

ANALYSIS OF THE ATTITUDE OF COLLEGE STUDENTS TOWARDS MOBILE PHONE USAGE IN NIGERIA

Olaitan W. Akinleke^{1*}, Olusegun J. Omowunmi²

¹Department of General Studies, Federal Polytechnic, P.M.B. 50, Ilaro, Ogun State, Nigeria.

²Department of Public Administration, Federal Polytechnic, P.M.B. 50, Ilaro, Ogun State, Nigeria.

ABSTRACT: *This study was conducted to investigate the attitudes of college students toward mobile phone usage in Nigeria. Six hundred and forty randomly selected 300- and 400- level students of the University of Ibadan, Oyo State and the Federal Polytechnic, Ilaro, Ogun State were involved in the study. The study was conducted in a classroom environment during the schools' continuous assessment (CA) week. After information was collected from the students, their test scores were obtained from their faculties. The test scores were compared to the scores obtained from the questionnaires. It was realized that the academic discipline of the college students as well as their area of residence do not make them perceive or use their mobile phones differently. Also, gender was found to be an important determinant of mobile phone usage among the students. In addition, no significant relationship was established between the mobile phone usage and their academic performance. It was then recommended that operational involvement and practical prevention programs, which would discourage mobile phone addiction in students, should be developed and configured in all cell phones. Also, management of colleges must constantly inform and reorient their students about the negative and positive effects of their mobile phone uses. In addition, authorities of the schools as well as policy makers must formulate rules for students to concentrate on their lectures totally without fiddling with their mobile phones during lectures.*

KEYWORDS: Attitude, Mobile Phone, Mobile Phone Addiction, Gender, Residence and Academic Performance.

INTRODUCTION

Attitude may be described as a stable tendency to respond either positively, negatively or indecisively to a person, thing, situation, or object. From a motivational point of view, it denotes a state of readiness formative arousal (Kenku, Balogun & Shenge, 2000). It may also be described as a relatively lasting manner whereby the perceptions and motives of a person are organised toward certain objects, events, or situations. The formation of such perceptions and motives may be due to certain factors located around the individual.

Although attitude may predispose people to react negatively to certain objects or events and thereby avoid their contacts, it may also make some people to have favourable dispositions to certain objects, situations or events such that they want to experience them again and again. In other words, it can be said that attitude does not only influence individual's perception and feeling about his/her environment, it further goes on to predispose the person to behave in a certain way. The deductive reasoning here is that attitude comes into focus in any form. The point being made is that an individual's feelings, which could be positive or negative, will elicit

a specific or patterned behaviour from him/her. It is in this view that college students' attitude have been characterised by their preference (and use) for mobile phones.

The fact that mobile phone technologies are growing rapidly and are being adopted by the global population has been pointed out by researchers. For instance, Ling (2003) argues that the mobile phone has become part of culture of every region in the world as it fundamentally affected our society, accessibility, safety, and security as well as coordination of social and business activities. According to him, the trend of mobile phone started in the late 1980s, but it has now reached the level of esteem as it was initially used for business and status symbol but it has become an obvious need of the day and is in the reach of everyone.

In the same vein, Aman, Shah, Hussain, Khan, Asif and Qazi (2015) observed that although mobile phones were initially marketed as a source of communication but they have taken us into a new world and they have "silently crept into intricacies of our life, from our personal life to our family life, friends, and social life in general". Cell phones have become a ubiquitous part of our daily lives as they function not only as a communication tool, but also as mobile computers that serve us with music player, games, internet, video camera, calculator, alarm clock, and many other perceived benefits such as increased accessibility and social connectivity, reduced loneliness and security in emergency situations (Zulkefly & Baharudin, 2009). Christina (2001) argues that there is a wide agreement that mobile phones can substitute stationary computers or mobile laptops to a considerable degree because they are able to transport voice, text messages, pictures, musical sound, software programs, and anything else coded in digital format. According to Christina, these identified multimedia functionalities are combined with significantly reduced size, weight, energy needs, and buying prices as well as by a simpler use-friendlier interface, which even makes it possible to be used by every member of human society, including younger children, illiterates, handicapped people and other marginal population segments.

