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## An Exploration on the Impact of Mobile Computing Systems in Private Schools

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### **Abstract:**

*The study explored the impact of mobile computing systems in private schools. It focused on two private schools in Harare. The sample comprised of forty students and ten teachers and two school administrators. Questionnaires and interviews were used to solicit data from the teachers and the pupils. The findings from the study revealed that face book, twitter and two are seen by many educators as a frivolous, time-wasting and distractive. Some respondents suggested that there is need to block these social networks as a form of protecting students against wasting time, bullying, and invasions of privacy. On a positive note it promotes a participatory culture which consists of a space that allows engagement, sharing, mentoring, and an opportunity for social interaction. It was also established that in private schools low usage is caused by school policies that prohibit the use of games. All participants acknowledged the use of mobile computing system in private schools by both teachers and pupils. They proposed that it will facilitate easy access to the internet for research purposes during the learning and teaching endeavours. They can also access online books, databases, notes, presentations including audio and video files. As a result it promotes collaborative learning. Communication is also enhanced through the use of emails. The researchers recommended schools should come up with ICT policy that can reduce challenges of prohibiting making or receiving of calls, watching video and playing music during lessons. Strict measures should be put in place to further block students from visiting unproductive websites. Schools should introduce loans where teachers, pupils and administration staff can borrow to buy the much needed mobile computing systems*

**Keywords:** Network, scaffolding, zone of proximal development, self-expressive, feedback, social skills, constraint

### **1. Background**

Michigan State University working with Creative Associates, International, USAID, and the Middle East Partnership Initiative (MEPI) developed and implemented a three-year program to address the issues of infusing technology into the Algerian secondary education system and established that peer-to-peer interaction yielded very positive results (Olson, Codde, De Maag, Tarkleson, Sinclair, Yook & Egidio, 2011). This reflected that schools in Algeria are permitted to make use of technology in their teaching and learning endeavours. A study carried out also revealed that Nigeria is on the wrong side of the international digital divide since it has not made significant effort to integrate ICT into secondary school curriculum (Aduwa-Ogiegbaen & Iyamu, 2005). Eluwole, Udoh, Olugbenga and Ojo (2014) have noted that the Internet has moved the world forward; also, as a result of using the Internet, a lot has gone wrong, quite a lot is going wrong, and a lot more could go wrong. They further proposed that there is need to develop a balance on how to manage the deployment and efficient use of the Internet so that it can be fit for purpose. A study to investigate the effects of information and communication technology (ICT) on school from teachers' and students' perspectives was also carried out by (.Ilomäki, 2008). Results indicated that students are capable and motivated users of new technology. The world has moved on from teacher centred way. Electronic resources are important because all the information that can be found worldwide is now available. Despite the fact that we are not close to each other we are now connected to each other. It's important because it allows students to access information wherever they are. Electronic resources are made to aid the teaching and learning. Chingombe and Dzimiri (2015) also carried out a study in Zimbabwean on controversy over the use of cell phones in schools. They suggested that since we are in the era of technology students should be allowed to use their cell phones in schools. This has prompted the researchers to further explore the impact of mobile computing systems in private schools in Harare.

#### *1.1. Theoretical Framework*

Electronic resource promotes pupils to become the 21<sup>st</sup> century students who can easily access information through the computing systems. It is through the use of the computer that children acquire more information that enables them to develop intellectually. Ahmed & Qazi (2011) noted that the use of computers, the internet and related techniques one can learn independent of a teacher or face to face tutorial but still producing good results. According to Vygotsky the key to enable children to continually proceed through

their zone of proximal development is reached through assistance provided by others (Sprinthall, Sprinthall & Oja, 2006). Thus, as students are using the computing systems they will be in a position to assist each other with research and homework tasks. This is fully achieved through scaffolding. Through scaffolding a more skilled person (teacher or more advanced peer of the child) adjust the amount of guidance to fit the student's current performance (Santrock, 2004). Scaffolding is thus a form of support that facilitates a child or novice to solve a problem or achieve a goal which would be beyond his unassisted efforts. The more knowledgeable other (MKO) is anyone who has a better understanding or a higher ability level than the learner, particularly in regards to a specific task, concept or process (Donald, Lazarus and Lolwana, 2010). Traditionally the MKO was thought of as a teacher or an older adult. However, this is not always the case. Other possibilities for the MKO could be a peer, sibling, a younger person, or even a computer. The key to MKO is that they must have more knowledge about the topic being learnt than the learner does (Arends, 2009). Teachers or more capable peers can raise the student's competence through the zone of proximal development (ZPD). Students should be taught how to use tools such as the computer, resource books, and graphs in order to better utilize these tools in the future (Snowman and Biehler, 2009). In this way, students will benefit as these tools and technologies influence the individual's thinking.

