Teacher and Learner Perceptions on Mobile Learning Technology: A Case of Namibian High Schools from the Hardap Region

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Abstract

Although the National ICT Policy for Education in Namibia was adopted in 2005, immediately followed by the National ICT Policy Implementation Plan in 2006, no known studies have been undertaken so far to evaluate its implementation. This has made it difficult to ascertain the ICT/mobile learning readiness of teachers and learners. This study analyzed the perceptions of learners and teachers towards mobile learning in Namibian High Schools. A mixed method approach, comprising a baseline survey and interviews with randomly sampled learners and teachers from three high schools in the Hardap region of Namibia was undertaken. Both qualitative and quantitative data was solicited on learner and teacher perceptions on mobile learning. The survey questionnaire, which was based on modified version of the Unified Theory of Acceptance and Use of Technology (UTAUT) model to make the questions suitable to the context of mobile learning was used. Unstructured interviews were used to supplement the questionnaire where gaps were identified. The data collected was then analyzed for descriptive and inferential statistics using Statistical Package for Social Sciences (SPSS).The results among others showed that even though that majority of teachers and learners in Namibia own mobile devices which can be used for mobile learning, introduction of mobile technology in schools would only work in an environment where there is a sound ICT infrastructure. Affordable internet access and skilled ICT teachers are also a challenge.

T‌he use of mobile technology for teaching and learning has the capability of influencing the teachers' experience and learners' academic achievement (Mac-Callum, & Jeffrey, 2013). For this to be possible the perception of the teachers and learners towards the use of mobile learning technology is very essential (Mac-Callum, 2010). There are already cases of learners using mobile technology to informally support learning; that notwithstanding, the teachers' willingness to accept and support it in order to fully adopt it for formal learning is needed. However, Different studies pointed out that the potentials of these technologies are roundly overlooked (Levin & Wadmany, 2008) One of the reasons may be that the technical know-how is lacking. This could be because most of the teachers may not have had background knowledge or initial training on how to use these technologies, particularly mobile learning technology, for pedagogy (Mtega, Bernard, Msungu & Sanare, 2012; Webb & Cox, 2004). Therefore, this can greatly impact on teachers' perception towards using mobile technology for teaching which will in turn rob off on students who may be interested in using it for learning.

Mobile learning can be achieved by using various types of mobile devices (Quin, 2000). According to (Attewell, 2011), most of these mobile devices contribute greatly in learners' literacy and numeral skills, ICT skills and easy accessibility of information such as access to educational materials. Mobile learning technology also contributes to students learning, assisted by wireless mobile devices (Litchfield, Dyson, Lawrence, & Zmijewska, 2007). Pedagogical processes can also be carried out in full or partly with mobile technologies (Oran & Karadeniz, 2007) thereby increasing lifelong learning in both formal and informal educational settings (Vavoula & Sharples, 2009). This goes to prove that mobile learning technology offers the potential for improved teaching and learning (Shen, Luo, & Sun, 2015). It is also worthy of note that the size of these mobile devices have made it widely accepted particularly by learners who are always on the move (Sharples, Taylor, & Vavoula, 2005).

Furthermore, the use of mobile devices as a teaching and learning tool has been acknowledged in numerous research (Cui and Wang, 2008; Utulu, 2012, UNESCO, 2012). The dynamic capabilities of mobile devices such as talk, text, still camera, video, radio, and the internet can change the teaching and learning processes, (Kukulska-Hulme and Traxler, 2005). Therefore the integration of mobile learning technology into teaching and learning can enhance pedagogic activities which will encourage learners in their bid to get knowledge (Cui and Wang, 2008).

However the benefits of mobile learning technology cannot be tapped if the perception of teachers and learners are not put into consideration. This is because it has an enormous influence in determining its usage. Different studies pointed out that the potentials of these technologies are roundly overlooked (Levin & Wadmany, 2008; Mooney, (2008). This could be due to lack of technical know-how (which will affect the confidence of teachers), technophobia or the belief the mobile technology will cause distraction in classes (Mtega et al, 2012; Webb & Cox, 2004). Phelps and Ellis (2002) noted that there is a substantial difference between teachers' perception of their competence in technology use and the amount of training needed before they can effectively use technology. Most times, they see technology as intimidating. This feeling may further worsen if the teachers' perceive the skills of their learners as being overwhelming and better than theirs. This feeling of inadequacy can result in teachers feeling insecure and they will then be reluctant to use technology (Nunan & Wong, 2005). Furthermore, this feeling can also make teachers to have doubts in the usefulness of mobile technology in teaching thereby strengthening their

unwillingness to use it for teaching processes (Hennessy, Ruthven, & Brindley, 2005). It is also reported that learners seek for more options of making learning tools more suitable so they learning can be done anytime and anyplace. Typically, "the use of personal devices affords students' ownership of learning, which may lead to positive language learning experiences and positive perception towards mobile learning technology" (Kukulska-Hume, Sharples, Milrod, Arnedillo-Sanchez, & Vavoula, 2009; p. 15).

Statement of the problem

The popularity of the use of mobile learning technology for teaching and learning processes has become a global phenomenon. Higher education sectors in United Kingdom (U.K), some countries in the Middle East and Africa no longer see mobile learning devices as a new innovation particularly in higher education (UNESCO 2012). Research revealed that in countries like U.K, South Africa, Nigeria China and Uganda, mobile learning had become a common place in most of their high institutions (Cui and Wang, 2008; Utulu, 2012 & UNESCO, 2012). Despite this fact, there are few literatures on the uses of mobile learning technology for teaching and learning in Namibian high schools. Not minding the fact that there is accessibility of mobile devices in both urban and rural areas and schools, the perception of its use for teaching and learning by teachers and learners have not been researched.

From a practical standpoint, this research is on understanding the level at which learners and teachers in Namibian High Schools are ready to accept the introduction of mobile learning into these schools. Mobile learning "allows teachers and learners ubiquitous and seamless access to information" (Kukulska-Hume et al, 2009), and immediacy, expediency, and convenience are valuable to teachers and enhance students' learning. A modified version of UTAUT instrument (Venkatesh, Morris, Davis, & Davis, 2003) which measures performance expectancy, efficiency expectancy, perceived playfulness, behavioural intention, social influence, voluntariness of use and facilitating conditions for mobile learning adoption was used in this study.

Research aim and objectives

The main aim of this research is to analyse teachers' and learners' perceptions of mobile learning in Namibian High Schools. The specific objectives are outlined as follows:

- To evaluate the usage pattern of mobile learning among teachers and learners in Namibian High Schools

- To assess the factors influencing teachers' and learners' perception towards mobile learning adoption in Namibian high schools.

Research questions

The following research questions guided the study;
- What is the usage pattern of mobile learning among teachers and learners in Namibian High Schools
- What are the factors influencing teachers' and learners' perception towards mobile learning adoption in Namibian High Schools

4. Review of related Literature

The use of mobile learning technology for pedagogy has become a common place for teachers and learners (Lan & Huang, 2012). However, this innovative technology-based

learning is still posing challenges to educational administrators on how to develop teaching methods coupled with the fact that many teachers and learners are still reluctant to the change in teaching and learning with the new technology due to the fact that they do not connected to the new learning culture. Furthermore, technology-based trainings and resources may not be enough to meet the desires of persons in comprehending the nature of learning (Stockwell, 2007).

That notwithstanding, the benefits of mobile learning technology cannot be overemphasized. This is because of the inherent dynamic capabilities it possesses. Apart from the benefit of ubiquitous learning attached to it (Kukulska-Hulme et al., 2009), recent technological advances such as "imbedded sensors, cameras, motion detection, location awareness, social networks, web searching, and augmented reality present the potential to foster learning and engagement across multiple physical, conceptual, and social spaces, both indoors and out" (Newhouse, Williams, & Pearson, 2006). Other benefits that are valuable to teachers and also enhance learning include convenience, expediency, and immediacy (Kynäslahti, 2003). These features are capable of providing various types of learning which may not be limited to classroom. Some of these learning features are individualized or collaborative (Cheon, Lee, Crooks & Song, 2012). Other important features of mobile technology are its portability, mobility and search capabilities which have promoted the learning experiences gained by using these devices (Martin & Ertzberger, 2013). These potentials of mobile technology which were previously learner-centered are gradually accommodating the teacher-centered pedagogical processes as teachers and researchers are now exploring the capabilities of mobile learning devices within teacher education.

