

Use of Smartphones among College Students in Nigeria: Revelations and Reflections

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ABSTRACT Smartphone empowered by the Global System of Mobile Communication (GSM) protocol has emerged as the most prevalent means of voice communication in Nigeria. Among college students the use of smartphones remains pervasive. The main objective of this paper was to examine what college students in Nigeria use smartphones for and the value they attach to ownership of GSM enabled smartphones. The paper also sought to determine linkages between college students' smartphone usage and demographic variables such as age and gender. In all, 555 respondents completed a self-administered questionnaire. The results showed that 38.2 percent of students spent between 1 and 5 hours per day on their phones. Majority of the respondents (98%) used their phones to communicate with family and friends. About seventy-five percent used their smartphones for social networking. Only twenty-four percent of students engaged their smartphones for academic activities. Age and number of hours spent on phones were found to be significant ($p=0.001$). It was also found that the activities students engaged their phones with determined the number of hours they spent on the phones. The study concluded that although there was widespread use of smartphones among college students, they tended to use smartphones more for social activities than academic activities.

INTRODUCTION

Smartphone has become one of the most pervasive gadgets of the 21st century. In the last decade smartphone adoption has grown exponentially to emerge as an integral part of everyday life in most societies (Alfawareh and Jusoh 2014). A survey of global attitudes and trends by Pew Research Centre (2016) show a sharp rise in smartphone ownership over the last three years. While the survey indicate a high prevalence of smartphones in Europe and US, South Korea however, emerged the country with the highest penetration of smartphones (88%).

Smartphones were made possible by the introduction of the Global System for Mobile Communication popularly known as GSM. The emergence of GSM is traceable to 1982, when the European Conference of Postal and Telecommunications Administrations (CEPT) constituted the Groupe Spécial Mobile committee ostensibly, to draw up a unified cellular telephone pro-

ocol for Europe, although the eventual mandatory standard or specifications were articulated by European Telecommunications Standards Institute (Hurdeman 2003). Essentially, the GSM encapsulates the open and integrated second-generation (2G) digital cellular standard that powers mobile phones. Between its introduction in 1982 and now, the GSM has improved in capability and efficacy becoming the most widely used phone technology across the world. In 2010, the GSM Association reported that technologies using the GSM protocol serve eighty percent of the international mobile market, covering over 5 billion people across more than 212 countries and territories, making GSM the most pervasive of the many standards for mobile systems.

As at 2014, GSM has emerged as the de facto global standard for mobile communications – controlling over ninety percent market share and in use in more than 219 nations and regions.

With the infusion of General Packet Radio Service (GPRS) technology, Wireless Application Protocol (WAP), and the 3G standard, the GSM phones provide a variety of applications

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that allow people to perform a number of activities ranging from personal, social, economic to academic endeavours. Nigerian mobile phone consumers have embraced this technology passionately.

GSM Penetration in Nigeria

The adoption of the GSM standard in Nigeria was kick-started in 2001 following the deregulation of the telecommunication sector and licensing of two foreign telecommunications operators, MTN and ECONET Wireless as well as the state-owned M-TEL (Fatoki 2005). Prior to the introduction of GSM, telecommunication services especially telephony, were monopolized by the state-run Nigeria Telecommunication Limited (NITEL) which was poorly managed (Fatoki 2005) and ill-positioned to meet the rising demand for phone lines and ancillary services. As at 2000 for instance, NITEL had less than a million lines for a population of over 100 million. Even so, telephone services were terribly congested and mostly unreliable (Fatoki 2005). The available telephone services whether on fixed or mobile platforms, were considered grossly overpriced and out of the reach of many Nigerians. While the state monopoly held sway, ownership of phones were seen as the exclusive preserve of the rich and powerful. But with the entrance of GSM operators access to telephone services was 'democratized' (Elegbeleye 2005) and it became possible for those previously excluded to acquire phones and be connected to telephone services on any network of their choice even from the comfort of their homes and at prices they could easily afford.

