

AN OVERVIEW OF MOBILE APPLICATION IN BUSINESS EDUCATION CONTENT DELIVERY AMONG STUDENT OF VOCATIONAL AND TECHNICAL EDUCATION

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ABSTRACT: *This paper examines mobile application in content delivery of Business education. Mobile Learning (M- Learning) as a new concept in the learning process which emphasizes the ability to facilitate the learning process without being tied to a physical location. Specifically, the study assessed devices for mobile learning, concept of Business education and its content, roles and advantages of mobile devices in learning Business education content. The study was conducted at University of Benin, Ugbowo campus, Benin City, Edo State. The population for the study was 140 students of 100level to 400level Vocational and Technical Education Department. Structured questionnaire were used to collect data from the 140 students. Data collected were analysed through content analysis and the Statistical Packages for Social Sciences. Pie chart and histogram were used to present results of quantifiable data. Results shows that students are willing to use the mobile technology in learning process and they have a positive perception and awareness to mobile technologies and will use the elements in mobile technology in learning process to improve their performance and interest in the learning of Business education. It is therefore recommended that teachers should be informed of the importance of Mobile Learning and how it can be used to help students exploit their leisure and change it into productive activity. Facilitators also should be trained on how to produce teaching materials and prepare their courses to suit Mobile Learning.*

KEYWORDS: Mobile Application, Business Education, Content Delivery, Student

INTRODUCTION

Mobile Learning (M Learning) as an aspect of Information Communication technologies (ICTs) has brought great and dynamic changes in the world of general education. Education is the process of imparting and acquiring knowledge through teaching and learning, especially at school or similar institution. (Stark, 2009). Education is a broad term which means act of teaching and learning composed of different aspects among which include technical and vocational education. Olakotan (2010), asserted that Technical and Vocational Education (TVE) tends towards preparing an individual for gainful employment in the world of work. In other words TVE can be seen as a functional type of education which places emphasis on producing skilled manpower in order to increase productivity of labour which tends to serve as a tool for economic development. Aspect of TVE includes; Business education with options in; Available career ranges from Accounting, Marketing, Office Management, Secretariat and Stenography, among others. Technical education with options in available career; building technology, electrical/electronics technology, automobile technology and woodwork

technology. Wood work technology. Business Education as a course takes different form of teaching learning methods. M Learning as a latest technology development which can facilitates teaching learning of Business Education will have a great impact on the pace and rate at which individual learns the curriculum content in the area of option selected for study. Latest information and communication technology helps lecturers and students in teaching and learning Business education.

Overview of Mobile Learning

The emergence and advancements of Information and Communication Technologies (ICTs) have changed the way teaching and learning processes are being conducted. ICTs facilitate immediate access to information resources needed for teaching and learning. ICTs have capabilities of improving information accessibility; facilitating communication via electronic facilities; enhancing synchronous learning and; increasing cooperation and collaboration. Information and Communication Technology (ICT) applications enhance an exchange of information between trainer-trainee or trainee-trainee. Such mobile learning can involve the sharing of multimedia learning materials, Web-searching and teacher-learner and learner-learner interaction. According to recent studies, 30 per cent of the world's Web traffic now occurs over mobile devices rather than desktop machines, leading to predictions that mobile Internet use will eventually overtake desktop use (UNESCO and COMMONWEALTH OF LEARNING, 2017). In other word adoption of mobile phone to teaching learning process is also referred to as Mobile learning.

Mobile Learning or M- Learning is a new concept in the learning process. It simply refers to the use of mobile and handheld IT devices, such as PDAs, mobile phone in teaching and learning (Wood, 2003). Also Laouris & Eteokleous (2005) defined Mobile Learning as E-learning that uses mobile devices or learning connected to a mobile device. In the words of Kukulska and Traxler (2005), Mobile Learning is the ability to facilitate the learning process without being tied to a physical location. Therefore, Business Education delivery process can be done at anywhere and not only in the four wall of a classroom. As a trainee in technical colleges or tertiary institutions, particularly in Nigeria, mobile phones, laptops and smart phones are gadgets that are affordable. With the availability of mobile phones students have the opportunity to learn Business Education concept in a new form different from the typical traditional method.

