Mobile phone usage among secondary school learners: Potential and challenges

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Abstract

Mobile phone usage by learners in secondary schools in Zimbabwe has received mixed feelings among stakeholders. While some have insisted that there was need to incorporate these gadgets, others have found no merit in their use. This present study was a case study on the use of mobile phones in schools, through a detailed contextual analysis of selected schools in Chegutu urban, Zimbabwe. The researcher studied thirty-two cases that exposed detailed views of stakeholders on why mobile phones continued to be neglected as instructional media. In order to generate data from participants, the study utilised face to face interviews as these were seen as the best way of achieving high quality data. Thirty-two participants were purposively chosen and included 2 school heads, 10 teachers and 20 learners. The participants were deemed adequate for a qualitative study. The findings from the study indicated that while a good number of learners had mobile phones and other related devices, these were very expensive for the majority of the learners more so the latest smart phones that could be used to access the internet, academic books and other e-resources. The majority of the learners had a positive view of the use and adoption of mobile phones in schools unlike most school heads and teachers. Findings also reveal that mobile phones and related devices could compliment the teaching and learning process to greater extent as they allowed learners to access information that may not be available in the school libraries. However, findings also show that mobile devices could also negatively affect students’ achievement if there were no measures in place to curb their unnecessary use that could see the learners resorting to absconding lessons to attend to phone calls and text messages during the learning process. The study recommended that due to the fact that most learners were able to purchase mobile phones, schools should allow mobile phones to be used as they lessen the financial burden of schools as books and other resources can be accessed at little or no cost. With the new curriculum policy frame work at all levels of primary and secondary education encompassing the use of ICTs, there is need for a new paradigm shift towards embracing mobile phones in schools. Stakeholders who include school heads, teachers, students and parents should be oriented on the best use of mobile phones in the teaching and learning process with the view of coming up with acceptable policies that would be adhered to for effective use of the devices for instruction.

Key Words: Mobile phone, Secondary School Learners, Potential, Challenges

Introduction

The use and adoption of latest information and communication (ICT) based technologies has become the in thing in Zimbabwe. This is so in view of the fact that there are numerous benefits attached to the use of computer mediated technologies and among which is the fact that these have been used for effective and efficient communication
locally and globally. Despite this importance, there have been spirited efforts to resist the use of modern technologies in both primary and secondary schools (Kiema, 2014). To that effect, some schools have banned the use and possession of mobile phones and other devices that may be used for communication in the school premises and authorities have subjected learners to through searchers for any such devices which have been labelled a classroom disturbance hence banned in most American schools (Sorrentino, 2014). Mobile phones are widely accessible as compared to computers since a lot of teachers and students in many countries still do not have access to computers (Yerushalmy and Ben-Zakeh, 2004). This is because computers require huge capital outlays for accessories and consumables (Bukaliya and Dzimano, 2011; Bukaliya and Mubika; 2012). Mobile phones therefore provide an affordable form of mobile learning (Mehdipour and Zerehkafi, 2013). Resisting these types of technology as instructional tools has resulted in several secondary schools clinging to antiquated forms of teaching in an age when old methods of teaching should give way to the use of new forms of teaching as a result of new technologies (Chinnammai, 2005).

As the debate on whether or not to allow mobile phone usage in schools rages on, there seems to be no end in sight as which way to go in terms of adoption and use of mobile phones and related devices in schools in Zimbabwe. It is therefore, imperative to establish potential benefits and challenges in the use of mobile phones in schools.

**Statement of the problem**

Most learners currently enrolled in schools have high regard for the use of mobile phones. However, most educational institutions have not welcomed the use of mobile phones as a form of instructional media, hence resorting to the traditional methods of teaching and learning. This study therefore aimed at answering the question: What are potential benefits and challenges in the use of mobile phones in schools?

**Research questions**

The study was guided by the following research questions:

1. To what extent are students ready to use mobile phones in learning process?
2. What are the effects of using mobile phones in the teaching and learning process?
3. What is the attitude of school administrators and teachers towards the use of mobile phones in the classroom?
4. What measures can be taken to make sure that the mobile phones are used effectively in the teaching and learning process?