Between the introduction of GSM in 2002 and now, the subscribers' base and teledensity have grown astronomically. Industry data gathered by the Nigerian Communications Commission (NCC) shows that active GSM subscribers as at May 2016 stood at 148.8 million translating to a teledensity of 106.32 percent (using the 2006 last national census population figure of 140 million). This represents a humongous growth considering that teledensity was a paltry 1.89 percent in 2002. The GSM sector continues to grow in leaps and bounds and accounts for the explosive growth in the telecommunication sector (Wojuade 2005; Anyasi and Otubu 2009). Currently the GSM sector controls 99.1 percent of the telecommunication market in Nigeria.

Generally, GSM empowered smartphone has become an integral part of the Nigerian society, a conspicuous phenomenon in formal and informal communication (Adomi 2006; Tella et al. 2007). It has been described as the most prevalent means of voice communication in Nigeria (Akanbi 2013). According to a Pew Survey (2016) about twenty-eight percent of adults reported owning smartphones in Nigeria.

Study carried out by Elegbeleye (2005) shows that Nigerians place premium value on mobile phones and consider them as enhancing interpersonal relationships.

In the economic front, mobile phone has revolutionized business operations especially in the area of reducing cost of doing business (Adebayo 2008) and empowering many rural economies (Ajiboye et al. 2007). It has and continues to make considerable impact on job creation particularly indirect job opportunities (Ndukwe 2008; Okereocha 2008; Soyinka 2008). Balogun (2000) argues that the easy and effective communication provided by the GSM platform has bolstered both internal and external trade and contributed significantly to the country's economic growth and development. Apart from stemming rural-urban migration, the wholesale adoption of the GSM communication technology has also impacted positively on service delivery and turnaround time particularly, for small and medium enterprises that have continued to leverage on the GSM marketing platforms to expand their clientele (Akanbi 2013). As noted by Ajiboye et al. (2007) the widespread usage of mobile phones has helped to cut down criminal activities significantly as many citizens can now quickly and easily report or alert the police of ongoing or intended criminal activities in their neighborhood. The defining contribution of mobile phones however, remains the radicalization and liberalization of the information and communication space in Nigeria (Ajiboye et al. 2007).

At the initial stage, the GSM platform was basically used for phone calls or conversation (Adomi 2006) and short messaging services (SMS) but just as the device has evolved aesthetically from unappealing bulky handsets to the smaller, lighter, sleek, flat and attractive models, it has also transformed in its utility. According to Ogbulezie et al. (2013), the GSM technology in Nigeria has undergone extensive modifications and expansion so as to fulfil the ever

increasing demand. Today the use of GSM phones transcends its traditional telephonic value to include a variety of functions such as video and voice recording, money transfer, payments for good and services (Anyasi and Otubu 2009) as well as serving as a hub for several social networking platforms such as Facebook, WhatsApp, Myspace and Google chat.

Smartphone Usage among College Students

Virtually every college student nowadays own a smartphone (Kim and Altmaann 2012; Payne et al. 2012; Mohtar et al. 2013; Alfawareh and Jusoh 2014). GSM phone or smartphone is increasingly providing platforms for university students and staff to conduct research and academic activities (Ajagbe et al. 2013). According to Anshari et al. (2017), many students rely on their smartphones to download educational materials from the internet. A study by Al-Harrasi and Al-Badi (2014) suggest that university students are able to amass great amounts of information useful for their academic work by connecting to on-line sites. However, empirical evidence appear to suggest that university students use mobile phones predominantly for social activities. As indicated in Harrasi and Al-Badi (2014) study, social networking emerged as a prominent activity that students engage their GSM with. As much as ninety-six percent of college students use their smart phones for all manners of social networking, with seventy-one percent of the students admitting using social networks to communicate with their friends, over and above family members and relations. The GSM enabled smartphones have brought volume and impetus to social networking activities. There is an increasing interest in using smart phones to access internet sites, particularly among university students (Hingorani et al. 2012). This is because GSM phones enable people to stay on-line for longer periods - connecting to a world of almost limitless information thereby, increasing the volume of activity in social networking (Al-Harrasi and Al-Badi 2014). Research by Lau et al. (2017) show that post-graduates and undergraduates students in Japanese university use smartphones more for social networking than academic activities. In South Korea, a study found that although nearly every student have about 80 applications on their smartphones only about sixteen percent of those