Theoretical Background
A variety of studies have discussed and focused on how technology is capable of facilitating teaching and learning. One cannot but note that the benefits of mobile technology in teaching and learning are enormous. This has greatly improved teaching and learning outcomes. Furthermore learner to learner, learner to teacher and teacher to teacher group interactions are also facilitated by the innovativeness of mobile technology. It has also enhanced the constructive learning approach where learners can construct their own knowledge (Koç, 2005). This type of student engagement brings about "critical thinking and self-learning in the sense that it enables learners to interpret information in the context of their own experiences" (Chou, Block, & Jesness, 2012, p.13). The constructivist view also leads to behaviouristic changes due to the learning approach.

The behaviouristic learning, sees learning outcome as a behavioural change of the learner (Skinner, 1938; Venezky & Osin, 1991). The constructivist view sees learning as the meaning constructed by the learner (Cunningham,1991; Duffy & Jonassen, 1991). Both viewpoints cannot be said to be right or wrong. However, it is imperative to note that constructivism is presently acknowledged as the most appropriate view of learning and that constructivism is the focal point of all education policies, models and practices.

Teacher-centred vs learner-centred mobile environment
The previous focus of educational activities is on the teaching style of the teacher. It emphasizes on what works best for the teacher. The teacher determines how the environment for learning will look like and the kind of activity that will take place. One of the characteristics of the Teacher-centeredness is that the main source of knowledge is the teacher. On the other hand, in an environment that is learner-centred, much focus is on preferences and learning style(s) of the learner(s). With the introduction of ICT/mobile

technology the teaching and learning styles intermingles, in the sense that teaching and learning becomes a collaborative effort of both the teacher and the learner; this way, the teacher acts as a facilitator of learning while the learner becomes the constructor of knowledge.

Underpinning theory

A guiding theory is a framework for existing theories and concepts that can be used to serve as a structure for a new research study. The underpinning theory is based on the unified theory of acceptance and use of technology (UTAUT). Venkatesh, Morris, Davis, & Davis, (2003) formulated UTAUT, and it consists of four concepts, i.e. Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI), and Facilitating Conditions (FC). The four concepts mentioned above are independent variables, which has influence on the dependent variables i.e. behavioral change and usage, gender, age, experience, and voluntariness of system use. Behavioral intention is therefore a critical predictor for technology use (Venkatesh, Morris, Davis, & Davis, 2003).
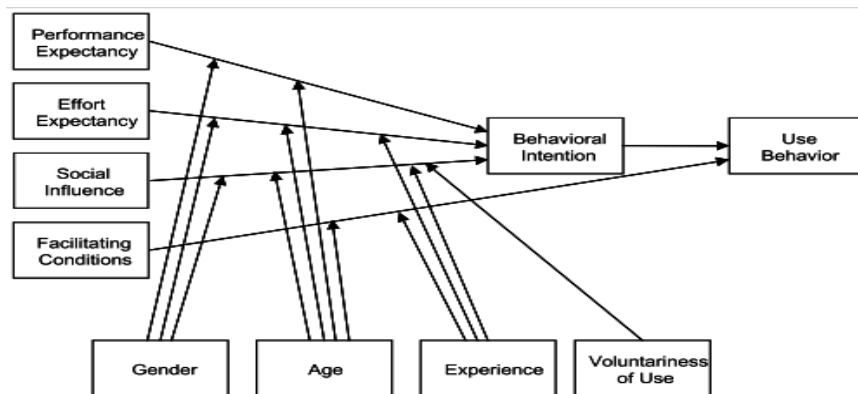

Figure 1: Unified theory of acceptance and use of technology (UTAUT) theory (Venkatesh, et al., 2003).

Numerous researchers have used the UTAUT model to investigate mobile learning acceptance worldwide. There are evidences of successful assessment of acceptance of mobile learning in higher education in many developing countries with the use of the UTAUT model. For instance in Thailand (Jairak, Praneetpolgrang, & Mekhabunchakij, 2009), Saudi Arabia (Nassuora, 2012), Pakistan (Iqbal & Qureshi, 2013), and Guyana (Thomas, Singh, & Gaffar, 2013). Though studies to ascertain students' mobile acceptance in education in some African countries by using UTAUT model are few.

Methodology

This research aims at investigating teacher and learner perceptions on mobile learning technology. This section will cover the research design, area of study, population and population sample, sampling technique, data collection instrument, validation of the questionnaire, and method of data analysis.
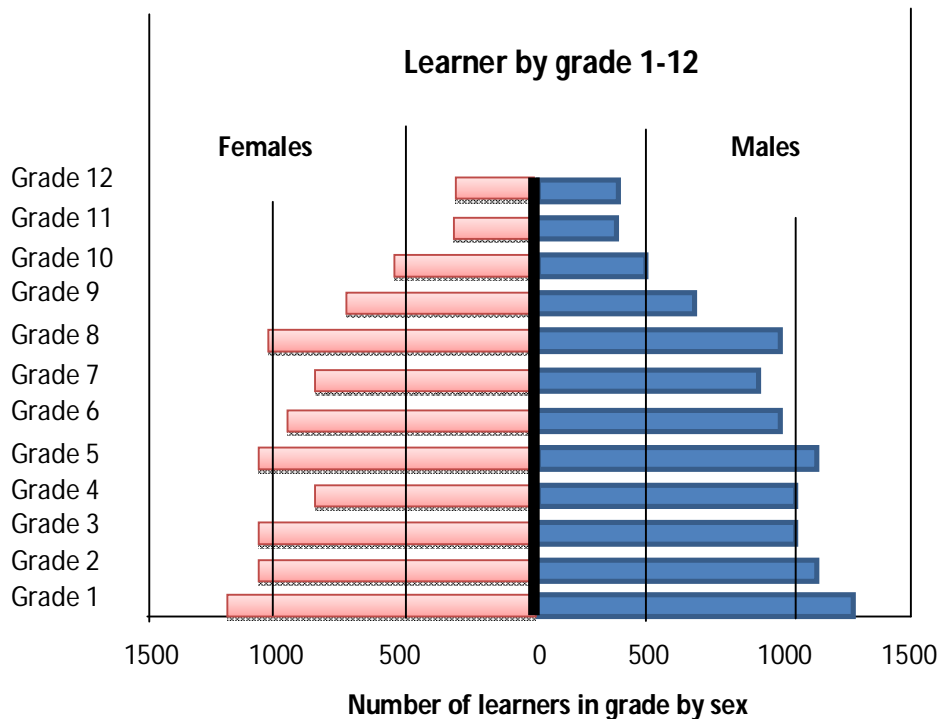
Design of the study

According to (Slawomir, 2008), research design is defined as the plan used by a scholar to obtain research participants and to collect information. The research design of this study is exploratory in nature. An exploratory research is carried out when earlier studies to refer to

are limited. Exploratory design will be useful for this study because it will explore teacher and learner perceptions on mobile learning technology in high schools as an e learning tool and no study have previously been done to identify new knowledge, new perceptions, new understandings, and new meanings. The study will employ a mixed approach to collect the data. Mixed methods is a research approach for conducting research involving collection, analysing and integration of quantitative (e.g., surveys) and qualitative (e.g., interviews) research.

