

**IMPACT OF MOBILE PHONE USAGE AND PUPILS' ATTITUDE ON ACADEMIC PERFORMANCE AMONG PRIMARY SCHOOL PUPILS IN MAKURDI LOCAL GOVERNMENT AREA OF BENUE STATE, NIGERIA**

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***Abstract***

*The past fifteen years experienced a huge increase in the number of mobile phone subscribers in Nigeria with prevalent use among teenagers. This study examined the impact of mobile phone use and pupils' attitude towards its drawbacks on academic performance among primary schoolchildren in Benue state, Nigeria. The study adopted a cross-sectional descriptive survey research design on a multi-stage stratified cluster sample of 300 pupils in private primary schools in Benue State. A self-administered questionnaire form covering socio-demographic characteristics, pattern of mobile phone usage, and attitudes towards its hazards was used for data collection. The academic performance was obtained from school records. The results showed that 95.7% of the pupils were using mobile phones, mostly the smart touch screen type (81.9%), and 41.8% take mobile phone to school. The mobile phones were used mostly for playing games and listening to music, 64.7% had positive attitude towards mobile phone use. Higher percentages of those having very good and excellent grades were not taking phones to school. The results of the study revealed that the use of mobile phones is prevalent among primary schoolchildren, and have a positive impact on their school performance, although their use at school could have negative impacts on their academic performance. Thus it recommend that Stricter school policies regarding the use of mobile phones in schools should be implemented, and encouraging utilization for academic purposes and applications to help in learning process.*

**Keywords:** Academic Performance, Mobile phone, Pupils' Attitude

## **Introduction**

The recent technological advancements; the innovation of computer and other discoveries in the field of Information Technology bring about the introduction of the mobile phone and its multifunction ranging from voice calls, messaging, data use, multimedia, information storage and retrieval, games (both online and offline) and other social media services. It also uses a group of Internet-based applications that allows the creation, sharing and exchange of user-generated contents. Over the past decade, technology has become increasingly important in the lives of adolescents, the use of mobile phones witnessed a high surge during the last decade. This was attributed not only to their ease of use and wide outreach, but also to the advanced technology continually adding to their versatile functions and applications. Now, mobile phone applications exceed the basic functions of communication by voice or texting, to a variety of added functions including educational (Reed, Hirsh-Pasek & Golinkoff, 2017)

The advent of the Global System for Mobile communication (GSM) in Nigeria has revolutionized every facet of societal life, affecting how people communicate, conduct businesses and even socialize. In Nigeria, the past 15 years experienced a huge increase in the number of mobile phone subscribers. This very high prevalence of mobile phone use could be mandated by the changes in the communities, with more mobility, more distances traveled, and more likelihood to exposure to hazards, so that people and especially parents of school children need to be able to contact them at any time and wherever they are. This would serve to reassure them about the safety of their children (National Academy of Science, 2012). Mobile phones have become an almost essential part of daily life. The recent report by Nigerian Communications Commission (NCC) on quarterly subscriber operator data show the number of subscribers per each individual telecoms operator on a quarterly basis as 172,485,805 (99.78% growth in December 2018), 173,315,056 (99.77% growth in March 2019) and 173,749,601 (99.84% growth in June 2019) generally indicating 6.68% growth compared to 0.24% growth in Q1–Q2 of 2019 (NCC, 2019).

The effect of GSM and advancement in mobile and Information Communication Technology (ICT) have also impacted on the educational sector. Today, schools have invested in ICT equipment to access the many benefits of the Internet. They have also introduced e-learning to enrich curriculum in their effort to groom pupils to compete on the global stage. The average teacher is expected to be computer literate and know how to use the internet to enrich his teaching. Pupils are also given projects to complete which require them to have access to internet through computers or smart phones.

However, schools have also had to deal with the negative impact of mobile technology; as beneficial as it may be, mobile phones have been identified as a huge source of distraction for pupils at Primary school level. In the past when fixed telephones were the norm in schools, there were minimum distractions and disruptions but presently with the invasion of mobile phone and the eagerness of parents to maintain contact with their wards, the device is becoming part of the classroom, distracting and disrupting the pupils' academic work. Thus, the mobile phone has the power to undermine the schools' authority and weaken their control over the pupils as well as affects their level of academic performances (Rabiu & Indo, 2016). As a result, many schools, especially Primary have put in place policies on the use of mobile phones while school is in session. The majority of schools visited allow limited use for specific situations; while some do not allow mobile phones at all. Though they can be veritable tools for learning, many teachers and school owners said pupils use phones for the wrong things.

