The effects of Cell phone use on the study habits of University of Zimbabwe First Year Faculty of Arts students.

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ABSTRACT

The objective of this study is to examine the effects of cell phone use on the study habits of University of Zimbabwe 1st year Faculty of Arts students. The research was carried out using questionnaires distributed to 200 students who own cell phones .The questionnaires collected demographic information about the respondents, cell phone type preferences, uses of cell phones during study, predominant usage during study and information about challenges facing students in using mobile phones for study purposes. The results showed significant gender differences in several aspects of cell phone use .The results also revealed that cell phone use has negative and positive effects on the study habits of university students depending on usage patterns .The study concluded that despite the challenges faced by students ,cell phones unlike other educational innovations are firmly rooted in the society in which education and institutions are part of and ignoring the use or applications of this technology would be ill-advised.
Key words: Cell phone, study habits, University of Zimbabwe

INTRODUCTION

This study investigates the effects of cell phone use during study on the study habits of University of Zimbabwe 1st year Faculty of Arts students. Many students starting university do not always possess the prerequisite skills to cope with the challenges of the new and changing learning environment. An environment where they are expected to study without being told specifically what or when to study. Ultimately their success or failure within university courses is determined by their ability to adopt the most appropriate strategy within a particular learning situation .In order to become effective independent learners in today's changing environment, there is need to focus more on what students are doing outside the classroom in terms of their study habits than on what students are doing in the classroom. Study skills are critical to academic success given the independent nature of university learning yet little attention has been paid to them in the Zimbabwean context.

 University students according to Ling (2001) are susceptible to trends, fashions and styles, which make them more willing to adopt new technology such as, cell phones .As new technologies emerge, the study habits of university students also evolve .Cell phones have changed the traditional college experience and to meet these challenges, learning institutions such as, the University of Zimbabwe must embrace the new technology for learning. Cell phone use has been increasing in all economic and age sectors and has expanded the boundaries of higher education

into an 'anytime, anywhere experience' (Prensky,2001:3)leading to university students been labelled as one of the most important markets and the largest consumer group of mobile phone services(Totten et al:2005,McClatchy:2006). Cell phones are presenting new means for students to access information thereby redefining the educational experience .Redefining this educational experience however presents new challenges for both educators and learners as they determine optimal mixes of technology and pedagogy.

Improving the study skills of university students is an area which lecturers and students alike agree is important .Unfortunately at the University of Zimbabwe ,this type of training is only left to Lecturers in the Communication Skills Department who introduce study skills to 1st Year Students in the Academic Communication Skills Course .In this course 1st year students are also taught about Information Literacy Skills and the trust is mainly on the use of Computers and Laptops leaving out the potential of cell phones as learning tools. The scenario at the University of Zimbabwe is also echoed by Azikiwe(1998) who point out that universities often simply provide a brief initial introduction to study skills to students in their 1st year and there after fail to provide the necessary and subsequent systematic advice and support leading to students failing to develop effective study skills. Every year the University of Zimbabwe admits 'the best and the brightest' and this homogeneous group of super achievers is really quite variable as some perform quite well and others do not. A few drop out and others continue their programmes with mediocre grades .These differences can be closely linked to study habits which according to Biggs (1987) and Meyer (1992) have been identified as one of the reasons for academic failure and dropouts.

The University of Zimbabwe has been concentrating more on Electronic-learning (E-learning) which can be defined as electronically supported learning and teaching of any kind leaving out M-learning(Mobile learning) (Brown:2005).E-learning does not necessarily require a connection to the internet as learning and teaching can be done through CD Rom's. M-Learning is a natural extension of E-Learning and it involves using mobile devices such as, cell phones ,smart phones and palmtops that allow students to learn in different environments and whilst on the move instead of being restricted to the classroom or library. Looking at how University students have embraced cell phone use ,there is a need for the university to also encourage M-Learning which is the use of wireless technology enabled devices for learning at anywhere, anyplace and anytime which makes information widely accessible.

Based on the extended usage of cell phones by university students in Zimbabwe the need appears to unravel the myth surrounding the use of cell phones as an aid to study and the effects it has on students study habits and academic performance . The significance of the study emerges from the fact that it attempts to identify the effects of cell-phone use on the study habits of university students and the role played by technology in supporting education, solving educational problems and promoting educational outcomes.