**Review of related literature**

**Theoretical Framework**

The current study is premised on the Technology Acceptance Model (TAM). TAM basically explains the behaviour of people in adoption and use of certain technologies in specific situations (Rumanyika and Mashene, 2015).

Two exerting factors pave way for the adoption and use of technologies. These are:

1. **Perceived Usefulness (PU):** This defines the degree to which an individual believes that using a particular system or technology would enhance his or her performance without regarding other limitations. In the case of the present study, perceived usefulness of the mobile phone would lure the learners and teachers to make use of the modern technology.

2. **Perceived Ease of Use (PEOU):** This defines the degree to which a person believes that using a particular system
would be free of effort. Give the ability of both teacher and learners to use the mobile phone with ease, its adoption and use would therefore not be problematic.

Perceived usefulness (PU) and perceived ease of use (PEOU) result in intension to use (UI) which subsequently paves way for usage behaviour (UB).

Benefits in the use of mobile phones in schools

The increased functionalities of mobile phones such as web-browsing, sending and receiving e-mails and audio/video capturing enhanced the usefulness of the device to be realized in several sectors of the economy including education. Aguero (2009) in Kihwele and Bali (2013) mentions that in Peru efforts have been made to enhance the use of mobile phones in formal education because they have helped to improve sectors such as agriculture and marketing business. Jensen (2007) in Kihwele and Bali (2013) write that the usage of mobile phones in India has improved fishing business and wholesale merchants as a result of low costs of using mobile phones. Mohamad and Woollard (2010) in Kihwele and Bali (2013) highlight that Malaysian education stakeholders see the opportunity that mobile phones can become one of the applications for teaching and learning in secondary schools. Kihwele and Bali (2013) note that South Africa is looking for an opportunity to introduce mobile phones to facilitate teaching Information and Communication Technology (ICT).

In the teaching and learning process, mobile phones can be used for surfing the internet and sharing the knowledge with...
others (Kihwele and Bali; 2013; Megan, 2011). Prensky (2004) highlighted that websites specifically designed for cell phone applications like a dictionary, search for images and search engines can be utilized when learning using mobile phones. Poirier (2011) asserts that by using mobile phones to connect to the internet, pupils can view pictures or videos that can help them to understand the settings on the topic they will be studying. For example, videos on world war can help pupils to identify weapons that they have never saw in real life situations. Ryer (2011) believes that teachers can create podcasts (audio or video files usually in an MP3 format that can be downloaded for listening) on historical matters using mobile phones.

Mobile phones can also facilitate communication. Through short messages services (SMS) students and teachers can exchange information on any topic (Kim, Mims and Holmes, 2006; Engel and Green, 2011). According to Kim et al (2006), the multimedia message services (MMS) help teachers and students to exchange text messages, videos and images. A communication system called Audience Response System (ARS) can be used by teachers to check students understanding on certain topics (Engel and Green, 2011). Engel and Green (2011) point out that through the audience response system teachers can text questions to pupils’ mobile phones via websites such as polleverywhere.com and students can text anonymous responses via the same channel. Mehdipour and Zerehkafi (2013) postulate that mobile phones and other mobile devices can be used in conjunction with wireless broadband and video call services like Skype to facilitate communication between teachers and pupils. In this regard, pupils and teachers can exchange information via social media platforms such as Facebook and Skype.

Numerous studies had been carried out to establish the factors leading to the ban of mobile phones in schools (Kihwele and Bali 2013; Shrivasta and Shrivasta 2014; Rumanunya and Mashenene 2015). These studies have indicated that it is mainly the misuse of mobile phones by students that has resulted in the gadget being mistrusted by school communities (Kihwele and Bali 2013; Shrivasta and Shrivasta 2014; Rumanunya and Mashenene 2015). At the same time, students are resisting the ban as they secretly bring these mobile devices into the school premises (Kihwele and Bali 2013). When they successfully enter the learning institution without being detected, mobile phones are being used to exchange music, pornographic videos and pictures, instead of educational activities (Ali 2013).

