Mobile learning stimulus in Nigeria

Mohammed B. Yakubu*, School of Science & Technology, Abubakar Tatari Ali Polytechnic, Bauchi, Nigeria
Abba Hassan, School of Science & Technology, Abubakar Tatari Ali Polytechnic, Bauchi, Nigeria
Aminu Ahmad, Abubakar Tafawa Balewa University, Bauchi, Nigeria
Kabiru I. Musa, Abubakar Tafawa Balewa University, Bauchi, Nigeria
A. Y. Gital, Abubakar Tafawa Balewa University, Bauchi, Nigeria

Abstract

Nowadays, the application or acceptance of mobile learning in teaching and conducting research and other academic activities have been successful in developed and some developing countries of the world and have proven to be more efficient than the customary learning systems. Most of students and academia in these developed nations have embraced mobile technology because of its simplicity, flexibility and also provide opportunity for students and academia to collaborate with one another irrespective of their geographical location for research purposes. Few literatures suggest that the level of technology acceptance in the country is still very low compared to other parts of European and some Asian countries. However, findings of the quantitative analysis and collected works have also shown that students and academia hesitant to embrace mobile computing technology is one of the most significant factors that affect the level of mobile learning in most African countries.

Keywords: Mobile learning, digital natives, autodidact, e-learning.

---

* ADDRESS FOR CORRESPONDENCE: **Mohammed B. Yakubu**, School of Science & Technology, Abubakar Tatari Ali Polytechnic, Bauchi, Nigeria. *E-mail address*: rosese0079@gmail.com / Tel.: +2348067039020

1. Introduction

Owing to progression in mobile technology and their increasing affordability, mobile devices have become most ubiquitous piece of technology in the world, thus creating a new paradigm on how people transact (Abba, Sadiq & Bulama, 2015c). Rapid trend in capacities of mobile technology has enabled users to perform different and multiple tasks on a device; almost everything. In spite of this advancement in mobile technology, all Nigerian higher institutions of learning prohibit the use of mobile learning. Fear in cheating and distraction are the major reason for the prohibition.

Mobile learning has different meanings for different communities, covering a range of use scenarios, including e-learning, educational technology and distance education, which focuses on learning with mobile devices. Crompton, (2013) defined mobile learning as 'learning across multiple contexts, through social and content interactions, using personal electronic devices'. With the use of mobile devices, learners can learn anywhere and at any time (Crescente, Mary & Lee, 2011).
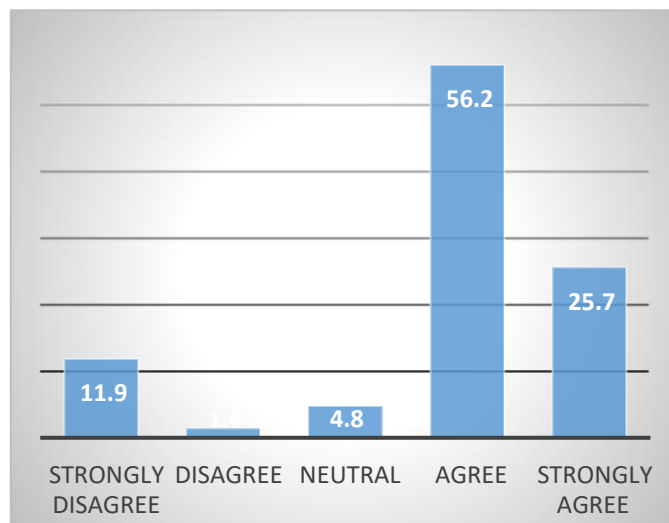
There are at present over 5.3 billion mobile subscriptions globally, which constitute 77% of the world's population. Although in rural areas, these estimates are lower, it is projected that 80% of people living in rural communities have access to a mobile network. In places where infrastructure barriers have prevented developing countries from accessing Internet, majority of people get access to Internet from their mobile devices (Abba et al., 2015c). For many, the role of mobile devices is although essential for living in typical society; mobile devices are still banned in Nigerian institutions of higher learning. If a dichotomy continues to exist between society and education, how will education ultimately fair? The challenges for education are proceeding to grow as students born in the digital and mobile age are approaching learning from a very different perspective than their predecessors (Abba, Bala & Bulama, 2015a).