### 1.2. Social Networks on Mobile Computing Systems

Social network sites are defined according to Ahmed & Qazi, 2011a) as web-based services that allow individuals to: Construct a public or semi-public profile within a bounded system, articulate a list of other users with whom they share a connection, and view and traverse their list of connections and those made by others within the system. The nature and nomenclature of these connections may vary from site to site. What makes social network sites unique is not that they allow individuals to meet strangers, but rather that they enable users to articulate and make visible their social networks.

Social Networking describes the phenomena found in, participatory and self-expressive Web sites such as Whatsapp, MySpace, and Facebook where members or participants expose, discuss, reveal, and expound on their personal lives, activities, hopes, dreams, and even fantasies for others to see and marvel upon. The growth of social networking sites shows a significant change in the social and personal behavior of Internet users.

Hew (2011) defines the term social networking as referring to "the networked tools that allow people to meet interact and share ideas, artifacts and interests with each other. Online social networks provide teachers and pupils with a platform in which they can interact beyond the constraints of the school walls, and with which the teachers can provide personalized feedback and support."

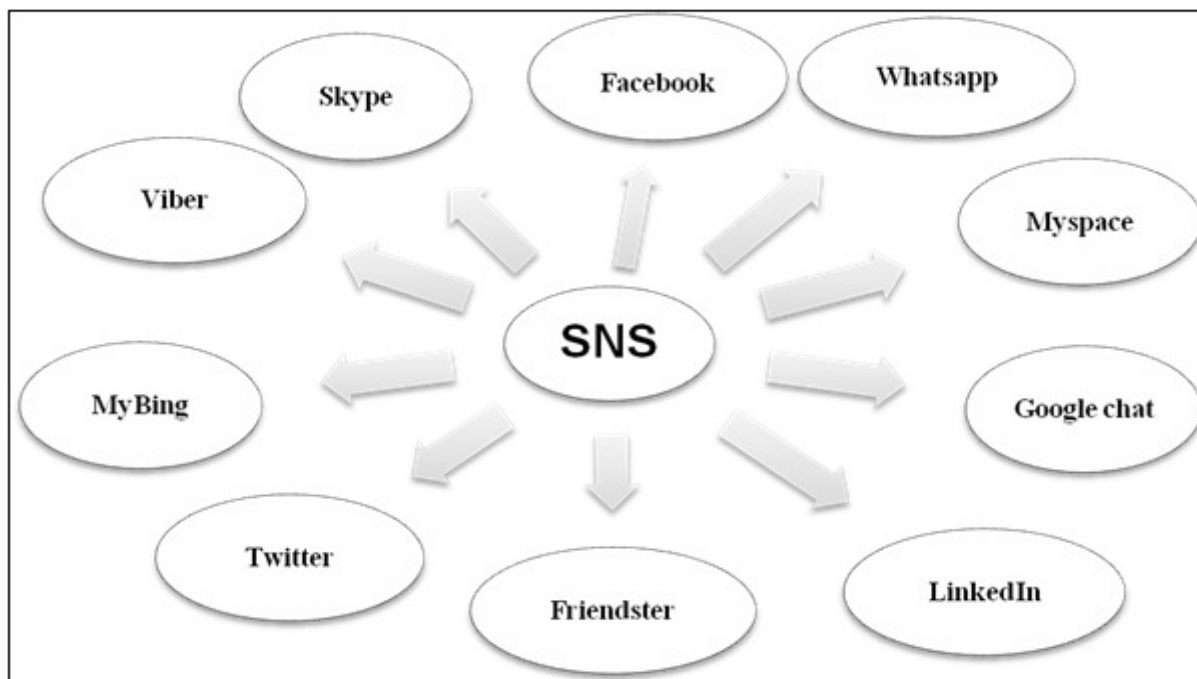


Figure 1: Online social network services

Another definition of social networking is given according to (Boyd & Ellison, 2007) as web-based tools that allow users to develop a public or quasi-public profile, electronically communicate with other users with whom they share a connection, and view and comment on their list of communications with other members of the group.

Similarly, (Griffith, 2008) outlined that a social networking site is defined as any website designed to allow multiple users to publish content of themselves. The information may be on any subject and may be for consumption by friends, mates, employers, employees just to mention a few. One of the first social networking websites was sixdegrees.com. It was named after the six degrees of separation concept and allowed users to list friends, family members and acquaintances both on the site and externally.