Area of the study

Hardap region, which is the study area, is one of the fourteen regions of Namibia with Mariental as its capital. Hardap is home to the popular Hardap Dam. Hardap has a stretch that covers the entire width of Namibia. It stretches from the Atlantic Ocean in the west to the eastern national border of Namibia. It borders the Kgalagadi District of Botwsana in the northeast, and the Northern Cape Province of South Africa in the southeast. Hardap borders the following regions within Namibia: Erongo region – northcentral, Karas region- south and Omaheke region northeast Hardap has a population of 68,249 (33,665 females and 34,579 males or 103 males for every 100 females) with an annual growth rate of 0.3%. The Hardap people are known for their distinct "Afrkans" language. 88% which is the majority of the population are for the coloured and white Namibian extraction. In the area of education, 84% of girls and 83% of boys between the ages of 6-15 attend school, and of those older than 15, 73% dropped out, while only 9% remained in school, and 13% had never attended (Census, 2011).

Hardap region has 56 schools with a total of 22,103 learners of whom exactly 50% are girls. The majority of learners are in primary schools - 14,343. In addition, there were 4,450 learners in junior secondary; and 1,092 in senior secondary. The grade pyramid to the left shows the number of learners by sex in each grade. There are some bulging at grades 1, 5 and 8 caused by high repetition. Repetition rates in Hardap are few compared to the other regions of Namibia. The pyramid is relatively straight up to grade 8, suggesting that many children are able to complete primary education.

Learner by grade 1-12

Population of the study

A population can be referred to as "a group of individuals/item who possess specific characteristics and from which a sample is drawn to determine the parameters or characteristics" (Creswell & Plano Clark, 2007; Maree & Pietersen, 2007; Singh, 2007). The population used for this study consists of students in 56 schools and 22,103 learners of the Hardap region (MoE, 2006).

Sample and sampling technique

Since carrying out a study of the whole population was not realistic, a sample of the population was taken. Research supports the selection of a sample from a given population to participate in a study (Babbie & Mouton, 2010; Brynard & Hanekom, 2006; Maree & Pietersen, 2007; Strydom, 2011). The benefits of using a sample, according to Bergman (2008) as well as Mitchell and Jolley (2007), is to save costs and time.

The sample of the study was selected from participants in three (3) high schools in the Hardap region. Purposive sampling was also employed to get the target population. "Purposive sampling is a technique widely used in qualitative research to identify and select information-rich cases for the most effective use of limited resources" (Patton, 2002). In this case individuals or group of individuals that have experience and knowledge about an area of interest are identified and selected (Cresswell, Plano & Clark 2011). In addition to knowledge, Bernard (2002) noted the "significance of willingness to partake, and the ability to share experiences and views in an articulate, expressive, and reflective manner". Three schools were selected using the random sampling procedure.

Participants

A sample of high school teachers and learners were drawn from the three (3) high schools that met the criteria described above on sampling method. The learners were selected specifically from grades (11) and twelve (12). This is because of their maturity and having spent more years in high school. Twenty (20) learners were randomly drawn from each grade which give a total of forty (40) learners selected per school summing up to one hundred and twenty (120) learners from the three high schools. Also eight teachers were carefully selected from each school giving a total of twenty four (24) teachers from all the selected schools in the regions. This is explained in the table below.

Table 1: Tabular Presentation of Participants.

Number of Schools selected	Number of learners per school	Total number of learners in selected	Number of teachers per school	Number of teachers
3	40	120	8	24

Instrument for data collection

A survey questionnaire usually has a number of different questions related to the research being conducted listed in it. These are printed formats whereby respondents are requested to complete with their answers. Babbie & Mouton (2010) noted that, "survey questionnaires are exceptional means of measuring attitudes and orientations in population that is large". Babbie & Mouton (2010) contended that it is the best available method that can be used in the collection of original data for describing a large population. Struwig and Stead (2001)

stressed that questionnaires offer better confidentiality, are less costly, effective and very convenient.

The survey questionnaire will basically use the instruments of survey formulated by Venkatesh, Morris, Davis, & Davis, (2003); Wang, Wu & Wang, (2009). The UTAUT survey instrument has been tested and utilized by several researchers (Anderson & Schwager, 2004; Moran, 2006; Wang & Shih, 2008) and contains questions which are adapted from past information System (IS) studies used to evaluate the various elements incorporated in the model (Venkatesh, et al., 2003; Wang & Shih, 2009; Wang, et al., 2009).

There were modifications in the survey instrument so as to create suitable questions aligned to the context this study and the participating population. For instance the words "mobile learning" will be used to replace to word "system". Other studies have made similar modifications on the UTAUT instrument (Anderson & Schwager, 2004; Moran, 2006; Wang & Shih, 2008). The survey questions will include questions with regards to the UTAUT constructs such as performance expectancy, effort expectancy, behavioural intention, social influence and facilitating conditions. These constructs will be used to determine teachers and learners intentions to use and perceptions of mobile technology. Other questions will be incorporated in order to gather both opinion-related and demographic data. Questions formulated will align to the objectives of the research, the theories and models established in the literature.

Validation of Instrument

All items regarding the measurement of UTAUT constructs will be adapted. This will ensure the content validity and reliability of the questionnaire used. "UTAUT is an empirically validated model that integrates constructs from eight key information technology acceptance models" (Venkatesh, et. al., 2003).

Results

Three public schools participated in the survey. 30 questionnaires were distributed to learners per school. 25 learners from Leamer High School, 20 from Rehoboth high school and 30 from Gertz responded to the questionnaires. The participants selected through random sampling were from Grades 11 and 12. 43.7% were in Grade 11 and 56.3% in Grade 12. 86.7% were in the 15-19 years old age group, 8% were in the 10-14 year old age group, 1.3% were 25 years and above and 4% were in the 20-24 year age group. Males constituted 31.1%, while females constituted 68.9%. 16 teachers were selected through random sampling from the three schools at four, four and five respectively, depending on the availability of the teachers. The majority of the teachers, which is 56.3% were in the 35-44 year age group, 12.5% were above 44 years of age and 18.8% were in the 20-29 years of age range. 50% of the teachers had an experience of between 6 and 10 years, while those with an experience of 16 years and above were 31.3% and less than 5 years' experience were 18.8%. There was an equal number of male and female teachers.

Table 2   Access to an internet-enabled smartphone or PC

DO YOU OWNE A SMARTPHONE O TABLET PC THAT IS CAPABLE OF ACCESSING THE INTERNET?		
QUESTION	Learners	Teachers
No, and I do not plan to purchase one	13.5	6.3
No, and I plan to purchase one	16.2	25.0
Yes	68.9	68.9

The above table, showed Mobile ownership. 13.5% of the learners do not have access to internet-enabled smart phones or PC and they do not plan to purchase one. 16.2% of the learners do not have access to a smartphone or PC although they plan to purchase one in the future. 68.9% indicate they have a smartphone or PC. A large number of learners have smartphones or PCs. 86% of the learners indicated access to smartphones, this includes the 69.8% that own smartphones and 16.2% that do not have the smartphones but plan to purchase. This is positive for the adoption of mobile technology. 2G coverage in Namibia is at 95%, 3G is at 30% and 4G is at 15% in areas where there is a network (Rhodes, 2016)

68% of the teachers own a smartphone. 25% of the teachers do not own a smartphone but intend to purchase one in the near future. 6.3% of the teachers do not own a cell phone and do not plan to purchase one. Mobile telephony penetration in Namibia is above 110%, with 2.35 million customers for both Global System for Mobile Communications (GSM) and Code Division Multiple Access (CDMA) combined (Namibian, 2012).

Table 3: Usage Patterns of mobile devices by teachers.