Ashiq, Mahmood and Siraj (2013) noted that mobile phone is rapidly becoming an important feature of our culture and lives as it serves as a tool for social connection and helps to maintain and manage social relationships. Ling and Yittri (1999) claimed that the adoption of mobile phones resulted in new form of interaction called "micro-coordination and hyper-coordination". According to them, micro-coordination refers to the use of cell phones by social groups to coordinate their meeting time and /or place as the need arises while hyper-coordination goes beyond the ordinary time/place coordination and includes emotional and social communication among group members and development of group norms for appropriate self-presentation.

Mobile phones empower millions of people to make and advance themselves through the internet as people make honest living on the internet as web designers, publishers, bloggers, apps developers, internet security consultants, and online marketing consultants (Soyemi, Olorunfoba & Okafor, 2015); enhance mobile banking and mobile payment through direct mobile billing schemes (Feig, 2007); provide us with a method to connect to important others in our lives (Myers, 2013); enables helps to be sought in case of an emergency and enable parents to keep an "eye" on their children (Lesitaokana, 2012).

From the discussion so far, mobile phones are largely beneficial and have become permanent feature of human daily living, however, researchers have identified youths as devoted users in all societies. In an ethnographic and quantitative studies conducted by Syed and Nurullah (2011), it was discovered that adolescents are the most avid user group in all countries. Syed

and Nurullah reported that it is a common sight in Malaysia to find teenagers ‘thumbing’ their handheld devices in urban public spaces, obvious to the rest of the living world around them, experiencing a new way to express identity, rooted in and giving rise to a new subculture in all human societies with its own norms, values and patterns of behaviour. It is in view of Syed and Nurullah’s findings that this research work was set out to examine how adolescents, especially, college students in Nigeria perceive and use mobile phones.

Mobile Phones and Adolescents

Bhutia and Tariang (2016) observed that the youth, especially, the college going students are the predominant users of mobile phones. According to Bhutia and Tariang, adolescents are usually the ones who are always curious and inquisitive about the latest developments in communication technology because they are at the age where they feel that they need to keep in touch with their friends every second, every minute, and every hour. They want to find out about the latest happening in their friend’s life as well as share theirs. Mobile phones afford them easy, fast and convenient way to keep in touch with their friends and family anywhere and anytime of the day. Similarly, Warner (2003) finds that youths use short messages (sms) to be in touch with their belongings and to feel a sense of their presence all the time.

Chen and Katz (2007) claimed that mobile phone is necessary for college students to keep in touch with their relations and to play their own roles by sharing their experiences with as well as getting an emotional and psychic support from their family. Hakoama and Hakoyama (2011) concluded that there have been enormous amount of popularity of mobile phones in younger generation within a short span of time. This is because youth is more inclined towards using mobile phones for activities other than communication than older generation as they are more disposed to changing fashion trends and styles (Mackay & Weidlich, 2007).

Goswami and Singh (2016) claimed that cell phone plays a major role in each individual’s life in the modern days as around 4.5 billion people use it worldwide. In their opinion, a huge chunk of these users consists of the youths who see it as a necessity than a luxury. They also observed that youths consider handset as an integral part of survival to the extent that some youths even prefer expending on their mobile phones to food sometimes. Mathews (2004) proposes that youths do not see mobile phone as a tool for making just phone calls, but rather, a ‘lifeline’ to the social network and an instrument for smoothly operating and coordinating their everyday life. Wang and Hiew (2005) reported that apart from using the mobile phone as a tool for communication, adolescents also use its peripheral features extensively. Such usage include mobile entertainment, playing games, ringtone and wall paper downloads, sending pictures, using the device as a camera, radio, mobile television, a location device, an alarm clock, an address book, and other aspect of personalisation and entertainment.

The use of such peripheral features is especially popular among adolescents (Lorente, 2002) and sometimes, they are lengthily used more than other core features that they forget that it was originally a communication tool (Lobert-Maris & Henin, 2002). Reasons for such expansive use among adolescents include avoiding boredom, staying updated, maintaining background entertainment while doing other things, creating a world of one’s own, liberation from local and rural settings, exposure to social media, the need for discovery and relaxation (Leung & Wei, 2000; Hoflich, 2002; Humphreys, 2003; and Koskinen, 2005).