applications are used for academic activities (Park and Lee 2012). In a similar work conducted by Ajagbe et al. (2013), it was found that majority of college students in Malaysia use GSM mainly for keeping in touch with parents, siblings and friends. A survey of smartphone usage among South African Students indicate that students use smartphones mostly for social networking (Uys et al. 2012).

One of the earlier studies that examined use of mobile phones among younger and older adults in the UK, found that university students frequently use mobile phones for 'rendezvousing' defined as the "informal co-ordination of a face to face meeting between friends and family" (Colbert 2004). In the Philippines, students use GSM phones to exchange SMS with one another and to communicate with departments (Mariano and De La Rosa 2004).

There is a prevalent use of smartphones among university students in Nigeria. A number of studies indicate that university students use smartphones for a range of social activities such as keeping in touch with friends, course mates, lecturers and relations (Olukotun et al. 2013; Adomi 2006; Olatokun and Bodunwa 2006).

It has been argued that the introduction of mobile phone has altered students' expenditure pattern in such a way that many students are prepared to sacrifice expenses on essentials such as food and academic to maintain their social activities. Olukotun et al. (2013) assert that many students are ready to go without food than not having airtime on their phones. Findings on the use of mobile phones at the University of Ibadan Nigeria, show that staff and students use their mobile phones principally for social activities (Olatokun and Bodunwa 2006). On the contrary, only an insignificant number of students use smartphones for research and academic activities (Olukotun et al. 2013; Olatokun and Bodunwa 2006) even though GSM phone has long been recognized as a veritable platform for students to access technology related services in libraries or information centers in Nigeria (Fatoki 2005).

Objectives

The use of smartphones remains pervasive among college Nigerians students who constitute a sizable percentage of smartphone users in Nigeria. What do college students use smartphones majorly for? What value do college stu-

dents attach to ownership of smartphones and what pattern of ownership of smartphone exist among college students. Much of the research on mobile phone usage have focused on examining usage in the urban areas (Etukudo 2009), community level (Ajiboye et al. 2007), commerce (Anyasi and Otubu 2009; Akanbi 2013) and communication (Elegbeleye 2005). Available research on mobile phone usage in the universities have concentrated on the large public or state owned universities (Olatokun and Bodunwa 2006; Olukotun et al. 2013). There appears to be a lack of research examining smartphone use in micro-private universities whose population comprised students from well to do families. The main objective of this paper therefore, is to examine the use of smartphones among college students in a medium-sized private university in Nigeria. Additionally, the paper attempts to identify peculiarities, trends and traits in the ownership of smartphones among students.

Theoretical Foundation

Elihu Katz's (1959) Uses and Gratification Theory provides an interpretative framework for how people use mobile phones to satisfy their needs. The theory is relevant because it focuses on the user that is the audience member, rather than the message. The theory asserts that individuals have needs and wants and are capable of articulating what those needs are. The theory argues that media can satisfy some of those needs (Truadt 2005). The theory suggests that people select their media options based on their individual needs. In other words, people deliberately search for means that will, ultimately, address their needs. Such needs, according to Katz range from *Diversion*, which entails escape from routine problems; to *personal relationship*, which sees the user substituting the medium for companionship. Other needs include *personal identity or individual psychology*; as well as *surveillance*, where individuals use media to obtain useful information about factors which could affect or assist in the accomplishment of certain tasks. The Uses and Gratification Theory is not message-centred, but audience-centred in that it brings the critical role of the audience to the fore. It emphasizes the primacy of the audience over the message. It may be argued that smartphones do not have the functionality of the traditional media like televi-