Thus, Nigerian education sector must rethink current pedagogical strategies; one potential way is to incorporate mobile learning towards meeting the needs of both students and higher institutions in the digital age. By shifting paradigms, it will benefit students by increasing achievement and learning outcomes, as well as higher institutions by helping them remain competitive with alternative educational outlets.
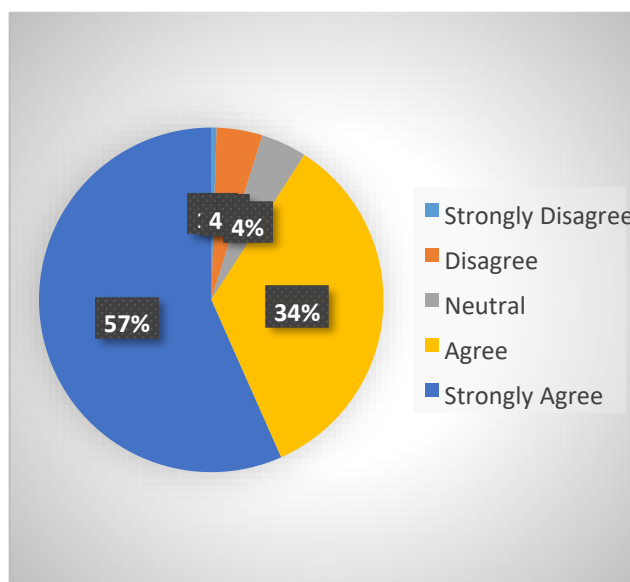
2. Bridging the digital gap—digital natives versus digital immigrants

Prensky (2001) pointed out that a difference has to be identified between 'digital natives' and 'digital immigrants' in the manner they view and use technology. Digital natives, as defined by Prensky (2001), are those who have been exposed to and immersed in technology since birth, in this case, students will likely perceive the use of technology very differently than digital immigrants, in this case, most of the lecturers. To support this, some of the lecturers stated that they bought and use smartphones because of their students; to communicate via social media and sometimes share notes. Some lecturers even use it with students for their advisory and supervisory group. To this end, digital immigrants (lecturers) must embrace mobile technological trends and overcome their phobia (Abba et al., 2015a).

Lecturers are worried about distraction whereas the study shown that students were already exposed to using mobile devices for learning, as shown in Figures 1 and 2.

Yakubu, M. B., Hassan, A., Ahmad, A., Musa, K. I. & Gital, A. Y. (2018). Mobile learning stimulus in Nigeria. *Global Journal of Information Technology: Emerging Technologies*. *8*(3), 095-101.

Figure 1. Class discussion through mobile devices (Abba et al., 2015a)

Figure 2. Class assistance through mobile devices (Abba et al., 2015a)

Again both lecturers and students have confidence that students would be competent to learn how to use these devices for learning with ease. But the lecturers show their acknowledgement that students would need extra training in order for them to be more ethical, aware and disciplined. However, students being digital natives might be more knowledgeable about the mobile devices capabilities than some of the lecturers.

Prensky (2001) addressed that 'Our students have changed radically. Today's students are no longer the people our educational system was designed to teach.' Being digital natives, students are more engaged with using and relying on latest technological devices; hence, have a profound effect on them. They are not just most used to interacting with mobile devices but glued to it. Therefore, the students do not just need mobile learning, it is a necessity to them.

Yakubu, M. B., Hassan, A., Ahmad, A., Musa, K. I. & Gital, A. Y. (2018). Mobile learning stimulus in Nigeria. *Global Journal of Information Technology: Emerging Technologies*. *8*(3), 095-101.

3. Potential challenges

The main challenge in mobile learning research is the lack of capability to keep pace with daily change in technology. All the articles studied for this study yields a positive outcome; hence, technology is evolving so rapidly that it is yet to understand the learning potentials of advanced mobile devices, usage of personal mobile devices for education and casual learning that now occurs in the classroom.

'There are still significant challenges of scale, sustainability, inclusion and equity in all their different forms in the future, and of context and personalisation in all their possibilities, of blending with other established and emerging educational technologies and of tracking the changes in technology' (Fischer, 2000). Other major barriers, according to researchers, relate to the personal nature of mobile devices. Many foresee challenges associated with creating content for various independent operating systems of student mobile devices (Fischer, 2000). However, advancements in technology, an increase in smartphone ownership in combination with a decrease in cost, are quickly eliminating this concern. Others believe the personal nature of mobile devices may hinder collaboration by isolating users from meaningful social interactions (Abba, Bulama & Bala, 2015b). Nonetheless, most users use mobile devices as their primary communication tool to make phone calls, text, email and in social network. In fact, Facebook claims that more than 200 million active users (40%) are currently accessing Facebook through their mobile devices and people that use Facebook on mobile devices are twice as active on Facebook as non-mobile users (Facebook).

