Journal of Education and Practice
ISSN 2222-1735 (Paper) ISSN 2222-288X (Online)
Vol.9, No.36, 2018

Fresh University Students and Phone Use Preferences: The Perception of a Public University in Ghana

Jacob Manu
Kwadwo Oteng Akyina
University of Education, Winneba (Mampong)

Kate Yeboah-Appiagyei
Peter Opoku
Valley View University

Abstract
The current study was a case study in one of the public universities in Ghana to ascertain phone acquisition and use tendencies of first year university students in their first semester of university education. A sample size of 300 was used for the study. The findings indicated that all the 300 (100%) students had phones whilst 223 (74.3%) of them had smartphones with internet functionality. It was found out that there was a significant difference between first year university students' time spent on phones, based on age. Again, there was a significant negative correlation between first year university students' time spent on phones based on their age. Further, the study revealed that first year university students were more likely to spend one semester (four months) on their phones in a four-year programme. The implications for practice have been discussed.
Keywords: cell phones use, classroom, phone acquisition, time, first year students

1.0 Introduction

The availability of different technological tools in the 21st century creates affordances as well as challenges that have to be approached with the desired caution (Miah, Hossain & Rahman, 2017). Both students as well as their teachers are spending time with these flooded gadgets to acquaint themselves with the use of these digital tools. What is not known is whether Ghanaian teachers, consciously, invite their students to share ideas through the various applications on their phones. Elsewhere, there has been a number of research to suggest that cell phone use is deceptively preventing university students from performing their roles as students (Burns & Lohenry, 2010; Froese et al., 2012). The effects of pervasive phone use are issues of time management, sleep deprivation, attention deficit, lateness, laziness, low productivity, among others (Chung et al., 2014).

In Ghana, opinion of school leaders, in numerous occasions and platforms, have attributed the perceived poor performance in the West African Senior Secondary Certificate Examinations English Language paper to the use of cell phones. As one of the measures to curtail this downward trend of quality education, there has been a policy and insistence of the leadership of Senior High Schools, in Ghana, to ban students from using cell phones at the various schools. The ineffectiveness of this policy to deny students access to cell phones in our Senior High Schools is manifested when we see students within this bracket with phones. For example, the headmaster of the Damongo Senior High School, in one of the regions in Ghana, confiscated and burnt 300 cell phones belonging to the students (Ghanaweb, 2018). The question is whether this act will deter from the use of phones on the various campuses.

There has been unprecedented access and availability of cell phones in Ghana. A recent report revealed that there were a little over thirty-four million mobile phone subscriptions, which involved individuals and organizations with the MTN service provider having more than half of the subscriptions (Jumia Mobile Annual Report, 2018). The report further predicted that the number of subscriptions was going to increase to forty million by the year 2020. This figure suggests that mobile technology is one of the 21st century devices that teachers can use to enhance the teaching and learning process due to accessibility with the internet as well as other education –friendly applications (Morrison & Lowther, 2010). If the educational leaders fail to come out with effective policies to help students integrate cell phone into the teaching and learning process, students will use their phones anyway. However, the impact of the cell phone might be negative as we have experienced in the past years.

Sharples (2007) indicated that "the complexity of these interactions between learners, educational settings and mobile technologies challenges the conventional view of education as imparting knowledge in a fixed location, inviting a more expansive possibility of ubiquitous learning supported by personal media communicators" (p. 87). The place of teachers in the classroom has gradually been eroded and replaced with different technological devices. In the past, teachers, blackboard and textbooks (Reiser & Dempsey, 2012) were the main media through which instruction was presented. As a result, students were expected to give about 100% attention to what was discussed during the contact hours. Whenever the bell rang, that symbolised the end of the teaching and learning process in the classroom. Students could only have access to the teacher by physically being present at where the teacher was for any remedial teaching. In situations where teachers stayed far away

from various communities, students had to bear the burden of walking several kilometres in order to get the needed help.

What about today? Things have changed. Our students are already using their electronic mails and social media sites as never before. It is the responsibility of the policy-makers and educational leaders to monitor the interactions and transactions that their students undertake with their phones. This is one of the surest ways to get to know of their interests and competencies and make conscious efforts to integrate them into the teaching and learning experience. Our students have taken the lead. It is left to their teachers to transplant the instructional environment to where we can locate them.

1.1 Statement of the Problem

In many of the pre-university schools in Ghana, there are policies that ban the use of cell phones on campuses. Students who flout these rules are suspended, have their phones confiscated, caned and so on. As a result, students did not have the opportunity to formally use their phones on campuses. At the university level, there are no such laws that forbid students from using cell phones on campuses. The propensity is that majority of the students is more likely to abuse their time with the cell phones. Whereas some of them will be over-spending on their phones (price of phones, cost of units for calls and internet surfing), others will be using major part of their time on their phones. This calls for stakeholders of education to take a look at it before it impacts negatively on the students.

