Personality Types as Correlate of Specific Phone Usages and Smart Phone Addiction among Students in the University of Ilorin, Kwara State, Nigeria

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Abstract

Past researchers have examined the impact of personality types on technology usage among students from varying angles. However, due to dearth of studies on personality types and smart phone addiction among students in the Nigerian environment, this study investigated the relationship between personality types, smart phone addiction and specific phone usages among University students. A sample size of 200 was used for this study using systematic sampling technique in the selection of respondents in the study area. Findings revealed that conscientiousness and agreeableness personality types had significant positive correlation with smart phone addiction; while extraversion and neuroticism had significant negative correlation with smart phone addiction. Again personality types had significant positive and negative correlation with specific phone usages. In addition, findings revealed that majority of the specific phone usages had positive correlation with smart phone addiction. Based on the findings of this study, recommendations were made towards curbing addictive tendencies among university students in the use of smart phones.

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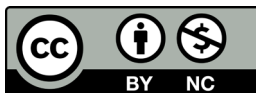
Introduction

Unprecedented growth in technology use has brought about the wide acceptance of internet enabled phones popularly known as "smart phones", most especially among students in colleges and Higher Institutions of Learning. Smart phones are special categories of mobile devices that are of varying sizes with unique features such as affordability, portability, flexibility and acceptability (Nielsen, & Fjuk, 2010). Asides, smart phones have multiple functionalities which have led to its high level of adoption among the youths. These functionalities include mobile application software, mobile internet, camera, files, alarm clock, downloadable applications among others (Okazaki & Hirose, 2009).

Students in higher institutions of learning depend heavily on smart phones as it enables them to carry out their day to day activities; and most especially specific tasks that are related to their academic work. University students, most especially, are one of the largest user group of Smartphone services (Head & Ziokowski, 2012). In spite of its usefulness, research has proven that users of smart phones most especially students, develop addictive behaviour overtime in form of spending long hours browsing on the phone, sending SMS, spending hours on social media platforms such as WhatsApp, Blogs and Twitter among others (Beydokhti et al., 2012). Smartphone addiction differs from other types of addiction in form of alcohol or drug dependence. Smartphone addiction is a form of behavioural addiction that negatively manifests in a person's life (Bolle, n.d.). It manifests in the form of intense focus on an activity or task using the phone such as browsing, texting, interacting on the social media platforms (Bolle, n.d.). Behavioural addiction can be defined as a disorder of excessiveness where behaviour functions to produce pleasure and to reduce feelings of pain and stress (Bolle n.d.). Therefore, excessiveness in the usage of smart phones by students without any sense of self control is addictive behaviour. It has been reported that excessive phone use can negatively impact on one's relationship with family members, classmates and instructors (Takao et al., 2009).

Over the years, researchers have associated personality types with addictive behaviour of students on phones (Andreassen et al., 2013; Beydokhti et al., 2012; Takao et al., 2009). In essence, personality types can determine the extent of addictive behaviour an individual manifests in the use of smart phone. Aside this, personality types may also drive the extent of use of an activity on the phone or specific phone usages

such as instant messaging, browsing on the phone, chatting, listening to music, playing games, downloading, taking pictures, text messaging among others. However, these, addictive tendencies may differ from one person to the other based on their personality types. The five big personality types which are Extraversion, Neuroticism, Openness, Agreeableness and Conscientiousness would be the focus of this paper due its popularity and use among personality researchers (Beydokhti et al., 2012). However, various studies have revealed similar and different research outcomes on the relationship between personality types of students and addictive behaviour in phone use It is worthy of note that most of these researches originated from countries outside Nigeria, therefore, there are dearth of researches in this area from the Nigerian perspective. Due to this gap in knowledge, the research outcomes of these studies cannot be extrapolated to the Nigerian environment as a result of cultural and environmental differences.

In the light of the above, this study investigated personality types as correlate of specific phone usages and smart phone addiction among university students, using Faculty of Communication and Information Sciences (FCIS), University of Ilorin, Kwara State, Nigeria, as a case study. This paper is divided into sections comprising the objectives of the study, literature review, research methodology, discussion of findings, conclusion and recommendations.

Objectives of the Study

The main aim of this study is to determine the relationship between personality types, specific phone usages and smart phone addiction among students in the University of Ilorin, Kwara State, Nigeria.