Initially, mobile phones were not allowed in schools as they were associated with drug dealings and gangs (Cullen (2015). It was the terrorist attacks that necessitated the use of mobile phones by pupils in schools. Goad (2012) asserts that the Columbine School massacre of 1999 and the September 2001 attack on the World Trade Centre made parents to call for the use of mobile phones in schools as they wanted to be connected with their children at all times. Mobile phones were therefore important not as instructional media, but as tools for facilitating communication between parents and their children.

### Students‘ readiness of using mobile phones in learning History

Previous studies have revealed that many students already have mobile phones. Rahamat, Shah, Din and Aziz (2011) revealed that ninety one and half percent of the students they surveyed had mobile phones. Rahamat et al (2011) further stress that most students of nowadays own at least a handset. In a study to unravel the attitude and perceptions of students at King Saud
University of Saudi Arabia on the effectiveness of mobile learning, Fahad (2009) discovered that all the one hundred and eighty-six students surveyed had mobile phones. Ford and Batchelor (2007) carried out a pilot research at a private school in South Africa and discovered that the majority of pupils had access to mobile phones. Osang, Tsuma and Ngole (2013) reported that 91.8% of students in Nigeria have mobile phones. It therefore appears that students are ready to use mobile phones in learning as many already have mobile phones.

Other studies have however revealed that the majority of pupils do not have access to mobile phones. Ford and Batchelor (2007) found out that the majority of pupils at a local government school where they carried out a pilot research did not have access to mobile phones. Some previous researches have also established that while the majority of students have access to mobile phones, most of them are ordinary phones which do not have additional functions such as accessing the internet and camera. In order to be applicable in education, a cell phone should have functions that are compatible with teaching and learning processes. Activities that include the audience response system, photo taking and researching are possible with web-enabled mobile phones which have cameras as well as smart phones. A study conducted by Kim et al (2013) indicated that only forty-eight percent of the fifty-three students they surveyed have web enabled mobile phones. Osang et al (2013) also stated that only twenty-four comma one percent of the students in Nigeria had smart phones. The remaining majority had basic phones for simply calling and texting (Rahamat et al 2011). This could also explain the concept of perceived ease by Davis (1989) where a gadget can only be used when it is easy to use.

Studies have also depicted that students are not yet ready to make provisions for the costs associated with using mobile phones in learning. In a study carried out to determine the readiness and perceptions of students towards mobile learning, Rahamat et al (2011) discovered that fifty five comma seven percent of the students were willing to spend very little on broadband bills, while only five percent were prepared to spend more amounts on broadband bills. Costs associated with mobile phones include the money needed to purchase the gadgets and subscribing to network services. This could be attributed to lack of perceived usefulness as accounted for in the model by Davis (1989) where for one to use a gadget, they should be aware of their use, for example in instruction purposes. Khrisat and Mahmoud (2013) argue that most of the modern multi-facility mobile phones are not cheap to buy as they cost anywhere between one hundred United States Dollars to more than five hundred United States Dollars. At the same time, Osang et al (2013) assert that advanced mobile phones normally come with regular cost like that of data plan. Osang et al (2013) therefore remark that: it is one thing for a student to have an advanced cell phone and another for that student to pay for enough time or unlimited data access. Khrisat and Mahmoud (2013) note that there are data charges associated with upgrading mobile phones as well as downloading large files. At the same time, fifty-seven percent and forty seven percent of the students in the study carried out by Fahad (2009) agreed and strongly agreed respectively that there would be high costs involved with owning and using mobile devices such as mobile phones for mobile learning.

In a research to find out the readiness of students towards using mobile phones as a learning tool, Rahamat et al (2011) established that most students were technologically ready as they were already using their phones on activities such as surfing the internet, taking photos and sending multi-media messages. Nevertheless, according to Brown and Diaz (2010), at a focus session
on mobile learning that was held by the Eli Community, participants were advised never to assume that students have expertise other than listening to music. Brown and Diaz (2010) argue that mobile technology might be in students' hands, but the expertise needed to use it effectively for course work and assignments might not be.

Effects of mobile phones in schools

Studies conducted elsewhere have revealed that the use of mobile phones in learning has an effect of motivating pupils to learn. According to Rahamat et al (2011) students nowadays are surrounded with technological gadgets; they are from the Net-generation and do not suffer from technophobia. Prensky (2001) indicates that today’s children are digital citizens who like to learn using digital gadgets such as mobile phones, computers, music players, and game stations. Rahamat et al (2011) is of the opinion that the integration of mobile devices like mobile phones for school students is an alternative to increase their interest in learning.