Some scholars have described the use of mobile phone by adolescents as a subculture that is characterised by the heavy use of sms; games; heavy personalisation; high levels of ownership;

gendering; locality; downloading ringtones, music and videos; blogging; addiction; and so on (Ling, 2002; Mante & Piris, 2002; Selian, 2004; Pertierra, 2005). According to Satchell (2004), mobile phone has become a cultural artefact that shape adolescents' cultural flows. Youths start out by playing, followed by sending short messages, and then end up using call functions, and eventually, it gets integrated in the norms and rites of the larger culture (Lorente, 2002).

In support of the proposition above, Muyinda, Mugisa and Lynch (2007) claimed that in the sphere of education, mobile phones have led to the evolution of new pattern known as mobile learning or m-learning. Mobile phones can be used to help students access web based contents, remix it, share it, collaborate with others and create media rich deliverable for the classroom teachers as well as global audience (Ferry, 2009).

Mobile learning suggests obtaining knowledge by correspondence with the use of the modern media technology in education. A distance learning that began to develop in the eighties of the twentieth century (Al-Fahad, 2009). Scholars have argued that mobile technologies have significant capability to enhance teaching and learning across all education sectors (Attewell, 2005; Chen & Kinshuk, 2005; Mitra, Willyard, Platt & Parsons, 2005); and their impact on students' behaviour, enthusiasm, motivation, and progress is well acknowledged (RTBI, 2008). Halder , Halder and Guha (2015) concluded that the necessity to use mobile phones in education seems to be inevitable, especially in higher education. According to Jacobsen and Forste (2011), over two-thirds of the university students in their study used electronic media (including cell phones) while in class, studying, or doing homework.

Barker, Krull and Mallinson (2006) pointed out that mobile phone technologies have three basic impacts on learning: portability, collaboration, and motivation. The phones portability enables students' learning to be universal in obtaining information and materials for their courses through their mobile phones since they can be taken anywhere easily. The cell phones also allow students to form groups on the social networks such as Facebook, twitter, whatsapp, yahoo messenger, and so on in order to collaborate, gather and share such information with ease. Group efforts may result in a more effective and successful collaborative learning. When technologies are incorporated into class works as teaching aids, students are motivated to engage and improve on their learning processes since mobile phones allow for internet connectivity, which bring about comprehensive and in-depth knowledge. Thus, students and their teachers can adopt them as a learning tool.

According to Barker, Krull and Mallinson (2006), teachers claimed that the use of cell phone in learning increases group participation in activities done during learning in class. In a similar view, Ayub, Hamid and Nawawi (2014) claimed that advances in computer technology have enabled the internet to serve as a platform not merely to seek information, but also to exchange ideas and knowledge with other users, and to obtain expert opinion via email, teleconferencing, chatting, and other avenues.

In spite of the several benefits identified above, some researchers have maintained that mobile phones have negative effects. For instance, Rismark (2007) notes that sometimes, students use the mobile phone to view videos ahead of lectures without further preparation. Sofowora (2011) also attributes mobile phone usage among college students to examination malpractices, mobile bullying, and indiscipline. Teenagers who use their phone excessively are more prone to disrupted sleep, restlessness, stress, and fatigue and they experience physiological health hazards like headaches, earache, warmth sensation, and musculoskeletal symptoms (Goswami & Singh, 2016). According to Agrawal, Deepinder, Sharma, Rang and Li (2008), cell phone's

harmful radiations degrade the quality of sperm with regard to quantity, viability, morphology, and few mutations in DNA, causing severe changes in sperms. Frequent users of cell phones have health challenges more often and reported poorer perceived health than less frequent users (Sodeqvist, Carlberg, & Hardell, 2008).

Mamudu and Oyewo (2015) argued that the emergence of several chat engines like whatsapp, google, ebuddy and so on has made it almost impossible for some people to part with their phone such that they have become addicted to it. Such individuals sleep and wake up with the cell phone beside them. Ezemenaka (2013) points out that such addiction take strong toll on the students without noticing it and some of them find it hard to believe that they are addicted to their phones.