The following objectives were given prominence in this paper:
(i) To determine frequency of use of phone tasks by students in the University of Ilorin, Kwara State, Nigeria.
(ii) To find out the relationship between personality types and smart phone addiction of students in the University of Ilorin, Kwara State, Nigeria.
(iii) To find out the relationship between specific phone usages and smart phone addiction of students in the University of Ilorin, Kwara State, Nigeria
(iv) To find out the relationship between personality types and specific phone usages of students in the University of Ilorin, Kwara State, Nigeria.

Literature Review

Smart phone addiction among university students

Quite a number of studies have examined personality types of students and smart phone addiction. These reviews have focused on smart phone addiction of students taking into consideration several factors. However, in recent times, it has been observed that smart phone usage is popular and rampant among university students due to its role in improving communication and establishing social relationships (Head & Zoikowski, 2012). Researchers have investigated smart phone addiction among students from diverse perspectives such as gender differences in smart phone addiction, socioeconomic factors influencing Smartphone addiction and personality studies (Andreassen et al., 2013). For instance, Perry and Lee (2009) investigated the predictors of mobile phone addiction among Mauritius University students. Findings revealed that between 6% and 11% showed addictive symptoms relating to tolerance, withdrawal and displacement of attention to school work. The number of text messages sent and the perceived skills exhibited by students in the use of Solicited Messages (SMS) were significant predictors of mobile phone addiction among students. This result depicts that students can be addicted to their mobile phones based on the different functionalities available on the phone.

Again, Walsh, White and Young (2008) explored mobile phone addiction among university student in Australia. Findings revealed that students exhibited tendencies of behavioural addictions in the form of conflict with other daily activities, euphoria, withdrawal, tolerance and relapse. Some of these symptoms are common with drug addictions and dependence. This study concluded that university students were addicted to mobile addiction.

Zulkefly and Baharudin (2009) also explored mobile phone use and its relationship to psychological health amongst students of the Universiti Putra, Malaysia. A self-administered questionnaire was distributed to 386 students selected by multi-stage cluster sampling. The result revealed that adolescents who spent time on their mobile phones exhibited psychological disturbance such as depression, anxiety, and lower self-esteem. In this study, there was a relationship between excessive phone use and lower self-esteem which is a form of psychological disorder. Similarly, Dixit, Shukla, Bhagwat, Bindal, Goyal, Alia and Shrivastava (2010) conducted a survey on mobile phone dependence on 200 medical

students from Mahatma Gandhi Memorial Medical College in India. In his study, students were categorized into mobile addict and non-mobile addict. Mobile addicts were referred to as nomophobic that means fear of being free of mobile contacts. Nomophobic students were measured on some psychological variables based on the level of anxiety and stress experienced by students due to low battery, faulty connections, lack of credit, and so on. Nomophobics are always troubled and felt uneasy when their mobile phones are not in use for one reason or the other. Results revealed a small proportion of the medical students were mobile addicts. Results indicated that 19.26% of students in the hostels and 17.58% in day schools were found to be nomophobes. In this study there was no significant difference in relation to gender. Students in medical schools were less dependent on their mobile phones, perhaps due to the numerous times spent on their studies. This might have accounted for the low percentage of mobile addicts as revealed in this study.

Thomée, Harenstam and Hagberg (2011) conducted a follow up study by examining the relationship between psychosocial aspects of mobile phone use and mental health symptoms among young adults between 20-24 years. In this study, a distinction was made between high and low mobile users. High mobile users manifested symptoms associated with one's mental health that include sleep disturbances, or symptoms of depression. The result of this study concurs with past findings on excessive phone use and their psychological manifestation. Psychological manifestations such as loneliness, boredom, and loss of concentration at home and in school were also associated with mobile phone addiction in teenagers. In addition, Hassanzadeh and Rezaei (2011) also focused on the relationship between some psychosocial and psychological factors emerging from the use of text-message among university students. Findings revealed a high level of SMS addiction by university students. The study concluded that SMS addiction is creating a serious mental and health challenge among students

On the Nigerian scene, Afolayan (2014) investigated socio-psychological dimensions of mobile phone addiction among students in Higher Institutions of learning in Kwara state. A total of 321 students were sampled from University of Ilorin, Kwara State University and Al-Hikmah University respectively. Findings revealed a positive relationship between some specific dimensions and mobile phone addiction such as boredom, loneliness and domestic accidents. In the same vein, Lee, Cho,

Kim and Noh (2015) in their research focused on the level of university students' addiction to their smart phones. 210 students of university students in Seoul were participated in this research. Findings revealed that the higher level of addiction to smart phone addiction, the lower level of self -regulated learning the students have, as well as low level of flow when studying. Further, follow-up interview was conducted on the smart phone, which revealed that smart phone addicts are constantly interrupted by other applications on the phones when they are studying, and does not have enough control over their learning plan and its process.