M-Learning is a computer aided learning style or method which using the latest mobile devices such as smart phones, laptops and tablet PCs (Prensky, 2001). However, M-Learning is not a solely learning approach through mobile phone or learning using wireless internet but M-Learning is an evolution of e-learning, which is complete the deficiencies in previous e-learning (Mostakhdemin-Hosseini and Tuimala, 2005). Some of the advantages of M-Learning are; the use of multimedia elements in conveying information and receiving online feedback, students can get the lecture notes quickly without copying it from the board, student can as well visit some pages or access online free courses to add to their knowledge. Also the learning process can be done anywhere and at any time.

Mobile Learning Devices

Devices that can be used for mobile learning are plentorial popularly regarded as smart phone. They have specific features which distinguished them from other electronic devices such as wireless function, movable and handle among others. These devices allow users to surf the

internet, play games, and download applications and for teaching learning purpose. Examples of mobile learning devices are: Apple iPhone, Apple iPad, Samsung Galaxy Note 10, Google Nexus 7, Kindle Fire HD, Android phone, Windows phones (iOS), Personal Digital Assistance (PDA), Smart phones among others. These devices allow two or more users to communicate to each other via text, graphics, verbal and other charting applications.

Mobile Learning in Nigeria

M- Learning technology has been absorbed into the education scenario in Nigeria but is still at the early stage. The study was carried out at a number of universities and colleges in Nigeria and proved that the acceptance and high tendency shown by the students of M-Learning based on the results of the study. Applying the learning method M-Learning can improve students' interest, focus their learning and student academic performances can be improved (Isham *et al.*, 2011), (Irwan and Norazah, 2011). Continuous assessment by the lecturer to the students in a course can be implemented accordingly. The use of mobile phones is very important in which information may be presented at any time and in any place (Hiramatsu *et al.*, 2012). Mobile phone is a device that aids in the process of teaching and learning in educational institutions. Community in Nigeria has begun to receive ideas on the use of mobile phones in education. There are some schools that have started using mobile phone in teaching and learning. Nigeria also has conducted a pilot study on the implementation through the study of "Use of I-Phone in Virtual Learning" (Utusan, 2011). This implies that most of Nigerians has a mobile phone and allows information to be obtained wirelessly which enable the implementation of M-learning for Business Education. (Akinbowale, 2017) was of the opinion that, smart phone as become a must to have among our higher institution students today base on one reason or the other especially for charting on different social applications, playing of games, listening to music, watching of videos among others. This gadget are been used by the students irrespective of where they are, even in the class while the lecturer is using traditional way of teaching, therefore if every student can have this gadget for charting means (and other means) among their peers, if it is educationally based, the learners will be able to accessed its regardless of time and place and it will be good for effective and easy teaching and learning of subject content.

Concept of Business Education

Business Education contributes immensely toward economic growth and development of any nation that deems it fit to invest in the aspect of education because it has the capacity to equip learners with skills in self- reliance. Business Education also gives the graduates the opportunity to create jobs, employ and train others in the same field of study, become creative and productive citizens who will be able to participate in the economic growth and development process.

Okim (2005) defined Business Education as the education to produce goods and services.

Akpan (2013) defined Business Education as the education that transfer knowledge, skills and attitudes to enable one perform better in a specified business.

Nolan, Hayden, and Malsbary in Ekpenyong (2015) defined Business Education as those business programmes and courses taught ordinarily at the secondary school level.

According to Osuala (2004), Business Education is a programme of instruction which consists of two parts: office education, a vocational programme of office careers through initial,

refresher and upgrading education and General Business education, a programme to provide students with information and competencies which are needed by all in managing personal business affairs and in using the services of the business. From this definition, business education is generally classified into two (2) parts: the office education, to prepare personnel's for the office work, those that would be interested in providing career in working under an organization, to be employed into a firm, etc. From that point of view Business Education is intended to equip students with the right type of skills, knowledge and attitudes to fully function in an organization. In other words, Business Education is that programme of instruction that prepares, equips and educates students for business through entrepreneurship. Also, Business Education could be seen as skills, knowledge and attitudes to establish, own and run a business enterprise successfully.