Mobile Phone Addiction

Goswami and Singh (2016) explained mobile phone addiction as a situation whereby individuals are “engrossed in their Smartphone use to the extent that they neglect other areas of life”. They noted that several terms have been used by various scholars to describe this kind of addiction. Such terms include “Smartphone addiction” (Casey, 2012); Mobile phone addiction (Park, 2005); “Problematic mobile phone use” (Takao, Takahash & Kitamura, 2009); “Mobile phone dependence” (Choliz, 2012); “Compulsive mobile phone use” (Mathews, Pierce & Tang, 2006); and “Mobile phone overuse” (Perry & Lee, 2008).

A mobile phone addict was described by Bhutia and Tariang (2016) as a person who constantly checks his/her phone every now and then, and the urge to check the mobile phones becomes so strong that he/she cannot stop even if he/she wishes to. Such a person is extremely attached with the mobile phone to the extent that he/she uses it while doing other things such as eating, walking, studying, and even uses it inappropriately in places like petrol stations, banks, meetings, classrooms, churches, mosques, and so on. He/she uncontrollably fiddles with the phone most of the time and stays on the mobile phone longer that he/she intended as he/she repeatedly performs trivial tasks such as playing games, watching movies, listening to music. Leung (2013) argues that cell phone addicts stay on the phone longer than originally intended; hide from family and friends or others to conceal the extent of involvement with the cell phone; and use it as a way of escape from problems or to relieve a phobic mood such as feeling of isolation, anxiety, loneliness, and depression.

Peele (in Bhutia & Tariang, 2016) points out that addictive behaviour develops from three main motives: escape (a perceived means of diminishing awareness, tension and pain); ritual (association with an experience that has immediacy, simplicity, and predictability); and compensation (elevated sense of control, power, and self). Perry and Lee (2007) explained these further through examples. According to them, mobile phone users tend to focus on the mobile phone interface when communicating, shutting out the surrounding environment to varying degrees (escape); they control the time, place, and content of the texting (compensation); and they engage in frequent daily sms sessions (ritual).

Apart from the length of time spent on the mobile phone or where and how it was used, Benessere (2013) identifies the followings as the signs of mobile phone addiction:

- Dedicating large amounts of time to activities related to using the phone (calls, text messages, games consultations, use of camera for photos and videos, etc) carried out exclusively or in combination with other activities;

- The victim experiences a sense of dizziness, headache, vertigo eye or ear ache or other physical symptoms that can be related to the abuse of the mobile phones;
- Extreme affection shown towards the mobile phone which is mainly seen through not wanting to be far away from the phone, even for small amount of time;
- The individual tends to get anxious, panic or experience unpleasant emotions in general when the telephone does not work or its battery is dead;
- The victim is inclined to use the mobile phone as instrument of control in sentimental and affectionate relationships;
- Tendency to use the mobile phone keep fears and insecurities (such as apprehension, solitude, particular phobias, anxiety attacks etc.) under control;
- Likely to have more than one mobile phone, often using separate lines for different uses (work/friends);
- The victim is in the habit of keeping the phone on at night so as to wake up at night and check for messages or calls;
- The victim spends more money on accessories than the phone costs
- The victim runs out of power battery everyday
- The victim answer call and text while driving
- Such person forms the habit of answering cell phone while in an intimate embrace with a loved one.

Bhuntia and Triang claimed that the adolescents are more vulnerable to develop mobile phone addiction because they are known to be heaviest users of information and technology with an increased usage of smart phones throughout the day as they do not only make calls with their phones but they also send text messages, take photographs, listen to music, watch movies, chat with family and friends, browse the internet, set and remind themselves about important events, download useful applications and so on. This view was only held by Griffiths (2010) who finds that the modern day enchantment to the cell phones highlights the latest technology that for better or worse, appears to be encouraging people to spend relatively more time with technology and less with fellow humans. Nowhere is this enchantment with technology more intense than in young adults – college students in particular (Massimini & Peterson, 2009; Shambare, Rugimbana & Zhoua, 2012)

