks.

### **Sample Size and Sampling**

Undergraduate students of the Tamale Campus of the University for Development Studies were the target population of this study. The simple random method of selection was used by the researchers in selecting the target population. One hundred and sixty-six (166) students were sampled out of the total student population of 6,729 (Academic Affairs Section, University for Development Studies, 2018).

### **Research Instrument for Data Collection**

The closed-ended structured questionnaire was employed to collect the information from the respondents. Closed-ended questionnaire is the type of questionnaire where respondents are only to tick the correct answer. They were also asked to respond on a 5-point Likert scale (1= Strongly Disagree; 5 = Strongly Agree). The dependability of the research tool was determined by using the test and re-test technique.

### **Administration of Instrument and Method of Data collection**

The researchers administered one hundred and sixty-six (166) questionnaires to the randomly selected students on the Tamale Campus of the University. The researchers explained some portions of the questionnaires to respondents by way of minimizing errors in the questionnaire. All the questionnaires were intended to facilitate data collection and subsequently data analysis.

### **Data Analysis Technique**

All the questionnaires were adequately checked for completeness after which the information was coded and analysed using the IBM SPSS Statistics Data Editor Version 20. There were 166 responses. We expect that students who hitherto had little knowledge about the possible effects of using mobile phones would come to understand and appreciate the relevance of this study.

## **RESULTS AND FINDINGS**

The analysis sought to consider responses as they related to the availability of mobile phones and the objectives of the study in the text.

### **Mobile Phones and some Associated Experiences of using them**

Almost all students in tertiary institutions have access to mobile phones which they use for various activities including communication. Accordingly, we asked questions seeking to elicit answers on how they acquired their mobile phones. We also tried to find clues as to their frequency of use, length of time spent on using the phone, and knowledge about the possible effect, if any, of using a mobile phone. Table 1 shows the responses received on the above subject.

Results of the investigation show that all the 166 respondents have access to a mobile phone. Out of this number, 148 representing 89.2% responded that they use their mobile phones frequently. Further, they also responded that they use their mobile phones for specific functions, including doing their class assignment(s). On whether respondents' experience a decrease in their GPA after extensive use of their mobile phones, 117 of them representing 70.5% responded in the negative. Also, 102 respondents representing 67.5% responded that the use of mobile phone does not affect their studies.

When respondents were asked how they acquired their mobile phones, eighty-eight (88) of them representing 53.0% responded that they received them from their parents. Twenty-eight (28) of the respondents representing 15.7% also responded that they received them through friends, while 47 of them representing 28.3% acquired them personally. Five (5) respondents representing 3%, however, indicated that they bought them through other means. The researchers asked respondents to also indicate how often they use their mobile phones in the night for calling, browsing, WhatsApping, facebooking, gaming etc. Responses of the respondents are presented in Table 2.

From Table 2, results of the investigation show that majority of the respondents (123) representing 74.1% often browse at night, followed by 102 respondents representing 61.4% who responded that they WhatsApp at night (77). The Table also revealed from our findings that many of the respondents (112) representing 67.5% do not often make calls at night. Seventy-seven respondents representing 46.4% responded that they do not usually play games in the

**Table 1:** Access to mobile phones and some associated experiences of using a mobile phone.

S/N	Variable	Yes	%	No	%	Total	%
1	Do you have access to a mobile phone	166	100	0	0	166	100
2	Do you use mobile phones frequently	148	89.2	18	10.8	166	100
3	Do you use mobile phones for specific functions	148	89.2	18	10.8	166	100
4	Do you spend too much time on any of these functions	96	57.2	70	42.2	166	100
5	Do you use mobile phones for class assignment	148	89.2	18	19.8	166	100
6	Are you disrupted from your studies when using your mobile phone	88	53.0	78	47.0	166	100
7	Do you lose concentration when your mobile phone is on while studying	74	44.6	92	55.4	166	100
8	Do you experience a decrease in your GPA after extensive use of your mobile phone	49	29.5	117	70.5	166	100
9	Do you think mobile phone use does not affect your studies	102	61.4	64	38.6	166	100
10	Are mobile phones becoming cheaper	80	48.2	86	51.8	166	100