Furthermore, Njoku (2006) defined Business Education as an educational programme that equips an individual with functional and suitable skills, knowledge, attitude and value that would enable him/her operate in the environment he/she finds himself/herself.

Akinbowale A.O (2017) sees Business Education as the education programme all aimed at training, equipping, inculcating on its students necessary and important skills, knowledge, attitude and value needed in becoming a successful entrepreneur and passing such knowledge, experience and value to people available for it. Business Education in this perspective is an avenue for the transferring of valuable skills, knowledge, attitudes and values for business owning. It goes beyond the transfer of knowledge to the actual transfer of skills, and values to operate in a business environment successfully. The goal of business Education is to impart marketable skills, knowledge, attitudes and values to enable individuals to be producers of goods and services (Charity F. 2016). This study is more concerned and interested in viewing Business Education as an education for production and how its content can help in Nigeria economy recovery.

Contents of Business Education Programme

Business Education entails teaching students the essentials, rudiments, assumption and methods of business. Education in this discipline takes place at various stages starting from the secondary education to higher institution education (College of education, polytechnics and university). In the higher institution level, students have to enroll for a particular degree in business education, and the option courses available differ by school but characteristically include essential and fundamental selections like accounting, marketing, management, secretariat and distributive education.

The contents of the Business Education programme refer to the curriculum of the programme (Udo, 2006). The curriculum of Business Education is skill oriented. It is intended to provide skills, knowledge and attitudes to students on the areas of accounting, keyboard mastery, office education, marketing education, management and business law.

Contents of Business Education are practical in nature in that students in year 3 at University, year two at colleges of education are expected to undergo a six months Students Industrial Work Experience Scheme (SIWES) where they will be exposed to the rudiments of industrial practices relating to the field, practice and build themselves with practical experiences. A more significant aspect of Business Education content is the Business Mathematics, Economics and Statistics. This is because as a business person, much of the work will be mathematically based. As the student progresses educationally, the students would be

exposed to the rudiments of entrepreneurship which is the fundamental aspect of the business education programme.

Contents of the programme are intended to enable the students to fit into the world of work and at the same time, become successful entrepreneurs.

According to Bassey (2013), the Business Education programme has contents that tend to make the students self-reliant upon graduation. Bitrus (2009) opined that the content of Business Education is more career oriented and as such, from the students first year of study the student is expected to choose a career from the available business Education programme. Available career ranges from Accounting, Marketing, Office Management, Secretariat and Stenography, among others. From this option, the student would be exposed to real life industrial experiences of the related occupations. In the Accounting career option, students are exposed to principles of Accounting, Economics and Business Mathematics from year 1. The students will be exposed to financial accounting, finance, macro and micro-economics. At the later stage of the year 2, the students will be exposed to cost and management accounting, year 3 is much of intermediate financial accounting, taxation, elements or principles of management and business law. At the final year, the Accounting option student is expected to be exposed to Advanced Financial Accounting, Company law, Financial Management, Auditing and Investigation among the several core Business Education courses like introduction to Business Education and office practice. At year 2, the students will be exposed to principles of Business operations, Business machines and keyboarding. Some institutions offer keyboarding at the year 1 level.

The office management or secretarial administration offers courses in office practice, typewriting and shorthand at the year 1 level. As the student progresses, the student is exposed to the rudiments of communications, and office operation. The student is furthermore exposed to office dictation, word processing, personnel management, records management and Management Information System (MIS). At some other point, the content usually exposed students to Manpower Development. (Charity F. 2016).

Mobile Learning's Framework

Benefit of Mobile Learning in education as cited by Chen and Kinshuk, (2005) in (Mtega, Bernard, Msungu, and Sanare, 2012) includes;

- High learning needs.
- Own initiative in search of information.
- Mobile learning infrastructure.
- Interactive learning process.
- Determine the activities of the explanation.
- Integrated learning information.