Furthermore, Parasuraman, Thamby, Sam, Yer- Chuon, and Ren (2017) investigated mobile phone addiction behaviour and awareness on electromagnetic radiation (EMR) among a sample of Malaysian population. This online study was conducted between December 2015 and 2016. A total number of 409 respondents participated in the study. Findings revealed that most of the participants developed dependency with smart phone usage and had awareness level on EMR. Many of the respondents were extremely dependent on their smartphones. One-fourth of the study population were found to have feeling of wrist and hand pain because of Smartphone use which may lead to further physiological and physiological consequences in the future. In the same vein, Abel, Abel, Salim and Jamal (2017) carried out a study on the prevalence of mobile phone addiction among students in institute technical of Kut. A descriptive cross-sectional survey was performed using a self-administered questionnaire on a sample of 380 randomly selected students. Findings revealed that there was no significant relationship between demographic factors (gender, residence, marital status, and employment status) and mobile phone addiction, while a significant association was found between mobile phone addiction and age groups. Overall, females had more effects of mobile phone usage compared to males.

On the whole, the review of literature has shown that Smartphone addiction is a reality and it has grave implications on students psychologically and physiologically in diverse areas such as loneliness, boredom and lack of concentration among others.

Big five personality types and smart phone addiction
Personality can be defined as stable sets of characteristics and tendencies of individual that determine their commonalities and differences in

thoughts, feelings, predispositions and actions (Maddi, 1989). Personality researchers in the literature have classified personality types based on different dispositions towards technology. These personality types are: extraverion, neuroticism, openness, agreeableness, conscientiousness. Each one of them is discussed briefly below:

(i) Extraversion. Students who belong to this category of personality type are referred to as extraverts. Extraverts are sociable, optimistic and seek out for new opportunities and excitement (McElroy et al., 2007). There are no dull moments with those with this personality type. High extraverted people are likely to be addicted to their smart phones than less extraverted individuals (Andreassen et al., 2013).

(ii) Neuroticism. These categories of students are referred to as neurotics. Neurotics tend to be shy, self conscious and paranoid. Highly neurotic individuals exhibit fearfulness, sadness, distrustfulness and difficulty in managing stress (McElroy et al., 2007). Neurotic people exhibit negative disposition towards technology use (Devaraja et al., 2008; reported that neurotic individuals have stronger mobile phone addictive tendencies.

(iii) Openness. These categories of students with these personality type exhibit openness to new ideas, conventional values and willingly confront authorities in areas that contradict their ideologies. Individuals high in openness are positively disposed to using technology (Devaraja et al., 2008).

(iv) Agreeableness. Agreeable people are sympathetic and good natured, cooperative, forgiving and good team players (McElroy et al., 2007). Agreeable people are positively disposed to using technology (Devaraja et al., 2008). For instance, Ehrenberg et al. (2008) reported in one of their studies that agreeable individuals exhibited stronger instant messaging tendencies. On the contrary, Andreassen et al., (2013) found agreeableness to be negatively associated with cell phone addiction.

(v) Conscientiousness. Conscientious people are organised, diligent in performing a given task, deliberate and reliable (McElroy, 2007). Devaraja et al (2003) reported that individuals that exhibited higher conscientiousness were disposed to technology use than those with lower conscientiousness.

Asides, quite a number of empirical studies have been conducted on personality types and smart phone addiction among students in colleges and higher institutions of learning outside Nigeria. Some of these studies are discussed below.

Firstly, Lane and Manner (2011) investigated the effect of the big five personality traits on smart phone ownership and use. A total sample of 312 respondents was used for this study using logistic and hierarchical regression to analyze data. Findings revealed that extraverted individuals were more likely to own a smart phone, and they placed emphasis on texting function of smart phone than agreeable individuals. On the other hand, agreeable individuals placed emphasis on making calls and less importance on texting.