sion, radio and newspapers, but it serves as a social media platform given that it performs the role of social connectivity. It connects individuals through voice, text and picture; and through the conferencing mode, as well as the sharing and exchange that take place at group levels. It is, therefore, quite logical to say that the smartphone is a social platform or media. Social media has been defined as an interaction among people in which they create, share and or exchange information and ideas (Ahlqvist and Hallonen 2008). To this extent, the GSM platform can be classified as a social medium. This is in contrast to the position advanced by scholars like Dabagh and Kitsantas (2011) who hold that any social experience whether in communication, collaboration or creative expression, which is not internet based cannot not qualify as a social media experience.

Conceptualising social media from the narrow prism of internet as the common denominator fails to take into consideration the interactive capabilities of smartphones. As has been argued by Ahlqvist and Hallonen (2008), social essence can also be captured through smartphones. The very essence of social media is interaction - sharing and exchanging of information which is also a key function provided by GSM smartphones.

Smartphones are frequently used to access and connect to internet channels and networks. To some degree, the use of smartphones can enable people to satisfy the four critical needs presented by Elihu Katz. In all, the intensity and spread of usage, as well the place smartphone occupies in daily lifestyles vary from individual, to individual and from community to community.

METHODOLOGY

The method for this study is survey and the design descriptive. The sample was drawn from Caleb University, a small-sized private university in southwest Nigeria with a population of 1220 including academic and non-academic staff. In all, a sample of 555 comprising 480 students and 75 members of staff completed a self-administered questionnaire. The questions dealt with the rate of usage and value attached to smartphones, amount of time students spent on their phones and what activities occupied their time most. The questionnaire also sought to elicit information on respondents' socio-demograph-

ics. Due to the pilot study earlier conducted, the questions were structured to allow respondents choose only from two options (Agree/Disagree, or Yes/No). Altogether, 555 responses were obtained representing a hundred percent response rate. Descriptive statistics were used to present trends while Pearson's Correlation was used to identify relationships between smartphone usage and demographic characteristics such as gender, age and status (that is, whether respondent is a student or staff).

RESULTS

Demographic Characteristics of Respondents

Table 1 presents the demographic characteristics of the respondents. In general, most of the respondents, 480 (86.5%) were students out of which 477 (86%) were female students. This reflects the university students' population which is skewed in favour of females. Non-teaching staff made up 63 (11.4%) while teaching personnel accounted for 12 (2.2%). The majority of respondents 251 (45.2%) were less than 20 years of age, followed by those whose ages were below 23 years 132 (23.8%) and then those who were 25 years and above 87 (15.7%). The percentage of respondents within 17 years stood at 15.3 percent of the total.

Table 1: Demographic characteristics of the participants by age

<i>Age of respondents</i>	<i>Frequency</i>	<i>Percent</i>
<17 years	85	15.3
<20 years	251	45.2
<23 years	132	23.8
>25 years	87	15.7

GSM Phone Ownership among Respondents between 1990 and 2013

Table 2 presents smartphone ownership among respondents. As can be seen from the table only a negligible percentage of respon-

Table 2: Year respondent possessed GSM phone

	<i>Frequency</i>	<i>Percent</i>	<i>Valid percent</i>	<i>Cumulative percent</i>
<i>Valid</i>	1994-2004	6	1	1
	2005-2009	55	10	11
	2010-2014	450	81	92
	2015	44	8	100
	Total	555	100	

dents that is, 6 (1%) had smartphones between 1990 and 2002. This is understandable giving that 24 years ago GSM was still a novel technology in the country and only accessible to upwardly mobile individuals. Moreover, majority of the respondents were most likely toddlers or in pre-school as at the time GSM made entry into Nigeria. The acquisition of GSM phones among respondents rose sharply between 2005 and 2009 (42%) and grew exponentially from 2010 to 2014 (81%). The fact that most respondents became teenagers and young adults within this period could be a plausible reason for the high rate of smartphone ownership.