Again, in the various lecture halls, it has gradually become an acceptable practice for students to be charging their phones whiles lessons are in session. Students do not care anymore to come in front of the class to check whether there has been a call or message. The impact of these tendencies are obviously negative when it comes to students' learning. In treating the *Nine Events of Instruction*, Gagne (1985) explained the importance to stimulate the attention of the learner in order for better retention and understanding. Our working memory is limited in terms of the amount of information it can act on within a period. For this reason, any form of distraction places the learner at a disadvantage position. Meanwhile, Shaffer (2007) explained that there are assessment challenges when students begin to make use of mobile devices in their learning. Better still, Gikas and Grant (2013) indicated that cell phone in the classroom is a source of distraction. Who has not seen students moving in and out of the university lecture room just to take the next call or send a text message?

Also, in spite of the struggles that parents and guardians of first year university students go through in their attempts to meet their wards financial obligations, it seems a substantial part of students' resources is spent on purchase, use and the servicing of their cell phones. Due to the numerous applications on the phones and the popularity of the various social media platforms, it has become a necessity for users to buy data on their phones in order to make these smartphones more functional. As a result, buying credit line on daily basis, has become the order of the day. It seems majority of university students do not care skipping a meal of the day in order to save enough money to buy credit for their smartphones. This development is worrying and might possibly lead to negative repercussions on students' physical well-being as well as their academic performance.

1.2 Significance of the Study

Phone use is a new lifestyle among the average African student. As a result, students make certain decisions on phone use that are more likely to impact negatively on their studies. Awareness of these subtle ways through which phones are eating away students' precious time is important to the developing first year university students. If students become aware of how they spend their time on phones and the possible ramifications, it will help majority of these students to be mindful of their behaviours and the implications of using the phone.

Again, in comparison between first year and the other levels, the freshmen and women have the most number of years to spend on campus. Their major goal is to become successful students and graduate with enviable classes. Their ability to identify better ways of using their phones will possibly help them to stay focused. If first year students are spending less time and money on their phones, they will be able to save enough money for other academic pursuits that equally need their attention.

Now and then, there has been public outcry on how the youth of today are using their phones. There have been instances where some people were knocked down by vehicles because they were busily using their phones by the road side. There have been drivers who lost their lives because they were on their phones whiles driving. Information on phone use patterns is needed in order to inform our university students on some of the dangers that are associated with inappropriate use of cell phones. At the same time, school leaders will be exposed to the developing trend of phone use among first year university students so as to come out with measures to help their students use cell phones proficiently.

Based on the extensive literature search on the uses of cell phone among university students in Ghana, only handful of data could be found. Therefore, the findings of this study is expected to add to the limited empirical studies on students' phone use tendencies especially among the institutions of higher learning. Such knowledge will help teachers to design the learning environment that will be suitable for these students.

1.3 Purpose of the Study

The purpose of the study was to use descriptive survey design to identify students' phone acquisition and phone use tendencies in their first semester at the university. Since the general expectation of students is to be able to learn meaningfully and pass their examinations, the researchers, also, wanted to identify the extent to which students use their phones and possible implications on learning. The first year students were intentionally chosen based on two reasons. First, they were learning to integrate themselves into the university student life in the university and as a result, might be willing to use phones as one of the tools to become known on campus. Second, they were yet to experience university examination for the first time. Under such condition, how might it affect their attitudes towards phone use?

1.4 Research Questions

The study was guided by the following research questions:

1. What is the phone possession outlook of freshmen and women university students?
2. What proportion of freshmen and women uses smart phone?
3. Is there any difference in the prices of phones, based on gender?
4. Is there any difference in the prices of phones, based on age?
5. Is there any difference in time spent on phones, based on age?
6. Is there any correlation between age and time spent on phones?

1.5 Delimitation

This study took place in one of the public universities within the Ashanti Region of Ghana. The population considered was first year university students (freshmen and women) in the 2017/2018 academic year. The researchers used a simple randomized sampling to select the participants for the study. The sample size was 300 students was drawn from 900 students. The main data gathering method was questionnaire. The study lasted for six months with the researchers self-financing the entire research process with a budget of 1000 Ghana Cedis.

2.0 Literature Review

The purpose of the study was to use descriptive survey design to identify students' phone acquisition and phone use tendencies in their first semester at the university. At the same time, it sought to identify the amount of time students spent on their phones. Cell phone has been integrated into the lives of the university students. As a result, students cannot do much without flipping their phones. McFarlane, Triggs and Yee (2008) explained that more and more students begin to own different mobile devices, and for that reason, the incorporation of these tools has important place in our classroom

2.1 Internet Outlook around the World

The World Internet Stats is one of the service providers that conducts research on how different continents and countries use the internet. Today, things have changed when we compare the last five years of our activities online. Africa in comparison with the rest of the world has internet usage of 10.0 % of the total number of people who use the internet. This figure is against North America (8.2%), Europe (17.0%), Asia (49.7%), South America (10.4%), Oceanic/Australia (0.7%) (Internet Stats, 2017). Apart from Asia (the most populous continent around the world), Africa is the second largest continent with an estimated population of 1,246,504,865.