College students are cognitively connected to their mobile phones as they see such devices necessary to maintain social relationships and offload the boring experiences of everyday life (Junco & Cotton, 2012); engage in interesting activities such as surfing the internet, playing games, conducting research and taking and sharing photographs (Myers, 2013); to view the topic ahead of lectures without further preparation (Rismark 2007). Mamadu and Oyewo (2015), have noted that the emergence of several chat engines like whatsapp, google chat, ebuddy, twitter etc has made it almost impossible for some people to part with their phones. More upsetting is the fact that some people experience withdrawal symptoms that are characterised with substance abuse, such as anxiety, insomnia, and depression when they are

without their Smartphones. Startlingly, such students do not notice their addiction as they find it difficult to believe that they are addicted to their phones. The implication of addiction such as this is that students spend greater time that could have been utilized and improve their academic performance on their phones. This opinion was corroborated by Harman and Sato (2011) who examined the effect of cell phones use on academic performance among 88 university students. They found that higher messaging rates and incoming calls may interfere with learning. In a related study of the relationship between multitasking, studying and academic performance, Junco and Cotten (2012) also reported that multitasking such as texting or using Facebook while studying was negatively correlated with college GPA.

Some studies have pointed out that mobile phones can facilitate learning in the form of m-learning as a result of which students can interact with one another anytime and anywhere. Jaud, Malik and Anjjar (2011) argued that mobile phones are helpful for the students for study purposes as they can use their cell phones to exchange helpful information with their classmates about their studies. According to Ferry (2009), modern cell phones can be used to help students to access internet based on contents, remix it, share it, collaborate with others and create media with deliverable for the classroom teachers as well as global audience.

Notwithstanding the conclusions, all of these studies report heavy use of texting by adolescents. For instance, Thurlow (2003) argues that adolescents are both the driving force behind and slaves of a growing text messaging culture. Haste (2005) also notes that texting is the favourite mode of contact for nearly all social and communication activities, socialisation and self-expression of the adolescents. They are the quickest to adopt text messaging (Grinter & Elrigde, 2001). Lorente (2002), finds that among adolescents, boys and girls respond differently to texting. In Lorente's opinion, girls use texting more than boys.

Gender and Mobile Phone Addiction

Previous researches have indicated that disparity may actually exist in how males and females use cell phones. For instance, in a study of gender patterns in cell phone use, Geser (2006), concludes that 'the motivations and goals of cell phone usage mirrors rather conventional gender roles'. He argues that men see a more instrumental use for cell phones whereas women utilize the cell phone as a social tool. Junco, Merson and Salter (2010) also observed that female college students sent more texts and talked longer on their mobile phones than their male counterparts. According to them, this is because females perceive information communication technologies as a means of maintaining and fostering relationships whereas, men view such technologies as sources of entertainment. In a similar study of Facebook addiction, Kuss and Criffiths (2011) also found that female adolescents tend to use social media largely to communicate with their friends and families more than male adolescents.

Skog (2002), concludes that mobile phones have evolved gendered sub-cultures in the sense that girls use their cell phones mainly as a tool for communication and maintenance of peer groups and contacts, and social aspects (such as design, ringtone and colour) while boys use their phones mostly as a toy by exploring its features. While investigating the gender differences that determine how users perceive their mobile phones, Howell, Love and Turner (2008) observed that females perceived the services they derive from mobile phones very positively, whereas, males persistently dislike such services regardless of location.

Researchers have also indicated that adolescent girls (aged 15 – 17) are slightly more likely than boys to use home computers for e-mail, word processing, and completing school assignments

as opposed to connecting to internet, creating spreadsheets or databases, using graphics and design software, managing household records or finances, or playing games (Lenhart & Madden, 2005). Most commonly, female college students use the internet for e-mail (Odell, Korgen & Schumache, 2000); and to conduct academic research than males (Selwyn, 2008). On the other hand, the latter are more likely to search for news, purchase items, and play games online with their mobile phones (Sherman, End & Kraan, 2000).

Statement of Problem

Summarily, various literatures that have investigated the impacts of mobile usage (as reviewed above) have reported that: (1) mobile phones (especially, Smartphones) have intended and unintended uses; (2) mobile phones have evolved some subcultures (particularly, occupational, status, and gendered) among youths in several countries; (3) emergence of mobile phones have obscured the borderline between work and private life, along with the borderline between public and private spaces; (4) with mobile phones, users are prone to social control by friends, family, and businesses; (5) mobile phone users, especially youths, are at risk of addiction and out of place usage.