Secondly, Beydokhti, Hassanzadeh and Mirzaian (2012) investigated the relationship between 5 main personality factors and SMS addiction by high school students. A total sample size of 364 students was used for this study. Findings revealed that neuroticism and addiction to text messaging were positively related, while a negative relationship existed between extraversion and addiction. This finding contradicts Igarashi, Motoyoshib, Takai and Yoshida (2008) who reported that extraversion is positively related to excessive use of mobile phones.

Furthermore, Roberts, Pulig and Manolis (2015) examined personality traits and cell phone addiction among 346 college students in an online survey. Findings revealed that emotional instability was positively associated with cell phone addiction, while introversion was negatively associated with cell phone addiction. These findings corroborate Bianchi and Philips (2005) who pinpointed that certain personality traits were more associated with cell phone addiction than others.

On the whole, the review of literature has shown that there are dearth of studies on personality types and smart phone addiction in the Nigerian environment. Therefore, this study would contribute to the literature by examining the relationship between personality types of students and smart phone addiction in the Nigerian environment.

Methodology
The methodology adopted was a survey research design type with the aid of a structured questionnaire to elicit responses from the respondents

in the study area. Descriptive and inferential statistics were used to analyze field data using the Statistical Package for Social Sciences (SPSS) version 17.0.

Sample Size and Sampling Technique
Systematic sampling technique was employed in the selection of forty students from each of the five Departments in the Faculty of Communication and information sciences (FCIS). This was done sequentially and logically by selecting an nth number which gave every student the opportunity of being selected randomly from the lists for each of the departments. These are Information and communication science (ICS), Computer Science (CSC) Telecommunication Science (TCS), Library Science (LIS) and Mass communication (MAC) respectively. A total of two hundred students were sampled for this study

Instrumentation
The structured questionnaire developed was made up of two adapted scales namely "big five personality scales" comprising of 43 item inventory measuring five dimensions of personality which are extraversion, neuroticism, agreeableness, openness and conscientiousness; and the smart phone addiction scale. These scales were designed on a four point scale using the Likert scale type ranging from Strongly Agree to Strongly Disagree. The structured questionnaire comprised of three sections. Section A captured the demographic profile of the respondents, section B focused on the personality types while section C measured smart phone addiction. Lastly, Section D was a checklist designed to capture specific phone usages utilized by students.

Validity and Reliability of Research Instruments
In ensuring the face validity of the adapted scales, the research instruments were given to two experts in the field of social informatics. After several corrections and proof reading by the researchers, the face validity was achieved. The face validity of the research instruments were considerably high. In establishing the reliability of the two adapted scales, Cronbach reliability measures was used in ensuring that the scales measured was it purports to

measure. The Cronbach Reliability Coefficient of the adapted scales were relatively above.

Tabel 1. Scores of scales revealing a high reliability

Scale	No of items	Source	Cronbach reliability score
Big five personality scale Extraversion Neuroticism Agreeableness Openness Conscientiousness	43 8 8 9 9 9	John & Srivastava (1999)	0.77
Smart phone addiction	10	Kwon et al. (2013)	0.83

Procedure for data collection
The researcher distributed two hundred copies of questionnaire to students in the study area. The researcher employed the services of two research assistants for easy distribution and collection of filled copies of questionnaire. Out of the 200 copies distributed, a total of 160 copies of questionnaire were returned valid and used for this study. This gave a return rate of 80%.

Method of data analysis
Descriptive and inferential statistics was used to analyze field data collected by the researcher. Specifically, descriptive statistics such as frequency, mean and standard deviation was used to analyze research objective 1; while Pearson Moment Corelational tool was used to analyze research objective 2, 3 and 4. This tool was used to ascertain whether a relationship existed between personality types, specific phone usages and smart phone addiction of students.

Analysis of data and presentation of results
The field data were analyzed and the results are presented in the below tables.

Table 2 shows the demographic profile of the respondents in the study area. In terms of gender, males constituted 117 (73.1%) while females were 43 (26.9). The majority of respondents were males. The respondents were sampled from each of the five departments in the faculty as reflected in Table 2.