Based on the figures above, it is easy for one to conclude that Africa is not doing that bad at all. However, the crux of the matter is that these revelations should worry leadership of countries as well as policy-makers in Africa. As we rub shoulders with the rest of the world, we stand to lose or gain, based on how we take advantage of the internet. Though, the 10.0% is not the least, in terms of the percentage of the population using the internet, Africa is still the last. For those who might be curious to know, thirty-one percent of Africans are using the internet (Internet Stats, 2017). The rest of the world has Asia (46.2%), Europe (80.2%), Southern America (62.4%), Middle East (58.7%), North America (88.1%), and Oceanic/Australia (69.6%). These represent the actual population of the people who are using the internet.

The data revealed by the World Internets Stats is a true representation of a study conducted by the Manu and Mensah (2015). In a quantitative study to compare the technological proficiency levels of international students in the USA, case study North Dakota, Manu and Mensah (2015) reported that African students went through a number of technological difficulties than their counterparts from the other continents that came to the United States to study. With this deficiency among the African students, they were at a disadvantage if they had to complete the same assignments. Further analysis of the study revealed that African students in the United States did not have better foundation in information and communication technology.

In terms of the countries in Africa, there are variations with the percentage of these nations that is using the internet. The African continent is dominated by Kenya with as much as 89.4% of her population using the internet. In actual numbers, the figure represents 43,329,434 of Kenyans using the internet. The Kenyans should

be commended for being able to dominate the light-skinned Africans on the Continent. In comparison, Ghana has 34.7% of her population, representing 9,934,286, who are using the internet. The issue is whether we are taking advantage of the availability of the internet as a country or not. The more we are exposed to what is happening within our neighbourhood, the more we can prepare our people adequately to face the challenges of this world.

2.2 Gender and Cell Phone

As we make an attempt to look at ways to help fresh university students use phones proficiently, one of the things that should be considered is whether there are peculiar things we should learn from the sexes that use cell phones. According to Mitra, Willyard, Platt and Parsons (2005), technologies are always used differently by males and females. This stance of the above researchers have been contested (Hilao & Wichadee, 2017). There are some proponents who found evidence that females were more likely to be involved in using phones than their male counterparts (Hong, Chiu, & Lin, 2012; Walsh, White, Cox, & Young, 2011). However, there have been other studies to suggest that there should not be any difference between males and females on technology usage (Bianchi & Phillips, 2005; Junco, Merson, & Salter, 2010; Lemish & Cohen, 2005).

Looking at the two sides of the gender argument on phone use, it seems there are certain functionalities of the cell phone that males and females demonstrate the same or similar attitudes when using them. However, there are other applications that different sexes might be more interested using them. For example, Tagoe and Abakah (2014) reported that female university students used their smartphones to take more pictures than their male counterparts. It is irrefutable that females are taking self-pictures (affectionately called selfies) and posting them on the various social media networks.

2.3 Cell Phone in the Classroom

The idea of students bringing phones to the lecture halls has been a worrying development for school leadership as well as lecturers. In a descriptive quantitative research to identify the perception of both faculty and students' phone use patterns during teaching, Burns and Lohenry (2010) observed that phone use was a major source of distraction in classroom as indicated by both students and faculty participants. Interestingly, the study also revealed that students usually received and replied text messages during classes. In another study that used both descriptive and experimental research to identify the learning losses of students, Froese et al. (2012) estimated that students were more likely to lose about 30% of the content area that was discussed in the classroom. At the end of the study, these researchers got evidence to support that students did poorly when responding to quiz questions while texting than when they were not texting.

In a related research, Lepp, Berkeley and Karpinski (2014) investigated the relationship between cell phone use and GPA as well as students' level of anxiety. With a sample size of 496 for total phone use and 490 for text messaging, the results of their research was fascinating. These researchers found a negative correlation between cell phone use and GPA and a positive correlation between cell phone and anxiety. This study implied that students who spent too much time on their phones were more likely to have a low GPA. In addition, the more they spent time on their phone (whether calling or texting), the more anxious they became.

Tindell and Bohlander (2012) wanted to know how cell phones were used and abused in the classroom. With a sample size of 269 university students from 21 academic programmes, these researchers reported that about 95% of students admitted bringing phones to the classroom. Out of this number, about 92% admitted having texted during classes. A worrying phenomenon was that 10% confirmed that they sent a text message during examinations. The participants in this study believed that faculty members were not aware of the different things students use their phones to do during the teaching and learning process.