Most of these past researches were conducted in developed countries like United States of America (US), United Kingdom (UK), Germany, and Norway. In underdeveloped countries like Nigeria, such consequences have not been thoroughly documented and described; hence, there is need for this kind of investigation so as to understand how college students in Nigeria perceive and use mobile phones as well as the effect that such perception and usage have on their academic outcomes. By using Nigerian data, this study will contribute towards a better understanding of how information communication technologies may affect the life course of African countries as a result of which governments, policy makers, telecommunication companies, and network providers will realise how to properly design interfaces to meet the unique needs of the growing college students so that the academic standard is not compromised.

Objectives of the Study

As stated above, most investigations that border on the users' attitude towards mobile phones were largely conducted in developed countries. But such findings may not be transmissible to underdeveloped countries like Nigeria due to sociocultural differences. Consequently, this study will access the perception and attitude of Nigerian college students as a yardstick for determining whether there is (or not) a good use of information and communication technologies among Nigerian youths. Purposely, the study intends to:

- i. Investigate mobile phone addiction among college students in Nigeria
- ii. Find out the differences (if any) in the mobile phone usage among college students on the basis of their courses
- iii. Examine if there was a relationship between the gender of the college student and mobile phone uses
- iv. Asses the attitude of the students toward mobile phones based on their area of residence (rural or urban)
- v. Investigate whether there is a relationship between students' perception of mobile phone and their academic performance.

To achieve these purposed intents, four research questions were raised and answered. They are:

- a. Does the attitude of college students towards mobile phone usage (viz. usability, preferable, and difficulty) for academic activities differ with respect to courses offered?
- b. Is there any difference in the attitude of college students toward mobile phone usage (viz. usability, preferable, and difficulty) for academic activities regarding their gender attribute?
- c. Are there differences in the attribute of the students towards cell phone use (viz. usability, preferable, and difficulty) for academic pursuits pertaining to their area of residence?
- d. Does mobile phone usage suggestively affect the academic performance of the students?

RESEARCH METHODOLOGY

Research Design

This research work is exploratory in nature. Exploratory researches are more suitable for studies that intend to gain more knowledge about issues that scarcely noticed and documented, although, may be affecting a large number of people in the society. It also suitable for discovering phenomena that are relatively new, understated or largely neglected in the society. This design was employed based on the fact that the focus of this research work – college students' attitude to mobile phone is understudied in Nigeria.

In order to gather data for the study, both quantitative and qualitative techniques were employed since such help to clearly understand and gain more in-depth information about issues from all ramifications.

Participants

Participants for this study were drawn from the Federal Polytechnic, Ilaro, Ogun State and the University of Ibadan, Oyo State. The two states are in the western part of Nigeria. The selection of these two schools was based on the fact that extensive analysis of the opinions of students of diverse higher institutions (universities and polytechnics) should be carried out, which is a very important variable for this study. Furthermore, the University of Ibadan has more complexities (programs) than the Federal Polytechnic, which is another important variable for the study as such will allow for comparative analysis of the responses of the students. A total of 645 students (345 males and 300 females) of the Faculties (referred to as Schools in the polytechnic) of the Social Sciences and Engineering were involved in the study. Their age ranged between 19 and 24 ($m = 20.4$). Using the stratified random sampling, the sample was representative of the entire departments of the two faculties. Out of the 645 students, 640 completed the questionnaire, which makes a response rate of about 99%. Permission was obtained from the authorities of the schools and the purpose of the research was explained to the students before questionnaire were administered on them.

Instrument

Based on available literatures on general technology usage (Becker, Alzahabi & Hopwood, 2012; Kimbrough, Guadaigno, Muscanell & Dill, 2012; Reich, Subrahmanvan & Espinoza, 2012; Junco, 2013; and Rosen, Carrier & Cheever, 2013), a questionnaire was developed to examine how the attitude of college students toward mobile phone services might be influenced by their academic discipline, gender, and residential area. The questionnaire, which comprises of 50 items, was divided into three sections. The first section asked respondents about their demographic features such as age, gender, current academic status, residential background (rural or urban dwelling), and religion.

