

Cell Phones as Effective Learning Resource

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Abstract: This study sets out to discuss the harnessing of the cell phones as an effective learning resource, the challenges that ensue, how to handle such challenges and the benefits of using the cell phone as a learning resource. Teaching and learning today has gone beyond the traditional method of the teacher talking to the learners with a chalk and a chalkboard and the learners passively listening. This has been facilitated by the information and communication technology, the cell phone being an integral aspect. Most phones do what a computer does and its affordability, portability and convenience make it a common gadget owned by almost every adult and some children. Most students own cell phones and love to interact with it. It will therefore be thoughtful to harness this technology to enhance teaching and learning. The study considered the meanings of cell phones, learning resources and mobile learning. It also had the challenges of using the cell phone as a teaching/learning resource, handling the challenges of using the cell phone as a learning resource and the benefits of using the cell phone as a learning resource as sub headings under this title. The challenges of using cell phones in the classroom are majorly distractions caused by ringing tones or students overindulgence ranging from academic dishonesty, texting to accessing social networking sites during lessons. To handle these challenges, the teacher has to ensure that lessons are well prepared with clearly stated behavioural objectives, maintain good classroom management, decide when the cell phones will be required in the lesson, state in his notes the search engines that will be used to browse the internet and ensure that there are no idle moments for any one in his class among other things. The cell phone is a rich learning resource that aids discovery learning, social learning interactions, reflective learning, gives instant and concise information, adds variety, it is flexible and convenient, unlike the computer it is affordable and easily available. Based on the discussion in this work, it was recommended that since most students own or have access to cell phones and tirelessly operate them, the teacher should properly harness this untiring skill to achieve educational objectives. Parents, teachers and other relevant authorities should educate the youths and students in particular on the dangers of abusing the use of the cell phone. The world is going on-line with the use of mobile devices we will be doing our students much harm if we make it alien to them, rather every student should be encouraged to have one and teachers should have a good knowledge of new instructional technologies so that they will be relevant to the students of this age and time.

I. INTRODUCTION

The most recent breakthrough in science has been in the area of information and communication technology and within this sphere is the globalisation of the world via the internet and mobile communication devices. Every technology is meant to

improve the living standard of man, make life easier and more comfortable and this is one of the reasons why the cell phone today is seen as a-must-have by adults and teenagers. Among other things, a cell phone can take and make calls to any other person with a phone, send and receive text messages, take, view and store pictures and videos using embedded cameras, access the internet, e-mail, chat and even download add-ons for the phone, play games and have access to calculator, stopwatch, calendar, clock, reminders, play music, store and run files.

These features can be harnessed as a learning resource to enhance teaching and learning. It is not uncommon to see teenagers / students get indulged in cell phone activities or distract others with it. Irrespective of this anomaly, we can make the most use of this technology to enhance teaching and learning. It will not be an over statement to say that almost all our teachers and students in the tertiary institutions have cell phones closer to them than their pen and books, and most secondary school students either own one or have free access to one. Therefore, it would be irrational to ignore or forbid the use of cell phones in the teaching-learning process but good reasoning would demand that its usefulness be co-opted as a learning resource to advance and enhance the instructional process. According to West (2013), students love mobile technology and use it regularly in their personal lives. It is therefore no surprise that young people want to employ mobile devices to make education more engaging and personalise it for their particular needs. With the use of the cell phone the teacher has the entire globe in his hands where he can access information, life pictures/ videos and more. He can also guide his learners to do same so that the learner will no longer be limited to the teacher's knowledge or teaching but will have access to global knowledge, other learners and teachers. West (2013) observed that not every student has access to the computer and the internet and given the cost of the hardware, it is not affordable for education authorities to provide a personal computer to every student. However, he said, most young people have phones and this provides a real opportunity to transform instruction. He also asserts that the use of the cell phones would educate the next generation of scientists, inventors, engineers, entrepreneurs, a workforce that is effective in a global context and adaptive as new jobs and new roles evolve. He added that "educators need to figure out how to harness mobile platforms for instructional purposes and employ them to boost educational learning.

The paper will consider the following sub topics:

- Learning resource.
- Cell phones (definition and functions)
- The cell phone and mobile learning.
- The challenges of using the cell phone as a teaching/learning resource.

- Handling the challenges of using the cell phone as a learning device
- What to Consider when using the cell Phone as a learning resource.
- The benefits of using the cell Phone as a learning resource.