In a similar research, Thomas and O'Bannon (2013) studied 92 student teachers to identify their perceptions on the benefits and barriers of using cell phones in the classroom. At the end of the study, the researchers reported that more than half of the student teachers reported benefits they derived from the phone as "learning opportunities, increased student engagement, opportunities for differentiation of instruction, increased communication, and increased student motivation as benefits of using cell phones in the classroom" (p. 11). In spite of these benefits mentioned by the students, their leading concerns were the disruption and cheating the phone use brings about. Gikas and Grant (2013), through a qualitative research reported that matured students were less distracted by the use of phones as compared to younger learners. Adding to the constraints in using cell phones, Hilao and Wichadee (2017) found that teachers using cell phones to learn complained of small screen, small keyboard, intrusiveness of SMS and limited memory.

2.4 Usefulness of Cell Phones

In concluding their study on the usage of cell phones in the classroom, Miah, Hossain and Rahman (2010) concluded that there was no need for educational practitioners to restrict students from the use of phones. In spite of the challenges that these researchers enumerated, they recommended that educational leaders come out with a

theoretical framework to govern the use of phones in our schools since there are many opportunities for learning when students are allowed to use phones during the teaching and learning process.

The technology acceptance model (TAM) has been used widely by different researchers. The developer of this model, Davis (1989), was concerned with two important things as people make attempt to adopt a particular technology. The two constructs of the TAM model were perceived usefulness (PU) and perceived ease of use (PE). According to the researcher, there was evidence that people would adopt a particular technology based on the relevance of the tool to the person as well as how easy to use the tool. Here, it can be argued that first year university students might consider these factors whenever making decision on the use of a particular technology.

The technological advances in the sub-Saharan Africa have also changed the ways and manner things are done. Businesses have had their share of these advancement in the form of using computer technology and internet resources to improve upon service delivery as they place their customers in the centre of all their decisions. Gradually, the educational sector is one of the areas that is receiving this technological advancement.

2.5 Theoretical Framework

There is the inability of instructors to optimize learning and create cognitive load (Driscoll, 2005). The cognitive theory simply refers to the amount of information that the working memory is expected to process within a period of time. Instead of the designing appropriate technology support needed for new students, most faculty members begin their lessons with an assumption that all students have the required technology literacy. Such instructional environment creates both intrinsic and extraneous cognitive load for students (Sweller, 2010). This comes about as students with less technology competence have to master the technical component of using software as well as the subject matter. Obviously, students with the required technology competence will have better leverage than those who struggle with technology.

The use of new technologies to improve upon the academic performance of the developing student is one of the most contended areas in the academia (Clark 1994; Kozma, 1994). Research indicates that the use of computer-based technology tools can promote higher order learning (as cited in Roschelle, Pea, Hoadley, Gordin, & Means, 2000). In spite of this unending discourse, the 21st century higher institutions are increasingly being furnished and updated with varied technologies (Jacobs, 2010). Reiser and Dempsey (2012) mentioned that "As our nation attempts to address global changes to ensure economic stability, international competitiveness and welfare of its citizens, our society is challenged to use technology more effectively and pervasively in educating the youth" (p. 214). For example, the United States spent about $66 billion on technology within ten years whereas China invested $13,6 billion (Quality Education Data, 2004). The question is whether the Government of Ghana has budget solely earmarked for the provision of 21st century tools and applications in our schools.

3.0 Methodology

The purpose of this study was to identify students' phone acquisition and phone use tendencies in their first semester at the university. The researchers used cluster sampling method to select one of the four campuses of a public university in Ghana. All 900 first year university students responded to a 25-point questionnaire. There were five demographic-related questions; eight random questions and two psychological constructs making a total of nineteen items. The questionnaire was made up of three sections. At the end of the exercise, simple randomized sampling was done to select 300 participants for analysis purposes (Krejcie & Morgan, 1970). The researchers designed their own items after reading current materials on the subject matter. To ensure construct validity, the instrument was given to colleague lecturers to review and come out with suggestions. The factor analysis indicated a Cronbach Alpha of 0.62 and 0.85 for phone use in class and phone for learning variables respectively. These figures indicate that the items reliably measured the two concepts under study (classroom phone use and using phones to learn).

3.1 Demographics

Gender was another factor the researchers were interested. The data collected indicated that the male respondents were almost twice of the size of the females. The findings indicated that 230 of the respondents were males (76.7%) whereas 70 of them were females (23.3%). These figures were a surprise due to the enrollment patterns of females and males in the study. The trend in enrollment has been a drastic reduction in the number of females as they move further on the academic ladder.

Table 1. Gender Distribution of Respondents

Gender	Frequency	Percentages
Male (1)	230	76.7
Female (2)	70	23.3
Total	300	100

(*Field data, 2018*)

In terms of the age distribution, the 300 participants were broken down to 19-23, 24-28, and 29 and above. The data indicated that 160 respondents were within the first age bracket, representing 53.3%. The next age bracket (24-28 years) was made up of 118 respondents, representing 39.3%. The university students, who were 29 years and above composed of 22, representing 7.0% of the total respondents. The mean was 23.8 years whereas the standard deviation stood at 3.4 years. The reason why the mean and the standard deviation figures were considerably higher was as a result of the few respondents whose ages were in the thirties.