It has also been established that mobile phones enable learners to be mobile. Osang et al (2013) commented that as mobile technologies, mobile phones facilitate anytime-anywhere learning whereby learners can learn at home, during the way home, or to school at any time. Ford and Batchelor (2007) believe that since a mobile phone is a portable device and can be used anywhere, anytime, the teacher is able to take the technology to the learner and it also opens up the possibility of using the technology on field trips and out of typical classroom environments.

Nevertheless, previous studies have also depicted that mobile phones can impair academic performance. A study conducted by Duncan, Hoekstra and Wilcox (2010) indicated that students who reported no cell phone use earned significantly higher grades than those who used mobile phones in the class. Therefore, Duncan et al (2010) say that if students miss instruction while engaging with digital devices, they may end up earning lower grades. Ryer (2013) who shares the same sentiments notes that students may exhibit decreased attention of the content being learned by focusing on their phones. This is corroborated by Ali (2013) who posits that, if the student is using the cell phone in the class, then the student is not paying attention. A study conducted by Rumanyika and Mashenene (2015) showed that 58% of their respondents agreed that they always write or receive messages during the classroom lecture. Shrivasta and Shrivasta (2014) also found out that most of the time teachers have to ask the students to switch off or keep their phones in silent mode and 86% of their respondents confirmed that they ask their students to switch off the phones.

Studies have shown that learners have tendency to misuse mobile phones in the classroom and this can lead to poor academic performance. Ali (2013) found that the most forms of misuse in the classroom include texting, cheating, sexting, playing games and making calls or text messages to friends outside the classroom during the lesson. Ali (2013) also writes that students feel they have the right to use mobile phones in the classroom over their teacher’s objection. Ali (2013) shows a picture of a student saying to his friend over the phone, “let me call you back the teacher is distracting me.” Students may therefore feel that the presence of the teacher deprives them of their right to use mobile phones. As a result a student can resort to answer, make calls or text messages under the desk. Ford and Batchelor (2007) argue that there is no question that currently there is a lot of under the table use of mobile phones in the classroom.

Concentration is also affected when a mobile phone rings in the classroom and this also impairs achievement. End, Worthman,
Mathews and Wetterau (2010) carried out a study to find out how cell phone rings affect notes taking. In their study, seventy-one students were asked to take notes on an educational video that was being shown to them under either ringing or controlled condition. Under ringing condition a confederate caller phoned a confederate recipient who was sitting in the class room. The phone rang for five seconds while the confederate recipient searched through a back pack. In the controlled condition there were no cell phone disruptions. The participants were then asked to complete a multiple choice test that assessed their ability to recognize factual video content. Participants in the ringing condition scored worse than participants in the controlled condition on disrupted items. So End et al (2010) conclude that cell phone rings negatively affect concentration.

Not only have studies portrayed that mobile phones impair academic performance, but they also distract lessons. In a study conducted by Rumanyika and Mashenene (2015: 45) to find out challenges to mobile phone management in higher education institutions, one responded said that:

Real, our attention is always disturbed whenever there are ring tones or SMS alerts. Also, students who receive or make calls during classroom lectures disturb our attention. Similarly, the tendency of students walking outside the classroom to receive or make calls or text SMS is an inhibitor for our attention as they create a lot noises due to movements.

Ali (2013) is of the similar notion as he states that a student may cause more distractions when he or she picks up the phone and go outside to answer the call. What is especially disturbing is that the cell phone ring, “happens during an important part of a lecture or discussion, just when a critical point is being made and suddenly the teachable moment is lost,” (Gilroy 2003: 56).

