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Awareness of Nigerian Students and Teachers about Potential Use of Cell Phone as a Teaching Aid

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Author's contribution

This whole work was carried out by the author OJ.

Original Research Article

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ABSTRACT

Aims: This study investigated the awareness of Nigerian students and those of Nigerian teachers about potential use of cell phone as a teaching aid.
Study Design: A survey research design.
Place of study: Kogi State College of Education (KSCOE), Ankpa, a state owned higher institution of learning located in the eastern senatorial district of Kogi state, Nigeria.
Methodology: A total of 100 respondents made up of 50 students and 50 teachers from the state College constituted the sample for the study. Four research questions were developed. Two sets of questionnaire constructed by the researcher were administered to the two groups, the students and teachers. Twelve (12) possible areas that cell phone could be of educational relevance were identified on the instrument for the respondents' responses.
Results and Discussion: Two major results were obtained. One, the students and teachers of KSCOE, Ankpa, have the awareness of the potential use of cell phone as a teaching aid. Two, the awareness notwithstanding, these students and teachers don't use cell phone to aid teaching and learning. This attitude is not far from inadequate training about the benefits of mobile technology on the part of both the students and teachers as well as readiness of most administrators of Nigerian schools to run technology education.
Recommendations: Teachers are to be given more training about the benefits of mobile technology, when and how they can be used through frequent seminars and conferences in order to become more confident in its use before they can convince their students to do

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so. In addition, they are to be provided with some incentives that will motivate them to apply and encourage technology in the classroom.

Key words: Teachers; students; cell phone; teaching; learning.

1. INTRODUCTION

Cell Phone or Mobile phone as is popularly known and called is a relatively recent technological device that its discovery is revolutionizing the society in view of its relevance and multiple functions or uses. Compared to other gadgets, cell phone is portable, less expensive, easier to operate, maintain and also more personal. Because of these characteristics, ownership of cell phones permeates every sector of Nigerian economy including the educational sector.

In the educational sector, particularly the higher institutions of learning in Nigeria, there are cyber cafes where students come to access internet for on-line learning and assignments. On some other campuses of learning in Nigeria there are Wi-Fi websites where students and teachers can access sometimes freely while some institutions provide these services at subsidized rates. Generally, using technology for learning in Nigeria is still poor. Apart from lap-tops and desk-top computers that are owned by some teachers and very few students, cell phones are the most predominant mobile technology in schools in Nigeria. Smart phones, mini tablets or bay tablets are not common technological gadgets available to many students in Nigerian schools. The cell phones that are owned and used by school administrators, teachers and students are not to enhance learning officially as there are no prepared curricular to integrate it into learning. They are rather used basically for communication. Because this tool (cell phone) is not integrated into the school program of learning, many teachers and administrators see them as distractions and restricted or prohibited students from using them in the classrooms.

This blunt approach in banning the use of cell phones in classroom is wrong [1,2,3,4]. Educators should rather be encouraged to imagine the pedagogy that will embrace the potential of using this device to support teaching and learning rather than condemning it out rightly. Once a purpose is established, cell phones like every other tool for learning would have a role to play in education [3]. It is a tool that could help students to learn in some surprising ways [4]. For instance, during the 2007-2008 school years, “Wireless Reach” began a pilot project in rural North Carolina where High School Students received supplementary algebra problem on Smart phones (the phones were provided by the project). The outcome of this project was promising as classes that used the Smart phones consistently achieved significantly higher proficiency rates on their end of course examination [4]. A partial list of what teachers could use the device for included: timing experiment with stopwatch, photographing apparatus and results of experiments for reports, Blue tooting project materials between group members and receiving short message service (SMS) and e-mail reminders from teachers [5].

The study on the use of SMS style of writing for note taking in the classroom found out that the experimental group that received training on the use of SMS style of writing for note taking performed significantly better than the control group in both note taking and comprehension that was drawn from the note [6]. Some few educators are now integrating text messaging into their core curriculum having known that the preferred form of communication is quickly changing from a phone call to text messages [7].