Learning resource

A learning resource is anything that is used to enhance the teaching-learning process. The British Columbia Ministry of Education says learning resources are texts, videos, software and other materials that teachers use to assist students to meet the expectations for learning. Abimbade (1999) defined learning resources as people, materials, tools, equipments, settings and activities that can be discovered, applied and used for learning purposes. Another terminology that can go for learning resources is instructional materials, following the definition of Case (2013). Instructional materials means all materials that are designed for use by pupils and their teachers as a learning resource and help pupils to acquire facts, skills or opinions to develop cognitive processes. Therefore, anything that is used by the teacher to make the pupils learn effectively is a learning resource or an instructional material.

What is a cell phone?

According to the Business Dictionary, the cell phone is a small device that has at least the same functions of a standard wire telephone but is smaller and more mobile. The Wikipedia free encyclopaedia defines a cell phone as a device that can make and receive telephone calls over a radio link while moving around a wide geographic area. It is also known as a mobile phone, cellular phone or a hand phone that enables the user to communicate almost anywhere in the world. Ware (2013) also shared this view that a cell phone is any portable telephone which uses cellular network technology to make and receive calls. He adds that all phones are technically the same, from the latest Android smart phone to the simplest feature phone, it is all about the technology used to transmit your calls rather than what the cell phone itself can do. He said often cell phone is used to describe a simple feature phone while smart phone is used to describe more advanced touch screen phones. But as long as a phone can transmit a signal to a cellular network, it is a cell phone. The term smart phone in recent times has come to mean a cell phone which offers more advanced features than just calls, SMS messages and basic organiser software. Cell phones are capable of doing anything a computer can do. For the purpose of this study, the word cell phone will be used to mean a smart phone or any cellular mobile device that has the features of a cell phone and has internet connections. Leach (2013) reported that 25% of mobile devices in Nigeria are smart phones. The cell phone has not yet been accepted as one of the things a student in the secondary school should come to school with because of the distractions that is caused by their ringing tones, classroom texting among others. Only time could tell what this technology has to offer the teaching-learning process in a world that is fast becoming smaller and more reachable because of technological advancement. You can link up with anybody, anytime for anything from the comfort of your home just in a very brief moment. Information and knowledge are twin and teaching and learning is the womb that bears them, hence we may not be getting it all right when we place a disclaimer on cell phones in the classroom. Koebler (2011) quoted Nielsen and Webb (2000)

as saying that teachers can turn the cell phone into an educational opportunity instead of an annoying distraction. They are of the opinion that the cell phone can enhance lesson plan and increase motivation. In a research study conducted by Unachukwu and Israel (2012) it was established that another way of improving learning and intellectual functioning in secondary schools was the use of cell phones during classes. In fact they recommended, as a result of their findings, that parents should provide one for their children for the purpose of improving their intellectual functioning and that, teachers who harass and cease students cell phones were not encouraging learning. Koebler (2011) quoted Nielsen again as saying that “schools should be preparing students for real life and in real life people use phones, if you are making an artificial world inside the school, you are not preparing them for the real world”.

Unachukwu and Israel (2012: 84) said cell phones can be used to

“video for long hours and can record voices/sounds even at low pitch, browse the internet for twenty-four hours non-stop, take photographs clearly even at a distance, check and send e-mails, find meaning to difficult and complex words during English and Literature classes, calculate simple and complex mathematical problems during Mathematical, Chemistry, Physics, or Biology classes, take photographs of specimens during field work in the sciences, take down notes (using iPod, Book pad etc.), download scriptures which can be used during religious classes, timing during self-examination, to set alarm for personal study or reminders on any date and time of any important events”.

Begum (2011: 110). added that the cell phone can also be used to do

“down loading required e-books, software and dictionaries from mobile Internet for reading practice; use the on line dictionaries for looking through word meaning and translation dictionaries for definition of a word; capturing class notes by the means of mobile camera; develop reading and speaking skill through the recorded short stories; practise pronunciation by recording audio materials; receive text messages from teachers with class content; sending SMS in short and crispy sentence for grammar practice and teacher can later do correction by SMS reply; students can get feedback from teachers via SMS. Homework and some tests can also be delivered in this way; snapping pictures through cell phone camera for assignment, field trips and reports and doing research through the use of text message and Internet browser; using mobile games to develop problem solving and critical thinking skill and word match games as the means of spelling practice”.