According to recent surveys, over 60 per cent of children and young people communicate in chat rooms on a daily basis. Three out of four children online are willing to share personal information about themselves and their family in exchange for goods and services and as many as one in five children could be targeted by a predator each year (Kofoworola, Adegunle, Oluwatoyin & Mojisola, 2015). Given the extreme widespread use of mobile phone among teenagers, many research works addressed the merits and demerits of the use of mobile phones among schoolchildren. The findings are debatable. Thus, a number of studies reached conclusions against the use of mobile phones by adolescents and schoolchildren due to associated hazards, whether physical (Dasdag & Akdag, 2016), psychosocial (Vernon, Modecki, & Barber, 2017), educational (Movvahedi et al, 2014) and dependence and addiction (De-Sola, Talledo, Rodríguez & Rubio, 2017). On the other hand, other study by Mohan, Khaliq, Panwar and Vaney, (2016) and Law, Thome, Lindeman, Jackson and Lidor, (2017) denied such hazards and even demonstrated beneficial effects of use of mobile phone among adolescents. Hence the need for the present study; Therefore, the present study set out to investigate the impact of mobile phone usage and attitude on academic performance among Primary School children in Makurdi LGA of Benue State, Nigeria.

### **Research Questions**

1. What is the relationship between Pupils' use of mobile phone at school and their academic performance?
2. What is the relationship between pupils' attitude towards mobile phone drawbacks and their academic performance?

## **Method**

The study adopted a survey research design; specifically the descriptive cross-sectional research design was utilized to conduct this study because the study investigated the impacts of mobile phone usage on academic performance of Primary School children. The research was carried out in private Primary Schools in Makurdi LGA of Benue State, Nigeria. Makurdi LGA comprises eleven (11) council wards. All the pupils in primary three and six, in private Primary Schools in Makurdi LGA during the study periods were eligible to be included in the study sample. A multi-stage stratified cluster sampling technique was used in enlisting the schoolchildren. In the first stage, three council wards were randomly selected from Makurdi Local Government Area. These were North Bank I, Modern Market and Central/South Mission wards. In the second stage, one private Primary School was randomly selected from each council ward. In the third stage, four classrooms were selected from each school, two from primary 3, and two from primary 6. All schoolchildren in the selected 12 classrooms were included in the sample; a sample of 300 pupils was obtained with an average of 20 to 28 pupils per classroom.

A self-administered questionnaire form was prepared for data collection. It consisted of three main parts. The first part was for pupil's socio-demographic characteristics such as age, gender, class and residence. The second part was for the use of mobile phone. It asked about the type of mobile phone and the functions used daily. It also asked about taking mobile phone to school and its uses there. The third part was an attitude scale with 13 statements reflecting pupil's attitudes towards the hazards of mobile phone and its potential negative effects on academic performance. Response was on a 3-point scale: agree/uncertain/disagree. These were scored from 3 to 1 respectively, with reverse scoring for positive statements so that a higher score indicated higher agreement upon the negative effects of mobile phone. The pupil's academic performance was obtained from their school records. The instrument was subjected to face validity. The items on the instrument were validated by two experts in Measurement and Evaluation for relevance to the subject matter, comprehensiveness, appropriateness of language used and adequacy of the items to solicit answers for the research questions. The reliability of the attitude scale was examined through measuring its internal consistency, and demonstrated acceptable reliability with Cronbach alpha coefficient of 0.73

After obtaining the necessary official permissions, the researcher visited the selected schools and met with the head teachers, explained to them the study aims and procedures and solicited for their cooperation. The researcher explained to the schoolchildren in each selected classroom the aim

and process of the study and asked for their assent to participate. The data collection form was distributed to them, and the researcher read each question and asked each pupil to write down his/her response. Then the filled forms were collected from them and revised for completeness. The work with each classroom took at least two sessions, one for explanation and another for filling the forms. The process was repeated for each of the 12 selected classrooms in the three schools. The school performance of each selected pupil was ascertained from their school records. The data obtained were analyzed using descriptive statistics in the form of frequencies and percentages.