There are lots of uses in education that cell phones could be put. Students using their cell phones could separate facts from fictions as a way of improving reasoning and also language learning [8], record lectures and snapshots of scenes and objects on field trips [9], use them to read articles and current events [10] and to equally take pictures of notes if they are slow to write or text such notes to absent classmates [11].

1.1 Statement of the Problem

Cell phones are available to almost all the students of higher institutions of learning in Nigeria. It is the most common of all mobile technology devices. Rather than seeing this tool as a potential instrument for promoting teaching and learning, many teachers and school administrators see them as distractions to classroom proceedings and frown at their usage by students. Cell phones have educational uses to which they can be put but how many students and teachers know this? This study was therefore embarked upon to find out the awareness of teachers and students about the educational relevance of cell phones and how well they use these cell phones to aid teaching and learning.

1.2 Significance of the Study

The result of this study is hoped to adequately inform both the students and teachers about the limitless advantages inherent in their cell phone and the need for these phones to be used to aid teaching and learning. In addition, the findings of this study could be relevant to school administrators and curriculum planners to think on educational programs that could integrate the use of cell phone as a resource tool.

1.3 Purpose of Study

This study found out the awareness of Nigerian teachers and students about the potential use of cell phone as a teaching aid in some areas of school works. Specifically, the study investigated:

1. The awareness of students about the areas identified where cell phones could be used to aid learning.
2. The awareness of teachers about certain areas that cell phones could be used to supplement learning.
3. Whether students use their cell phones to explore learning opportunities in the areas identified.
4. Whether teachers create opportunities for students to use their cell phones in those areas of learning opportunities identified.

1.4 Four research questions that were raised to guide the study are:

i. What is the level of awareness of students about uses of cell phones to enhance learning in some identified areas of school works?
ii. What is the level of awareness of teachers about uses of cell phones to aid learning in some identified areas of school works?
iii. To what extent do students use their cell phones to explore learning opportunities in some identified areas of school works?
iv. Do teachers provide opportunities that will encourage students to use their cell phones in these identified areas of school works?

2. METHODS

2.1 Design

The research design for this study was a survey.

2.2 Participants

The students and lecturers of Kogi State College of Education, (KSCOE), Ankpa participated in the study. A total of one hundred respondents made up of fifty students and fifty lecturers from the College made up the sample. The respondents were obtained through purposive sampling procedure when they came from holidays for teaching practice orientation. The first fifty students who came to the hall and who had cell phone received the instrument. The collection of this instrument was on the spot. Fifty lecturers that were sampled were those available in their offices when the researcher went out to distribute the instrument.

2.3 Instrument for Data Collection

The instrument for the study was two sets of questionnaires designed by the researcher. These sets of questionnaires were divided into sections. The first section of the instrument sought information on the awareness of students as well as that of the teachers about the uses of cell phone to support learning in twelve (12) areas of school works identified by the researcher. In the second section, the students were required to say whether or not their cell phones had been of assistance to them in the twelve (12) areas of school works identified. The teachers on the other hand were required to respond to any of the identified twelve (12) items they encourage students to explore using their cell phones. The instrument was four-point response options of Strongly Agreed (4), Agreed (3), Disagreed (2) and Strongly Disagreed (1). The acceptable mean was 2.50 or above. Any mean score that was below 2.50, indicated low awareness and usage of cell phones by subjects in this college.

2.4 Validation of Instrument

The instrument was face validated by two research experts in the college before their administration. The response rate was one hundred percent.

2.5 Analysis

The data collected were analyzed using mean.

3. RESULTS

The results of this study are presented in line with the research questions raised. Question one found out the level of awareness of students concerning the use of cell phones to promote learning in 12 areas. The responses on Table 1 revealed that 8 out of the 12 items had their values ranged from 2.60-3.60 (lowest to highest mean) and were above the cut of point of 2.50. This indicated that the respondents accepted that they are aware about the 8 items on the educational uses of cell phone. Only items 6, 7, 8 and 10 scored below the acceptable mean value of 2.50 implying that they had low awareness that cell phones could be used for working on projects with class mates, accessing digital and electronic textbooks,

taking video of classroom presentations and sending and receiving e-mail. However, the overall mean of the responses of 2.86 which is above the cut of point of 2.50, indicated that students in Kogi State College of Education, Ankpa, generally have knowledge about cell phones being used for browsing the internet for learning materials, solving mathematical problems, gathering data during field trips and arranging classes with students among others. Their awareness is high about the potential of cell phone to aid learning. These responses are shown below on Table 1.