Below is the usage pattern of mobile devices in The Hardap region

Respondents	Learners		Teachers	
Responses	NO	YES	NO	YES
Do you use the device for academics purpose?	19.4	80.6	20.0	80
Do you use any application related to your status as a student?	34.4	65.6	8.3	91.7
Do you have computer labs in your school?	6.7	93.3		100
I know how to access the internet from mobile device	4.0	96.0		100
I know how to download educational materials on a mobile device	17.6	82.4	31.3	68.7
I know how to download mobile educational applications on a mobile device	24.3	75.7	37.5	62.5
I know how to find definitions of a word I don't know on a mobile device	1.4	98.6	18.8	81.2
I know how to use a mobile device as a calculator	14.9	85.1		100
I know how to access social networking site on a mobile device	13.5	86.5	12.5	87.5
I know how to use mobile device to look up something that i didn't know or didn't understand during class	19.2	80.8	25.0	75.0
I know how to send e-mail on a mobile device	36.5	63.5	18.8	81.2
I know how to post a comment to a blog or respond to a post on a mobile	9.5	90.5	12.5	87.Z
I know how to use mobile technology for educational and non-educational purpose	11.0	89.0	18.8	81.2

Usage Patterns of mobile devices by teachers.

Mobile devices for academic purposes
19.4% of the learners indicated they do not use mobile devices for academic purposes, while 76.4% indicated they use mobile devices for academic purposes. This means that learners are used to using mobile devices for academic purposes. One of the schools in the sample does have a mobile learning policy. The learners are using mobile devices not only in the classroom, but at home as well. 66.7% of the teachers use mobile devices for academic

purposes, while 20% do not. This means that the majority of the teachers are already using mobile devices for educational purposes.

Usage of mobile under a learner/teacher status
This aspect depends on the understanding of what a learner is doing; whether it is within a school environment or outside the classroom. 60.9% of the learners indicate they use mobile devices in the classroom environment, while 34.4% indicate they do not. On the other hand, 75% of the teachers indicate they use mobile devices in their capacity as teachers, while 8.3% decline. The teachers may not be internet-literate but have a flair for mobile devices in the classroom.

Access to computer laboratories in schools
93.3% of the learners have access to computer laboratories, while 6.7% have no access to computer laboratories. The learners may be taking lessons that do not require mobile technologies. Others may be taking lessons for recreational purposes. For others, there may not be a computer applications course within the curriculum. 100% of the teachers say their schools have computer laboratories. Unlike the learners, the majority of which were neutral because they may not have access to these laboratories for educational purposes, the teachers know of the existence of computer laboratories in their schools.

Access to the internet from mobile device
96.0% of the learners are able to access the internet from their mobile devices, while 4% cannot. This shows that even those that do not have mobile devices have experience in internet access via mobile devices. On the other hand, 100% of the teachers know how to access the internet from mobile devices. They have knowledge on the use of the internet through mobile devices.

Downloading educational materials
While 82.4% of the learners know how to download educational materials from their mobile devices, 17.6% responded in the negative. The numbers of those that can download educational materials are high. Not all the learners that can have access to the internet can download educational materials, it seems. From the previous results, 96% of the learners can access the internet, while here 82.4% can use it to download educational materials. This means that 13.6% of those who know how to access the internet cannot download educational materials. The truth is that since they can access the internet, learning how to download educational materials cannot be much of a problem for them in the adoption of mobile teaching and learning. On the other hand 100% of the teachers responded that they know how to access the internet from their mobile devices. The downloading feature of mobile phones can be easily used by learners and teachers to download various kinds of materials through their mobile phones and if they are properly used will enhance their learning capabilities (Kafyulilo, 2014).

Downloading educational applications
75.7% of the learners indicated they knew how to download educational applications, while 24.3% cannot. That means 24.3% of the learners cannot download applications from the total of 96% that can access the internet. Since they can access the internet from their mobile devices, the learners need little effort to learn how to download educational applications for mobile lessons. On the other hand 68.8% of the teachers indicate they know how to download educational materials from a mobile device, while 31.3% cannot. This shows that, inasmuch as they access the internet, a large number of the teachers (31.3%) find it difficult to download educational materials, although the majority can. Downloading applications is

more complex than downloading any other materials. One has to purchase applications, especially specialised ones like educational applications (Brown & Haag, 2011).

Finding definitions of words on mobile devices
The results from this aspect show that learners are mobile-learning ready. 98.6% of the learners know how to find definitions of words on their mobile devices, while only 1.4% cannot. The 1.4% are most probably part of those learners that don't have access to smartphones. The majority of the learners, therefore, can use the internet on mobile devices for downloading educational applications. Downloading definitions of words and searching for words are two different things. 81.3% of the teachers know how to find definitions of words they do not know from a mobile devices, while 18.8% cannot. It is easy to search for words than download them, judging from the 81.3% response in this section versus the 68.8% from the previous section. According to (Valk, Rashid, & Elder, 2010), it is possible to use mobile learning devices to deepen an individual's understanding of a subject. This means that mobile devices can be called information providers.

Using mobile devices as a calculator
85.1% of the learners can use a mobile device as a calculator, while 14.9% cannot. There is difference in numbers between those that can use a calculator and those that can find words, at 85.1% and 98.6% respectively. Those that cannot use the mobile devices as calculators are simply not mathematically-inclined and it has nothing to do with their ability to use mobile devices. On the other hand, 100% of the teachers know how to use mobile devices as calculators. Calculations play a meaningful role among teachers. Mobile phones use in education has moved from just sharing information to being used for mathematical education (Yerushalmy & Ben-Zaken, 2004).

Accessing social networking sites via mobile devices
86.5% of the learners know how to access social networking sites on their mobile devices, while 13.5% cannot. This is the same level of access as with the calculator. This means that learners use mobile devices equally for recreation and education purposes. Those learners that do not use social networking are simply not interested. 87.5% of the teachers access social networking sites using mobile devices, while 12.5% cannot. Although the teachers are predominantly in the 35-44 age group, they compare favourably with the young learners on the usage of mobile devices for social purposes. This shows that it is only those teachers that are not interested in social media that do not use it and they can be from any age. To make mobile education interesting and appealing to young people educators should take advantage of social media (Leicht & Goble, 2014). (Gikas & Grant, 2013) highlight the impact of mobile technologies on learning and teaching using social media for providing better learning.

Using mobile devices to look up something not understood during class
80.8% of the learners indicated that they use mobile devices to look up something they would not have understood in class, while 19.2% do not. It boils down to those that use mobile devices in the classroom setup. Those that are able to download educational materials already is 82.4%. This is almost the same percentage as that of students that actually use mobile devices for educational purposes. If they can look up something that they do not understand, then they can look up educational materials too. 75% of the teachers say yes, they know how to use mobile devices to look up something they need to teach in class if they are not sure about it, while 25% say no. This shows that the majority of the teachers know how to take advantage of mobile technologies for more knowledge, while the remaining can easily learn when the need arises.

Sending email on mobile devices
63.5% of the learners indicated that they can send an email through a mobile device, while 36.5% said they could not. These learners can access the internet but do not use it to send emails, most probably because they are not interested in the email as a mode of communication. The younger generation ordinarily feel that the email is for official communications. Since they are more into social media, they can interact via that channel, and the email won't serve them that much. 81.3% of the teachers indicated that they can send an email on a mobile device while 18.7% cannot. This means that the majority of the teachers can use mobile technologies to communicate via email. This gives the incentive for students to start using it as well although the teachers and learners are equally active on social media. Although a death knell has been sounded on email, a study by (Merker, 2013) shows that more than 50% of the students check their email every day, while 67% check at least once a week.

Posting a comment to a blog
90.5% of the learners indicated that they can post a comment and respond to a comment on a blog, while 9.5% do not. Blogging is a new concept, but either way learners are using it. Learners are more exposed to blogging. On the other hand, 87.5% of the teachers know how to post a comment to a blog, or respond to a blog post, while 12.5% cannot. That means that although blogging is a new concept, both learners and teachers are using it, hence blogging can be taken advantage of in mobile learning. Blogging has the potential to expand student creativity, not to mention their writing skills (Shekhter, 2015).

Mobile technology for educational and non-educational purposes
89% of the learners use mobile devices for both educational and non-educational purposes, while 11% do not. This shows that there is a great awareness on mobile technology among the learners. Those that say no are comparable to those that do not have access to mobile devices. Most teachers, on the other hand, can use mobile technologies for both educational and non-educational purposes. This is positive towards mobile learning adoption by both learners and teachers. 75% of the teachers responded positively, while 25% were in the negative. (Keengwe, Schnellert, & Jonas, 2012) reflect on ways to adopt mobile phones in education to engage learners.