**Source:** Survey Data (2018)

**Table 2:** The things mobile phones are used for in the night and frequency of using mobile phones.

S/N	Variable	Often	%	Rarely	%	Not Often	%	Never	%	Total	%
	Night calls	18	10.8	27	16.3	112	67.5	9	5.4	166	100
	Browsing	123	74.1	11	6.6	31	18.7	1	0.6	166	100
	WhatsApp	102	61.4	21	12.7	41	24.7	2	1.2	166	100
	Facebook	50	30.1	32	19.3	71	42.8	13	7.8	166	100
	Games	50	30.1	22	13.3	77	46.4	17	10.2	166	100

**Source:** Survey Data (2018)

night as revealed by our findings. We also found out that 71 respondents representing 42.8% do not use their night time for Facebook activities. Browsing to acquire additional information may be a good thing if only it would aid students in their studies and could be encouraged.

### Educational Effect of mobile phone use on students

This section of the study dealt with the educational impact of mobile phone use on students with the responses ranging from strongly disagree (SD), disagree, not sure (NS), agree (A), and strongly agree (SA).

The findings in Table 3 show that 83 respondents representing 50% and 38 respondents representing 22.9% strongly agree and agree respectively that the use of mobile phones can be used in cheating during examinations. Also, 76 respondents representing 45.8% and 55 respondents representing 33.1% strongly agree and agree with the view that using a mobile phone during lectures can cause distraction. This finding was supported by the view that students

prefer texting friends than listening to lectures. It was also noted that 49 respondents representing 29.5% and 56 respondents representing 33.7% respectively strongly agree and agree to this assertion. Furthermore, 57 respondents and 48 respondents representing 34.3% and 28.9% respectively strongly agree and agree to the view that mobile phones affect the academic performance of students negatively.

However, 132 respondents consisting of 62 respondents and 70 respondents representing 37.3% and 42.2% respectively strongly agree and agree with the assertion that students use mobile phones for class assignments. Also, 100 students made up of 72 and 28 representing 43.4% and 16.9% respectively agree and strongly agree with the view that mobile phones affect the academic performance of students positively.

Surprisingly, on the issue of whether students with smart phones are better-off academically, the findings revealed that 62 respondents representing 37.2% and 32 respondents representing 19.3% respectively strongly disagree and disagree with this assertion. Also, 30 respondents representing 18.1% were not sure of the assertion that students in

**Table 3:** Results of Respondents on the educational effect(s) of mobile phone use on students

S/n	Variable	SD	%	D	%	NS	%	A	%	SA	%	Total	%
1	Mobile phones can affect the academic performance of students positively	26	15.7	15	9.0	25	15.1	72	43.4	28	16.9	166	100
2	Mobile phones can negatively affect students' academic performance if not used wisely	25	15.1	20	12.0	16	9.6	48	28.9	57	34.3	166	100
3	Mobile phone use increases as the performance of students increases	28	16.9	42	25.3	47	28.3	27	16.3	22	13.3	166	100
4	Students use mobile phones for class assignments	13	7.8	7	4.2	14	8.4	70	42.2	62	37.3	166	100
5	Students with smart phones are better-off academically	62	37.3	32	19.3	30	18.1	22	13.3	20	12.0	166	100
6	Using a mobile phone during lectures can cause distraction	19	11.4	8	4.8	8	4.8	55	33.1	76	45.8	166	100
7	Students prefer texting a friend than listening to a lecture	20	12.0	13	7.8	28	16.9	56	33.7	49	29.5	166	100
8	Mobile phones can be used in cheating during examinations	27	16.3	9	5.4	9	5.4	38	22.9	83	50	166	100
9	Negative effects of mobile phones are more than the positives	59	35.5	27	16.3	26	15.7	32	19.3	22	13.3	166	100
10	Teachers lament that mobile phones distract student attention	17	10.2	23	13.9	45	27.1	59	35.5	22	13.3	166	100
11	Overly use of mobile phones leads to decrease in students GPA	44	26.5	31	18.7	45	27.1	33	19.9	13	7.8	166	100

**Source:** Survey Data (2018)

possession of mobile phones were better-off academically.

### Other Possible Effects of Using a mobile phone

This section of the study dwells on other possible effects of using a mobile phone. The findings presented in Table 4 below have the variables ranging from "mobile phone can interfere with human relationships" to "mobile phones can be used to engage in unacceptable behaviour".