Table 2. Demographic information of the respondents

Demographic information	Frequency	Percentage
Gender		
Male	117	73.1
Female	43	26.9
Department		
ICS	32	20.0
CSC	32	20.0
TCS	32	20.0
MAC	32	20.0
LIS	32	20.0

Table 3 below shows the preferred mode of communication by students using their smart phones. Majority of students 88 (65.0%) preferred WhatsApp as the most utilized mode of communication on their smart phones, followed by voice calling 64 (40.0%). The least utilized mode of communication was emailing (1.9%).

Table 3. Preferred mode of communication utilized by students

Preferred social media	Frequency	Percentage
Phone call	64	40.0
Text messaging	5	3.1
Whatsapping	88	65.0
Emailing	3	1.9

Table 4 below shows the preferred social media utilized by students. Majority of students 105 (65.6%) preferred WhatsApp as a form of social media tool in communicating to their friends, family members and colleagues using their phones, followed by 33(20.6%) Facebook, while the least social media were Twiter and Instalgram respectively. This depicts that WhatsApp is a widely accepted social media among university students.

Table 4. Preferred social media utilized by students

Preferred social media	Frequency	Percentage
Facebook	33	20.6
Twitter	9	5.6
Whatsapping	105	65.6
Instalgram	10	6.2

Table 5 below shows daily, weekly and monthly usages of specific phone tasks by students. In terms of daily usage, the top three tasks utilized by students were social Networking (80.9%), Browsing (79.2%) and listening to Music (78.5%), while the task with the least percentages

under daily usage are taking pictures (31.6%), gaming (40.3) and downloading (41.8) respectively. Under the weekly usage, the top three tasks utilized by students were taking pictures (38.3%), watching video (36.1%) and downloading (35.3%). These findings show that students perform most of their activities using their smart phones. This may be due to the handiness, convenience and affordability of these devices by students. These devices afford students the opportunity of performing several tasks due to the multi-functionalities of internet enabled phones.

Table 5. Frequency distribution table showing daily, weekly and monthly usages of specific phone tasks among students

Phone task	Daily usage F (%)	Weekly usage F (%)	Monthly usage F(%)	Not at all F(%)
Browsing	126 (79.2)	27 (17.0)	4(2.0)	2(1.2)
Instant messaging	79 (54.9)	35(24.3)	15(10.4)	15(10.4)
Music	124(78.5)	27(17.1)	1(.6)	6(3.8)
Video	79 (51.0)	56(36.1)	16(10.3)	4(2.5)
Gaming	62 (40.3)	46 (29.9)	27 (17.5)	18 (12.3)
Downloading	64 (41.8)	54 (35.3)	25 (16.3)	9 (5.9)
Social networking	127 (80.9)	24 (15.3)	5 (3.2)	1 (.6)
Pictures	48 (31.6)	58 (38.2)	34 (22.4)	12 (7.9)
Voice call	107 (69.5)	24 (15.6)	13 (8.4)	10 (6.5)
Text messaging	75 (48.4)	52 (33.5)	14 (9.0)	14 (9.0)

Table 6 below has revealed significant positive correlation between some personality types and smart phone addiction. For instance, conscientiousness (0.216) had the highest positive correlation with smart phone addiction, followed by agreeableness (0.162). On the other hand, significant negative correlation was equally established between the following personality types and smart phone addiction: Neuroticism (-0.252) had the highest negative correlation with smart phone addiction, followed by Extraversion (-0.156). On the contrary, openness (-0.016) had no significant correlation with smart phone addiction.

Table 6. Pearson correlation table showing the relationship between personality types and smart phone addiction

Personality types	Mean	Cases (N)	Smart phone addiction
Extraversion	23.60	154	-0.156**
Agreeableness	30.97	154	0.162 **
Conscientiousness	33.14	154	0.216 **
Openness	36.12	154	-0.016
N neuroticism	22.01	154	-0.252**

Correlation is significant at the 0.01 level (2 tailed)

As revealed in Table 7 below, majority of the phone usages had a significant positive correlation with smart phone addiction in the following sequence: Instant Messaging (0.268), downloading (0.242), social networking (0.232), taking pictures (.233), browsing (0.216), music (0.185), video (0.161), emailing (0.126), text messaging (0.121). However, the following phone usages did not have any significant correlation with smart phone addiction. These are chatting (0.091), gaming (0.097) and voice calling (0.053) respectively. On the whole, these results depict that majority of students are addicted to their smart phones because most of the tasks are personally driven.