The cell phone and mobile learning

What gives the cell phone an outstanding feature is its portable and mobile character coupled with its notable functionality. In generic terms a cell phone is also called a mobile phone, a pocket device or a mobile device. Therefore, Mobile-learning (m-learning) is the use of mobile devices (MP3 player notebooks, mobile phones and tablets) by learners to acquire information, skills or knowledge. It is any sort of learning that happens when the learner is not at a fixed, predetermined location. Mobile-learning is used to support classroom teaching and learning and because of its mobility it breaks the bounds of the traditional classroom. This is made possible through the web browser in the phone which gives direct access to the World Wide Web

(Internet).). Cakir (2015), observed that “mobile technologies are fast, effective, authentic, spontaneous, natural and ubiquitous”.

M-learning enhances teaching and learning via the use of the cell phone. It eliminates the constraint of time as learners have unlimited access to knowledge and information on the internet. The fast and slow learners can regulate their speed by using their cell phones when and where it is convenient to learn or get information. By using the short message service (SMS) or e-mail, the teacher who is constrained by time can text information, assignment, research questions etc to his students anytime irrespective of his location. The students on the other hand can send in their assignments, questions etc to the teacher’s mail box via the same channel.

M-learning eliminates the constraint of space which the traditional learning environment has been identified with. The United Nations millennium development goals on education will be a mirage if teaching and learning would only be within the confines of a school building (www.un.org/millenniumgoals). Learning opportunities (skills, information, knowledge) are now made accessible to any interested learner through the use of the cell phone.

Since mobile-learning is the ability to obtain or provide educational content on personal pocket devices especially when the device is linked to the Internet, the learner now has the prerogative of using his cell phone to search for and obtain learning content anywhere and at any time. He/she can also make available personal discoveries, research, and share information or knowledge with other learners via the same channel. Notes can be compared among students from different parts of the globe, as a result of this the learner has unlimited sources of information on any topic in any area of learning. The position of the learner now moves from that of a passive receiver of knowledge to an active participant in the teaching learning process.

With all these prospects so mentioned, the use of the cell phone in the classroom as an instructional resource is not without problems. It has not yet been accepted as one of the things a student in the secondary school should come to school with because of the distractions that is caused by their ringing tones, classroom texting among others. Like any other technology, the cell phone has been abused by its users. A few of such abuses also considered as challenges are considered below:

The challenges of using the cell phone as a teaching/learning resource

In a study conducted by Soyemi, Oloruntoba and Okafor (2015), it was observed that students were influenced to a great extent by the social media negatively and this affected their academic performance. This could be as a result of the distractions caused by cell phones as will be further discussed.

According to Ishita et al (2015) “the usage of cell phone is not intended for negative purpose and influence, however the attitude of and time channelled towards these devices has enslaved students making them addicts”. Apart from these (attitude and time consumed) there are other ills that pose as challenges to the use of cell phones in the classroom.

Ring tone distraction: in a study conducted by Campbell (2006) ring tone was reported as a serious source of distraction in the classroom. It is not uncommon to hear someone’s phone ring in public places or answering a call loudly in the midst of people.

This attitude can be very disruptive if it takes place in the classroom. It could disconnect a trend of thought and make the achievement of stated goals elusive. This is one of the reasons why schools and other social groups ban the use of cell phones when they are in session. (Tindell and Bohlander, 2011).

Texting: messaging or texting while lessons are going on cuts off the attention of the learner from the teacher. Students love text messaging using twitter, 2-go, face book, WhatsApp, chatting, SMS etc. and can remain chatting for hours.

Examination malpractice: when students are not closely supervised, they tend to put up unworthy attitudes one of such is using the cell phone for examination malpractice. This is one of the reasons why cell phones are not allowed in schools. It is worth saying that the challenges posed by cell phones in the class are all surmountable.

Handling the challenges of using the cell phone as a learning device:

Cell phones like any other classroom learning resource require conscious preparations and utilization before it can yield expected results. It would be worth the effort to ensure that the following steps are taken before using the cell phone for teaching and learning in order to overcome the challenge it poses. Sharples (2003) opines that rather than seeing mobile phones as troublesome devices, educators should seek to exploit the potentials of the technology and find ways to put them into good use for the benefit of learning practice. Wang (2014) and Yilmaz (2016) say that the use of cell phones or any other e-learning device are very effective especially with students with low-level performance ability and can be used to support classroom instruction.