The second and third sections were formed based on four dimensions of measuring attitudes toward general technology use that include: (1) usability of mobile phones (Turner & Croucher, 2013); (2) barriers of using mobile phone in a particular period (Burak, 2012; Thompson, 2013); (2) preferable of mobile phones (Wang & Tchernev, 2012); and (4) overall attitude towards using mobile phone for academic purposes (Venkatesh, Thong & Xu, 2012; Jenkins-Guarnieri, Wright & Johnson, 2013). Responses were designed on Likert-type scale that ranged from strongly agree to strongly disagree. Each respondent marked (✓) either of the response format (as appropriate) for each statement. This allowed the responses to be grouped and analyzed statistically using SPSS V15.

After the questionnaire was developed, a pilot study was conducted to verify its clarity. This was necessary to improve the instrument and as a result, five items were removed while another eight were reworded to ensure understanding and clearness. A Cronbach's coefficient alpha that was computed to determine the reliability of the items yielded 0.72.

Data Analysis

The means, reliability analysis and t-test were determined using SPSS statistical package. The level of significance was set at the usual 0.05.

Table 1: Attitude of College Students Pertaining to Academic Discipline

Dimensions	Academic Discipline	Mean	SD	t-value	P
Attitude towards usability of mobile phones	Social Sciences	64.10	7.69	0.19	0.78
	Engineering	59.77	4.48		
Attitude towards barriers of mobile phones	Social Sciences	10.06	3.29	1.75	0.15
	Engineering	11.37	3.78		
Attitude towards preferable of mobile phones	Social Sciences	22.92	2.69	1.97	0.08
	Engineering	24.37	2.48		
Overall attitude of college students	Social Sciences	84.70	8.69	1.30	0.18
	Engineering	87.37	6.48		

p>0.05

The first research question desired to know whether academic discipline stresses mobile phone usage of college students. The statistical analysis as shown in Table 1 reveals that the t-cal for academic discipline towards usability is 0.19 and P-value is 0.78; for barriers, t-cal is 0.19 and P-value is 0.15; for preferable, t-cal is 1.97 and P-value 0.08; and the overall attitude of the college students toward using mobile phone is 1.30 and P-value is 0.18 all at $P > 0.05$. This implies that in all dimensions of usability, preferable, barriers, and general attitude towards using mobile phone for educational reasons, there is no any significant difference between students of different academic disciplines.

Table 2: Attitude of College Students with Regard to Gender

Dimensions	Academic Discipline	Mean	SD	t-value	P
Attitude towards usability of mobile phones	Male	62.08	8.71	1.64	0.17
	Female	61.80	6.84		
Attitude towards barriers of mobile phones	Male	9.41	2.04	8.59	0.00
	Female	12.73	2.17		
Attitude towards preferable of mobile phones	Male	26.87	2.93	1.34	0.13
	Female	27.73	2.56		
Overall attitude of college students	Male	72.96	6.51	5.75	0.00
	Female	97.46	2.84		

$p > 0.05$

As a response to the second question that sought to determine if gender factor underscore mobile phone uses among college students, Table 2 indicates t-cal for gender attribute towards usability is 1.64 and P-value is 0.17; for barriers, t-cal is 8.59 and P-value is 0.00; for preferable, t-cal is 1.34 and P-value 0.17; and the overall attitude of the college students toward using mobile phone is 5.75 and P-value is 0.00 all at $P > 0.05$. This implies that in all dimensions of usability, preferable, barriers, and general attitude towards using mobile phone for educational reasons, there is no any significant difference between students of different academic disciplines. This means that with regard to the attitude towards the usability of mobile phone, male students do not differ significantly from female students, whereas regarding attitude towards barriers of using mobile phone for educational reasons, there is a significant difference between male and female students. Also, pertaining to attitude towards preferable, males and females do not differ significantly but in the overall attitude of using cell phones for educational purpose, males differ significantly from the female college students.