Approach for Mobile learning takes a different form from the typical traditional method of teaching and learning where all learning activities such as teaching or lecturing, assessment and evaluation among others are attached to a particular location. Technology based education

occurs in a place where network facilities are available while mobile technology based education occurs any where students can access wireless network (Wifi). Therefore, the current technological development in education through M learning provides trainees with the benefit to determine their own learning time and activities. This is supported by Chen and Kinshuk (2005), who posited that an educational service based on mobile technologies is a mobile learning resource and can be accessed by students regardless of time and place. The design of mobile technology-based education must be dynamic, easily scalable and can be applied at all times and places. In conclusion, the design of mobile technology-based education can be adapted in learning Business Education.

The Role of Mobile Phone in Learning Business Education

Applications of mobile phone to daily life activities are many, including the study of Business Education content. Benefits of mobile phones are not limited to increased access to learning and referencing materials on Business Education but also it facilitates changes in the style of teaching and learning or acquiring effective skills in Business Education. M-Learning is seen as a continuation of traditional learning style and also as an alternative to the style of effective learning. There is a general opinion which states that the use of mobile phones can facilitate self-learning process in which students will reflex to the diversity in learning styles. M-Learning approach helps in designing learning activities, particularly in Business Education outside of the classroom and outside of class hour. M-Learning also helps in constructing problem-based learning as well as any related assignments and projects that meet the students' interest (Kukulska and Traxler, 2005). Therefore, M-Learning enable Business Education students to learn effective and relevant skills at their own pace, also learning can take place at any time and place as this makes trainee to be active and mastermind in learning.

Advantages of Mobile Technology in Business Education

M-Learning has been proved to be effective in other countries and now has started to be introduced in Nigeria education. Some higher institutions have integrated the mobile technology in their teaching curriculum. The notes can be shared with the availability of mobile devices such as mobile phones and smart phones among trainee. They do not have to sit in front of a personal computer to download the notes. It can be done by using internet provided by mobile phone service provider subscription or using the wireless infrastructure that provided by such faculties or departments. As such, download the notes can be done anywhere and at any time. Previously, test can only be done in the class or lab, but now students can take their test at any time. Lecturers can simply entering questions and set the time taken for the test. Students can obtain their scores in real time. Software for this test can be found easily and can also be produced by the lecturer using a simple programming technique. The requirements in this new learning environment should be considered so that the learning process is not confined to traditional methods. Through M-Learning, flexibility and control is given to the students. Students are given the flexibility to submit an assignment, test, download notes, discuss and perform learning activities according to their needs and time requirements.

The study was conducted by Triantafillou *et al.* (2006) for tests and examinations carried out through mobile devices in education and found that the evaluation made by the M-Learning is more effective and efficient. This is because the test is carried out with M-Learning is more cost effective rather than the test is carried out with paper and pencil. Items that are answered by the students make the scoring process more accurate and precise. These positive effects can be applied in learning environments in higher education institutions in Nigeria. It can enhance

the performance of a student in all aspects. In addition, they are also able to see and use this mobile technology with a wider perspective. Since each trainee has a different potential, M-Learning is the motivation for them to develop and improve their educational performance continuously. Short messaging service facility that provided with mobile devices will make teaching and learning easier because all the information related to appointments with members of the group and lecturers can be implemented in real time. This facility is able to save time and facilitate a student and lecturers to set their daily schedules without bound at certain times.