Table 1. Mean responses of students on awareness of educational uses of cell phone

	I know that mobile phone can be used for:	
1	Browsing internet for larger learning resources	3.14
2	Solving some mathematical problems	3.40
3	Gathering relevant data during field trip	3.06
4	Arranging classes with teachers	2.70
5	Recording and taking notes	2.88
6	Working on project with class mates	2.30
7	Accessing digital and electronic text books	2.40
8	Taking video of classroom presentations and experiments	2.40
9	Playing educational games	3.02
10	Communicating with classmates on educational issues	3.60
11	Sending and receiving e-mail	2.40
12	Learning about school activities	3.02
	Grand mean (X)	**2.86**

In Table 2, the data shows the responses of teachers to question 2 about possible areas that cell phones could supplement students' learning. The data on the table indicated that 11 out of 12 items had their mean score values ranged between 2.58 and 3.26 (lowest-highest mean). These mean values are above the cut of mean of 2.50. This indicated that the teachers in Kogi State College of Education, Ankpa, are aware that cell phones could enhance learning in 11 out of the 12 areas pointed out on the instrument. The only item that teachers scored low awareness (2.38 mean) is in the area of working on project with classmates. The grand mean of 2.83 shows that the awareness of teachers in this college is higher about the potential of cell phone as a teaching aid. These responses are shown on Table 2.

The analysis on Table 3 is a response to the demand on students to indicate whether their cell phones provide assistance in the following areas of school works. The data in this table showed that students scored below the cut of point of 2.50 in 8 items. What this implied is that students do not use their cell phone for educational resources as browsing the internet, gathering data during field trips, recording lectures and taking notes and taking video of classroom presentations among others. The data showed that students only use their cell phones for creative writing (2.54 mean), solving some mathematical problems (2.92 mean), playing educational games (2.62) and communicating with classmates on educational issues (3.36). Generally, the grand mean of 2.41 was less than the acceptable mean of 2.50 implying that students in this college do not use their phones well for educational purposes. This information is shown on the table below.

Table 2. Mean responses of teachers on cell phone as a potential teaching aid

	I am aware that mobile phone can be used for:	
1	Browsing the internet for learning resources	2.96
2	Solving some mathematical problems	3.16
3	Gathering relevant data during field trip	2.82
4	Arranging classes with students	3.06
5	Recording and taking notes	2.66
6	Working on project with class mates	2.38
7	Accessing digital and electronic text books	3.04
8	Taking video of classroom presentations and experiments	2.60
9	Playing educational games	2.64
10	Communicating on educational issues	2.90
11	Sending and receiving e-mail	3.26
12	Timing experiment/class work with stopwatch	2.58
	Grand mean (X)	**2.83**

Table 3. Mean responses on whether students use their cell phones in these areas of school works

1	Creative Writing	2.54
2	Browsing the internet.	2.14
3	Solving some mathematical problems	2.92
4	Gathering data during field trips	2.08
5	Recording and taking notes	2.34
6	Working on project with class mates	2.26
7	Accessing electronic text books	2.18
8	Taking video of classroom presentations and experiments	2.30
9	Playing educational games	2.62
10	Communicating with classmates on educational issues	3.36
11	Sending and receiving e-mail	2.10
12	Timing experiment/class work with stopwatch	2.10
	Grand mean (X)	**2.41**

The data on Table 4 revealed the responses of teachers to the 12 possible areas that they encourage their students to use cell phones to aid teaching and learning. The teachers in this College as shown on Table 4 indicated that they did not encourage their students to explore any of these possibilities. The mean values that range from 1.48-2.30 are below the cut of mean of 2.50. This indicated that teachers in this college do not encourage their students to record their lectures, film when on excursions using their cell phones, accessing some textbooks or journals online with their cell phones.

3.1 Summary of Findings

From the analysis above, the following major findings were made:

1. Both the students and teachers of Kogi State College of Education, Ankpa, have sufficient knowledge that cell phone could be used to support teaching and learning in school.