The findings in Table 4 revealed that 138 respondents made up of 98 representing 59% and 40 respondents representing 24.1% respectively strongly agree and agree that distracted driving can increase the

risk of accidents. This is not surprising because over one hundred and thirty respondents broken down as 85 representing 51.2% and 49 representing 29.5% strongly agree and agree that talking or texting on your phone while driving is dangerous due to distraction. Also, 122 respondents representing 73.5% agreed that mobile phones could be used to engage in unacceptable behaviours. It was further noted from the findings that one hundred and thirty-five(135) respondents made up of 80 representing 48.2% and 55 representing 33.1% strongly agree and agree that mobile phones can make one's life easy and secure in an emergency situation. This view is supported by Wei and Kolko, (2005) who argued that many of the people they interviewed gave specific reasons for why they needed a phone such as for emergencies or for work.



**Table 4:** Results of Respondents on other possible effects of using a mobile phone

S/n	Variable	SD %	D %	NS %	A %	SA %	Total %
1	Mobile phones can interfere with human relationships	11 6.6	15 9.0	27 16.3	65 39.2	48 28.9	166 100
2	When one's mobile phone is on, its location can be determined	8 4.8	3 1.8	36 21.7	70 42.2	49 29.5	166 100
3	Mobile phones can make a person's life comfortable and secure while in an emergency situation	12 7.2	5 3.0	14 8.4	55 33.1	80 48.2	166 100
4	Mobile phones can be used as a safety device	12 7.2	14 8.4	22 13.3	62 37.2	56 33.7	166 100
5	It is dangerous to drive while texting or talking on your phone due to distraction	16 9.6	6 3.6	10 6.0	49 29.5	85 51.2	166 100
6	Distracted driving can increase the risk of accidents	10 6.0	11 6.6	7 4.2	40 24.1	98 59.0	166 100
7	Knowing the phone number can make hackers track the phone's location and record calls	8 4.8	4 2.4	32 19.3	59 35.5	63 38.0	166 100
8	Service providers can track mobile phones when in use	7 4.2	9 5.4	30 18.1	62 37.3	58 34.9	166 100
9	Mobile phones are energy efficient because they use less power	7 4.2	11 6.6	45 27.1	60 36.1	43 25.9	166 100
10	Mobile phones can be used to engage in unacceptable behaviour	7 4.2	12 7.2	25 15.1	74 44.6	48 28.9	166 100

**Source:** Survey Data (2018)

Also, about one hundred and twenty respondents broken down as 49 respondents representing 29.5% and 70 respondents representing 42.2% strongly agree and agree with the assertion that the location of a mobile phone can be determined when the phone is on.

## DISCUSSION

The findings of this study have shown that students' perception about the effects of mobile phone usage in tertiary institutions of Ghana is numerous and varied. The effects which are on educational and other outcomes were either positive or negative. Some positive educational effects of using mobile phones from the findings are that students can use them for their class assignments; downloading the dictionary, as well

as other educational applications which could aid them in their academic exercise. These findings agreed with that of earlier research carried out by Schreiner (2018). Schreiner (2018) posited that mobile phones could be a helpful academic tool or a harmful academic disruption, and added that the technology available to cell phones allow students to create more polished academic products with less effort than before.

The findings again showed that one hundred (100) respondents representing 60.3% agreed that mobile phones affect academic performance of students positively. The results were consistent with Olanrewaju's (2015) writing on the effect of mobile phones on students' academic performance. Olanrewaju (2015) argued that the internet enabled phone usage does not affect the academic performance of students but rather the ringing during lectures can cause the distraction.

Our observation and interaction with students

also revealed that in recent times, some students use their phones in the lecture halls to record lectures and at their own time transcribe the lectures into notes for their better understanding of the said lectures. Further, by listening to the voice clip on the device, what was taught is reinforced for easy recall when the need arises (examinations). Through this means and as some students posited, they stand a better chance of understanding the lectures presented. This assertion is affirmed and supported by Suryanarayana (2015) that smart phones with Android, Apple iOS and Windows Phone operating system come with educational applications which one can use while in school. Accordingly, we are of the view that when students use their mobile phones wisely, it can aid them in their studies. This goes to show that there are positive educational effects associated with using mobile phones.

Still, on the educational effect, the findings of the study revealed that 105 respondents representing 63.3% agreed that mobile phones could negatively affect academic performance of students' if not used wisely.