Table 2. Age Distribution of the Respondents

Age	Frequency	Percentages
19-23	160	53.3
24-28	118	39.3
29 and Above	22	7.3
Total	300	100.0

(*Field data, 2018*)

There has been a general complain about the amount of money students spend on their cell phones. For this reason, the researchers wanted to know how much students spent buying their phone. Based on the data, as displayed on Table 3, close to half of the respondents (48.3%) spent between 200 and 400 Ghana Cedis to purchase their phones. The mean phone price was 338.9 Ghana Cedis.

Table 3. Phone Prices of the Respondents

Price	Frequency	Percentages
10-200	81	27.0
201-400	145	48.3
401-600	53	17.7
601 and Above	21	7.0
Total	300	100

(*Field data, 2018*)

To further check whether students acquired their phones from their own resources or otherwise, there was a question to that effect. The data indicated that 74.6% of the respondents used their own resources to purchase the phones. The remaining 25.4% used other means to get phone. What was not revealed in this study was students' source of income apart from the students' loans, study leave with pay and support from parents.

Table 4. Source of Phone Ownership

Phone Payment	Frequency	Percentages
Self	224	74.6
Other	76	25.4
Total	300	100

(*Field data, 2018*)

The researchers were interested in finding the number of years the fresh university students have been using cell phones. Based on the data in Table 5, 27.0% had used a cell phone for a year, 35.3% for two years, 16.3% for three years, 9.0% for four years, 7.3% for five years, 4.0% for six years and 1.0% for seven years. From this, it can be concluded that fresh university students are not novices in terms of phone use. If teachers are willing to give their students clear instructions on how to use their cell phones to improve their learning, students are more likely to follow suit with ease.

Table 5. Years of using cell phone

Years	Frequency	Percentages
1	81	27.0
2	106	35.3
3	49	16.3
4	27	9.0
5	22	7.3
6	12	4.0
7	3	1.0
Total	300	100

(*Field data, 2018*)

4.1 *Research Question 1*: What is the phone possession outlook of freshmen and women university students?

The 21st first century is flooded with different digital devices and software applications (Morrison & Lowther, 2010). As a result, it is important to collect data on how students acquire these mobile devices. The researchers wanted to know under what conditions students possess cell phones. To answer the question on the technological outlook, in terms of phone possession, three different items were administered to the students. Based on the data

collected, 75.7% (227) owned one phone. Twenty-one point seven (65) of the students owned two phones whereas only 2.6% (8) reported three phones. This information is very important to the classroom teacher. It seeks to confirm that all the 300 participants owned a cell phone. The question, therefore, is in what ways can the classroom teacher take advantage of the availability of the mobile device when learning?

Table 6. Phone Possession Outlook

Phone Payment	Frequency	Percentages
One Phone(1)	227	75.7
Two Phones (2)	65	21.7
Three Phones	8	2.6
Total	300	100

(*Field data, 2018*)

4.2 *Research Question 2*: What proportion of freshmen and women uses smart phone?

To probe further into the phone ownership dynamics of these university students, the researchers wanted to find the number of students who used smartphones. Interestingly, about 74.3% (223) indicated that their phones were the smart phone type. Smart phones come with various learner-friendly applications. Apart from the numerous learner-friendly applications on smart phones, the hotspots and Wi-Fi functionality allow students to connect to the internet and take advantage of the volumes of information online.

Table 7. Smart Phones Ownership

Smart Phone Users	Frequency	Percentages
Yes (1)	223	74.3
No (2)	77	25.7
Total	300	100

(*Field data, 2018*)

Better still, there was another item to check whether students used their own resources to purchase the phones or otherwise. Again, a similar percentage of students affirmed that they used their own resources to buy the phone. What this study is silent on is the source of the resources used in buying the phones.

4.3 *Research Question 3*: Is there any difference in the prices of phone based on gender?

The researchers wanted to find whether there was any difference in the prices of phone between males and females university students. The assumption of the researchers was that female university students were more likely to own fancy phones than their male counterparts. After running the independent samples t-test, the results indicated that there was not a significant difference between males and females in terms of the prices of phone. The statistical analysis was $t(298) = -.829$, $p = 0.408$, 2-tailed.

Table 8. T test of phone prices based on gender

Variables	(*t*)	Significance
Males/females	-.829	.408

(*Field data, 2018*)

4.4 *Research Question 4*: Is there any difference in the prices of phone based on age?

Here, the researchers wanted to find whether there would be a difference in the prices of phone based on peoples' age. An Analysis of Variance (ANOVA) with a post-hoc of Bonferroni statistical procedure indicated insignificant differences among the three age categories ($F(2, 297)$, 0.533, $p<.59$, 2-tailed). The finding implied that the old and the young, alike, used similar brands of phones in the first year of college, which costs similar amounts.