Results from UTAUT

Table 4: Performance expectancy

LEARNERS					
PERFORMANCE EXPECTANCY	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agreed
I would find mobile learning devices useful in my learning	5.3	-	18.7	40.0	36.0
Using mobile learning devices enables me to accomplish learning activities more quickly	1.3	2.7	25.3	61.3	9.3
Using mobile learning devices will enhance my learning capabilities	1.3	6.7	24.0	44.0	24.0
If I use mobile learning devices I will increase my chance of getting better grade	1.3	6.7	24.0	40.0	24.0

TEACHERS					
PERFORMANCE EXPECTANCY	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree
I would find mobile learning devices useful in my learning	-	-	6.3	40	36
Using mobile learning devices enables me to accomplish learning activities more quickly	-	-	18.8	31.3	50
If my learners use mobile learning devices it will enhance my learning capabilities	-	-	6.3	37.5	56.3
If I use mobile learning devices I will increase my chance of getting better grade	6.3	-	12.5	62.5	18.8

Table 4: Performance expectancy

- **Finding mobile devices useful to learning**

Mobile phones have to be used in teaching and learning due to their usefulness (Kihwele & Bali, 2013). 76% of the learners are agreed that they find mobile devices useful to their learning. Of these 40% agree, while 36% strongly agree. 5.3% of the learners strongly disagree, while 18.7% are neutral. The number of learners that do not have access to mobile devices is 18.8%, which compares to the 18.7% who are neutral in this case. The 5.3% who strongly disagree are probably techno-phobic. Since the majority of the learners agree that they find mobile devices useful to learning, this is a positive trend towards the adoption of mobile technology to teaching and learning. There is a high response from the teachers that mobile learning would be useful to them. 93.8% of the teachers agree that they would find mobile learning devices useful in teaching. Of these 43.8% agree, while 50% strongly agree. 6.3% of the teachers are neutral, however. The same positive attitude towards the adoption of mobile technology to teaching can be said of the teachers.

- **Accomplishing learning/teaching activities quickly through mobile devices**

There is a growing amount of research that suggest that electronic media encourages multitasking and task-switching (Rosen, Carrier, & Cheever). 81.4% of the learners agree that mobile devices enable them to accomplish learning activities more quickly. This constitutes 58.7% who agree and 22.7% who strongly agree. 13.3% of the learners are neutral, while 5.3% disagree. This constitutes 1.3% who disagree and 4.0% who strongly disagree that mobile devices assist them accomplish learning activities quickly through mobile devices. Therefore mobile learning has the capacity to build them up and help them accomplish learning activities. None of the teachers disagree that mobile technology will enable them to accomplish learning activities quickly. 81.3% of the teachers agree and 18.8% of the teachers are neutral. Of those that agree, 31.3% agree, while 50% strongly agree. This compares well to the previous section on the usefulness of mobile devices to learning.

- **Using mobile devices to enhance my learning/teaching capabilities**

A constant exposure to digital technologies, gadgets, games and mobile devices has arguably evolved a new breed of learner and teacher called "the digital native, meaning those learners or teachers who think and process information differently from their predecessors" (Cobcroft, 2006,p.24). 70.6% of the learners agree that mobile devices will enhance their learning capabilities. This constitutes 61.3% who agree and 9.3% who are strongly agreed. 25.3% of the learners are neutral, while 4.0% disagree. Of these, 1.3% disagree, while 2.7% strongly disagree. Mobile learning will go a long way to helping the learners. The neutral students are

those that may not have seen the benefits of mobile learning. The majority of the teachers accept that mobile technology will likely, enhance their teaching activities. 93.8% of the teachers agree and 6.2% are neutral. Of those that agree, 37.5% agree, while 56.3% strongly disagree.

- **Increasing chances of getting better grades through mobile learning**

There are a number of researches that prove that mobile learning does improve educational outcomes (Valk, Rashid, & Elder, 2010) and (West, 2013) Mobile learning transforming education, engaging students and improving outcomes. 68% of the learners agree that mobile learning will increase their chances of obtaining better grades. This constitutes 44% who are agreed and 24.0% who are strongly agreed. 24% of the learners are neutral. 8% of the learners disagree that mobile learning will likely increase their chances of getting better grades. Of these, 1.3% agree and 6.7% strongly disagree. Inasmuch as the number of those that agree that mobile learning will enhance grades is high, those others who are not online believe that even without mobile learning they can still get better grades. There is an increase in those that disagree, compared to the other questions asked from previous sections. Teachers are aware of the benefits of mobile learning. 81.3% of the teachers agree that if their learners were to use mobile learning, this would increase their chances of getting better grades. Of these, 62.5% agree, while 18.8% strongly agree. However, 12.5% of the teachers were neutral, while 6.3% of the teachers disagree.

Table 5: Effort expectancy

LEARNERS

EFFORT EXPECTANCY	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agreed
My interaction with mobile learning devices will be clear and understandable	1.3	6.7	22.7	56	13.3
It would be easy for me to become skillful when I am using mobile learning devices	-	5.3	25.3	49.3	18.7
I would find mobile learning devices easy to use	2.7	6.7	12	41.3	37.3
Learning to operate mobile learning devices is easy for me	1.4	4.1	13.5	51.4	29.7

TEACHERS

EFFORT EXPECTANCY	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree
My interaction with mobile devices will be clear and understandable	-	-	6.3	62.5	31.3
It would be easy for me to become skillful when I am using mobile learning devices	-	12.5	12.5	50	25
I would find mobile learning devices easy to use	-	12.5	12.5	43.8	31.3
Learning to operate mobile learning devices is easy for me	-	18.8	15.5	37.5	31.3

- **Making interaction with mobile devices clear and understandable**

69.3% of the learners agree that consistent use of mobile devices for educational purposes will make their interaction with mobile devices clear and understandable. This constitutes 56% who agree and 13.3% who strongly agree. 22.7% of the learners are neutral, while 8% disagree. Of the latter, 1.3% disagree, while 6.7% strongly disagree. There is a similarity in the numbers of those who disagree that mobile learning increases their chances of getting better grades and those that believe that consistent use of mobile devices will make their interaction with mobile devices clear and understandable; this all boils down to an awareness of the benefits to be derived from mobile technology adoption. 93.8% of the teachers agree that consistent interaction with mobile learning devices will make their interaction with mobile devices clearer and understandable. Of these 62.5% agree, while 31.3% strongly agree. These are people that have already been using mobile devices and understand them well. 6.3% of the teachers are neutral.

- **Skills acquisition through mobile technology**

68% of the learners agree that it would be easy for them to become skilful when using mobile devices. Of these 49.3% agree, while 18.7% strongly agree. 5.3% of the learners disagree, while 25.3% are neutral. In both the performance expectancy and effort expectancy constructs, the percentage of the neutral hovers between 24 and 25% and for those that disagree it hovers between 5% and 8%. Those in the neutral are hovering in the same percentage because they are not clear on what to believe. This has something to do with the level of awareness of the benefits of mobile technology. 75% of the teachers agree that it would be easy for them to become skilful when using mobile devices. Of these 50% agree, while 25% strongly agree. However, 12.5% of the teachers disagree, while 12.55 are neutral. Inasmuch as there is a lot of teachers who disagree, there is a reasonable number of positive responses. This shows that mobile learning will go a long way in making teachers skilful in teaching.

- **Ease of use of mobile devices**

Ease of use is the measure of the degree an individual believes a particular technology is free from effort (Chang & Tung, 2008). 78.6% of the learners indicate they would find mobile learning devices easy to use. Of these 41.3% agree, while 37.3% strongly agree. 12% of the learners are neutral, while 9.4% of the learners disagree. This constitutes 2.7% of the learners who disagree and 6.7% of the learners who strongly disagree. The increase in those that are agreed is due to the large numbers of learners that have mobile devices and have the skills to use them. 75% of the teachers agree that they would find mobile learning devices easy to use. Of these 43.8% agree while 31.3% strongly agree. 12.5% of the teachers are neutral, while 12.5% of the teachers disagree. The results here are the same as those for being skilful. The teachers believe mobile devices will be easy to use for teaching and learning.