Number of Smartphones Used By Respondents and Reasons for Changing Phones

The number of smartphones respondents have used since initiation and the reason for changing their phones are presented in Table 3. The results show that the majority of respondents, 446 (80.4%) used more than three phones since they started using mobile phones, while respondents that have used just one or two phones constituted 102 (18.4%).

Table 4 presents the number of phones respondents have used between 1994 and 2015. The Nokia brand of GSM phones emerged the most preferred among respondents, 249 (44.9%), followed by Blackberry 174 (31.4%), and then, Samsung 54 (9.7%) and Sonny 47 (8.47%) respectively. Nokia and Motorola phones were the foremost brand of GSM phones that arrived with the GSM phenomenon in Nigeria. Nokia's acclaimed quality especially the durability of its battery may be the reason why it still enjoys growing patronage. On the other hand, Blackberry which became a sensation with its instant messaging platform remains a favorite among Nigerians especially teenagers and young ladies even though other brand of mobile phones offer instant messaging and interfacing platforms. The recurring reasons respondents (200) adduced for changing their mobile phones were

Table 3: Number of phones used by respondents' between 1994 and 2015

<i>Number of phones used</i>		<i>Frequency</i>	<i>Percent</i>	<i>Valid percent</i>	<i>Cumulative percent</i>
<i>Valid</i>	1-2	102	18.4	18.4	18.4
	3-4	446	80.4	80.4	98.8
	5-6	2	0.3	0.4	99.2
	6-8	1	0.2	0.8	100
	>8	0	0	0	
	Total	551	99.3	100	
	Missing System	4	0.7		
<i>Total</i>		555	100		

quality and utility (36%), followed by the need to keep up with trends (35%). Less than a quarter of the respondents (102) stated that they had to change their phones as a result of loss or theft (18.4%) or technical issues (10.5%). Respondents who changed their phones just to indulge their fancies represented only a paltry 1.4 percent. Most Samsung and Sony brands are expensive and this could be the explanation for why few respondents use them. The result shows that a small proportion of respondents (31) also use the Chinese brand, Tecno (5.6%). This could be as a result of its relatively low-price.

Table 4: Respondents reasons for changing phones

<i>Reasons for changing phones</i>	<i>Frequency</i>	<i>Percent</i>
Quality and utility	200	36
Keep up with trends	195	35.2
Loss/theft	102	18.4
Technical issues	50	9
Spoil myself	8	1.4
Total	555	100

Number of Hours Respondents Spend on Phones

Table 5 shows the number of hours respondents spend on their phones daily. As can be

seen in most of the respondents, 212 (38.2) spent between 1 and 5 hours per day on their phones. About a quarter of respondents, 140 (25.2%) spent between 6-10 hours per day while 68 (12.3%) respondents stay on their phones for up to 11-15 hours per day. Interestingly, a significant number of respondents, 59 (10.6%) stated that they spend more than 20 hours per day on their phones.

Activities Respondents Frequently Engage Their Phones With

Respondents were asked to list 10 things they do with their phones in descending order. Table 6 presents the activities students frequently use their smartphones for. As shown in the table most of the respondents, 544 (98%) listed calling friends and family as the most frequent activities they engage their phones with. This is comparable to previous findings which indicate that most students use their smartphones for social activities such as communicating with course mates, lecturers and family members (Adomi 2006; Olatokun and Bodunwa 2006; Ajagbe et al. 2013). The other prominent activities respondents engaged their smartphones for include: social networking (75%) and chatting

Table 5: Number of hours respondents' spend on phones

		<i>Frequency</i>	<i>Percent</i>	<i>Valid percent</i>	<i>Cumulative percent</i>
<i>Valid</i>	<1hr	33	5.9	6.2	6.2
	1-5hrs	212	38.2	39.8	46.1
	6-10hrs	140	25.2	26.3	72.4
	11-15hrs	68	12.3	12.8	85.2
	16-20hrs	20	3.6	3.8	88.9
	>20hrs	59	10.6	11.1	100
	Total	532	95.9	100	
	Missing System	23	4.1		
<i>Total</i>		555	100		