 The study is mainly guided by the following research questions:

1. What are the cell phone type preferences of University of Zimbabwe 1st Year Faculty of Arts students?

2. What do University of Zimbabwe 1ˢᵗ Year Faculty of Arts students use their cell phones for whilst studying?

3. What are the effects of cell phone use during study on the study habits of University of Zimbabwe Faculty of Arts 1ˢᵗ Year students?

4. What difficulties are faced by University of Zimbabwe Faculty of Arts 1ˢᵗ year students in using cell phones as study tools?

BACKGROUND TO STUDY

The cell phone is one of the most rapidly growing technologies in the world with more than six billion subscribers(UN Report: 2013).In Zimbabwe there are more than 12 million subscribers and these subscribers are mainly shared between Econet with more than 8 million subscribers ,followed by Telecel with around 2.5 million subscribers and Net One with slightly over 2.1 million subscribers(POTRAZ :2013) . A cell phone or cellular phone also known as a mobile phone is a device that can make and receive telephone calls over a radio link while moving around a wide geographical area(Prensky:2001).Modern cell phones support a wide variety of other services such as ,text messaging ,multi media messaging,email,internet access ,bluetooth, business applications ,games ,photography and calendaring among other services. The study prefers a broader definition of cell phones to also include smart phones as types of cell phones since they also perform some of the functions offered by a cell phone .A smart phone is a device that also makes calls but also adds on features that in the past where found on a personal computer such as, Microsoft documents, QWERTY keyboard, synchronising personal and professional e-mail accounts (Attwell: 2005).

The simplest way to tell a smart phone apart from a cell phone is that cell phones do not have an operating system whilst smart phones have an operating system such as ,Android or Windows.Cellphones are relatively low cost ,powerful, small, lightweight and with proper instructional design they promise educational opportunities because of their increased flexibility for learners. According to Prensky (2001),today's high end cell phones have the computing power of a mid-1990's computer and even the simplest voice only phones have more complex and powerful chips than the 1969 on board computer that landed a spaceship on the moon.

Study skills according to Al Hilawani and Sartawi (1997), are those skills and habits which are necessary for understanding and retrieving information. Key competencies of study include, acquiring information, recording information, recording appropriate responses to the presented information, locating the required information, organising and managing information ,synthesizing information to create meaningful patterns of responses ,memorising and retrieving information on demand(Hoover:1989).Azikiwe(1998)describes study habits as the way and manner a student plans his or her private reading outside lecture hours in order to master a particular subject of topic. Study habits can be good ones which lead to a student excelling or bad ones which can lead to a student getting mediocre grades. Effective and successful study consists of more than merely memorising facts but calls for knowing where and how to obtain information and the ability to

make intelligent use of it. Study habits directly reflect on one's learning ability and it is significant to find out the study habits of students in order to improve their learning.

LITERATURE REVIEW

A perusal of related literature highlights the increased use of increased digital technology by university students in learning and two views have emerged, advocates and opposers.Literature on M-Learning point to a variety of benefits and for heuristic purposes these impacts can be grouped into two broad categories, namely supposedly educational outcomes by improving access to education while maintaining the quality of education and purportedly impacts on educational outcomes by facilitating alternative learning processes and instructional methods. McNeal and Hooft (2006) found cell phones as important resources which make teaching more relevant and meaningful thereby improving students literary and numeracy skills. In another study Attewell (2004) reported how cell phone use encourages both independent and collaborative learning experiences and in the process raising self esteem and self confidence. Kukulska-Hulme and Traxler (2007) believe that cell phones are a form of multiple literacy which provides a bridge between the real life texts of the community and formal learning thereby providing a multimodal literary approach to learning.

Kukulska-Hulme and Traxler (2007) also revealed how cell phones facilitate designs for authentic learning leading to personalised learning that largely targets real world problems and involves projects of relevance and interest to the learner.Cellphone use has also been found to support lifelong learning that occurs during everyday life, learning that occurs in spontaneity and impromptu settings and outside the formal environment (Brown: 2005). Such personalised learning exerts a democratizing effect on the learning experiences of learners as they take greater responsibility for the learning process instead of being passively fed information by lecturers (dela Pena Bndalaria:2007).