### Results

The present study examines the impact of mobile phone use among Primary School children on their academic performance, with a sample of 300 pupils

**Table 1:** Socio-demographic Characteristics of Pupils in the Study Sample (n=300)

	Frequency	Percentage
<b>Age:</b>		
<10	115	38.3
>=10	185	61.7
<b>Gender:</b>		
Male	102	34.0
Female	198	66.0
<b>Class:</b>		
Primary 3	142	47.3
Primary 6	158	52.7
<b>Residence:</b>		
Rural	29	9.7
Urban	271	90.3

Table 1 revealed that 38.3% of the Pupils are less than 10 years old and 61.7% are 10 years or above, with girls 66% and boys 34%. 47.3% and 52.7% of the school children are in primary 3 and 6 respectively, with 90.3% of the school children resident in the urban areas.

**Table 2:** Use of Mobile Phone among Pupils in the Study Sample (n=300)

	<b>Frequency</b>	<b>Percentage</b>
Use mobile phone	287	95.7
<b>Type:</b>		
Regular	12	4.2
Smart	31	10.8
Smart touch screen	235	81.9
Multiple	9	3.1
<b>Functions used daily:</b>		
Making voice calls	130	45.3
Receiving voice calls	169	58.9
Sending text messages	37	12.9
Receiving text messages	65	22.7
Browsing net	150	52.3
Looking for study topic	97	33.8
Games	232	80.8
Music	201	70.0
<b>Playing games using:</b>		
One hand	111	38.7
Both hands	176	61.3

Table 2 shows that 287 (95.7%) out of the 300 school children's were using mobile phone, mostly the smart type with touch screen (81.9%). The functions most used daily were those of games (80.8%) and music (70%), while the least were sending and receiving messages, 12.89% and 22.65% respectively. Majority reported using both hands for playing games (61.3%).

**Table 3:** Use of Mobile phone at School among Pupils in the Study Sample (n=300)

	<b>Frequency</b>	<b>Percentage</b>
Take mobile to school	120	41.8
<b>Used in:</b>		
Class	4	3.3
Break time	98	81.7
Both	18	15.0
<b>Used for:</b>		
Making voice calls	68	56.7
Receiving voice calls	96	80.0

Sending text messages	20	16.7
Receiving text messages	58	48.3
Browsing net	72	60.0
Looking for study topic	92	76.7
Games	115	95.8
Music	104	86.7
<b>Attitude towards mobile phone drawbacks:</b>		
Agree (negative)	106	35.3
Disagree (positive)	194	64.7

Table 3 shows that approximately two-fifth (41.8%) of the Pupils in the study sample reported taking their mobile phones to school. The majority were using it only at break time (81.7%). The most frequent uses were in playing games (95.8%) and listening to music (86.7%), while only 16.7% used it in sending messages. Slightly less than two-thirds of the Pupils (64.7%) had positive attitude towards mobile phone use.

**Table 4:** Relationship between Pupils' use of Mobile phone at School and their Academic Performance

	<b>Take Mobile Phone to School</b>			
	No		Yes	
	No.	%	No.	%
<b>Academic Performance:</b>				
Fair	30	45.5	36	54.5
Good	35	46.7	40	53.3
Very good	47	66.2	24	33.8
Excellent	55	73.3	20	26.7

Table 4 revealed that, most of the Pupils with Fair and Good academic performance accounting to 54.5% and 53.3% respectively reported taking Mobile phone to school while the majority of Pupils with Very good and Excellent grades(66.2% and 73.3%) respectively do not take Mobile phone to school.

**Table 5:** Relationship between Pupils’ Attitude towards Mobile phone drawbacks and their Academic Performance

	<b>Pupils’ Attitude</b>			
	Agree (negative)		Disagree(positive)	
	No.	%	No.	%
<b>Academic Performance:</b>				
Fair	20	26.3	56	73.7
Good	32	44.4	40	55.6
Very good	32	45.7	38	54.3
Excellent	22	26.8	60	73.2

In table 5, 26.3% and 44.4% of the Pupils with Fair and Good academic performance had negative attitude toward the use of mobile phone and agreed upon its drawbacks such as distraction, loss of time, as well as its physical hazards and ethical problems. While 54.3% and 73.2% of Pupils with very good and excellent performance had positive attitude towards mobile phone use and mostly disagreed upon its drawbacks.