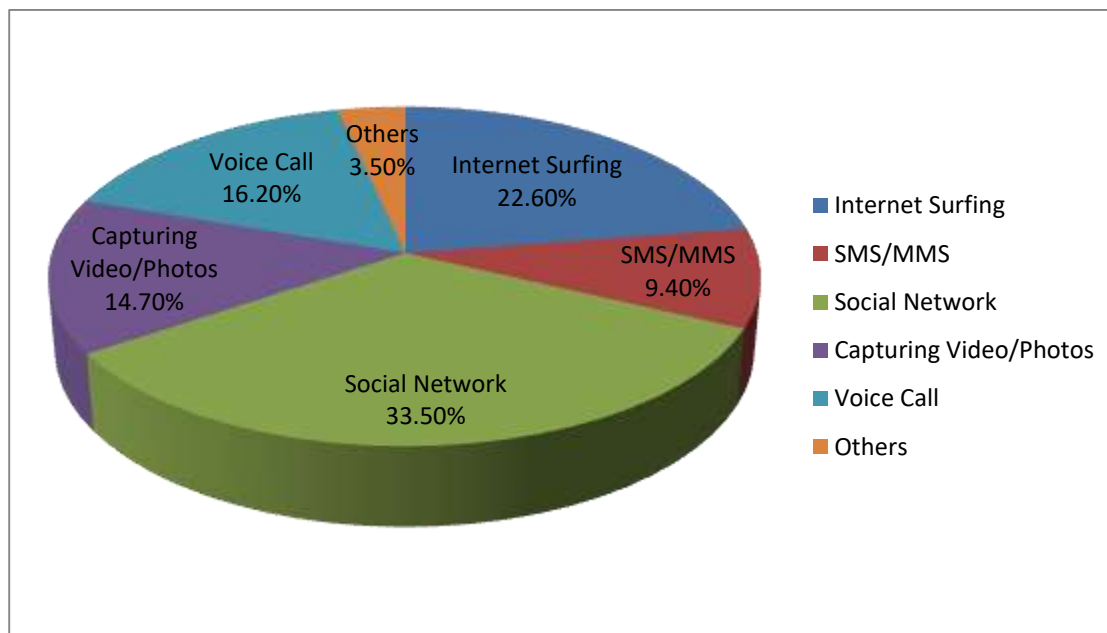
RESEARCH METHODOLOGY

The study was conducted at University of Benin, Benin City in Edo State. The population for the study was 140 students of 100level to 400level Business Education Department. No sample was made because the number of the population is manageable. Structured questionnaire group on awareness of the mobile gadget usage, student's reactions if they have mobile gadgets with the internet or Wi-fi connection, readiness to use elements in learning process and alternative elements to be used in learning process were used to collect data from the 140 students. Data collected was analysed through content analysis and the Statistical Packages for Social Sciences. Pie chart and histogram were used to present results of quantifiable data.

Student's Awareness and Readiness for Mobile Learning

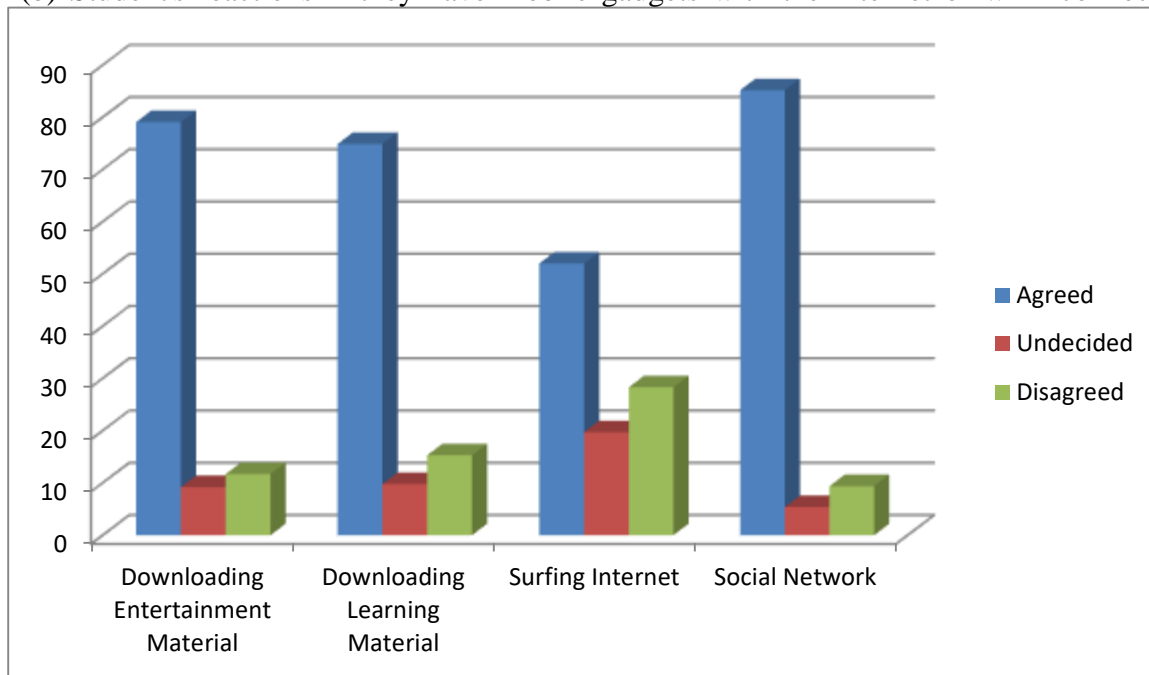
A study has been carried out to find out the awareness and the readiness of Uniben student for applying the mobile technology in learning process of Business Education. Chart below (a) Awareness of the mobile gadget usage. (b) Student's reactions if they have mobile gadgets with the internet or Wi-fi connection. (c) Readiness to use elements in learning process. (d) Alternative elements to be used in learning process.

