

## Secondary school students' awareness and use of mobile phones for academic purpose

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### ABSTRACT

*The study examined secondary school students' awareness of the educational use of mobile phones and their use of the device. The study adopted survey research design in which 250 senior secondary school students were purposively selected from four public high schools in Ilesa metropolis of Osun State, Nigeria. The instrument for data collection was a self-developed questionnaire divided into two sections with 16 items on each section based on the research topic. Three research questions were generated and answered. The result showed that majority of the respondents are aware of educational use of mobile phone though, the frequency of the use for the purpose of learning is not encouraging but there is significant relationship between the students' level of awareness and their use of mobile phone for learning. The study therefore suggests that blanket ban should not be placed on the use of mobile phones within the school environment by secondary school students. Curriculum planners should incorporate the use of mobile phone as a tool for learning in secondary school while appropriate rules and regulations should be put in place to guide the use of mobile phones within the school environment by secondary school student.*

### KEYWORDS

*Academic purpose, mobile phone, students' awareness*

### RÉSUMÉ

*L'étude a examiné la conscience des étudiants d'école secondaire de l'utilisation éducative des téléphones portables et de leur utilisation du dispositif. L'étude a adopté le protocole expérimental d'enquête dans lequel 250 étudiants supérieurs d'école secondaire ont été à bon escient sélectionnés de quatre lycées publics dans la métropole d'Ilesa de l'état d'Osun, Nigéria. L'instrument pour la collection de données était un questionnaire auto-développé divisé en deux sections avec 16 questions sur chaque section basé sur le domaine de recherche. Trois questions de recherches ont été produites et répondues. Le résultat a prouvé que la majorité des répondants se rendent compte d'une utilité éducative de téléphone portable cependant, la fréquence de l'utilisation pour l'étude ne soit pas d'une manière encourageante mais il y ait des relations significatives entre les étudiants de niveau de la conscience et de leur utilisation de téléphone portable pour l'étude. L'étude suggère donc que l'interdiction couvrante ne devrait pas être placée sur l'utilisation des téléphones portables dans l'environnement scolaire par des étudiants d'école secondaire. Les planificateurs de programme d'études devraient incorporer*

*l'utilisation du téléphone portable comme outil pour apprendre dans l'école secondaire tandis que des règles et les règlements appropriés devraient être mis en place pour guider l'utilisation des téléphones portables dans l'environnement scolaire par des étudiants d'école secondaire*

## **MOTS-CLÉS**

*But scolaire, téléphone portable, la conscience des étudiants*

## **INTRODUCTION**

The use of mobile phones has permeated all aspects of human activities thereby making its ownership a must in order to remain relevant in the global system. Mobile phones have led to increased access to information across the world through inter connectivity. According to Omode (2014), the discovery of mobile phone has revolutionalized the society premised on its multiple functions and uses which could be attributed to some of the features imbedded in it in terms of portability, inexpensiveness, ease of operation and maintenance. The scholar asserts that ownership of mobile phones has permeated every sector of Nigerian economy including the education sector and remains the most prominent technology within the school system.

In the view of Blumenstock and Eagle (2010), mobile phones serve as a means of interaction among people by making it possible for them to create, share, exchange information and ideals in virtual communities and networks while Aguero (2009) posits mobile phones as one of the ICT tools with the potentials for improving access to information for learning and teaching based on positive contributions achieved through the use in other sectors of the economy. Twum (2014) shows that the use of mobile phones among university students in Ghana affords them new and stimulating learning opportunities while Ebiye (2015) reveals that Nigerian university medical students are aware of the educational use of mobile phones and also use the device to facilitate learning. Hartnell-Young and Heym (2008) aver that features imbedded in mobile phones such as clock and calendar enable students to plan their studies while Leyden (2015) identifies forty ways through which mobile phones could be use to facilitate learning among which are:

- i. Checking of facts relating to academic work.
- ii. Taking photos to illustrate work and presentations
- iii. Using mobile phones as videos to record experiment for inclusion in projects
- iv. Using mobile phones by teachers to carry out tests and quizzes
- v. Reading news and current affairs that are related to learning.
- vi. Using mobile phones as dictionary
- vii. Using mobile phones as calendar for planning learning activities
- viii. Accessing resources and materials quickly before examination
- ix. Using stopwatch/timer for proper time management
- x. Reading eBooks
- xi. Recording explanation given by teachers for future references and
- xii. Using phones as calculator.

Ferry (2008) while attesting to the educational use of mobile phone reveals that the most successful pre-service teachers used mobile phones as video or digital camera to capture episodes of their lessons that illustrate their teaching thereby enabling them to learn from their own recorded lessons.