- **Ease of operating mobile devices**

The young operate mobile devices effortlessly and with motivation (Kee & Samsudin, 2014). The number of learners that agree that operating mobile learning devices is easy for them stands at 91.1%. Of these, 51.4% of these agree and 29.7% strongly agree. 13.5% of the learners are neutral, while 5.5% are disagreed. Of these 1.4% disagree, while 4.1% strongly disagree. The figure of 91.1% shows the vast usage of mobile learning devices and the ability of learners to explore these devices and use their extended features. This means that the students will find it easy to use any mobile device given to them. The number of teachers that find mobile devices easy to operate stands at 68.8%. Of these, 37.5% agree and 31.3% are

strongly agreed. 12.5% are neutral, while 18.8% disagree. The positive response shows that teachers can easily operate mobile devices once mobile teaching and learning is in place.

Table 6: Perceived playfulness

LEARNERS					
PERCIEVED PLAYFULNES	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agreed
When using mobile learning devices I will not realize the time elapsed	5.3	6.7	22.7	46.7	18.7
When using mobile devices I will forget the work I must do	5.3	32	30.7	17.3	14.7
Using mobile learning devices will stimulate my curiousity	2.7	-	21.3	65.3	19.7
Using mobile learning devices will lead to my exploration	1.3	2.7	21.3		
TEACHERS					
PERCIEVED PLAYFULNES	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree
When using mobile learning devices my learners will be too addicted	-	12.5	43.8	31.3	12.5
When using mobile devices my learners will forget the work they must do	6.3	31.3	37.5	18.8	6.3
Using mobile learning devices will give enjoyment	-	6.3	6.3	81.3	6.3
Using mobile learning devices will stimulate my learners curiousity	-	-	12.5	62.5	25
Using mobile learning devices will lead to my exploration	-	-	-	68.8	31.3

- **Addiction to using mobile devices**

Research shows that there is self-gratification that is achieved through excessive cell phone use (Jones, 2014). 65.4% of the learners indicate they will not realise the time lapsed when using mobile learning devices. The learners know that they are always engrossed when using mobile devices. 22.7% of the learners are neutral, while 12% disagree. Of these, 5.3% disagree while 6.7% strongly disagree. 43.8% of the teachers agree that when using mobile devices, learners will most likely be addicted to it. This constitutes 31.3% of the learners who agree and 12.5% of the learners who strongly agree. 12.5% of the learners disagree, while 43.8% of the earners are neutral. There is a balance between those learners that are neutral and those that agree. Teachers understand that using such devices may make students lose concentration, but the open-minded teachers want a go-ahead to adopt mobile learning in the curriculum still.

- **Forgetting work to be done when using mobile devices**

Technology addiction has been proven to disrupt student learning. While 37.3% of the learners agree that while using the mobile devices they will forget the work they must do, an equal number of learners disagree. 30.7% of the learners are neutral. The learners are on the defensive. They do not want the administration to think that when they use mobile devices they won't work, but that they can use mobile devices in class and still work at the same time.

Although access to mobile learning depends on how mobile technology is introduced and how it is used in class, students can be playful and forget to do their work. Where strict guidelines are in place, learners can be controlled. 18.8% of the teachers agree, 6.3% of the teachers strongly agree, 31.3% disagree, 6.3% of the teachers strongly disagree and 37.5% of the teachers are neutral that when using mobile devices, learners will forget the work they must do. With much supervision by teachers, students can concentrate on their work.

- **Enjoying learning/teaching through mobile devices**

(Jabbour, 2013) revealed that 3G technology-based mobile phones have an impact on student attitudes towards education. Students have a positive learning experience when using these technologies. 78.6% of the learners agree that using mobile devices will make them enjoy their learning. Of these 49.3% agree, while 29.3% strongly agree. 13.3% of the learners are neutral, while 8% disagree. Of these 2.7% disagree, while 5.3% strongly disagree; the 8% who is a group of learners that have either no interest in mobile learning or have no smartphones. Those that agree that they enjoy using mobile devices know that mobile learning will benefit them in the long term. The learners may not be aware that they are learning when using mobile devices for recreational purposes. Inasmuch as mobile devices are good for teaching and learning, features in these devices can enhance learning/teaching capabilities. For example, educational games can not only be enjoyed but can be learnt from as well. 81.3% of the teachers agree, 6.3% of the teachers strongly agree, 6.3% of the teachers disagree and 6.3% of the teachers are neutral that mobile learning devices will give enjoyment to them for teaching.

- **Mobile devices stimulating curiosity**

Used effectively, technology can play a role in stimulating curiosity (Arnone, Small, Chauncey, & Mckenna, 2011). 76% of the learners agree that mobile learning will stimulate their curiosity. Of these, 65.3% agree, while 10.7% strongly agree. 21.3% of the learners are neutral and 2.7% of the learners strongly disagree. When the new features are introduced onto mobile devices, students begin to explore and learn how to use the application. Learners are always curious to learn. 62.5% of the teachers agree, 25% of the teachers strongly agree and 12.5% of the teachers are neutral that using mobile learning devices will stimulate learners' curiosity. The response is positive.

- **Mobile devices stimulating exploration**

Researchers agree on the association between curiosity and exploratory behaviour (Arnone, Small, Chauncey, & Mckenna, 2011). While 76% of the learners agree that mobile learning stimulates curiosity, 74.7% agree that it stimulates exploration. Of these 50.7% agree, while 24% strongly agree. When curiosity is stimulated, so is exploration. As learners explore, they learn. Those that disagree are minimal at 4%. 1.3% disagree, while 2.7% strongly disagree. On the aspect of those that are neutral, it stands at 21.3% for curiosity and 21.3% for exploration. Curiosity and exploration are related. While 68.8% of the teachers strongly agree that mobile learning will stimulate curiosity among the learners, 31.3% strongly agree. One of the benefits that mobile technology offers is the advantage of its features. There is consensus between learners and teachers that mobile learning will improve their exploration capabilities.

Table 7: Behavioural intention

<div align="center">LEARNERS</div>

BEHAVIOURAL INTENTION TO USE MOBILE LEARNING TECHNOLOGY	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
I will like to use mobile learning technology for my studies in future	2.7	1.3	8.0	37.3	50.1
I will be happy to use mobile learning devices if they are introduced for learning	1.3	5.3	3.3	41.3	40.7
I plan to use mobile learning devices when am able to have one	1.3	5.3	13.3	42.7	37.3
	Never	Once a week	2 times a week	3 times a week	Everyday
How often do you access internet from your handheld mobile device	8.1	8.1	5.4	25.7	52.7

<div align="center">TEACHER</div>

BEHAVIOURAL INTENTION TO USE MOBILE LEARNING TECHNOLOGY	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
I will like to use mobile learning technology for my studies in future	-	-	12.5	56.3	31.3
I will be happy to use mobile learning devices if they are introduced for learning	-	-	6.3	50	43.8
I plan to use mobile learning devices when am able to have one	-	-	6.3	68.8	25
	Never	Once a week	2 times a week	3 times a week	Everyday
How often do you access internet from your handheld mobile device	6.3	1.3	-	-	62.5

- **Mobile learning devices for use in the future**

According to (Matha & Madarsha), when students have an intention to use mobile learning, it will influence their utilisation of mobile positively. 88% of the learners agree that they would like to use mobile learning devices for studies in the future. Of these 37.3% agree, while 507% strongly agree. 8% of the learners are neutral and 4% disagree. Of those who disagree, 2.7% disagree, while 1.3% strongly disagree. These results show that mobile readiness in the sample is very high. While 56.3% of the teachers agree, 31.3% of them strongly agree that they would like to use mobile learning devices to teach in the future. 12.5% of the teachers are neutral. This is a positive response to mobile learning readiness.