Table 9. Phone price differences based on age

Variable	(*F*)	p-value
Age	.533	.59

(*Field data, 2018*)

4.5 *Research Question 5*: Is there any difference in time spent on phone based on age? Students and how they manage their time should be of concern to educators as well as teachers. The researchers wanted to know how much time students spent on their phones daily. Based on the data gathered, around sixty-eight percent of the freshmen and women spent ten minutes to three hours on their phone. With a mean time of 140 minutes and 123 minutes standard deviation.

Table 10. Time Spent on Phone

Time	Frequency	Percentages
10-179	205	68.3
180-355	52	17.3
360 and above	43	14.3
Total	300	100

(*Field data, 2018*)

In our schools, time is very important. For this reason, the researchers wanted to find whether there was a difference in time spent on cell phones, based on age. A simple Analysis of Variance indicated a significant difference ($F(2, 297)$, 4.537, $p < .01$, 2-tailed). The post-hoc further testing indicated that the difference existed between the ages 19-23 and 24-28. From Table 2, the two age categories (19-23 and 24-28) were 53.3% and 39.3% respectively. The average time spent on phone was 140 minutes. This finding seems to suggest that traditional university students (19-23 years) are more likely to spend longer time on the phone than the 24-28 years category.

Table 11. Time spent on phone based on age

Variables	(*t*)	*p*-value
Age	4.537	.01

4.6 *Research Question 6*: Is there any correlation between age and time spent on phone?

The researchers wanted to investigate whether there was a correlational relationship between the age of fresh university students the time they spent on their phones. The Pearson Moment Correlation indicated that there was a negative significant correlation ($r = -0.11$, $p < 0.05$). This finding implied that the younger the age of the university students, the longer they used their cell phones. Details of the statistics are indicated in Table 11.

Table 12. Relationship between Age and Time on Phone

Variables	(*r*)	*p*-value
Age/Time spent on phone	4.537	.05

5.0 Discussions

This study found evidence that every first year university student had a phone. Out of this, about 75% of freshmen and women university students were more likely to own smartphones. Koehler et al. (2012) found a similar evidence that 77% of Monash University owned smartphones. Looking at what smartphones can do in the 21st century, it is a great opportunity for lecturers to take advantage of these devices and help students to stay engaged inside and outside the classroom. Kim, Ilon and Altmann (2013) found support that Korean university students had either iPhone or Android phone. With these devices, the university students were globally connected and used their phones to learn meaningfully. Zayed (2016) indicated that university students have serious connection with the smartphone and can use its numerous applications for learning. Access to the internet makes it possible for students to verify the accuracy of the things learnt on their own without necessarily going to the teacher. The question is to what extent can teachers remain effective in the midst of these devices? What are some of the distractions in the lecture halls brought about by the use of these technological devices? What might be the possible effects of the inability of the teachers to sustain the interest and attention of their students during instructional time?

Females are more complex than their males, and as such should demonstrate differences in technology use (Hong, Chiu, & Lin, 2012; Walsh, White, Cox, & Young, 2011). This is demonstrated in how they take time to prepare for the day. Likewise, one would expect college females to own phones that are significantly expensive than their male counterparts. The test of independent samples t-test indicated that there was no difference between freshmen and women in terms of how much money they spend on their phones. First year university females were not likely to own expensive phones than their male counterparts. This finding was a surprise to the researchers since females normally get support from family as well as the people they have other relationships. It might be too early to conclude on this subject.

The prices of phone based on age was also important to the researchers. The age of the respondents indicated that there were non-traditional students among them. Again, there were professional teachers who already had diploma before enrolling in their respective programmes. The statistical procedure indicated that there was no difference in the prices of phone based on age. This finding might be due to the age dynamics of the respondents. The data showed that majority (about 85%) of the respondents were between the ages 20 and 27. Better still, the raw scores for the ages indicated similar phone prices. With this evenly spread scores, it was not possible to find differences in prices of phone based on age.

Unlike the differences in the prices of phone based on age, the differences in time spent on phone based on age was significant. With significance level of .008, the researchers found evidence that freshmen and women

university students were more likely to spend different times on their phone based on age. This revelation is very important since university students, who are fresh from the Senior High Schools, and officially, might be using phone for the first time. It is more likely there is the propensity to abuse its use and suffer the consequence on their academic performance. Owusu-Acheaw and Larson (2015) reported that university students were more likely to spend between thirty minutes and three hours on their phone. They, however, suggested that teachers incorporate the phone use into the teaching and learning process. Also, they suggested students read novels and other materials to improve upon their knowledge.

Beyond the difference that is reported above, the correlation relationship also indicated significant negative relationship. The younger the age of first year university students, the more time they spent on their phones. Tagoe and Abakah (2014), using 400 distance education students in one of the public universities in Ghana found evidence that younger university students were more likely to own smart phones than the older students. It is tenable that traditional university students should spend more time on their phones than non-traditional university students due to the time they started using phone as well as the societal expectations of this group of students.