In spite of the attributes inherent in mobile phones which could be of immense benefits to education, the use within the academic realm by students has continued to generate divergent views among educators and other stakeholders in the academic system. Rabiou, Muhammad, Umaru and Ahmed (2016) acknowledge difference of opinion on the use of mobile phones in school among young people, parents and teachers. According to the scholars, while parents are positively disposed to the use premised on the need to maintain regular contact with their children, teachers are of negative view based on the likelihood of aiding indiscipline among the students.

Chen, Seilhamer, Bennett and Bauer (2015) reveal the pervasiveness of mobile phones among university students in Florida but note that the device is not used by the students to enhance learning thereby suggesting the need for necessary pedagogical support that will facilitate the use for educational purpose. According to Edufrica (2016), the decision of Rwanda government to allow the use of mobile phones by students within the academic environment has received cold reception from both parents and teachers based on the notion that it could lead to high level of indiscipline, coupled with poor academic performance among the students. Mamudu and Oyewo (2015) citing Sofowora posit that the use of mobile phones by students has raised concern for indiscipline, examination malpractices and mobile bullying.

Khwele and Bali (2013) posit that mobile phones could be a disruptive tool in schools due to inappropriate use and poor supervision of the use. The investigation of these authors reveals that the use of mobile phones impacts negatively on students' academic performance and encourages chaos within the school environment. Ford and Batchelor (2007) reveal that mobile phones are misused by students by using it to; record violence scene, search uncensored content such as pornography, take photos and post them to websites, listen to music and chat which make students to be glued to their mobile phones at the expense of their academic work. Soyemi, Oloruntoba and Okafor (2015) reveal negative effect of mobile phone on polytechnic students in Nigeria premised on the fact that the students are committed to the use of mobile phones for chatting, music and other non-educational purpose.

Kevin (2015) while justifying the need to ban the use of cell phones in schools submits that such a step will enhance academic performance, allow students from poor socio economic background and those on special education to be more committed to their school work coupled with reduction on time spent on screen thereby reducing health hazard associated with too much exposure to the screen and also reduce cyber bullying. Louis-Philippe and Richard (2015) reveal improved students' academic performance in schools where the use of cell phone was banned in England with greater positive impact on students from low socio economic background and the low achievers. Business Insider Nordic report on 30th August, 2016 reveals students' support for the ban of mobile phone in schools in Sweden. The ban according to the report, will decrease distraction in the students' working environment, allow students to engage in more exercise during recess at school, and decrease internet bully and abuse.

Detroit Free Press on 22<sup>nd</sup> July, 2016 reports the placing of ban on the use of cell phones or cell phone-sized electronic in Michigan High School during class and when they are in hallway part during class time to avoid distraction in classroom. However, Omode (2014) identifies lack of provision for the use of mobile phones in the various school curricular as impediment to the use in schools. According to the scholar, the use of cell phones by students, teachers and school administrators is not focused on enhancing learning since there is no curriculum that allows for the integration into learning and teaching thereby making both teachers and school administrators to see mobile phones as distracters therefore advocating restriction on the use. The author opines that students should be educated on the proper use of mobile phones

through collaborative efforts of both teachers and parents if it should be allowed within the school environment.

The realization of the educational benefits of mobile phone could be responsible for the stance of some stake holders in education to advocate for the use within the school environment. The study conduct in Zimbabwe by Leslei (2015) reveals both positive and negative effects of cell phone on university students' academic performance but views cell phone as deeply rooted into the society in which education forms a part thereby making non utilization of the device in schools awkward. The Department of Education in New York was reported on 2<sup>nd</sup> March, 2015 by New York Daily News to have lifted the ban on the use of cell phones in schools in New York City. The government of Uganda according to the report on Daily Monitor of 9<sup>th</sup> September, 2013 also lifted ban on the use of phones in secondary schools across the country.

Improper use of mobile phones by students within the academic environment and lack of curriculum provision for the use are responsible for negative attitude of teachers, school administrators and owners towards the use. The prevailing high level of failure and indiscipline among secondary school students in Osun State, Nigeria have been attributed partly to the use of mobile phones by the student thereby leading to outright ban of the use of mobile phones within the school environment in secondary schools across the State as published in the Premium Times of February 24, 2016. However, the fact that such decision has been previously taking in some countries but later reversed based on the realization of the educational benefits of the device calls for an investigation of students' awareness of the educational benefits of the device and how they use it.