Selection and preparation of the lesson content: The instructional process entails a lot of organisation of curriculum content in order to elicit expected learning outcomes. The questions what do I want to teach? Who do I want to teach? How do I want it?, are like road maps that will guide the teacher in his/her teaching. A careful and committed answer to these questions will enable the teacher to select and make preparations for lesson presentation with any mobile device.

Clearly stated aims and objectives: A teacher needs to state what he wants to achieve in the long run and at the end of an instructional process and should communicate same to the students at the beginning of the lesson. This will be a focal point all through the lesson so that they are not carried away by the fun of the mobile device. Sometimes using a cell phone may be very revealing and without a conscious effort to stick to clearly stated objectives, the tendency to divert to a new discovery is obvious. Stating the desired objectives will make the teacher and the students use the device just for the need of the moment. This should also be highlighted in the syllabus. Begum (2011) recommended that the curriculum and syllabus should include mobile assisted learning.

Creating awareness on ICT ills: Rabi, Mohammed, Umaru and Ahmed (2016), after their research findings recommended that seminars, conferences and workshops should be held to sensitize students on how the wrong usage of cell phones can negatively affect their academic performance. This implies that students should be given adequate information on the good, the bad and the harmful of the Information and Communication

Technology (ICT) in general and the cell phone in particular. Self-indulgence and lousiness in the use of the cell phone by users, especially the younger generation, has led to cell phone abuse like in every other technology. Be that as it may, the cell phone is with us today and the teaching profession has to maximize its benefits in order to make the profession keep pace with modern technology.

Proper class management and control: The teacher is the manager of the entire instructional process and the learning environment. If class management and control is poor or lacking, learning outcomes or the achievement of stated objectives may be a mirage. Therefore, for a successful usage of the cell phone in the instructional process, the teacher must be fully in charge. He/she must ensure strict compliance to instructions, that students use the cell phone when the teacher wants them to and that they do what they are asked to do. Those who do not have the device should be encouraged to share with those who have so that nobody is left to be idle. This will require good supervision and interaction with and among the students. Begum (2011) counselled that to avoid distractions and students cheating concrete rules should be assigned and implemented to use cell phones in the classrooms.

Good timing: Since the focus of the lesson is not the cell phone per se, the teacher has to decide before the beginning of the lesson (during lesson preparation) when the cell phone will be required during the lesson presentation. This could be done by:

- Writing down in his/her note what information will be required or searched for on the internet, dictionary or what calculations will be done using the cell phone.
- Write down the websites or the search engines that will be used to explore the internet.
- Determine the time that will be spent using the cell phone bearing in mind the duration of the lesson.

Enlightenment on time management: Intrinsic motivation brings about a lasting behavioural modification and this is what enlightenment does. When students know that time is precious and that proper time management is related to success they will have self-restrain and reduce self-indulgence with cell phones because young people want to identify with success. Self-indulgence has been one of the reasons why parents and school authorities restrict or ban the use of cell phones by students but with proper enlightenment this attitude could be curtailed.

The benefits of using the cell Phone as a learning resource

It was discovered in a study conducted by Jacobson and Forste (2011) over two-thirds of the university students used electronic media including cell phones while in class, studying or doing homework. While Attewell (2005), Chen and Kinshuk (2005), have proved in their studies that mobile technologies have considerable potential to enhance teaching and learning across all educational sectors. Some of the advantages or benefits of the cell phone are discussed below.

Available and affordable: cell phones are more available than most textbooks because they are always handy to the user and text messages can be received instantly and the internet can be accessed 24 hours of the day. They are cheaper than computers and do not require any training to operate. Most parents own cell phones and some children also own cell phones or have access to one, therefore students can lay their hands easily on one for their

assignments, research or private study. Teachers could collect parents/guardian phone numbers from the students and use that for communication with the parents and students as it concerns their learning.

Flexible and convenient: cell phones are portable devices which can be operated anywhere (in the bus, on your bed, while you are waiting etc.), anytime (day or night) just at the time learning is required. All one needs is to get connected to the internet to upload an enquiry or subject matter using any desired website or the search engines then all the knowledge that you needed for that will be brought to you from all over the world.

Variety: using cell phone to teach or learn brings in some change from the usual classroom talk and chalk method. There are pictures to see, audio to listen to if it is in the language or music class or calculations to be done following given formula or principle. This will also meet the needs of pupils with varied interest and learning styles,

Social learning/interactions: students text their peers or even make voice calls to get information that has to do with their studies, sometimes they contact experts in order to do their assignments. This would have been more rigorous, time consuming and expensive if the cell phones were not available. Interactions between teachers/school and the parents is very vital to the wellbeing of the students and the teachers, this is made easy with the coming in of cell phones. Ferry (2009) acknowledged that mobile phones can be used to help students access web based contents, remix it, share it and collaborate with others.