5.1 Conclusion

In conclusion, first university students need to be aware of the consequence of their actions as new students. This study has confirmed that students are using an average time of two hours and twenty minutes a day on their phones. What is not clear is whether the students are using their phones for learning. If the contrary is the case, then, it is more likely that about four months (a semester) of first year university students' life will be on the phone within the four-year programme. A need exists for educational leaders as well as educators to pay attention to how they could develop learning interventions to help students benefit instructionally from the time they spend on phones.

5.2. Implications for Practice

The purpose of the present study was to identify first year university students' phone acquisition and phone use tendencies in their first semester at the university. Based on the data obtained and the analysis, the following measures can be used as intervention to help first-year university students stay on task:

1. The number of smartphones owned by the students is significant. For this reason, opportunity exists for teachers to look at novel ways to create collaboration among the students. This intervention will help students to learn the rudiments of team work, as one of the life skills of the 21st century student.
2. First year university students are already using internet resources and for that reason, lecturers should incorporate internet use into the teaching and learning process. With this, it is more likely for fresh university students to appreciate the need to update their knowledge in their respective disciplines. By so doing, they will learn to be become world-class learners, who will be adequately prepared to face the challenges of this century.
3. Younger first year university students are more likely to be on their phones for longer time as compared to the older ones. For this reason, orientation should be organised for these younger students on the ramifications of excessive phone use. When students are sensitised at the beginning of their academic life on campus, it will help students to use their time judiciously.
4. At the national level, policy-makers and employers should be aware of the connection between phone use and productivity. If students are spending 140 minutes daily on their phone, this attitude is more likely to be taken to the job market. For this reason, there will be the need for employers to come out with phone use policy on the job. Such policy will restrain the employees to stay on task and use their phones during breaks and after work.

References

Bianchi, A., & Phillips J. G. (2005). Psychological predictors of problem mobile phone use. *Cyber Psychology Behavior, 8*(1), 39–51.

Burns, S. M., & Lohenry, K. (2010). Cellular phone use in class: Implications for teaching and learning a pilot study. *College Student Journal*, 44*(3),* 805-810.

Chung, K., Gweon, G., Ko, M., Kim, Y., Lee, U., Lee, J., Lee, C., Song, J., Yang, S., & Yatani, K. (2014). Hooked on smartphones: An exploratory study on smartphone overuse among university students. *CHI*.

Clark, R. E. (1994). Media will never influence learning. *ETR & D*. *42*(2), 21-29.

Davis, Fred D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, 319-340.

Driscoll, M. P. (2005) *Psychology for learning and instruction*. (3rd Ed). Boston: MA: Pearson Education, Inc.

Freire, P. (1972). *Pedagogy of the oppressed*. Harmondsworth, England: Penguin

Froese, A. D., et al. (2012). Effects of classroom cell phone use on expected and actual learning. *College Student*