### ***Statement of the problem***

Mobile phone is one of the ICT tools that has turned the world into global village through easy access to information. The positive contributions of the use of mobile phones in economic, political and social aspects of every society have led some scholars to advocate the adoption as a tool in the teaching-learning process. However, while some studies have revealed positive impact of the use of the device in the academic environment, others have also revealed negativity premised on the views that the device has contributed to poor academic performance of students and also encouraged indiscipline within the school thereby making some school administrators to place a blanket ban on the use of mobile phones within the school environment.

The purported contribution of the use of mobile phones within the school environment to educational backwardness of the students requires an investigation of students' awareness of the educational use of the device and also find out if it is used in that realm so as to determine the extent to which secondary school students' poor academic performance and prevailing high level of indiscipline could be attributed to the use of mobile phones which has impacted positively in various aspects of the society. Therefore, this study examined secondary school students' awareness of educational benefits of mobile phones and their use of the device for educational purpose.

### ***Research questions***

1. Are secondary school students aware of the educational use of mobile phones?
2. Do secondary school students use their mobile phones for learning?
3. Is there any relationship between secondary school students' awareness of educational use of mobile phones and their use of the device for learning?

## METHODOLOGY

### *Research design*

The study adopted a survey research design which only requires the gathering of information from the population sample without manipulating any variable. The choice is also premised on the fact that the study involved investigating a sample of the population and generalizing the result.

### *Population of the study*

The population of the study is made up of all senior secondary school students in Ilesa metropolis of Osun State, Nigeria.

### *Sample and sampling technique*

A sum of two hundred and fifty (250) year-two senior secondary school students were purposively selected from four (4) public high schools within Ilesa metropolis of Osun State, Nigeria. The choice of public school was based on the fact that the ban on the use of mobile phones by secondary school students in the state is limited to public schools. Students in their second year were selected because they have experienced high school system for a minimum of one year and only those who have mobile phones were selected.

### *Instrument for data collection*

The instrument used for data collection is a self-developed questionnaire titled 'Secondary School Students' Awareness of Educational Benefits of Mobile Phones and the Use'. The development of the instrument was based on the various educational use of mobile phone based on the educational relevant applications inherent in it. The instrument is made up of two sections consisting sixteen (16) items each designed in line with the title of this study. Section 'A' contains items to be responded to inform of 'Yes' or 'No' while response to section 'B' was based on always, sometimes or not at all. The instrument was given to three experienced secondary school teachers to assess the validity before it was administer to twenty-five students of the population sample who were not involved in the real study. Their responses were analyzed and a reliability coefficient of 0.85 was obtained.

### *Data analysis*

Data were analyzed using percentage and Pearson's product moment correlation. The percentage aspect of descriptive statistics was used to answer research questions one (1) and two (2) while Pearson's product moment correlation was used for research three (3).

## RESULTS

### *Gender distribution of respondents.*

A total of two hundred and fifty (250) respondents participated in the study based on one hundred and thirty-four males (134) and one hundred and sixteen (116) females implying 53.6% male and 48.4% female there by reflecting appropriate representation of both sexes in the study.

*Research question 1: Are secondary school students aware of the educational use of mobile phones?*

**TABLE 1***Analysis of secondary school students' awareness of the educational use of mobile phones*

S/N	VARIABLES	Yes (%)	No (%)
1	Mobile phone can be used to take photos of objects, places or events relevant to our school lessons	200(80.0)	50(20.0)
2	Mobile phone can be used to take notes in the classroom	90(36.0)	160(64.0)
3	Relevant learning materials can be got from the internet through mobile phone	220(88.0)	30(12.0)
4	Lessons delivered by teachers can be recorded using mobile phone	175(70.0)	75(30.0)
5	We can discuss group assignment and other school work with our classmates through mobile phone	235(94.0)	15(6.0)
6	Online lessons can be listened to through mobile phone	215(86.0)	35(14.0)
7	We can save relevant information pertaining to our school work on our mobile phone	215(86.0)	35(14.0)
8	The alarm in our mobile phone can be used to guide us in our school activities	190(76.0)	60(24.0)
9	Mobile phone can be used as calculator in our school work	165(66.0)	85(34.0)
10	We can use online dictionary through our mobile phone	240(96.0)	10(4.0)
11	We can read e-books through our mobile phone	235(94.0)	15(6.0)
12	The reminder in our mobile phone can be set to remind us of important school activities	225(90.0)	25(10.0)
13	We can play education games using mobile phone	235(94.0)	15(6.0)
14	We can send school assignment to our classmates through mobile phone	235(94.0)	15(6.0)
15	Mobile phone provides us the opportunity to interact with our classmates through social media e.g facebook, whats App	250(100.0)	0(0.0)
16	Mobile phone enables us to have access to online library services	245(98.0)	5(2.0)