An adverse finding was that mobile phones during lectures could cause distraction when the phone rings. One hundred and twenty-one (121) respondents agreed that using the mobile telephone during lectures can cause distraction. This finding was consistent with that of Suryanarayana (2015) in his work on the positive and negative effects of mobile phone on students' career, where he listed: more distraction, engaging in inappropriate behaviours, bad impact on studies, and finally accidents. Suryanarayana (2015) explained that when cell phones ring during classes, they draw everyone's attention away from the lesson and can disrupt the flow of learning. He argued that this added distraction has negative effects on students' educational achievement as it prevents them from concentrating on their studies. Distraction caused by mobile phone when the phone rings during a class session is supported by Chatterjee (2014). He argued that when the ring of a mobile phone is loud during a class, it can distract diligent note takers.

Further, it was found out that, mobile phones should not be encouraged during examinations because of the tendency of students using them to cheat. This view is supported by Sarwar. and Soomro (2013), who argued that it would not be easy to make calls during examinations to cheat but it may be easy for pupils in a crowded classroom or examination hall to use their smartphone's for cheating in the classroom. Sarwar and Soomro (2013), indicated that "in fact there were some surprising statistics out there about the use of smartphone's for cheating in the classroom" (p.220).

There is also possible danger of using your mobile phone while driving. Research has shown that there is increased risk in traffic accidents when mobile

phones (either handled or with a "hands-free" kit) are used while driving. Results from the findings also revealed that about one hundred and forty (140) respondents representing 83.1% agreed with the view that distracted driving can increase the risk of accidents. The findings further showed that over one hundred and thirty (130) respondents representing 80.7% agreed to the assertion that it was dangerous texting or talking on your phone while driving. This distraction can increase the risk of accidents. These findings agreed with that of Frei et al. (2011), where in their study they argued that there is about three-four times greater risks of an accident due to distraction of driving and using your mobile phone.

## CONCLUSION

In conclusion, we can say that the introduction and use of mobile phones have been a mixed blessing among the populace and like the coin, has two sides because of its positive and negative effects. The study showed that a significant number of the respondents have in-depth knowledge about the effects of mobile phone use. Also, their perception about the excessive use of mobile phones is that its effects can be both positive and negative. The reasons assigned are that whereas in one breath 100 respondents agreed that mobile phone usage affects the academic performance of students positively. In another breath, 105 respondents felt that if mobile phones are not used wisely, it can impact negatively on the academic performance of students. This goes to show that excessive use of mobile phones can affect students' academic performance depending on how it is used. Nevertheless, more than two-thirds of respondents disagree or are not sure whether there are more negative than positive effects of using mobile phones. All in all, the study has served as a good eye opener as it would make students know the added advantage of using mobile phones besides using them for social media.

## RECOMMENDATION

1. Though it may be difficult to regulate the usage of mobile phones among students in tertiary institutions, we recommend Management to ensure conformity to lay down rules and regulations in the use of mobile phones by students in the University during lectures.
2. There have been some instances where some students were caught using their mobile phones to cheat in examinations. Accordingly, we strongly recommend that mobile phones should not be encouraged during examinations because of its sophistication.

3. Students should be informed about the positive and negative effects of over-dependence and unregulated use of their mobile phones as this could affect their studies. There is the tendency for students to text a friend rather than listen to a lecture. The results in Table 3 could attest to this.
4. Students should be made to know the implications of spending too much of their time using mobile phones. This is because it could distract their concentration in lecture halls and ultimately affect their academic performance negatively.
5. Results of the investigation show that all respondents have access to one or two phones, with a significant number of respondents using their mobile phones for specific functions and others for their lecture assignments. Students should, therefore, be encouraged to use their mobile phones wisely.
6. Students should be encouraged to take note of the emergency situations where they would be expected to use their mobile phones. Results of the investigation showed that 135 respondents agreed that mobile phones could make one's life comfortable and secure while in an emergency situation. Further, 118 respondents agreed that mobile phones can be used as a safety device.
7. Students should be discouraged from using their mobile phones to engage in unacceptable behaviours such as watching pornographic material because the consequences of such actions could be injurious.

### SUGGESTIONS FOR FURTHER RESEARCH

This study focused on how students in tertiary institutions of Ghana, specifically those of UDS perceive educational and other effects of mobile phone usage. Accordingly, a replication of such a study could be carried out by looking at the perception about mobile phone use among students in tertiary institutions of Ghana with emphasis on the economic and health effects of using mobile phones.

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