- **Happiness to use mobile devices once introduced for learning**

88% of the learners will be happy to use mobile learning devices if they are introduced for teaching and learning. Of these 41.3% agree, while 46.7% strongly agree. 5.3% of the learners are neutral, while 6.6% of the learners disagree. Of those who disagree, 1.3% disagree, while 5.3% strongly disagree. The results show there is mobile readiness among the learners and hence a behavioural intention to use the mobile devices in learning means the learners will readily adopt mobile learning. This is because the learners know that mobile learning will not only foster the way they will access information, but also enable them to be innovative and good problem-solvers (West, 2013). 93.8% of the teachers agree that they will be happy to use mobile learning devices if they are introduced for teaching and learning. Of

these 50% agree, while 43.8% strongly agree. From these results, it shows that teachers are ready for mobile learning adoption.

- **Adopting mobile learning once device acquired**

The "eagerness to use mobile phones among learners and teachers is an indicator of the possibility of adopting mobile technology" (Chambo, Laizer, Nkansah-Gyekye, & Ndume, 2013, p.700). 70% of the learners agree that they plan to use mobile learning devices when they are able to have one. Of these 42.7% agree, while 37.3% strongly agree. Those that are neutral constitute 13.3% of the sample, while those that disagree constitute 6.6% of the sample. From the latter, 1.3% agree while 5.3% strongly agree. For those that are neutral, it may be because they are not certain which type of mobile device we are referring to in this research. The teachers have intention to use mobile devices in teaching once acquired and the infrastructure is in place. 68.8% of the teachers agree, 25% strongly agree and 6.2% are neutral. This means that teachers are willing to use mobile technologies on a personal basis or if the schools give them.

- **Frequency of access to internet from mobile device**

Mobile devices make an impact on education mostly especially as they provide easy and fast access to the internet, high speed browsing, saves time and money and easy access to teaching and learning materials (Edonkumoh, 2015). Those learners that access a mobile device everyday are 52.7%, while those that access a mobile device three times a week are 25.7%. Those learners that access a mobile device twice a week are 5.4%, while those that access once a week or never are at 8.1% each. The results show that there is a high usage of internet-enabled mobile devices among learners. This is mainly for social media, and not necessarily for classroom purposes. The learners are addicted to social media. 62.5% of the teachers access the internet from their mobile devices on a daily basis, 31.3% never access the internet from their mobile devices and 6.3% of the teachers access the internet from their mobile devices 3 times a week. Those teachers from schools that haven't formalised mobile learning do not access the internet at all. The same frequency adopted for educational purposes can have an impact on mobile learning and teaching.

Table 8: Social influence

LEARNERS

SOCIAL INFLUENCE	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agreed
People who influence my behaviour think that I should use mobile learning devices	6.8	20.3	28.4	31.1	13.5
People who are important to me think that I should use mobile	9.3	13.3	24.0	34.7	18.7
I will find mobile learning devices helpful when I partake in group discussions with my mates	-	5.3	17.3	49.3	28.0
In general, I think my school will support he use of mobile learning technology	21.3	14.7	40.0	13.3	10.7
My friends will be happy to use mobile learning devices	1.3	2.7	12.0	38.7	45.3

TEACHERS					
SOCIAL INFLUENCE	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree
People who influence my behaviour think that I should use mobile learning devices	6.3	-	12.5	50	31.3
People who are important to me think that I should use mobile	6.3	-	6.3	25.0	62.5
I will find mobile learning devices helpful when I partake in group discussions with my mates	6.3	18.8	6.3	56.3	12.5
In general, I think my school will support he use of mobile learning technology	-	-	43.8	43.8	12.5
My friends will be happy to use mobile learning devices	-	-	18.8	68.8	12.5

- **Opinion of people who influence learner behaviour**

Students are inclined to use mobile learning continuously and comfortably if people who influence their behaviour make them do so (Masrek, 2015). People who influence learner behaviour on mobile learning are the teachers and administrators. 44.6% of the learners agree that people who influence their behaviour think that they should use mobile devices. Of these, 31.1% agree, while 13.5% strongly agree. 28.4% of the learners are neutral and 27.1% disagree. Of those that disagree, 6.8% disagree, while 20.3% strongly disagree. There is a varying response as this is not an issue that may not discussed in schools. All the same in schools that do not have a mobile policy in place, learners are not allowed to bring mobile devices into class. 31.3% of the teachers agree, 50% of the teachers are neutral, 12.5% of the teachers disagree and 6.3% of the teachers strongly disagree that the people who influence their behaviour think that they should use mobile learning devices. Those that are neutral and are disagreed are in the majority. The Ministry of Education does not yet have a mobile learning policy, although at school level we have a case in which one of the participating schools teaches mathematics via mobile technology already.

- **Opinions of people who are important to the learner**

According to (Matha & Madarsha, n.d), learners would likely use mobile devices if they perceive a good view from important people or family support. People who are important to the learner are friends, parents, peers and neighbours. 53.4% of the learners agree that people who are important to them think they should use mobile devices. Of these, 34.7% agree and 18.7% strongly agree. 24% of the learners are neutral and 22.6% disagree. Of the 22.6% who disagree, 9.3% disagree, while 13.3% strongly disagree. In the social area, the push to use mobile devices is mainly about communication not necessarily education. The communication aspect increases the need to own mobile devices. People who are important to the teacher include the family. Family need mobile devices for communication purposes but they cannot put set rules on them. 62.5% of the learners agree, 25% are neutral, 6.3% disagree and 6.3% strongly disagree that people who are important to them think they should use mobile learning devices.

- **Usefulness of mobile devices in group discussions with mates**

Mobile learning technology has been implemented as a communication tool in learning through email, text, audio and voice discussions (Wei, Chen, & Wang, 2007). 77.3% of the learners agree that they will find mobile devices helpful when they partake in group discussions with mates. Of these, 49.3% agree, while 28% strongly agree. 17.3% of the learners are neutral, while 5.3% of the learners disagree. Group discussions may not

necessarily be academic, but may also be social. However, group discussions using mobile technologies can help in academics. From the teachers, 56.3% agree, 12.5% strongly agree, 18.8% disagree, 6.3% strongly disagree and 6.3% are neutral on that the learners will find mobile learning devices helpful when there are group discussions. Effective teaching and learning encourages group discussions.

- **Schools support for use of mobile technology**

To enable the adoption of mobile learning and teaching, a policy environment conducive to large scale mobile learning is necessary (UNESCO, 2012). 24% of the learners agree that their schools will support the introduction of mobile learning to teaching and learning. Of these 13.3% agree and 10.7% strongly agree. 40% of the learners were neutral, while 36% of the learners disagree. The learners are not sure of the school policy on mobile learning hence they are not sure of what the school will decide. The belief among the learners is that such decision should be left to the school, which is why the numbers of those that are neutral is more. The majority of the teachers believe that their schools will support the use of mobile learning. 43.8% of the teachers agree; 12.5% of the teachers strongly agree and 43.8% of the teachers are neutral on this issue.

- **Happiness of friends to use mobile devices in learning**

84% of the learners agree that their friends will be happy to use mobile learning devices. Of these 38.7% agree while 45.3% strongly agree. 12% of the learners are neutral, while 4% disagree. The learners work with friends, know them and interact with them. They use mobile devices among themselves even if it may not be for educational purposes. They are also aware of how helpful mobile technology will be to them in the class environment. Teachers show general acceptance of the usage of mobile learning devices and are happy to use them. 68.8% of the teachers agree, 12.5% of the teachers strongly agree and 18.8% of the teachers are neutral on the issue that their colleagues will be happy to use mobile learning devices in class.