Table 1 shows the analysis of students' awareness of the use of mobile phones for educational purpose. Majority of the respondents agreed that; mobile phone can be used to take photos of objects, places or events relevant to their school lessons (80%), relevant learning materials can be got from the internet through mobile phone (88%), lessons delivered by teachers can be recorded using mobile phone (70%), they can discuss group assignment and other school work with their classmates through mobile phone (94%), online lessons can be listened to through mobile phone (86%), they can save relevant information pertaining to their school work on their mobile phone (86%), The alarm in their mobile phone can be used to guide their school activities (76%), mobile phone can be used as calculator at school (66%), they can use online dictionary through mobile phone (96%), they can read e-books through mobile phone (94%), the reminder in mobile phone can be set to remind them of important school activities (90%), educational games can be played using mobile phone (94%), they can send school assignment to their classmates through mobile phone (94%), mobile phone provides them the opportunity to interact with their classmates through social media e.g facebook, whatsapp (100%), mobile phone enables them to

have access to online library services (98 %). However, only 36% of them are aware that mobile phone can be used to take notes in the classroom. The above table shows that majority of the respondents are aware of educational uses of mobile phones except that of taking note in the classroom.

*Research question 2: Do Secondary School Students use their mobile phones for learning?*

**TABLE 2**

*Analysis of the use of mobile phones for learning by secondary school students*

S/N	Variables	Always n (%)	Sometimes n (%)	Not at all n (%)
1	I use my phone to take photos of objects, places or events relevant to my school work	30(12.0)	165(66.0)	55(22)
2	I use my phone to take notes in the class	10(4.0)	80(32.0)	160(64)
3	I use my mobile phones to record class lessons delivered by my teachers	10(4.0)	70(28.0)	170(68.0)
4	I use my phone to browse the internet for necessary information in doing my school work	130(52.0)	100(40.0)	20(8.0)
5	I discuss my school work with my classmates using mobile phone when unable to meet one on one	115(46.0)	110(44.0)	25(10.0)
6	I listen to online lessons using my phone	110(44.0)	105(42.0)	35(14.0)
7	I save important information relevant to my school work in my phone	110(44.0)	130(52.0)	10(4.0)
8	I set the alarm in my phone to wake me up at night so that I can read	180(72.0)	70(28.0)	0(0.0)
9	I wake up in the morning to prepare for school by the alarm in my phone	215(86.0)	30(12.0)	5(2.0)
10	I use my phone as calculator in doing my school work involving calculator	85(34.0)	95(38.0)	70(28.0)
11	I check the meaning of difficult words through my phone using online dictionary	150(60.0)	85(34.0)	15(6.0)
12	I read online books through my phone	115(46.0)	105(42.0)	30(12.0)
13	I use to set the reminder in my phone to remind me of important school activities e.g test, submission of assignment	130(52.0)	105(42.0)	15(6.0)
14	I play education game on my phone	100(40.0)	135(54.0)	15(6.0)
15	I interact with my classmates on social media (e.g facebook, WhatsApp) to discuss issues relating to my school work	150(60.0)	85(34.0)	15(6.0)
16	I access online libraries through my phone for relevant information on my school work	85(34.0)	125(50.0)	40(16.0)

Table 2 shows the analysis of research question 2. It can be seen that 12% of respondents always use mobile phone to take photos of objects, places or events relevant to their school work, 66%

used it sometimes while 22% does not use it at all for the purpose. The Table also shows that only 4% of the respondents always use their phone to take notes in the class, 32% sometimes use it while 64% does not use it at all for the purpose. 4% of the respondents always use their phone to record class lessons delivered by their teachers, 28% sometimes does so while 68% does not at all. 52%, of the respondents always use their phone to browse the internet for necessary information in doing their school work, 40% of them use it sometimes while 8% does not use it at all for the purpose. 46% of the respondents always use their mobile phone to discuss their school work with their classmates when unable to meet one on one, 44% sometimes does the same while 10% does not at all. 44% always listen to online lessons using mobile phone, 42% sometimes while 14% does not at all. 44% of the respondents save important information relevant to their school work in their phone, 52% does so sometimes while 4% does not at all. 72% of the respondents always set the alarm in their phone to wake them up at night so that they can read while 28% does so sometimes. 86% of the students always wake up in the morning to prepare for school by the alarm in their phone, 12% sometimes does so while 2% does not at all. 34% of the respondents always use their phone as calculator in doing their school work involving calculation, 38% sometimes does the same while 28% does not at all. 60% of the respondents always check the meaning of difficult words through their phone using online dictionary, 34% uses it sometimes while 6% does not at all. 46% of the respondents reads online books through their phone always, 42% sometimes while 12% does not at all. 52% of the respondents always set the reminder in their phone to remind them of important school activities e.g test, submission of assignment, 42% sometimes does so while 6% does not at all. 40% of the respondents plays educational game on their phone always, 54% sometimes does so while 6% does not at all. 60% of them interact with their classmates on social medial (e.g facebook, whats App) to discuss issue relating to their school work always, 34% sometimes while 6% does not at all. 34% of the respondents always access online libraries through their phone for relevant information on their school work, 50% sometimes but 16% does not at all. It can be inferred from the Table that majority of the respondents are not making effective use of their mobile phone for learning.