2. Students of KSCOE, Ankpa, use their cell phones to supplement learning in some very little areas.
3. Teachers in KSCOE, Ankpa, are yet to encourage their students to explore the potential of cell phones to support teaching and learning in the classroom.

Table 4. Mean responses of teachers to items they make students use their cell phones

1	Creative writing	1.92
2	Browsing the Internet	1.74
3	Solving some mathematical problems	1.74
4	Gathering data during field trips	1.48
5	Recording and taking notes	1.60
6	Working on project with class mates	1.80
7	Accessing text books	1.70
8	Taking video of classroom presentations	1.76
9	Playing educational games	2.30
10	Communicating on educational issues	2.00
11	Sending and receiving e-mail	1.82
12	Timing experiment/class works with stopwatch	1.92
	Grand mean (X)	**1.81**

4. DISCUSSION

The result of this study revealed that both students and teachers are aware of the possibility of using cell phones to support teaching and learning. Their clusters mean scores of 2.86 and 2.83 that are above the acceptable mean score of 2.50 suggested that they are aware of the potential of cell phone as a tool for gathering relevant data in learning. With cell phone, Students and teachers could browse the internet [10], solve some mathematical problems [4], gather relevant data during field trips [9] as well as using it for creative writing and learning of English [7] and also taking pictures of note if they are slow to write [11].

Although, the students and teachers showed to have high awareness about the potential of cell phone as a teaching aid, they study equally revealed that these students don't use their cell phones in so many areas of school works that cell phone would have been of tremendous help. And again, their teachers don't encourage them to tap the advantages inherent in cell phones as a learning resource.

This probably is due to the fact that usage of this devise is vehemently opposed by teachers as well as school administrators who have insufficient knowledge and fund that characterize mobile technology. Many teachers in most Nigerian schools are yet to have sufficient knowledge about the potentials of mobile technology in revolutionizing education. Students are seen to be more technology compliant than the teachers and because the teachers have insufficient knowledge, they are not visibly seen to be venturous.

Common features such as creative writing that come in the form of text messages, some common mathematical problems of addition, subtraction, division and multiplication, playing educational games and communicating with classmates are the items that students use their cell phones to support learning. Even at this, the students cluster mean of 2.41 on Table 3, suggested that the potential of cell phone in supporting learning in this college is

underutilized. Table 4 showed that teachers are yet to attach educational purpose to cell phone (1.81) even though they are aware (2.83) of the uses of the device to support learning. This could be why some teachers see this tool as a distraction and are vehement in refuting its usage in the classroom by students [12]. No matter the hard stance of teachers, one fact remains that students use them in the classroom.

5. CONCLUSION

Cell phone is refuted in the classrooms because of the distractions that they cause in teaching and learning. But this is not to undermine the huge potential of cell phone to enhance teaching and learning in the classroom especially as we know that it is wrong to throw the baby out with the bath water. Teachers should be effortful to discover and utilize the potentials of cell phones to improve learning in their various subject disciplines.

6. RECOMMENDATIONS

Based on the findings of this study,

1. Teachers should be given more training about the benefits of mobile technology, when and how they can be used so that they can become more confident in its use before they can convince their students to do so. This training is necessary especially as it is known that not many people love changes.
2. Teachers are, in addition to training, be provided with some incentives so as to be motivated to apply and encourage the usage of this technology in the classroom. Such incentives could involve sponsorship in seminars- local and international, provision of educational technology devices either freely or at subsidized prices and the provision of enabling classroom environment that will support the use of technology in the classroom.
3. Teachers should inform, encourage and allow their students to use their Cell phones in recording, and filming lectures as well as taking snapshots of scenes during field trips.
4. Cell phone industries such as Nokia etc, should reduce or subsidize phones with facilities such as Blue tooth, Camera, Limitless character and numbers as well as internet capabilities to enable students purchase them more and use them to promote learning.

7. LIMITATIONS OF STUDY

This study was limited to teachers and students of Kogi State College of Education, Ankpa. Again the study considered only cell phone and not any other technological device because they are the ones that are most commonly available particularly to the students.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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