Table 9: Voluntariness of use

LEARNERS

VOLUNTARINESS OF USE	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agreed
Although might be helpful, using mobile learning device should certainly not be compulsory	5.4	9.5	28.4	44.6	12.2
Mobile learning should be made compulsory	1.3	13.3	48.0	21.3	14.7
Learners should be m or made to choose if they want mobile learning or not	5.3	6.7	16.0	38.7	33.3

TEACHERS

VOLUNTARINESS OF USE	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree
Although might be helpful, using mobile learning device should certainly not be compulsory	-	12.5	25.0	56.3	6.3
Mobile learning should be made compulsory	-	25.0	31.3	37.5	13.3
Learners should be m or made to choose if they want mobile learning or not	-	6.7	26.7	53.3	13.3

- **Should mobile devices be compulsory in schools**

According to (Fuller & Joynes, 2015,p. 154), "educators should focus less on whether mobile learning should be implemented and more on developing mobile learning curricula that is comprehensive, sustainable, meaningful, compulsory in order to prepare learners for their working lives". 52.8% of the learners agree that mobile devices should certainly not be compulsory. Of these 44.6% agree, while 122% strongly agree. 28.4% are neutral. 14.9% disagree, of which 5.4% disagree, while 9.5% strongly disagree. The learners want mobile learning but it should not be compulsory. They are aware that they are likely to be tempted to use mobile devices for other things during lessons. The majority of the teachers feel that although it might be helpful, using mobile learning devices should certainly not be compulsory in class. 56.3% of the teachers agree, 6.3% strongly agree, 12.5% of the teachers disagree and 25% of the teachers are neutral. Inasmuch as they do not support the adoption, there is a generally accepted view that mobile learning should be used. Guidelines on mobile technology usage should be introduced for better results. The mobile devices should be configured such that they cannot be used for non-school activities such as calls or SMS during classes.

- **Should mobile devices be made mandatory in schools**

(Chen & Tzeng, 2010) argue that using innovative technologies such as mobile technology is associated with better academic performance. As a result mobile technology should be made mandatory in schools. If mandatory, it means that all will use it in schools in this case. 36% of the learners agree that mobile devices should be made mandatory in schools. Of these 21.3% agree, while 14.7% strongly agree. 14.6% of the learners disagree, of which 1.3% disagree and 13.3% strongly disagree. 48% of the learners are neutral. An awareness raising among learners is required for them to make decisions.

Learners should be controlled when using mobile devices in class. Measures such as storing away mobile devices during non-mobile learning classes and configuring devices not to receive messages and calls can be some of the measures in place. 37.5%5 of the teachers agree, 6.3% of the teachers strongly agree, 25% of the teachers disagree and 31.3% of the teachers are neutral on whether or not mobile learning should be made mandatory in schools.

- **Learners to choose if they want mobile learning**

72% of the learners agree that they should be given the opportunity to choose if they want to take up mobile learning or not. Of these, 38.7% agree and 33.3% strongly agree. 16% of the learners were neutral, while 12% disagree. This shows that the learners want the right of choice. Those that disagree is because they consider it the responsibility of the stakeholders to make such a policy statement.

It should not be up to the learners to choose whether or not they want mobile learning in their schools, but that of the authorities creating a conducive environment for learning. Teachers have access to computer laboratories more than the learners; hence they are more motivated than learners towards mobile learning. 53.3% of the teachers agree, 13.3% of the teachers strongly agree, 6.7% disagree and 26.7% are neutral that learners should be made to choose if they want mobile learning.

Table 9: Facilitating conditions

LEARNERS

FACILITATION CONDITIONS	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agreed
I have the resources necessary to use mobile learning devices	5.3	12.0	25.3	49.3	8.0
I have the knowledge necessary to use mobile learning devices	1.3	4.0	14.7	52.0	28.0
My schools has facilities for mobile learning	21.3	21.3	30.7	21.3	5.3

TEACHERS

FACILITATION CONDITIONS	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree
I have the resources necessary to use mobile learning devices	18.8	12.5	18.8	31.3	18.8
I have the knowledge necessary to use mobile learning devices	12.5	6.3	25.0	25.0	31.3
My schools has facilities for mobile learning	12.5	18.8	18.8	37.5	12.5

- **Availability of resources for mobile learning**

Facilitating conditions refer to the availability of resources to support the adoption and usage of mobile learning at a given institution (Mtebe & Raisamo, 2014). The cost of purchasing devices for use by teachers and students can be prohibitive (Crompton, 2013). 57.3% of the learners agree that they have the resources necessary to conduct mobile learning. Of these, 49.3% agree, while 8% strongly agree. 25.3% were neutral and 17.3% disagree. Of these, 5.3% disagree, while 12% strongly disagree. The resources are the mobile device infrastructure and the teachers. Most students have mobile devices. Those that are neutral may not know the devices for mobile learning. On the issue of the availability of the resources necessary to conduct mobile teaching, all depends on how teachers look at the resources. Resources could be from the school or from their pockets or it could be their skills. 50.1% of the teachers agree that they have the resources necessary to conduct mobile education. 31.3% agree, while 18.8% strongly agree. 12.5% disagree, while 18.8% strongly disagree. 18.8% of the teachers are neutral.

- **Knowledge to use mobile devices**

80% of the learners have the knowledge necessary to use mobile devices. Of these 52% agree, while 28% strongly agree. 14.7% are neutral, while 5.3% disagree. Of those who disagree, 1.3% disagree, while 4.0% strongly disagree. Most of the learners own smartphones and use them frequently. Past experience on the use of mobile devices is necessary for mobile learning. 56.3% of the teachers have the knowledge necessary to use mobile learning devices, 18.8% disagree that they have the knowledge necessary to use mobile learning devices, while 25% of the teachers are neutral. Inasmuch as we have an appreciable number that agree they have knowledge to use mobile devices, teachers still need training.

- **The Facilities for mobile learning**

26.6% of the learners disagree that their schools have facilities for mobile learning. Of these, 21.3% disagree, while 5.3% strongly disagree. 30.7% of the learners are neutral, while 42.6% agree. Of the 42.6% who agree, 21.3% agree, while 21.3% strongly agree. All the other

schools have ICT laboratories. But only one uses them for mobile learning in selected subjects. A large number of teachers agree that their schools have facilities for mobile learning. 37.5% agree, 12.5% strongly agree, 18.8% are neutral, 18.8% disagree and 12.5% strongly disagree. There may be a large number of teachers who agree but the facilities may not be enough. Teachers may need adequate facilities for the adoption of mobile learning inasmuch as they need training.

Conclusion

Introduction of mobile technology in schools would work in an environment in which there is a sound ICT infrastructure. Unfortunately, in Namibia 2G coverage is at 95%, 3G at 30% and 4G at 15% in areas where there is network coverage. Affordable internet access and skilled ICT teachers are also a challenge. The positive though, is that mobile telephony penetration in Namibia is above 110%. This is all about the e-readiness status of Namibia. E-readiness is the measure of the degree to which a country is able to participate in electronic activities. The burden of narrowing the digital divide between well-resourced and under-resourced schools should be taken up by the government. Issues such as negotiating internet access deals with internet service providers should be taken over by the parent government ministry.

The majority of teachers and learners in Namibia own mobile devices. For mobile education, these devices can be used for accessing the internet, downloading educational materials and applications, performing calculations, accessing social networking sites, searching for definitions of words, sending and receiving emails, reading assignments and blogging. ICTs have the capacity to improve accessibility to information, facilitating communication, enhancing synchronous learning and collaboration. However, not every learner has access to mobile technology. Hence the relevant ministry should be in a position to provide learners with mobile devices.

ICTs in the classroom are perceived as distracting learners. With proper controls in place, the disadvantage of incorporating mobile technology into the classroom can become less than the benefits. The right school policies have to be in place. So should government policies on ICT in education be updated to cater for disruptive technologies such as mobile learning in schools? Education is a very sensitive area to be interfered with willy-nilly, hence it is understandable why there is a delay in implementing some of these technologies. In summary, from the results of this research, Namibia is mobile education ready. All that is left is for the policymakers to take it a step further.

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