Institutional perceptions towards the use of mobile phones

In a study conducted to find out the perceptions of teachers towards the use of mobile phones in the class room, Ryer (2011) discovered that thirty-five out of fifty four teachers believed that mobile phones should not be banned in schools. Several studies have however, shown that school administrators and teachers have negative attitude towards cell phone learning and it is this factor that has mainly contributed to the failure of the cell phone to penetrate the History classroom. A study carried out by Obringer and Coffey (2007) revealed that twenty-four percent of the school principals in America did not allow students to use cell phone. In a study conducted to assess the attitude of college teachers towards the use of mobile phones, Shrivasta and Shrivasta (2014) discovered that eighty-one percent of the teachers supported the view that there should be clear policies restricting the use of mobile phones in college classrooms. Kihwele and Bali (2013) conducted a study to find out the perceptions of parents, teachers and students towards the use of mobile phones and they found that the majority of teachers believe that owning a cell phone while in school leads to misbehaviors like being at a wrong place in order to get space to use the phone secretly. Teachers even believe that students can be influenced by mobile phones into having love affairs. A respondent in the study by Kihwele and Bali (2013: 103) lamented that:

We caught two girls using mobile phones in toilets around 11 pm while others were sleeping….When the phone was taken it had 112 messages of which only 2 were from brother and mother. The other 110 were purely romantic messages: you can imagine how serious it is.
School administrators and classroom practitioners are also of the opinion that mobile phones can negatively affect learning. According to Shrivasta and Shrivasta (2014), teachers in their study felt that students using their mobile phones while studying not only disturb the teaching but also a reason of their poor performance. Eighty-one percent of the respondents believed that the cell phone is one of the reasons for the lack of concentration among students. The same authors also discovered that teachers feel that mobile phones lead to poor academic performances as students spend their time sending love messages instead of studying.

Research methodology

This study was a case study that explored and investigated contemporary real life phenomenon, that is, the use of mobile phones in schools, through detailed contextual analysis of selected schools in Chegutu urban, Zimbabwe. The design was chosen because the detailed qualitative accounts provided by case studies helped to explain the complexities of real life situations which may not be captured through other designs (Creswell, 2007; Yin, 2003). The design also required the researcher to study a few cases that exposed detailed views of stakeholders on why mobile devices continue to be neglected as instructional media. In order to generate data from participants, the study utilised face to face interviews. This was because interviews are the best way of achieving high quality data generated from the people affected by the use of mobile phones in schools (Creswell, 2007; Yin, 2003).

Population and sample

The population of the prospective participants was 277. This consisted of 3 school heads, 40 Advanced level teachers, and 234 advanced level students. These different groups of prospective participants helped to unravel a diversity of views towards the use of mobile phones in schools by students. Out of the total population, 32 participants were chosen purposively as 2 school heads, 10 teachers and 20 learners. The participants were deemed adequate for a qualitative study.

Presentation and discussion of findings

Research question 1: To what extent are students ready to use mobile phones in learning process?

The findings from this research have indicated that the majority of the students have mobile phones that they either kept at home or brought clandestinely to school although they were aware of the risks of the devices being confiscated by the school authorities. Contrary to the current findings, Ford and Batchelor (2007) discovered that most pupils at a government school in Tshwane in South Africa did not have access to mobile phones. This was because the government school was poor (Ford and Batchelor, 2007) and hence many pupils there did not afford to purchase mobile phones. These findings, however, replicate those by Rahamat et al (2012) who discovered that the majority of the students in Negeli, Sembilan had mobile phones. Fahad (2009) also discovered that most students in Saudi Arabia owned mobile phones. Osang et al (2013) also discovered that most students in Nigeria had mobile phones.

However, when it came to the availability of web-enabled smart mobile phones, the majority of students indicated that they did not have such devices. A respondent in a study by Young and Heym (2008) concurred by noting that the costs of wireless internet smart phones meant that they are not ubiquitous among secondary school students. In consensus, Khrisat and Mahmoud (2013) explain that most of the modern multi-facility mobile phones are not cheap to buy as they
cost anywhere between one hundred United States Dollars to more than five hundred United States Dollars. This replicates the findings by Kim et al (2013) who discovered that only forty-eight percent of the fifty-three students they surveyed had web enabled mobile phones. Osang et al (2013) also found out that twenty-four percent of the students in Nigeria had smart phones which would access the internet.