(70%). More than half of the respondents that is, 311 (56%) used their phones for entertainment such as listening to music and playing games (31%), while more than a quarter (149) used the phones to browse or access the internet (27%). Surprisingly, only 139 (25%) listed academic activity as a frequent activity they engage their phones with. The unstable power supply of electricity and high cost of data may be the reasons why respondents use smartphones less for academic activities. Downloading information on the web could be quite expensive and many students would rather use the university internet system to save cost. Besides, there is very little virtual teaching and learning or online interface between lecturers and students or administrators going on in the university.

Table 6: What activities do students engage with GSM?

<i>Activities in descending order</i>	<i>Yes, % (frequency)</i>
Calling friends and family	98 (544)
Social networking (Facebook, Myspace etc.)	75 (416)
Chatting with friends and family	70 (389)
Listening to music	56 (311)
Playing games	31 (172)
Browsing the internet	27 (149)
Performing academic activities	25 (139)
Accessing news or information	20 (111)
Sending SMS	15 (83)
Banking or paying for services	12 (66)

Value Respondents Attach to Ownership of Smartphones

Table 7 presents the value respondents attached to ownership of smartphones. Overwhelming majority of the respondents agreed that having a smartphone was a necessity 544 (98%). Likewise, the majority of respondents stated that having phones saved them a lot of stress such as travelling, going to the bank, providing alternative internet access when the university's internet goes down. Respondents appear attached to their phones, an overwhelming majority, 505 (91%) stated that they will feel miserable without their phones while 483 (87%) agreed they would be depressed if their phones were lost or stolen. Similarly, a significant percentage of respondents, 466 (84%) stated that they will be anxious and under pressure to replace lost or stolen phones, suggesting that the phones have become an integral aspect of the respondents' lives. This result compared to the finding of Rai

et al. (2017) which showed that students in an Indian university felt uncomfortable without their smartphone. The result also showed that a sizeable number of respondents, 350 (63%) considered having airtime and data on their phones crucial and are ready to sacrifice other pressing needs to keep their phones running. In all, a large number of respondents see smartphones as enhancing their confidence or self-image (81%). This is consistent with the findings by Olukotun et al. (2013) which suggested that students are prepared to sacrifice essential expenses such as food and academic needs to satisfy social activities on their smartphones.

Table 7: Value respondents attach to smartphones

<i>Statement</i>	<i>Yes, % (frequency)</i>
Ownership of smartphone is a necessity	98 (544)
smartphones saves me a lot of stress	92 (511)
I will feel miserable without my phone	91 (505)
I will be depressed if my phone is lost or stolen	87 (483)
I will be under pressure to replace my lost or stolen phone	84 (466)
Having smartphones enhances my self-esteem	81 (450)
I can sacrifice other expenses to have airtime and data on my phone	63 (350)

The Pearson Correlation was used to ascertain relationships between smartphone usage and demographic characteristics such as gender, age, status. As shown in Table 8, there is a significant relationship between age and time of first phone acquisition ($p=0.000$). This means that the usage of smartphones varies with age, most respondents acquired and began to use smartphones only when they have come of age. Similarly, the number of phones used by respondents correlates with their age ($p=0.000$). However, the result did not tell us whether the number of phones increased or decreased with the age of respondents. Age and number of hours spent on phones were found to be significant ($p=0.001$) an indication that the amount of time spent on phones vary according to the age of respondents. Giving that respondents who are less than 25 years account for over eighty-one percent of the sample, it could be safe to assume that the younger respondents spent more time on their phones. It was also found that the num-