Reflective learning: almost all cell phones now have voice recorder which the learner can use to record a lesson in the class and then listen to later as many times as is needed until he/she assimilates the lesson. A student teacher can use it for micro-teaching for self-evaluation and confidence building (Begum, 2011).

Vivid evidence: the camera in the cell phone makes it possible for the teacher or learner to take pictures of events or objects as the opportunity arises. As students go on excursion, travel for site seeing attend ceremonies they can take photographs to keep the memories fresh and the teacher can do same for use in the class as instructional materials, this will serve as an eye witness account or an exhibit for what would have been considered a mirth.

Instant information: when a teacher or student is in doubt in the classroom all he/she needs to do is to pull out his pocket device and consult. He can phone an expert, a colleague or connect to the internet and get the necessary up to date information that is required. So the cell phone aids memory, cross-checking of information which leads to good decision making and sound professional judgement.

Concise information: information given on the cell phone is always clear and minimised to fit into the screen of the phone. This eliminates verbosity and irrelevance thus making it easy for the learner to assimilate. (Hajim, 2012).

Discovery learning: the teacher may want the students to use their cell phones to get information that will build up their skill in a practical lesson by asking them to source for information on any area of a given practical lesson. By the time the students get the job done they would have discovered so much by themselves and such knowledge is always indelible.

Instructional tool: an instructional tool is a material used to aid teaching and learning in the instructional environment. Examples of such tools or aids are timers, dictionaries, calculators, maps, etc. sometimes these tools may not be adequate or even available, but the cell phone can be used conveniently to replace them all.

Unrestricted boundaries: Classroom walls are broken down as the teacher can text assignments to his students outside the school and they in turn can ask questions or communicate the problems they encounter in the course of their private studies to their teacher through calls or text message. Teaching and learning continues beyond the official school hours as teacher and students can interact conveniently and continuously anytime, anywhere through the cell phone.

Revision and Evaluation: Students use cell phones to prepare for some national examinations. For instance, there are websites for Joint Admission and Matriculation Board (JAMB) practice on the net. Students use their mobile phones to attempt questions to test their knowledge and speed in answering questions. At the end they get their scores instantly. With this a student could do self-assessment and know how ready he/she is for the examination, which area needs more effort and what to do to improve.

CONCLUSION

The use of mobile devices as a means of communication in our times has come to stay and communication is the heart of the instructional process. Today most cell phones can perform the functions of a computer and this is very impressive, therefore harnessing this state of the art technology to enhance teaching and learning is the right step in the right direction. Although there are challenges confronting this course, they are not insurmountable. Suffice it to say that the process of teaching and learning today has gone beyond the traditional method of the teacher standing before the learners with a chalk and a chalkboard and the learners passively listening. The new instructional technologies make the teacher a guide, who facilitates learning and the learner actively involved in the achievement of learning outcomes. One of such instructional technologies is the cell phone which offers an unquantifiable resource material to the teacher and the learner. The flexibility and convenience which the cell phone offers in teaching and learning makes it outstanding, laudable and worthwhile.

Recommendations

The study emits the following recommendations:

1. Since most students own or have access to cell phones, the teacher as a matter of resourcefulness should devise a means of properly channelling their unrelenting habit and skill on the use of cell phones to achieving educational objectives.
2. Teachers should be acquainted with other uses of the cell phone other than making and receiving calls so that they could conveniently use their cell phones to obtain relevant and appropriate information and instructional materials for their lesson preparation and presentation. They should explore the use of the cell phone to improve and update their knowledge and teaching, in their subject areas.
3. Parents, teachers and other relevant authorities should educate the youths and students in particular on the

good, the bad and the harmful use of the cell phone so they could be wisely guided.

4. The world is going on-line and just like the television; the cell phone should not be kept away from students nor students from it rather students should be encouraged to explore its benefits for their academic proficiency.
5. Students should practise self-restrain in the use of the cell phone unadvisedly knowing that they stand to lose if they do, but would gain a lot if they do what is right with it.
6. The cell phone is a rich and comprehensive educational resource therefore as much as it is possible every student should be encouraged to have one.
7. Teachers should have a good knowledge of new instructional technologies so that they will be relevant to students of this age and time.

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