In contrast, however, Rumanyika and Mashenene (2015) established that the majority of the students in the upper levels at the College of Business Education in Tanzania had smart phones. In concurrence, Engel and Greene (2007) discovered that seventeen out of eighteen students in their pilot research had mobile phones. The difference in the present findings and those from other previous researches may be a result of differences in geographical areas. A study carried out by Rumanyika and Mashenene (2015) took place at a higher education institution where students need advanced mobile phones for carrying out on-line researches. On the other hand, Engel and Greene (2007) concentrated at an American school where many parents can afford advanced mobile phones for their children. The findings of this research may indicate that many parents are not able to make provisions for purchasing smart phones for their children.

The current study indicated that there is a difference between the actual availability of advanced mobile phones among students and the perception of the school administrators and teachers. Whereas most students have indicated that they do not own mobile phones that can access the internet, the majority of school administrators and teachers refuted the notion that mobile phones are not being used in schools because students do not afford web-enabled mobile phones. The administrators pointed out that the costs of web enabled mobile phones are continuing to decrease as more advanced but less expensive mobile phones are continuously being available on the market. One respondent stated, “with fifty United States Dollars you can purchase a new cell phone these days and used mobile phones are even much cheaper.” It therefore appears that school administrators and teachers assumed that most students had advanced mobile phones. Nevertheless, the responses of the administrators and teachers indicated that it is not the factor of whether mobile phones are available or not that is militating against the use of mobile phones in the teaching and learning process as there is already a belief that students can afford web-enabled mobile phones.

On the issue on whether students are not ready for the use of mobile phones because they do not have the knowledge on using mobile phones, half of the school administrators believe that students have the knowledge. However, the other two administrators believe that the larger section of the students at the case school do not yet know the use of mobile phones in learning. One of the participants lamented, “playing music on the cell phone is what most of our students are capable of doing with mobile phones.” All the teachers have indicated that students do not have the knowledge of using mobile phones in learning. The larger section of the students themselves admitted that pupils do not have the knowledge of using mobile phones in learning. This therefore means that while students are using mobile phones in their day to day lives, they do not have the knowledge of how mobile phones can be used in the teaching and learning. The view that students do not have the knowledge of using mobile phones in learning has also been observed by Brown and Diaz (2010) who argue that mobile technology might be in students hands, but the expertise needed to use it effectively for course work and assignments might not be. This differs from the observation made by Rahamat et al (2013) who concluded that most students in Negeli,
Malaysia were technologically ready to use mobile phones in learning. Students in the schools under study are therefore not technologically ready for the use of mobile phones in the teaching and learning process.

**Research question 2:** What are the effects of using mobile phones in the teaching and learning process?

Most participants acknowledged that using mobile phones in teaching and learning process has an effect of motivating pupils as mobile phones make learning interesting. Rahamat et al (2011), are in harmony with the current study as they note that students nowadays are surrounded by technological gadgets. They are from the Net-generation and do not suffer from technophobia. Prensky (2001) also shares the same opinion as he indicates that today’s children are the digital citizens who like to learn using digital gadgets such as mobile phones, computers, music players and game stations. Rahamat et al (2011) found that the integration of mobile devices like mobile phones for school students is an alternative to increase their interest in learning.

The current study also established that mobile phones can enable the learners to be mobile. One participant explained, “Since they are themselves mobile, mobile phones help the learner to learn anytime anywhere as long as there is network coverage.” The findings from this research are therefore in harmony with the findings from other researches. Mehdipour and Zerehkafi (2013) concluded that as mobile devices, mobile phones help pupils to learn anywhere; in a classroom, at the dining room table, in a bus and anywhere. Kim et al (2006) included mobile phones among mobile wireless technologies which provide the freedom of anytime, anywhere learning. Kim et al (2013) subscribed to the same view by concluding that mobile technologies such as mobile phones enable students to engage more frequently in learning activities outside of class. School communities are therefore aware of the benefits of mobile phones in the teaching and learning activities.

Findings of this study reveal that all the school administrators and teachers confirmed that the use of mobile phones can impair academic performance due to classroom misuse of mobile phones. The majority of the participants indicated that students can misuse mobile phones during lessons by texting messages, making calls and playing games instead of paying attention to the teacher. Other common classroom misuse of mobile phones that have been indicated by the participants included viewing pornography and exchanging music via the blue tooth during lessons. The findings from this research are in harmony with the observations made by Duncan et al (2010) who concluded that if students miss instruction while engaging with digital devices, they may end up earning lower grades. Ryer (2013) also discovered that mobile phones can affect the achievement of students when they exhibit decreased attention of the content being learned by focusing on their phones. This is corroborated by Ali (2013) who posits that, if the student is using the mobile phone in the class, then the student is not paying attention.