Table 7. Pearson correlation table showing the relationship between specific phone usages and smart phone addiction

Specific phone usages	Mean	Cases (N)	Smart phone addiction
Browsing	1.20	154	0.216 **
Instant messaging	1.78	154	0.268**
Emailing	2.66	154	0.126*
Chatting	1.20	154	0.091
Music	1.28	154	0.185*
Video	1.63	154	0.161*
Gaming	2.05	154	0.097
Downloading	1.85	154	0.242*
Social networking	1.21	154	0.232*
Taking pictures	2.05	154	0.233*
Voice calling	1.47	154	0.053
Text messaging	1.80	154	0.121

Correlation is significant at the 0.01 level (2 tailed)

As shown in Table 8 below, majority of the phone usages had significant negative correlation with personality types. For instance, extraversion personality type had significant negative correlation with instant messaging (-0.222), emailing (-0.131), music (-0.104), video (-0.103), taking of pictures (-0.211) and text messaging (-0.136). Agreeableness had significant negative correlation with browsing (-0.211), chatting (-0.286), music (-0.132), video (-0.118) and social networking (-0.248); openness personality type had significant negative correlation with browsing (-0.127), instant messaging (-0.102) and social networking (-0.126). On the other hand, the following phone usages had positive correlation with the following personality types. For instance, agreeableness personality type had significant positive

correlation with emailing (0.139). Conscientiousness personality type had significant positive correlation with voice calling (0.147) and text messaging (0.110); while neuroticism personality type had significant positive correlation with browsing (0.226) and social networking (0.141). On the whole, this finding depicts that personality types drive the use of specific phone usages.

Table 8. Pearson correlation table showing the relationship between specific phone usages and personality types

Specific phone usages	Mean	Cases	Extraversion	Agreeableness	Conscientiousness	Openness	Neuroticism
Browsing	1.20	154	-0.087	-0.211**	-0.005	-0.127**	0.226**
Instant messaging	1.78	154	-0.222**	-0.092	0.050	-0.102**	0.043
Emailing	2.66	154	-0.131**	0.139**	0.017	-0.039	-0.063
Chatting	1.20	154	0.019	-0.286	0.025	-0.087	0.075
Music	1.28	154	-0.104**	-0.132**	0.045	-0.045	0.055
Video	1.63	154	-0.103**	-0.118**	-0.060	-0.085	0.040
Gaming	2.05	154	-0.048	-0.015	-0.077	-0.024	0.030
Downloading	1.85	154	-0.009	-0.072	0.026	-0.009	0.056
Social networking	1.21	154	-0.022	-0.248**	0.022	-0.126**	0.141**
Taking pictures	2.05	154	-0.211**	0.038	0.029	-0.070	-0.035
Voice calling	1.47	154	0.031	-0.027	0.147**	-0.013	-0.035
Text messaging	1.80	154	-0.136**	-0.015	0.110**	-0.049	0.045

Correlation is significant at the 0.01 level (2 tailed)

Discussion of findings

This study has demonstrated significant relationships among the personality types vis-a-vis phone usages and smart phone addiction among students in FCIS, University of Ilorin, Kwara State, Nigeria. The findings of this study are discussed in line with the stated objectives and extant literature.

The first objective of this study was to determine frequency of use of phone tasks along daily, weekly and monthly usages by students in FCIS, University of Ilorin, Kwara State, Nigeria. Findings revealed that most of the tasks performed on phones by students were under the daily and weekly usages. The result of this study corroborates the findings of Afolayan (2014) on daily and weekly internet usages by students in higher institutions of learning in Kwara State, Nigeria. This result depicts that students use their internet enabled smart phones to perform varied activities due to their usefulness and outstanding benefits.