Mcneal and Hooft (2006) point out that even though cell phones are popular their use in the learning environment has been met with some resistance from students and educators mainly based on the fact that they are "a source of irritation, delinquency and even crime" (Katz and James E: 2008) .Proponents of cell phone use strongly feel that cell phones are inappropriate tools for learning as they are actually harmful. Commonly cited negative effects of cell phone use in education include, chatting and texting when students should be studying. As Cumiskey (2005) notes, public use of cell phones transforms our roles from social participants to observer or user .In other words, it's not just the student using a cell phone who is affected but also the one who is studying closer to the user thereby constituting a disturbance to proximate others. Kawasaki (2006), Jeen -Hynn et al (2008) and Ling's (2005) reported how students who are preoccupied with their mobile phones tend to experience psychological distrurbances, depression, lower self esteem and interpersonal anxiety when they study without their cell phones.

 Helszer (2004) reports on how some Education administrators spend much time and energy developing policies and procedures to keep cell phones out of education at the expense of

developing sound policies that integrate cell phone use as knowledge construction and data tools. For example ,Gilroy(2004)pointed out that 85% of professors' surveyed in Germany stated that they wanted cell phones banned from tertiary education mainly because of students cheating in tests ,accessing unfiltered internet sites and secretly taking pictures without permission. Cell phone use has also been found to reduce students thinking abilities and shortening the attention span of students so dramatically that students struggle to read anything longer than a social network posting(Young:1996). Research has concluded that m-learning works best when used as part of a blend (Brown: 2005, McHugo and Hall 2006) that is ,as a supplementary tool that is used in combination with traditional methods such as, lectures, paper based materials and other ICT tools.

METHODOLOGY

For data gathering and to investigate the study questions a questionnaire with closed and open ended questions designed by the researcher was distributed to a sample of 200(100 male students and 100 female students) 1st year students in the Faculty of Arts in the Second Semester of 2012.The respondents were drawn from five departments namely, Department of English, Department of Religious Studies, Department of Modern Languages, Department of African Languages, Department of Economic History, Department of History and Department of Linguistics . The selection of the participants was random and the only criterion was ownership of a cell phone. The format of the survey was based on a mixed method of seeking qualitative and quantitative responses. The questionnaire consisted of 4 main parts; Part 1 collected demographic information about the respondents, Part 2 asked information about cell phone type preferences, Part 3 asked questions about uses of cell phones during study and predominant usage during study and Part 4 gathered information about difficulties facing students in using cell phones during study.
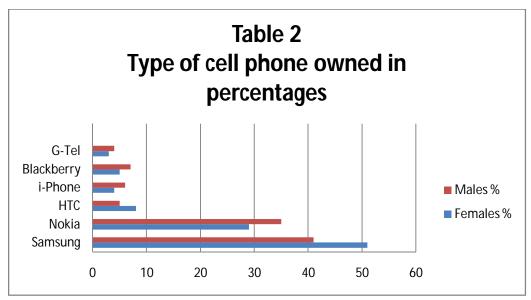
FINDINGS AND DISCUSSIONS
i)   CELL PHONE RANKING AND TYPE OF CELL PHONE OWNED

The 200 respondents, 100(50%) female students and 100(50%) male students had owned cell phones for more than six months and some for more than two years. The respondents were asked to rank four main categories of the cell phone selection namely price, available features, look and shape and brand. The respondents then indicated the type of cell phone they own.

Table1
Cell phone selection ranking by the respondents

	1st Place	2nd Place	3rd Place	4TH Place
Price	26.4%	36.4%	25.3%	12.3%
Brand	29.8%	30.3%	27.4%	31.0%
Available applications	24.2%	20.2%	26.3%	19.1%
Look and Shape	21.3%	14.2%	24.4%	21.3%

Table 2
Type of cell phone owned in percentages

The results in Table 1 show the importance of brand because this feature gets the most first rank in the sample but the price is also very important. When examined together the first rank and second rank, the results show, that the price gets the most votes. The importance of price is also evident in the number of last rank. Price is very critical to all students and it is the only thing between them and their favourite cell phone. The available applications were less important than price and brand even though most respondents preferred cell phones with internet, Whatsapp up or Viber applications. Correlations showed that usually the more expensive the device was the more applications it had.