The multi-functionality and size of mobile devices enable them to support a variety of different learning activities. However, this also makes developing or specifying a theory associated with mobile learning extremely problematic (Fischer, 2000). Fischer (2000) argues that in looking for a theory, the mobile learning community may be over-simplifying mobile learning and will be faced with three different options and dilemmas:

i) Import theory from 'conventional' e-learning and worry about transferability
ii) Develop theory about initiation locally and worry about validity
iii) Subscribe to some much more general and abstract theory and worry about specificity and granularity.

According to Naismith et al. (2005), the under-listed challenges are related with key issues in mobile learning:

i) Mobility: Mobile learning offers anywhere anytime capabilities to learning activities, inside and outside the classroom. This poses challenges to usual teaching practices.
ii) Informality: Mobile learning encourages informal learning. This can make mobile learning lose its benefits if it is too widespread.
iii) Ownership: Mobile devices offer personal access and ownership to support both personal and group learning. Personal ownership is important to commitment and engagement but poses challenges to institutional control.
iv) Learning over time: Mobile devices offer the challenge of providing effective tools to lifelong learners to reflect on their mobile learning experience.

Several other features that partake to lead towards the ubiquity of mobile devices are as well observed as by some researchers as potential barriers. For instance, researchers were worried that display/screen size of mobile devices, especially smartphones may affect learning. Study exploring display/screen size and learning is limited; on the other hand, introduction of phablet smartphones in 2007 seems to solve the problem. Minimum display/screen size of a phablet is 4.13 inches and since there has been competitions in screens among all mobile devices industries.

Yakubu, M. B., Hassan, A., Ahmad, A., Musa, K. I. & Gital, A. Y. (2018). Mobile learning stimulus in Nigeria. *Global Journal of Information Technology: Emerging Technologies*. *8*(3), 095-101.

4. Lifelong learning

Lifelong learning is the ongoing, voluntary and self-motivated pursuit of knowledge for either personal or professional reasons (Fischer, 2000). Mobile technology is an excellent means that will facilitate lifelong learning.

Lifelong learning could be encouraged with the aid of mobile devices for the reason that they can provide instant access to knowledge anytime, anywhere. An argument can be made that knowledge could also be accessed via other means of technology; hence, the freedom of movement and flexibility of mobile devices facilitate for access anytime, anywhere. According to interest or need, students can utilise autodidact opportunities due to remarkable information available, as well as numerous apps being developed for various subject areas. Mobile devices offer the challenge of providing effective tools to lifelong learners to reflect on their mobile learning experience.

Students nowadays are being autodidact without being encouraged by lecturers, many have hunt for and find applications that have assisted them to learn course content, study or attain other non-course related knowledge. Also, they are, at present, accessing course materials and organise educational tasks through their mobile devices (Abba et al., 2015a).

As students are already used to accomplishing educational tasks informally, the data suggest that students have confidence in a more formal incorporation of mobile learning, as shown in Figure 3.
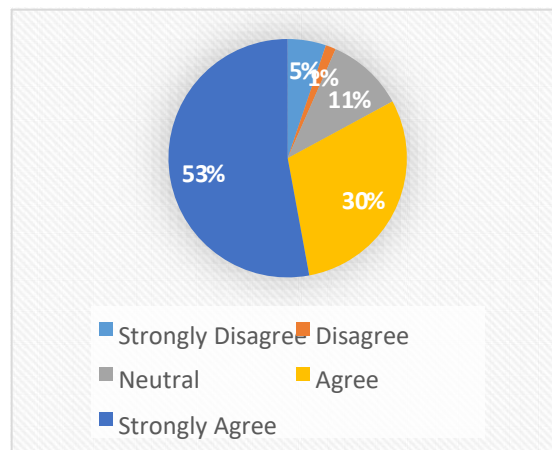

Figure 3: Incorporation of mobile learning into classes (Abba et al., 2015a)

Mobile devices usage gives the idea to support autodidact and/or self-controlled learning. This can be proven via the new pattern in the way students responds to learning. They communicate through mobile devices with regards to their learning experience in class with respect to Figure 1. In addition, students enthusiastically lookout for information from the Internet, as well as from their respective peers once they identified a motivation need or knowledge gap.