Table 8: Relationship between GSM usage and demographic variables

Correlations									
Gender	Status	Age	Year phone was acquired	No. of phones used	No. of lines used	No. of hours spent on phone	What phones are used for	Likely amount that can be spent to acquire a phone	
Gender	1	.204**		.390**	.110**	-.23	.186**	-.100*	
		0	.346**	0	0.009	0.59	0	0.031	
	555	555	0	551	555	532	555	462	
Status	.204**	1	.555	.112**	.131**	-.296	0.031	-.420**	
	0		.649**	0.008	0.002	0	0.461	0	
	555	555	0	551	555	532	555	462	
Age	.346**	.649**	1	.179**	.202**	148	.124**	-.0.418	
	0	0	.543	0	0	0.001	0.004	0	
	555	555	0	551	555	532	555	462	
Year Phone was Acquired	-.286**	-.282**	.555	-.396**	-.292**	.291**	.240**	.287**	
	0	0	.543	0	0	0	0	0	
	543	543	0	542	543	525	543	452	
No. of Phones Used	.390**	.112**	.543	1	.181**	0.045	.242**	.107*	
	0	0.008	.179**	0	0	0.304	0	0.022	
	551	551	0	551	551	530	551	459	
No. of Lines Used	.110**	.131**	.551	.181**	1	.109*	-.052	.188**	
	0.009	0.002	.202	0	0	0.012	0.22	0	
	555	555	0	551	551	532	555	462	
No. of Hours Spent on Phone	-.023	-.296**	.555	.045	.109*	1	-.098*	0	
	0.59	0	.543	0.304	0.012	532	0.023	441	
	532	532	0	530	532	532	532	441	
What Phones are Used For	.186**	.031	.532	.242**	-.052	-.098*	1	0.008	
	0	0.461	.124**	0	0	0.023	0	0.859	
	555	555	0	551	555	532	555	462	
Likely Amount that can be Spent to Acquire Phones	.100*	-.420**	.555	.107*	.188**	.381**	0.008	1	
	0.031	0	-.418**	0.022	0	0	0.859	452	
	462	462	459	441	462	462	462	452	

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

ber of hours respondents spent per day on phones was connected to what they use the phones for ($p=0.023$). In other words, the activities respondents engage their phones with will determine how long they spend on their phones in a day. Those who engage their phones for a lot of activities are most likely to spend longer period on their smartphones than those who use the phone for just one or two activities. There was a significant relationship between status of respondents and the number of lines or networks they subscribe to ($p=0.000$). This implies that the use of multiple phones lines or networks varies considerably with the profile or status of respondents. The result show that status is significant with how much a respondent is likely to pay to acquire a smartphone ($p=0.000$). On the other hand, status and number of phones used by respondents were insignificant ($p=0.319$), just as status had no correlation with number of phone lines or networks used by respondents. No significant relationship was established between status and what respondents do when on the phone ($p=0.461$). This suggests that the status of respondents whether as student or staff do not determine or predict what activities respondents use their phones for.

DISCUSSION

The objective of this study was to determine the use of GSM powered smartphones among college students and the likely demographic characteristics that influence its usage. Additionally, the study sought to ascertain the activities college students use their phones for and what value college students attach to their phones. The result indicates that college students spend considerable time on their phones daily. About thirty-three percent of respondents spend 16 hours a day on their phones. This result is similar to the finding reported by Uys et al. (2012) which found that students in a South African university remained online for about 16 hours per day.

It was found that a significant relationship exist between the number of hours spent daily on phone and the activities respondents engage their phones for. Interestingly, the findings showed that short messaging services ranked about the lowest (15%) in the list of activities respondents use smartphones for. This contrast sharply with the findings in previous studies.

Mariano and De La Rosa (2004) reported that students in the Philippines used GSM phones to exchange SMS with one another and to communicate with departments. Also, Nonyongo et al. (2005) found that SMS was one of the favorite activities university students and faculty members in South Africa use their phones for. It could be that the explosion in the instant messaging and chat applications such as WhatsApp, Facebook Messenger, as well as the relatively reduction in the cost of calls may have eroded the importance of SMS.