(a) Awareness of the mobile gadget usage.



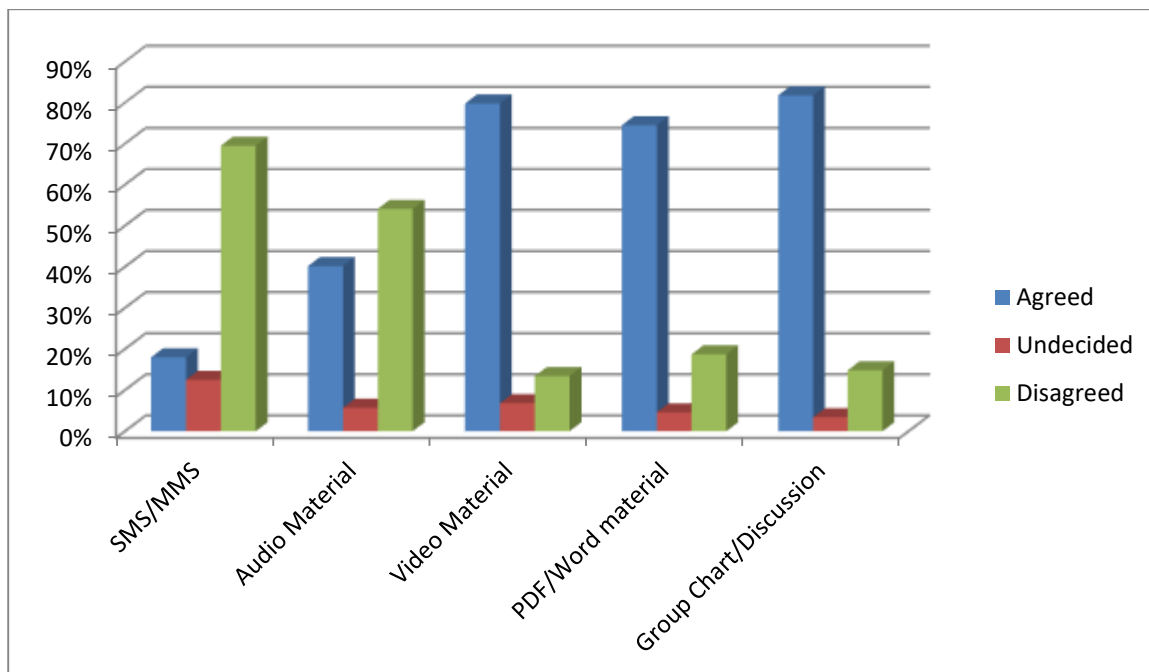
Source: Field Survey 1

(b) Student's reactions if they have mobile gadgets with the internet or wi-fi connection.