All the administrators and teachers have admitted that mobile phones distract lessons when they ring in the classroom. Even the majority of students admitted that mobile phones distract attention and the smooth flow of the lesson when they ring. Rumanyika and Mashenene (2015) also discovered that students’ attention is affected by ringing tones in the classroom. Ali (2013) is of the similar notion as he states that a student may cause more distractions when he or she picks up the phone and go outside to answer the call. In concurrence Gilroy (2005) found out that the cell phone ring occurs during an important part of a lecture or discussion, just when a critical point is being made and suddenly the teachable moment is lost.

**Research question 3:** What is the attitude of school administrators and teachers towards the use of mobile phones in the classroom?
The findings from this research have revealed that the school heads have mixed feelings on whether or not mobile phones should be allowed in the teaching and learning process. The school heads that supported the use of mobile phones, cited the uses of mobile phones when researching, exchanging history material through messages and listening to radio programmes on the mobile device radio. Those who did not want the use of mobile phones during lessons mentioned that when students are allowed to bring mobile phones to school, it would be difficult to control them. According to the findings from this research, most teachers did not want mobile phones to be used in the teaching and learning process. Most administrators and teachers had negative attitudes towards the use of mobile phones in the classroom. This contrasts the findings by Ryer (2011) who noted that the majority of teachers at Maple Park High School in America believed that mobile phones should be used in schools. This may be because the school policy at Maple Park High School allowed teachers to use mobile phones in class at their discretion (Ryer, 2011) and therefore, teachers there already experienced the effectiveness of mobile phones in the classroom.

The current research concurs with Shrivasta and Shrivasta (2014) who discovered that teachers feel that mobile phones lead to poor academic performances as students spend their time sending love messages instead of studying. These findings are also corroborated by Kihwele and Bali (2013) who founded that the majority of teachers believe that owning a mobile device while in school leads to misbehaviors like being at a wrong place in order to get space to use the phone secretly. This implies that the negative attitude of some in the school communities towards the use of mobile phones as instructional technologies is influenced by the negative effects of mobile phones in learning. This may also indicate that the negative attitude towards the use of mobile phones is a major factor militating against the use of mobile phones in the sampled schools.

Conclusions

This study therefore concludes that:
• While a good number of learners have mobile phones and other related devices, these are very expensive for the majority of the learners more so the latest smart phones that can be used to access the internet to access academic books and other e-resources.
• Students at the case schools are not ready to use mobile phones in the instructional process as shown by their lack of expected discipline to use the mobile devices purely for academic purposes during the duration of the school hours.
• While the majority of the learner participants have a positive view of the use and adoption of mobile phones in schools, most school heads and teachers have reservations towards their use in the teaching and learning process.
• Mobile phones and related devices can either compliment the teaching and learning process to greater extent as they allow learners to access information that may not be available in the school libraries.
• The mobile devices can also negatively affect students’ achievement if there are no measures in place to curb their unnecessary use that can see the learners resorting to absconding lessons to attend to phone calls and text messages during the learning process.

Recommendations

In the light of the above conclusions, the study recommends that:
• Due to the fact that most learners are able to purchase mobile phones, schools should allow these to be used as they lessen the financial burden of schools as books and other resources can be accessed at little or no cost.

• With new curriculum policy framework at all levels of primary and secondary education encompassing the use of ICTs, there is need for new mental shifts towards embracing mobile phones in schools.

• Stakeholders who include school heads, teachers, students and parents should be oriented on the best use of mobile phones in the teaching and learning process with the view of coming up with acceptable policies that would be adhered to for effective use of the devices for instruction.

• Schools can develop rules and regulations from a national policy framework to govern the use of mobile phones in the schools rather than give a blanket ban to this latest and important technology.

• Training workshops on the use of mobile phones in teaching and learning should be conducted for teachers and students.

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