Although results suggest that majority of respondents spent considerable time on phones performing various activities, academic endeavors ranked a distant seven in the hierarchy of activities respondents engage their phones with. In other words, only twenty-five percent of respondents use their phones to conduct academic related activities. This result is consistent with previous studies reported across many countries which showed that students use their smartphones more for nonacademic activities (Uys et al. 2012; Ajagbe et al. 2013; Park and Lee 2013; Lau et al. 2017). The fact that overwhelming majority of respondents spend greater amount of time daily on social networking is not surprising. As noted by Al-Harrasi and Al-Badi (2014), many people rely on their smart phones for a variety of social networking activities. Hingorani and Wood (2012) noted that students are increasingly using smart phones to access internet sites because they enable them to stay online for longer periods. The findings of this research compares with the results of Lau et al. (2017) which revealed overwhelming use of smartphones for routine daily communication and social networking in a Japanese university. It also corresponds with Rai et al. (2017) study which showed that students in Indore, India use smartphones essentially to communicate and access social networks. The implication of this finding is that college students spend a considerable time on their mobile phones networking and chatting with friends or seeking entertainment. In a university community, it is expected that students' phones would be more preoccupied with things that promote learning and knowledge especially as the smartphones provide a platform to connect to online sites that they could access to amass great amounts of information useful for their academic work. The paucity of user-friendly virtual teaching and

learning applications or programmes in the university could be a plausible explanation for the poor use of smartphones for academic purposes. It is likely that migrating teaching and learning programmes to university online repositories could motivate college students to use their smartphones more for academic activities.

The findings of this study are consistent with Elihu Katz's Uses and Gratification Theory (1959) which postulates that individual's use of media is based on their individual needs. As shown in this study, the use of smartphones by respondents varies according to need and the smartphones platform satisfies a range of respondents' needs including obtaining useful information about factors that could affect or assist in the accomplishment of certain task like academic assignments or enhancing personal identity, as indicated by the findings, a majority of respondents reported that having smartphones boosts their confidence.

CONCLUSION

The findings show a pervasive use of smartphones among college students. Majority of students spend a chunk of their time on the phone daily mainly engaging in social activities such as calling family and friends and interacting on several social networking platforms. Remarkably, a significant percentage of students use their mobile phones less for academic activities. The use of smartphone and amount of time spent on the phones are underpinned by a number of factors including age and the activities the students engage the phones with. Students who use their phones for a number of activities are more likely to spend longer hours on the phones. However, status does not appear to be a significant factor on what activities a respondent engages his or her phone with or how long the respondents stays on the phone. In other words, respondents' status either as a student or staff has little to do with what he or she does with the phone or the amount of time he or she spends on the phone. In the main, the result suggests that college students attach great importance to possessing a smartphone and that the loss of this prized possession could trigger emotional pain so much that they would be desperate to find a replacement. To many college students smartphones represent not just a lifestyle but a status symbol which boost their self-confidence and, for which, they are prepared to sacrifice other essentials to maintain.

RECOMMENDATIONS

It can be inferred from this study that many college students are not using their smartphones for academic enriching activities. One way to counteract this is for the universities to reengineer their websites to become more interactive and offering contents that are less cumbersome to download. Podcasts, live streaming of academic events, migration of some academic or library materials to electronic blackboards on the websites could also help drive academic activities on GSM enabled platforms. But most importantly, providing free Wi-Fi access would leapfrog the use of smartphones for academic activities in the universities. Most students avoid using their phones to browse and download academic materials because it will easily deplete their data but with free Wi-Fi the issue of data cost would have been solved.

LIMITATIONS

There are a few limitations to the research methodology that bear mentioning. Sample for this research was drawn from a private university located in a section of the country where a particular ethnic group constitute the predominant population. Furthermore, the greater percentage of the respondents come from above average income homes. Results may have appeared differently if students of diverse ethnic and economic status were included. As such, this research paper should not be mistaken for an empirically conclusive account of the use of smartphones by all college students in Nigeria

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