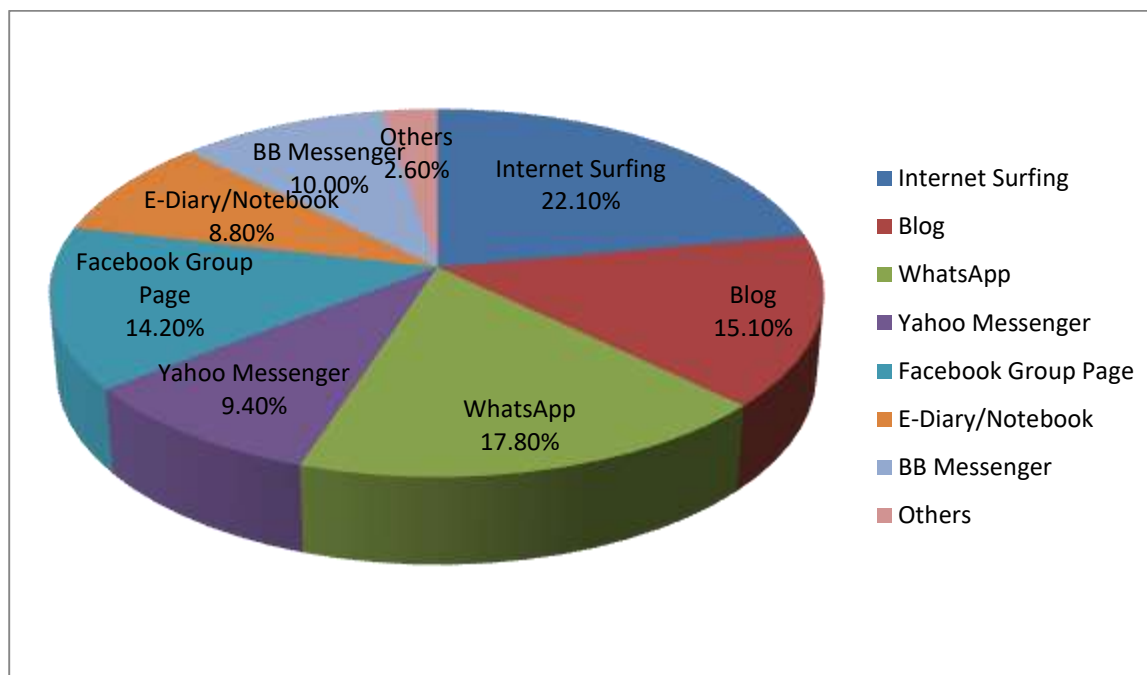
Source: Field Survey 2

(c) Readiness to use mobile device for learning Business Education.



Source: Field Survey 3

(d) Alternative application to be used in learning Business Education.



Source: Field Survey 4

The perception on mobile learning was being examined. From the findings in Figure 1 (a) and (b), it can be conclude that students will use the mobile gadgets for Internet surfing (22.6%), sms/mms (9.40%), social network (33.6%), Capturing video/photos (14.7%), voice call (16.20), and others (3.5%). This study also carried out that if they have the mobile devices with the internet or Wi-Fi connection, they tend to download entertainment materials (79.1%), Download learning materials (74.9%), Surfing Internet (52%) and social networking (85.2%). According to the result in Figure 1 (c) and (d), students are ready to use SMS and MMS (18.0%), audio materials (40.20%), video materials (79.80%), PDF/Word materials (74.50%) and group chat/discussion (81.8%) as mediums in learning. In the other hands, they also willing to use the alternative mediums such as Internet surfing (22.1%), Whatsapp (17.8%), E-diary/Note (8.8%), Blog (15.1%), application as well as messengers like Blackberry Messenger (10%), Facebook group page (14.2%) Yahoo Messenger (9.4%).

Based on result, this study shows that students are willing to use the mobile technology in learning process. At the same time, they have a positive perception and awareness of mobile technology and will use the elements in mobile technology in learning process.

CONCLUSION

Advantages of M-learning for learning purposes cannot be underestimated. Its adoption for Business Education teaching learning process has made its impact to be felt. The existence of internet mobile technology has made it a reality and flexible for trainees to learn and acquire information without being tied to any physical location. With advanced technology and affordability of mobile devices, m-learning is not difficult to be implemented in UNIBEN. Thus, it was shown that m-learning is ideal for implementation in UNIBEN while seizing opportunities to produce trainees who are competitive and able to capture the saleable skills embedded in Business Education. As for students/trainees of UNIBEN, they have the

awareness to mobile technologies in learning process and ready to implement m-learning. The benefits that can be obtained with the use of m-learning can be used as motivation in the success of this new teaching method. It is the key to success that need to be taken into account for the realization of teaching and learning methods in M-Learning. In Nigeria, we should grab the opportunities available in the M-Learning technology to produce trainees who are competitive and able to master the saleable skills in making them self employed and reliant.