Female students appeared not worried about the price but were more concerned with the brand, appearance and look while they ranked available applications lower. Male students ranked available applications higher than look and appearance and this confirms past research by Ling(2001),Bianchi and Phillips (2005) that male users are more attracted to technical application and features of the mobile phone such as games while females use the cell phone as a socializing tool.

After this ranking, the next question was on the type of cell phone owned by the respondent. The results in Table 2 show that the respondents prefer a Samsung cell phone which is owned by 46% of the respondents followed by Nokia with 32%.The third and fourth highest owned cell phones are HTC with 0.7% and Blackberry with 0.6%.The Apple i-Phone was owned by 0.5% of the respondents mainly because of its high price. G-Tel Cell phones were the least preferred mainly because it is associated with cheap Asian imitations.

The choice of a cell phone type and the reasons influencing type section of the respondents   can be understood in terms of several established models and theories in terms of adoption of technological products as such as, Theory of Reasoned Action (Fishbein and Ajzen (1975) and the Technological Acceptance Model (Davies:1989) .The two theories propose several antecedents which ,include perceived expressiveness (Cassidy et al:1992)which is how students express their identity ,individuality and emotions, perceived enjoyment(Davies:1992) which is the extent to

which students enjoy using their cell phones because of the various applications they have, perceived usefulness (Davies:1992),which is the belief that using a cell phone as a study tool can enhance their learning and perceived ease at use (Davies:1997),which is the degree to which students believe cell phone will provide easy access to information.

iii)   USE OF PHONE APPLICATIONS WHEN STUDYING

The third part of the questionnaire required respondents to evaluate their frequency of cell phone applications usage during study. The Likert scale contained the following categories of frequency;1=Never,2=rarely,3=often,4=always and 5=no response. All the respondents (100%) do not switch off their cell phones whilst studying and 65% indicated that they put their cell phones on silent when studying.

Table 3.
Respondents cell phone application usage when studying.

	Never	Rarely	Often	Always	No responses
Internet	22.9%	18%	20.1%	40.1%	0%
Text messaging(SMS)	0.1%	0.5%	24%	75%	0%
Voice calls	10%	31.4%	22.4%	37.1%	0%
Multi Media Messaging(MMS)	80.1%	0.5%	0.2%	0%	13%
Camera	18.2%	34.1%	25.4%	23.1%	0%
Video recording	60%	20%	15%	0.5%	5%
Calendar	20%	53.5%	15%	0.8%	10%
Calculator	16%	85%	0.5%	0.1%	0%
Clock	0%	0.2%	24.8%	73.1%	0%
Alarm	20%	55.3%	22.5%	0.3%	0%
Games	29.4%	68.2%	0.9%	0.6%	0.5%
Organiser	70%	30%	0.5%	0.3%	0.2%
Radio	42%	17.4%	20.3%	21.8%	0%
Audio Recording	10%	89%	0.4%	0.2%	0%

a) INTERNET AND WEB BROWSING

The majority of the phones (76%) were internet enabled and 24% were voice only cell phones .The majority of respondents with internet enabled cell phones indicated that they visit internet sites during study time. Most of the respondents indicated that they mainly access Google and other text or search engines during study time thereby turning their cell phones into research tools. Some of the sights visited included the dictionary and encyclopaedia. Eighty percent of the respondents who used Google and other search engines indicated that they use the internet to search for educational information while 20% use the search engines for non-educational

purposes. None of the respondents indicated using voice activated search engines despite the several advantages it also has for the blind and sight impaired. The results also showed that female students were more likely to send or receive emails during study than male students.