### 1.3. Learning uses of Online Social Networks within Education

Educators and advocates of new digital literacy are confident that social networking encourages the development of transferable, technical, and social skills of value in formal and informal learning. In a formal learning environment, goals or objectives are determined by an outside department or agency. Instant messaging, tweeting or blogging enhances student involvement.

Students who would not normally participate in class are more apt to partake through social network services. Networking allows participants the opportunity for just-in-time learning and higher levels of engagement. The use of SNSs allows educators to enhance the prescribed curriculum. When learning experiences are infused into a website, students utilize everyday for fun; students realize that learning can and should be a part of everyday life. It does not have to be separate and unattached.

Informal learning consists of the learner setting the goals and objectives. It has been claimed that media no longer just influence our culture. They are our culture. With such a high number of users between the ages of 13-18, a number of skills are developed. Participants hone technical skills in choosing to navigate through social networking services. This includes elementary items such as sending an instant message or updating a status. The developments of new media skills are paramount in helping students navigate the digital world with confidence.

Social networking services foster learning through what (Brandtzæg, 2012) describes as a "Participatory Culture." A participatory culture consists of a space that allows engagement, sharing, mentoring, and an opportunity for social interaction. Participants of social network services avail of this opportunity. Informal learning, in the forms of participatory and social learning online, is an excellent tool for teachers to sneak in material and ideas that students will identify with and therefore, in a secondary manner, students will learn skills that would normally be taught in a formal setting in the more interesting and engaging environment of social learning.

Sites like Twitter provide students with the opportunity to converse and collaborate with others in real time. Social networking services provide a virtual "space" for learners. James and Gee (2004) suggests that affinity spaces instantiate participation, collaboration, distribution, dispersion of expertise, and relatedness.

## 2. Research Methodology

A Research design is considered to be the *logic or master plan* of a research that throws light on how the study is to be conducted (Creswell, 2003). The researchers adopted a mixed method approach. According to Bhattacharjee, (2012) the term mixed methods research is the type of research design in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches (e.g., use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth and depth of understanding and corroboration. Bless and Higson-Smith (2010) add that a sample is a subset of the whole population which is actually investigated by a researcher and characteristics are generalised to the entire population. A sample of twenty pupils, ten teachers and two administrators was selected. Participants will be purposively chosen because of their suitability in advancing the purpose of the study (Creswell, 2007). Data were solicited through the use of interviews, questionnaires. A sample of twenty students and ten teachers was used and two administrators were used.

### 2.1. Research Findings

The study revealed that most pupils preferred mobile operating system on their mobile devices. However, Google Android and Microsoft Windows are the most widely used operating systems. User-friendliness and compatibility with many applications were reasons why pupils, teachers and admin staff chose these operating systems. It was also noted that pupils use one hundred percent on academic issues whilst eight percent use it on social networks. Games and open source applications are least used in private schools by all stakeholders. Low usage is caused by school policies that prohibit the use of games. Research on internet has ninety eight percent and multipurpose has eight three percent. This is evidence that even though there were some restrictions there were some people using the computing systems for games.

All teachers use mobile systems most on for record keeping. Ninety four percent use it on researching whilst ninety two percent used it on teaching purposes. On the other hand, administration staff used mobile computing systems mostly on research and social networks. In response that sought to find out whether pupils should be permitted to use mobile computing systems in private schools some mixed views were aired by the respondents.

All participants agreed that pupils should use mobile computing system. They cited that pupils will have access to the internet for research purposes and learning and teaching. Through the use of computing systems it will be easy to access online books, databases, notes, presentations including audio and video files. This is portable as compared to textbook backpack. It also enhances effective teaching and learning by pupils and teachers respectively. Consequently pupils will engage in collaborative learning. Email communication will be necessitated amongst teachers, pupils and admin staff. They noted that moving with technology which leads to innovations. Pupils applauded use of computing systems for it enhances them to access to up-to date information and past question papers and free literature. They also revealed that they download supporting information in images on internet to help with assignment. They can also exchange information and experiences with teachers. Teachers can also upload materials related to specific topics that pupils can read while using social network sites. It can also be used as forum where pupils can clear doubts.

Some teachers were disagreeing that both teachers and pupils should not be permitted to use mobile computing system. A pictorial presentation is show below:

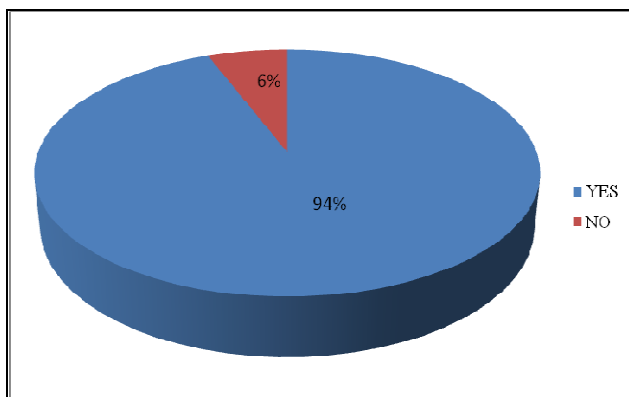


Figure 2: Should pupils use mobile computing systems in private schools?