Journal, *46*(2), 323-330.
Gagne, R. M. (1985). *The conditions of learning*. New York: Holt, Rinehart and Winston.
Ghanaweb, (2018, July 20). Angry Damongo SHS headmaster burns 300 mobile phones of students. Retrieved from https://www.ghanaweb.com/GhanaHomePage/NewsArchive/Angry-Damongo-SHS headmaster-burns-300-mobile-phones-of-students-670462
Gikas, Joanne, & Grant, Michael M. (2013). Mobile computing devices in higher education: Student perspectives on learning with cell phones, smartphones & amp; social media. *The Internet and Higher Education, 19*, 18-26.
Hilao, M. P., & Wichadee, S. (2017). Gender differences in mobile phone usage for language learning, attitude and performance. *Turkish Online Journal of Distance Education, 18*(2), 68-79.
Hong, F. Y., Chiu, S. I., & Lin, H. Y. (2012). The development and current states of private college student mobile phone addiction scale. *Chung Cheng Educational Studies, 11* (1), 87–116.
Jacobs, H. H. (Ed). (2010). *Curriculum 21: Essential education for a changing world*. USA: ASCD Publications.
Jacobsen, W. C., & Forste, R. (2011). The wired generation: Academic and social outcomes of electronic media use among university students. *Cyber Psychology, Behavior, and Social Networking, 14*(5), 275–280
Jumia Mobile Annual Report (2018). Ghana's mobile phone subscribers to hit 40m by 2020. Retrieved from https://www.myjoyonline.com/business/2018/March-19th/ghanas-mobile-phone-subscribers-to-hit-40m-by-2020-report.php
Junco, R., & Cotten, S. R. (2011). Perceived academic effects of instant messaging use. Computers & Education, 56(2), 370–378.
Junco R., Merson D., & Salter D. W. (2010). The effect of Gender, ethnicity, and income on university students' use of communication technologies. *Cyber Psychology Behavior, 13*(6), 619–627.
Kim, J., Ilon, L., & Altmann, J. (2013). Adapting smartphones as a learning technology in a Korean University. *Journal of Integrated Design and Process Science, 17*(1), 5-16.
Koehler, N., Yao, K., Vujovic, O., & McMenamin, C. (2012). Medical students' use of and attitudes towards medical applications. *Journal of Mobile Technology in Medicine*, *1*(4), 16–21.
Kozma, R. B. (1994). Will media influence learning? Reframing the debate. *ETR & D*. *42*(2), 7-19.
Krejcie, R & Morgan, D. (1970). Determining sample size for research activities. *Educational and Psychological Measurement, 30*, 607-610.
Lemish, D., & Cohen, A. (2005). On the gendered nature of mobile phone culture in Israel. *Sex Roles, 52*(7/8), 511-522.
Lepp, A., Barkley, J. E., & Karpinski, A. C. (2014). The relationship between cell phone use, academic performance, anxiety, and satisfaction with life in university students. *Computer in Human Behavior, 31*, 343-350.
Lepp A., Barkley, J. E., & Karpinski, A. C. (2015). The relationship between cell phone use and academic performance in a sample of U.S. university students. *SAGE Open*, 1–9
Manu, J., & Mensah, E. (2015). International students and their technology proficiency. J. Keengwe, J. G. Mbae & S. K. Ngigi. *Promoting global literacy skills through technology-infused teaching and learning*. (pp. 135-146). IGI Global Publishing.
McFarlane, Triggs, P. & Yee, W. (2008) *Mobile learning: Research findings*. Coventry: Becta. Retrieved from http://partners.becta.org.uk/uploaddir/downloads/page_documents/research/mobilelearning_july07.pdf
Miah, S., Hossain, M., & Rahman, H. (2017). Usages pattern of cell phone in classroom: A case study of mathematical and physical science faculty students of Jahangirnagar University. *Journal of Education and Practice*, *8*(10), 103-108.
Mitra A., Willyard J., Platt C., & Parsons, M. (2005). Exploring web usage and selection criteria among male and female students. *Journal of Computer - Mediated Communication,* 10 (3). Retrieved from http://jcmc.indiana.edu/vol10/issue3/mitra.html
Morrison, G. R., & Lowther, D. L. (2010). *Integrating computer technology into the classroom*. (4th Ed). Upper Saddle River, NJ: Pearson Educational, Inc.
Owusu-Achiaw, M., & Larson, A. G. (2015). Use of social media and its impact on academic performance of tertiary institution students: A study of students of Koforidua Polytechnic, Ghana. *Journal of Education and Practice, 6*(6), 94-101.
Quality Education Data (QED) (2004). Technology purchasing forecast. Retrieved from http://www.qeddata.com/marketkno/researchreports/techpurchaseforecast.aspx
Reiser, R. A., & Dempsey, J. V. (2012). *Trends and issues in instructional design and technology*. Boston, MA: Pearson Education, Inc.
Roschelle, J., Pea, R., Hoadley, C., Gordin, D., & Means, B. (2000). Changing how and what children learn in school with computer-based technologies. *Children and Computer Technology*, *10*(2), 76–101.

Shaffer, D. W. *(*2007*). How computer games help children learn. New York: Palgrave.*

Sharples, M. (Ed.). (2007). *Big issues in mobile learning: Report of a workshop by the Kaleidoscope Network of Excellence Mobile Learning Initiative*. Nottingham, United Kingdom: University of Nottingham, Learning Sciences Research Institute

Sharples M., Taylor J., Vavoula G. (2010). *A Theory of Learning for the Mobile Age*. In: B. Bachmair. (Eds) *Medienbildung in neuen Kulturräumen*. VS Verlag für Sozialwissenschaften.

Sweller, J. (2010). Element Interactivity and Intrinsic, Extraneous, and Germane Cognitive Load. *Educational Psychology Review, 22*, 123–138.

Tagoe, M., & Abakah, E. (2014). Determining distance education students' readiness for mobile learning at University of Ghana using the Theory of Planned Behavior. *IJEDICT, 10*(1), 91-106.

Tindell, D. R., & Bohlander, R. W. (2012). The use and abuse of cell phones and text messaging in the classroom: A survey of university students. *College Teaching*, *60*(1), 1-9.

Thomas, K., & O'Bannon, B. (2013). Cell phones in the classroom. *Journal of Digital Learning In Teacher Education, 30*(1), 11-20.

Walsh, S. P., White, K. M., Cox, S., & Young, R. M. (2011). Keeping in constant touch: the predictors of young Australians' mobile phone involvement. *Computers in Human Behavior, 27* (1), 333–342.

Zayed, N. M. (2016). Special designed activities for learning English language through the application of WhatsApp! *Canadian Center of Science and Education, 9*(2), 199-204.