Seventy percent of respondents admitted to accessing social network sites or file sharing sites such as, Face book, You Tube and Twitter during study from time to time or even more frequently. However ,87% of visits to social network sites were for non-educational purposes. Such instances of real time chat and data sharing applications can support communication collaboration and knowledge sharing. If used correctly ,social network sites can be productive and enhance learning.Facebook accounts can allow students and lecturers to share links and ideas, regular blogging which allow students to read and comment on each other's posts making students to become content creators. As noted by Northrup (2001) the rise in students' level of interaction corresponds with high levels of learning leading to improved academic performance.

Internet search engines have been accused of conditioning students to expect to be able to find information quickly and easily and hence making them lazy. Young (1996) indicated that college students who use the internet 'excessively' experienced a decline in study habits as they are often distracted. Whilst on the internet students can bump into pornographic sites. Despite the various distractions the majority of the respondents agreed that it assisted them in their study. For example, in goggle search if a student spells a word wrongly, Google prompts the student 'Did you mean' thereby providing a correct spelling. The results reveal that the internet is a valuable source of information for students. The epileptic and expensive nature of data connections in Zimbabwe are a major barrier to students fully utilising the internet as it is very expensive to download documents more so for students to spend more time surfing on the internet.

b) SHORT TEXT MESSAGING (SMS) AND MULTIMEDIA MESSAGING SERVICE (MMS)

The Study confirmed that the most popular feature used was text messaging. The results from Table 3 show that 75% of the respondents confirmed sending or receiving text messaging during study time. Of the texts messages sent or received, a small proportion of the respondents, 35% pointed out that the text messages were for educational purposes, whilst 65 % where for non-educational purposes .Of the 65% messages relating to non-educational purposes, 70% were to friends, whilst 30% were to parents and relatives. Multimedia messaging service (MMS) was one of the least used applications with 80.1% respondents indicating that they never used the application. More females' respondents than males used the SMS features while male students were more interested in other technological features such as games. This finding is consistent with earlier studies (Nurvitada: 2003, Lie: 2004, Ling: 2001).

The respondents indicated that education related SMS messages were mainly on asking for titles of texts, definitions, information on missed lectures and for seeking clarification on concepts. Only 5% pointed out that they at times send text messages to their lecturers. The amount of information shared through SMS and MMS is usually less because of the prohibitive high costs of sending a long message. Most of the messages sent or received are written in short hand or

abbreviated form. The use of short hand has been related to negatively affecting spelling and grammar proficiency as evidenced from the use of abbreviated words, incorrect subject-verb agreement and misspellings in assignments and examinations (Kate Ross: 2010).

Geertsema et al (2011) however disagrees with the negative effects of text messaging by pointing out that there is a stronger casual relationship between the abbreviations and literacy skills meaning that text messaging gives exposure to the written words which relates to higher literary attainment. Short text messages can be written easily even with 'predictive text' providing timely reminders and students can also use SMS innovative games, pop quizzes to become aware of current events for classroom discussion .Students can also learn languages, literature and writing through language games such as crosswords and Tetris like word puzzles .Cell phones also provide an incentive for university students to use their literacy skills in their native languages

Whilst educators dismiss cell phone's instant messaging as distracting during study because of non-educational texting and compulsive checking of the cell phone for messages, even a window could be a distraction to an unmotivated student. Texting provides inventive methods that facilitates collaborative learning and continued conversation despite the physical location thereby creating common interpretations and shared understanding. The results show that not all texting has a negative effect.

c)   VOICE CALLS

The results show that students receive and make calls during study since all respondents pointed out that they do not switch off their cell phones when studying. Over 50% indicated that they at some point during study make or receive calls. More than 90 % of the calls made or received during study were non-educational purposes, pointing out at how cell phones can be distracting whilst studying. The results also confirmed Junco, Mersen and Salter's (2010)findings that females spent more time talking on the phone than males and that there are more likely than males to receive more family oriented as well as social oriented calls.

 Receiving calls is the most important feature of mobile phones since it is cost free and the majority (70%) of the respondents pointed out that they receive calls from parents', relatives, classmates and friends during study while only 30% make calls .The results show that respondents were less likely to make a call than to send a message. The students also indicated that they checked their cell phones several times when studying more than three times in an hour anticipating a call, message or email even if the cell phone is on vibrate and in a case of network inaccessibility or phone malfunction, 30% said they would be very upset and stressed.