RECOMMENDATIONS

It is recommended that network providers should reduce internet service tariffs so that trainers and trainees can afford and use mobile internet services for teaching learning purpose. Also teachers should be informed of the importance of Mobile Learning and how it can be used to help students exploit their leisure and change it into productive activity. Finally, Facilitators should be trained on how to produce teaching materials and prepare their courses to suit Mobile Learning.

REFERENCES

- Chen, J. and Kinshuk.S. (2005). *Mobile technology in educational services*. Journal of Educational Multimedia and Hypermedia, 14(1): 91-109.
- Charity F. and Abasienie S. B. (2016) '*Improving Business Education Contents; A Prerequisite for Achieving Economic Recovery in Nigeria's Post Oil Era*'
- Federal Republic of Nigeria (2013). *National Policy on Education* (4th Ed) Lagos: FGN Nigerian Educational Research and Development Council (NERDC).
- Hiramatsu, Y., Ito. A., Sato. F., Shimada. F. and Tanaka. N. (2012). *A study of ict literacy education by mobile phone for children of elementary school*. In: Proceeding of the 7th International Conference on Broadband and Biomedical Communications 2012 (IB2COM 2012). Sydney.
- Irwan, M., I. and Norazah, M.N. (2011). *Kesediaan pelajar politeknik terhadap pembelajaran mobil*. In: Persidangan Kebangsaan Penyelidikan dan Inovasi Dalam Pendidikan Dan Latihan Teknik dan Vokasional' (CIE-TVT2011). Penang: pp: 506 – 511.
- Isham, S., H., M.A. I and Ramlee. M. (2011). *Teknologi mobil dalam pembelajaran modul seni reka di politeknik port dickson*. In: Persidangan Kebangsaan Penyelidikan dan Inovasi Dalam Pendidikan Dan Latihan Teknik dan Vokasional' (CIE-TVT2011). Penang: pp: 506 – 511.
- Kukulka, H., A.G. and Traxler, J. (2005). *Mobile learning*. A handbook for educator and trainers. New York: Routledge Falmer.
- Mostakhdemin-Hosseini, A. and J. Tuimala, 2005. *Mobile learning framework*. In: IADIS International Conference Mobile Learning 2005. Qawra, Malta.
- Mtega, W.P., Bernard, R., Msungu, A.C. and Sanare R. (2012). *Using Mobile Phones for Teaching and Learning Purposes in Higher Learning Institutions: the Case of Sokoine University of Agriculture in Tanzania*; 5th UbuntuNet Alliance annual conference.
- Okoro, O.M. (2006). *Principles and Methods in Vocational Technical Education*. Nsukka: University Trust Publishers.

- Olakotan, O.O. (2010). *Empirical analysis of employability skills in technical education among government science and technical college students in Ogun State*. Unpublished B.Sc (Ed). Thesis, Tai Solarin University of Education Ijebu-Ode.
- Prensky, M. (2001). *Digital natives*. Digital Immigrants, 9(5).
- Rix, J., Haas, S. and Teixeira, J. (2008). *Virtual Prototyping*. Springer.
- Categories Furniture Articles needing cleanup from June 2008 All articles needing cleanup
- Stark (2009). *Microsoft Encounter World English Dictionary*. (North America Edition) <http://encarta.msn.com/>.
- Triantafyllou, E., E. Georgiadou and Economides A. A. (2006). *The design and evaluation of a computerized adaptive test on mobile devices*. Science Direct 1319-1330.
- Utusan, E. (2011). *E-pembelajaran mobil pertama di malaysia*. Utusan melayu.
- Wood, C. (2003). *Introduction to Mobile Learning*. Retrived on 3/4/2017 from: <<http://ferl.becta.org.uk/display.cfm?resID=5192>>