Six percent of the respondents who disagreed that pupils should use mobile computing systems were of the view that they will access to unwanted sites. They were of the opinion that they can end up abusing social networks even during lessons. Lessons can also be disrupted when pupils receive phone calls during lessons.

Views from the respondents on the benefits of mobile computing systems are summarised below:

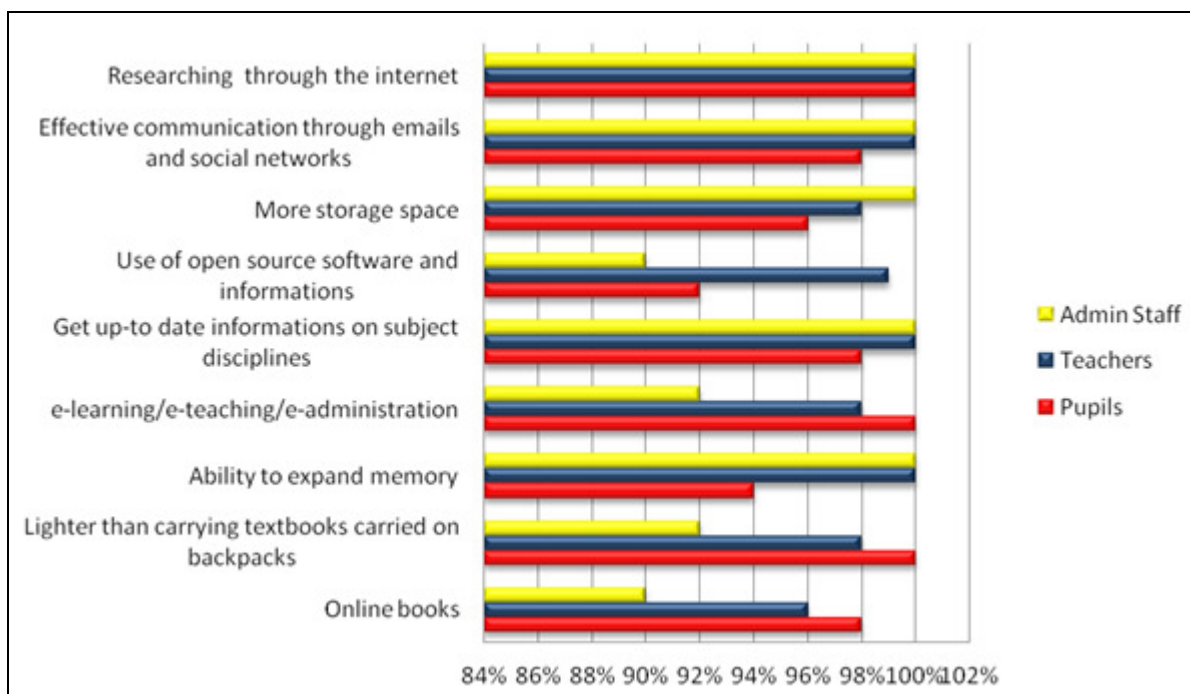


Figure 3: Benefits of using mobile computing system in private schools

Some teachers felt that outpouring of identifiable information and the easy communication vehicle that social networking service opens the door to sexual predators, cyber bullying, and cyber stalking. Some teachers were of the opinion that if schools block them [social networking services], they're preventing students from learning the skills they need. They indicated that banning social networking is not only inappropriate but also borderline irresponsible when it comes to providing the best educational experiences for students. They rather suggested that schools have the option of educating safe media usage as well as incorporating digital media. In addition to a concern for digital divides affecting the participation of young people in SNSs, studies that examine these differences also enlighten other research concerns. For example, many of the popular questions surrounding students and SNSs ask what effects these technologies have on outcomes such as academic achievement or the development of social relationships (Ahn, 2011a). Social network sites may assist students in developing better relationships, or social capital, with their network (Ellison, *et al.*, 2007; Valenzuela, *et al.*, 2009). Conversely, social media tools may also facilitate negative and dangerous interactions for young people such as breaches of privacy and cyber bullying (Palfrey, *et al.*, 2009).