**Discussion**

This study examined the impact of mobile phone use and pupils’ attitude towards its drawbacks on academic performance among primary school pupils in Makurdi LGA, Benue State. The findings indicated that the general use of mobile phones has positive impact on academic performance. This is in agreement with the findings of Rabiun and Indo (2016), and Jairus, Christian, Ogwuche and Thomas (2017) whose studies on secondary school students in Nigeria demonstrated a positive relationship between their use of mobile phones and their level of academic performance. However, the use of these phones at school seems to have a negative impact on their academic performance. The findings further revealed that, almost all schoolchildren are using mobile phones; they mostly use high technology smart phones with touch screen. This also agrees with the findings of Nadia and Lamia (2017). A similarly high rate of mobile phones use was reported in a study in Spain among teenage schoolchildren, reaching 90% of the study sample (Muñoz-Miralles et al, 2014). As regards the most common use of mobile phones among the pupils in the present study, this turned out to be for playing games and listening to music. These are pastime applications with no direct benefit on

their academic performance. Moreover, slightly less than two-thirds of them reported using both hands while playing games, which indicated mastery of manipulation reflecting very frequent use for this purpose. In congruence with this, Reolid-Martínez et al (2016) in a study on Spanish teenagers found that girls mostly used their mobile phones to listen to music and chat, while boys mostly played games. A similar pattern of use was also reported in a study on teenage schoolchildren in France, which demonstrated that more than half of the time spent on electronic devices such as mobile phones or tablets was used in playing games and watching video clips (Royant-Parola, Londe, Tréhout & Hartley, 2017).

Meanwhile, only around one-third of the Pupils in the current study reported using their mobile phones in study like looking for a study topic. Additionally, around a half of the Pupils used their mobile phones in browsing the internet, which could serve in part as study purposes. The relatively low proportion of schoolchildren in the present study using their mobile phone for these constructive purposes indicates lack of perception of the utility of this technology. In this respect, a study in Turkey found that the great majority of the parents of schoolchildren indicated the importance of access to the internet in the educational process of their children (Dinleyici et al, 2016). A relatively large proportion of the schoolchildren in the current study were taking their mobile phones to school, and approximately one-fifth of them were using them in class, which could seldom be for use in academic activities since the majority were using it in playing games and listening to music. This indicates that taking mobile phone to school is a negative predictor of the schoolchild's academic performance. In line with this, Ling and Helmersen (2010) found that mobile phone at school disturbs school and students' roles. They tend to distract students and alter their concentration through allowing contacts outside school environment.

The present study results demonstrated that about two-thirds of the schoolchildren had a positive attitude towards mobile phone use. They mostly disagreed upon its drawbacks such as distraction, loss of time, as well as its physical hazards and ethical problems. However, the relation between attitude and school performance in terms of grades revealed that such attitude is two ways. Thus, a majority of those having a positive attitude were among those having the extreme grades of fair and excellent. Thus, the positive attitude could push the schoolchild towards excellence, or on the other hand to a just pass grade, which could be attributed to the drawbacks of mobile phones. This would have a negative impact on their academic performance. In agreement with the current study, Cilliers, Viljoen and Chinyamurindi (2017) in a study on students in South Africa revealed a majority of positive attitudes towards

the use and benefits of mobile phone in seeking information for study.

### **Conclusion**

The use of mobile phones is prevalent among Primary School Pupils in the study settings. This seems to have a positive impact on their school performance. However, when these phones are used at school, they may have a negative impact on their grades.

### **Recommendations**

Based on the findings of this study, the following recommendations were drawn:

1. Parents, teachers, school administrators and pupils should be sensitized on the influence of mobile phone usage on academic performance among Primary Schoolchildren
2. There should be Stricter school policies regarding the use of Mobile phones in schools
3. Schoolchildren should be encouraged to increase their utilization in academic purposes and applications to help in their learning process
4. Further research is needed to explicate the impact of the use of mobile phone educational applications on pupil's learning process.

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