As an instance, it is common to most students to text their peers or mates about lecturers ability, the class context and sometimes even their level of commitment in class. This can be considered self-awareness and collaboration. As the data indicated in Figure 3, educators can use this as an opportunity to boost student's teamwork such as group assignments, group projects or any relevant group work.
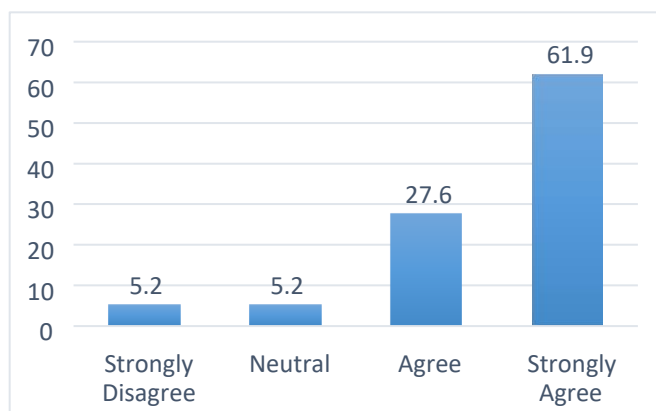
Figure 4. Mobile device enhance students collaboration (Abba et al., 2015a)

Majority of students as well use sticky notes, note pads or to-do apps in their devices to jot down keywords they are not familiar with and look it up in Internet. Sometimes they straight away seek for assistance on specific course content from classmate via mobile device of course.

5. Conclusion

Presently, students are using their mobile devices to accomplish diverse educational tasks as shown from the outcomes of the survey. Informally, students are regularly carrying out extra activities in class like taking a snapshot, organising class events and accessing relevant course materials and information through the Internet with their mobile devices. Lecturers, through their mobile devices, are using social networking apps to communicate about class events and activities. Again through these social apps, some lecturers create groups for their project students in order to enhance the supervisory in real time. For this reason and the findings of this study, incorporating mobile learning in Nigerian higher institutions would be beneficial for all its stakeholders.

Students nowadays are being autodidact without being encouraged by lecturers, many have hunt for and find applications that have assisted them to learn course content, study or attain other non-course related knowledge. In addition, they are, at present, accessing course materials and organise educational tasks through their mobile devices.

As students are already used to accomplishing educational tasks informally, the data suggest that students have confidence in a more formal incorporation of mobile learning. Hence, it would remain easy and of assistance. The data for lecturers indicate they will positively embrace incorporating mobile devices in classes. However, they would possibly limit the integration to learning opportunities and access to course content materials as the data disclose that distraction is likely to occur. For class activities, they do not favour mobile devices to be in use as some activities require hands-on; hence, cannot be accomplished in mobile devices.

Cheating and distraction appeared to be the main restraining influence for lecturers embracing incorporation of mobile devices in classes. Even student data disclose that students do believe that mobile devices can provide a new way for cheating in their assessments. With regards to distraction, lecturers pointed out that Internet is the main thing that distract students and make them wonder around looking information and losing concentration while the class is going on. Students to be as equally or more distracting claims some of the recognised and accepted technology like laptops and PCs that are used presently in most classes for educational use.

Yakubu, M. B., Hassan, A., Ahmad, A., Musa, K. I. & Gital, A. Y. (2018). Mobile learning stimulus in Nigeria. *Global Journal of Information Technology: Emerging Technologies*. *8*(3), 095-101.

References

Abba, H., Bala, M. & Bulama, M. (2015a). *Measuring readiness & acceptance of mobile learning in ATAP using technology acceptance model*. Bauchi, Nigeria: TetFund.

Abba, H., Bulama, M. & Bala, M. (2015b). *Measuring readiness & acceptance of mobile learning in ATAP using technology acceptance model*. Bauchi, Nigeria: TetFund.

Abba, H., Sadiq, S. A. & Bulama, M. (2015c). *Mobile learning: the impact of mobile devices and technology in learning at IUKL*. Technology and Innovation Conference (TECHON).

Ally, M. (2009). *Mobile learning: transforming the delivery of education and training* (pp. 77–79).

Bakia, M., Mitchell, K. & Yang, E. (2007). State strategies and practices for educational technology: examining & enhancing education through technology program. *United States Department of Education, 1*.

Crescente, F., Mary, L. & Lee, D. (2011). Critical issues of mlearning: design models, adoption processes, and future trends. *Journal of the Chinese Institute of Industrial Engineers, 28*(2), 111–123, 2011.

Crompton, H. (2013). *A historical overview of mobile learning: toward learner-centered education*. In Z. L. Berge & L. Y. Muilenburg (Eds.), *Handbook of mobile learning* (pp. 3–14). Florence, KY: Routledge.

DES. (2000). *Learning for life: white paper on adult education*. Dublin.

Fischer, G. (2000). Lifelong learning—more than training. *Interactive Learning Research, 11*(3), 265–294.

Kathryn, D. G. (2012). *The perception of teachers toward the use of mobile technology as a tool to engage students in learning*.

Keegan, D. (2005). *The incorporation of mobile learning into mainstream education and training*. In mLearn 2005—4th World Conference of mLearning, Cape Town, South Africa.

Prensky, M. (2001). Digital natives, digital immigrants. *On the Horizon, 9*(5), 1–2.