The second objective of this study was to find out the relationship between personality types and smart phone addiction of students in the University of Ilorin, Kwara State, Nigeria. Findings also revealed positive

correlation between conscientiousness (0.216), agreeableness (0.162) personality types and smart phone addiction; while neuroticism (-0.252), extraversion (.0-156) personality types had a negative correlation with smart phone addiction. On the other hand, openness personality types had no significant correlation with smart phone addiction. This result is in line with past studies on personality types and smart phone addiction. For instance, conscientiousness and agreeableness personality types were found to be positively associated with smart phone addiction (Andreassen et al., 2013). However, the result of this study contradicts past findings which revealed a positive relationship between openness personality type and smart phone addiction (Devaraja et al., 2008).

The third objective was to find out the relationship between specific phone usages and smart phone addiction of students in the University of Ilorin, Kwara State, Nigeria. Findings revealed that majority of the phone usages had significant positive correlation with smart phone addiction such as browsing (0.216), instant messaging (0.268), emailing (0.126), Musmusic (0.185), video (0.161), downloading (0.242), social networking (0.232), taking pictures (0.233), text messaging (0.121). However, on the contrary, few of the phone tasks had no significant correlation with smart phone addiction such as chatting (0.091), gaming (0.097) and voice calling (0.053). The implication of this finding is that students are addicted to their internet enabled phones due to the enormity of tasks that are carried out with little or no assistance from others. This might have accounted for the addictive behaviour overtime on the specific phone usages.

The fourth objective was to determine the relationship between personality types of students and specific phone usages and in the University of Ilorin, Kwara State, Nigeria. Findings revealed that specific phone usages such as instant messaging (-0.222), emailing (-0.131), music (-0.104), video (-0.103), taking of pictures (-0.211) and text messaging (-0.126) had significant negative correlation with extraversion personality type. Again, phone usages such as browsing (-0.211), chatting (-0.286), music (-0.132), video (-0.118) and social networking (-0.248) had significant negative correlation with agreeableness personality type; while phone usages such as browsing (-0.127), instant messaging (-0.102) and social networking (-0.126) had significant negative correlation with openness personality type. On the other hand, specific phone usages such as voice calling (0.147) and text messaging (0.110) had significant positive correlation with

conscientiousness personality type; Phone usages such as browsing (0.226) and social networking (0.141) had significant positive correlation with neuroticism personality type. Only emailing (0.139) had significant positive correlation with agreeableness personality type. On the whole, the result of this study has revealed that extraversion personality types had the highest significant negative correlation with phone usages. This finding contradicts Afolayan (2014) in her study on personality types and specific internet usages which revealed a positive relationship between extraversion personality types and specific internet usages; and a negative correlation between neuroticism and specific internet usages. The finding of this study has proven that phone usages of students are driven by their personality types.

Recommendations and Conclusion
Personality types play an indispensable role in the extent of phone usages and smart phone addiction by students. The results of this study concur to findings of past studies revealing significant relationship between certain personality types and smart phone addiction among students. For instance, personality types such as conscientiousness and agreeableness were positively associated with smart phone addiction; while extraversion and neuroticism were negatively associated with smart phone addiction. On the contrary, openness personality type had no significant correlation with smart phone addiction.

In addition, majority of the phone usages had positive correlation with smart phone addiction such as browsing, instant messaging, taking of pictures and text messaging among others. This is an indication that most of the university students that were surveyed are addicted to their smart phones due to the satisfaction derived from those phone tasks. It was equally established that students' personality types were positively and negatively associated with specific phone usages among university students. For instance, extraversion and openness personality types had negative relationships with specific phone usages; while neuroticism and conscientiousness had positive relationships with specific phone usages. On the other hand, agreeableness personality types had significant positive relationship with some specific phone usages and also negative relationship.

In view of the above, the following recommendations were made towards curbing addictive behaviour in the use of smart phones by students in higher institutions of learning.

Firstly, school counsellors should take up the responsibility of educating students on the use of smart phones and their negative implications on their academic and social life.

Secondly, management of higher institutions of learning should devise ways of curbing or minimizing addictive tendencies of students especially in the use of smart phones in public places by setting rules and regulations that would govern its usage.

Thirdly, designers of smart phones should develop devices that might help to track time spent on phone tasks. This might help to curb addictive behaviour among students due to their long stay on internet enabled phones in performing several tasks.

In conclusion, this study has provided empirical evidence to show that personality types drive smart phone specific usages and addiction among university students in Nigeria regardless of cultural and environmental differences. Therefore, efforts should be geared towards curbing smart phone addiction among students by guardians, parents and the university authority.

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Biographies
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