Social networks have many benefits apart from distracting students from learning. The benefits of Face book's networking and social communication capabilities can benefit both the teachers and the pupils by tapping into a greater number of learning styles, providing an alternative to the traditional lecture format, creating an online classroom community, and increasing lecturer- student and student – student interaction. Online Social networking sites are used for educationally related activities, including significant educational innovations such as interactive and collaborative learning. Social networking is a tool, with both its advantages and problems for usage in lecturing and learning. Despite the potential benefits they have identified, harnessing social technologies offers both opportunities and challenges.

### 2.2. Recommendations

Based on results of the study, researchers also recommended that pupils, teachers and admin staff in private schools must use Windows operating systems for laptops and Google Android for tablets and smart phones. Schools can introduce loans where teachers, pupils and admin staff can borrow to buy the much needed mobile computing systems. Private schools teachers must use them for teaching; pupils for learning and administration staff for administrative purpose. All private schools must craft their ICT policy in-line with National ICT policy. This policy will prevent unauthorised access to the mobile computing system both physically and logically. The private schools can configure Proxy Servers and set up firewalls, digital certificates, User IDs and passwords that prohibit unauthorized to unwanted sites. Physical security can be implemented to curb theft and loss of mobile computing devices.

### 2.3. Areas of Further Research

The researchers suggest further area of study on:

- Mobile computing systems in primary schools
- Mobile computing systems in higher and tertiary education
- Mobile computing systems in other sectors of the economy

### 3. References

- i. Aduwa-Ogiegbaen, S. E., & Iyamu, E. O. S. (2005). Using Information and Communication Technology in Secondary Schools in Nigeria: Problems and Prospects. *Educational Technology & Society*, 8 (1), 104-112. U.
- ii. Ahmed, I. & Qazi, T. (2011a). A look out for academic impacts of social networking sites (SNSs): A student based perspective. *African Journal of Business Management*, 5(12),5022-
- iii. Arends, R.I (2009). *Learning to Teach 8<sup>th</sup> Edition*. New York: McGraw Hill.
- iv. Bhattacharjee, A. (2012). *Social Science Research: Principles, Methods and Practices*. Creative Commons Attribution-Non Commercial-ShareAlike3.0. USA: Unreported License.
- v. Brandtzæg, P. B. (2012). Social implications of Internet and social networking sites: A user typology Approach. Doctoral thesis submitted for the degree of PhD. University of Oslo.
- vi. Brandtzaeg, P. B& Heim, J. (2011). A typology of social networking sites users. *International Journal of Web Based Communities*.
- vii. Chingombe, S.I and Dzimiri, C ( 2015) Controversy over the Use of Cell Phones in Zimbabwean Schools, *International Journal of Innovative Research & Development* , September, 2015 Vol 4 Issue 10 , ISSN 2278 – 0211 (Online).
- viii. Creswell, J (2007). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. Thousand Oaks. CA: Sage Publications, Inc.
- ix. Donald, D., Lazarus, S. & Lolwana, P. (2010) *Educational Psychology in Social Context: Ecosystemic Applications in Southern Africa (4th Edition)*. Cape Town: Oxford University Press Southern Africa (Pty) Ltd.
- x. Eluwole, O.T,Udoh, N.S Olugbenga and Ojo , D (2014) The Impact of Internet on African Education and Culture, *International Journal of Business, Humanities and Technology* Vol. 4, No. 3; May 2014.
- xi. Griffith, S. (2008). An introduction to the potential of social networking sites in education. *Proceedings of the Emerging technologies Conference, University of Wollongong*, 18-21.
- xii. Hew, K. F. (2011). Students' and teachers' use of Face book. *Computers in Human Behavior*, 27(2), 662-676.
- xiii. Ilomäki, L (2008) The effects of ICT on school: teachers' and students' perspectives. *Painosalama Oy – Turku, Finland*.
- xiv. Olson , J ,Codde, J, De Maag, K ,Tarkleson ,Sinclair, J ,Yook, Sand Egidio, R ( 2011) *An Analysis of e-Learning Impacts & Best Practices in Developing Countries With Reference to Secondary School Education in Tanzania*, Michigan State University Board of Trustees, USA.
- xv. Santrock, J.W. (2004) *Educational Psychology (Second Edition)*.New York: McGraw-Hill.
- xvi. Snowman, J, McCown, R & Biehler, R (2009), *Psychology applied to teaching*, Canada, Wadsworth Cengage Learning.
- xvii. Sprinthall, N.A.,Sprinthall, R.C. and Oja, S.N. (2006) *Educational Psychology: A Developmental Approach (6<sup>th</sup>Edition)*.New York: McGraw-Hill.