The results indicate that voice calls can be used to share educational information but there is need to promote cell phone etiquette as students should understand some simple etiquette of when to turn off cell phones and when not to answer cell phones.

d)   CAMERA AND VIDEO RECORDING

Generally a few respondents indicated using the camera and video recording application on their cell phones for educational purposes. Despite the educational benefits of cameras and video recording, some of the respondents indicated using the camera for sending lewd photographs which can be distracting during study. Camera and video recording applications can become tools for data collection and documentation. For example, the Camera and video recording application can be used to take appropriate pictures say in economic history, archaeology which can then be published on the internet whilst creative photos can inspire students' creative writing.

e)   VOICE RECORDING AND MUSIC

Although a cell phone is a sound based technical device, 89% of the respondents rarely use this application and it was actually surprising that the respondents use the camera more than voice recording .The few respondents that use this application to record lectures for their friends who would have missed classes and to record important topics they feel are important or central such as examination revision classes. It was interesting to note that 21% of the respondents cannot study without listening to the radio or music downloaded on their cell phones.

f)   GAMES

The results show that 85% rarely play games on their cell phones while about 14% at one point or another play games during study. Of the few respondents who play games during study the majority were male students. While literature is replete with the distracting effects of games, various features in games can help students to develop problem solving and critical thinking skills. The rules of the games notify contestants presenting the ways to play in order to win thereby instilling structural expertise. Playing to win demonstrates to students the need to continuously strive to come out on top.

g)   CALCULATORS, CALENDARS AND CLOCK

The respondents indicated that they rarely use calculators and this might be attributed to the fact that as Arts students they rarely make any calculations. The small percentage of 0.1 % who use calculators may use them to calculate coursework marks. 23% of the respondents at least use the calendar to check on assignment due dates and tutorials dates. Scheduling and calendar applications are useful to the respondents as they can increase an individual's organizational skills and regulative or self directed learning ability. All the respondents confirmed using the clock application when studying to regulate their study time.

iv)   CELL PHONE USE CHALLENGES FACED BY STUDENTS

The last part of the questionnaire used open ended questions to gather information on the challenges faced by students in using cell phones as study tools. The main challenges faced by the respondents included ,network congestion which slows down speed at which information is

delivered, lack of electricity due to power cuts for recharging their cell phones ,high costs of prepaid cell phone services which limits the rate and time for which one would want to use the cell phone, small screen size, inadequate memory, short battery, content and software application limitations ,lack of inbuilt functions, difficulties of adding applicatios,differences between application and circumstances, network speed and reliability.

The question that arises from these numerous challenges is whether Zimbabwe gives adequate technical support for M-learning at the University of Zimbabwe .Like at other institutions of higher learning in Zimbabwe , Mobile learning is still fragmented and the technical infrastructure is not yet fully ready for truly mobile learning as some learning materials still remain unsupported .The most serious problem faced today is the lack of a sound theoretical framework which can generate effective instructional , evaluative and quality of programmes that rely significantly on mobile technology. But considering great advantages that cell phone can bring, the adoption of cell phone as a study tool should be greatly encouraged. The limitations of mobile devices may be a temporal concern if we look at the rapidly advanced functions and numerous applications being introduced every day.

CONCLUSION

The results show that a cell phone is a very important tool for study as most of the respondents used their phones for study purposes. Cell phones are increasingly one of the most popular information access devices and what stands out from the study is the high use of interactive, multi user functions which can at times be disruptive or beneficial during study. In essence, the study revealed that cell phones are beneficial for learning but learners have a tendency to abuse them.

While additional research is warranted in order to confirm whether or not the findings can be generalised to the University of Zimbabwe and all Universities in Zimbabwe the size of the sample and consistent patterns do lend credibility to the findings. Higher institutions can take advantage of the potential and capitalise on the cell phone for educational purposes because of the intrinsic motivation of university students in wanting to communicate amongst themselves. Findings of the study also show that mobile phone designers must take into account how young people use cell phones for educational purposes. The presence of cell phones presents a host of options and challenges for today's students. Cell phones are undeniably convenient, helpful tools for study and can be a hurtful source of distraction depending on the attitude and use pattern of a student.

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