*Research Question 3: Is there any relationship between secondary school students' awareness of educational use of mobile phones and their use of mobile phones for learning.*

**TABLE 3**

*Summary of Pearson's product moment correlation coefficient of the relationship between secondary school students' awareness of educational use of mobile phones and their use of mobile phones for learning*

<b>Variable</b>	<b>N</b>	<b>X</b>	<b>S. D</b>	<b>r</b>	<b>p</b>
Educational awareness	250	1.280	0.449		
Learning uses	250	1.161	0.418	0.526	0.021

Table 3 shows the result of the relationship between Secondary School Students awareness of educational use of mobile phones and their use of mobile phones for learning. The Table shows that r value of 0.526 is greater than that of p value of 0.021 which implies that there is positive relationship between secondary school students' awareness of educational use of mobile phones and their use of mobile phones for learning.



## **DISCUSSION**

The study revealed that majority of the respondents is aware of the educational use of mobile phones. This implies that majority of the secondary school students are aware of the various ways through which they can make use of their mobile phones for learning purpose thereby falling in line with Ebiye (2015). Therefore, the prevailing high level of indiscipline and poor academic performance of the students cannot be attributed to their lack of awareness of how their mobile phones could be used as a tool for learning.

The study further reveals that majority of the respondents does not always use their mobile phone for learning thereby supporting Chen, Seilhamer, Bennett and Bauer (2015). The respondents mainly make effective use of the alarm in their phones to keep them awake to read and prepare for school thereby reflecting non effective utilization of mobile phones as a learning tool by secondary school students. It can therefore be inferred that secondary school students can negatively use their mobile phones which could account for high level of indiscipline and poor academic performance among the students.

The study also shows positive relationship between the respondents' level of awareness of the educational use of mobile phones and the use of the device for learning. The positive relationship could be attributed to the fact that the summation of the number of respondents who always use their mobile phone for learning and those who sometimes use it is higher than that of those who do not use it at all in each of items responded to except in the aspect of taking note and recording lessons delivered in the classroom by the teacher.

## **CONCLUSION**

The use of mobile phone by secondary school students within the school environment has remained contentious among stake holders within the educational realm premised on the perceived effect of it on students academic performance. When those who view the device as a tool that could be used to facilitate learning advocate for the use within the school environment by secondary school students, others opine that it should not be allowed on the basis of its negative effects on students' academic performance and discipline in schools. Studies have also revealed that many schools and governments have prohibited the use, however, some have reverted their decision based on the realization of positive impact that could be derived from the use.

The high level of indiscipline and poor academic performance of secondary school students in Osun State, Nigeria have led to the outright ban on the use of cell phones by students within the school environment. The purported negative effect of mobile phones on students' academic performance and discipline could be attributed to lack of awareness of the educational benefits of the device. This study investigated the awareness of the educational use of mobile phone by secondary school students in the area covered. The study reveals that the students are aware of educational use of mobile phones but do not always use it to enhance their learning thereby denying themselves the benefit of enhancing their academic performance via the use of the device and justifying the stance of some school administrators, teachers and parents on the need to ban the use of the device within secondary school environment.

## RECOMMENDATIONS

The following recommendations are therefore made premised on the findings of this study:

- Total ban should not be place on the use of mobile phones by secondary school students within the school environment since the students are aware of the educational benefits inherent in the use of mobile phones.
- Secondary school students should be guided on how to use their mobile phones to enhance their academic activities.
- Curriculum planners should see to the incorporation of mobile phone as a tool for learning in the school curriculum so as to facilitate its effective utilization for learning.
- Appropriate rules and regulation that will guide secondary school students on the use of mobile phone within the school environment should be put in place.
- Indiscipline and poor academic performance among secondary school students should not be attributed solely to their exposure to mobile phones.

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