Table 3: Attitude of College Students Regarding Residence

Dimensions	Academic Discipline	Mean	SD	t-value	P
Attitude towards usability of mobile phones	Urban	62.05	5.19	3.08	0.00
	Rural	58.44	5.81		
Attitude towards barriers of mobile phones	Urban	13.53	3.85	2.80	0.01
	Rural	8.90	3.31		
Attitude towards preferable of mobile phones	Urban	23.85	2.95	0.81	0.08
	Rural	26.54	2.56		
Overall attitude of college students	Urban	103.20	4.15	5.27	0.00
	Rural	96.37	7.72		

$p > 0.05$

Table 3 above shows that the t-cal for residence-based attitude towards usability is 3.08 and P-value is 0.00; for barriers, t-cal is 2.08 and P-value is 0.01; for preferable, t-cal is 0.81 and P-value 0.08; and the overall attitude of the college students toward using mobile phone is 5.27 and P-value is 0.00 all at $P > 0.05$. The meaning of this is that as regards usability and preferable of using cell phones, college students that are based in rural areas are not significantly different from those residing in the urban areas. But concerning barriers as well as overall attitude towards using mobile phone for academic pursuits, there is a significant difference between rural and urban based college students.

Table 4: Attitude of College Students Regarding Residence

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.580 ^a	1	.209		
Continuity Correction ^b	1.192	1	.275		
Likelihood Ratio	1.554	1	.213		
Fisher's Exact Test				.247	.138
Linear-Linear Association	1.572	1	.210		
N of Valid Cases	640				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 19.20

b. Computed only for a 2x2 table

As reflected in Table 4 above, the chi-square analysis that was employed shows that college students' perception of the effect of the usage of mobile phone on their academic performance is not significant. In other words, mobile phone usage does not affect students' performance. This finding is in line with the conclusion of previous researches that did not establish any significant relationship between mobile phone usage and academic performance (e.g. Ezemenaka, 2013; Olofiniyi, Fashiku & Owombo, 2012; and WAEC Chief Examiner Report, 2014).

DISCUSSION AND CONCLUSION

This study investigated usability, barriers, preferable, and general attitude toward using mobile phones as predictors of academic performance of college students. The result shows that academic choice of college students as well as where they reside do not make them feel (or use) their mobile phones differently. In other words, there is no any difference in the perception and usage of mobile phones by college students based on their academic discipline and their area of residence. Inability of this study establish a significant difference in the attitude of the students based on their academic pursuit may be due to the fact that students pursuing other courses like technical or medical and science oriented courses were not included in the study, which is a major flaw of the study. The academic world have emphasized m-learning as an effective method of gaining knowledge as technology is found to be a necessary tool for better understanding of different scientific and technological realities and postulations. This same reason may have been responsible for the failure of this study to establish a significant relationship between mobile phone usage and academic performance.

This study found that gender is an important factor that determines mobile phone uses among adolescents, that is, male and female college students showed different attitude to their mobile phones and they exploit their (mobile phone) features differently. In all dimensions, this study shows that the mean responses of female students are greater than that of the male college students, thus, female college students are more likely to use their cell phones for educational purposes than the male students. This finding corroborates previous conclusions that girls more than boys consider mobile phone as important in their lives (Haste, 2005; Oaksman, 2006; Syed & Nurullah, 2011; and Halder & Guha, 2015).

RECOMMENDATIONS

It is recommended that operational involvement and practical prevention programs which would discourage mobile phone addiction in students should be developed and configured in all cell phones. Tariang (2016) points out that there is a need to counter the negative effects of overindulgence and dependence on mobile phones or the time will soon come when the youths will be affected or be influenced and get carried away by the marvel of this compact technology thereby affecting their wellbeing and healthy all round growth.

Since the use of internet enabled phones cannot be proscribed, the management of colleges, parents/guardians and the GSM network providers constantly inform and reorient college

students about the negative and positive effects of their mobile phone uses and of the likely consequences of addicted and uncontrolled use of their mobile phones.

Also as a form of safety and protective measure, authorities of higher institutions of education should interact with the network service providers to cut-off the internet connection on phones for students during academic and examination periods in order to prevent malpractices. In line with this, policy makers as well as school authorities must formulate and implement essential rules for students to concentrate on lectures totally without any distraction from phones or any other related influence.

Suggestions for future Research

Future researches can be conducted to discover among the array of applications and services provided by cell phones, which of them is/are the most suitable and useful for college students, especially, for educational outcomes.

Also, research may be carried out to examine the various intervention programs that will help students reduce their test anxiety and as well increase their self-control.

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