Library Philosophy and Practice (e-journal)　　　　　Libraries at University of Nebraska-Lincoln

January 2019

Business Education Lecturers' Perception of Learning Management Systems for Effective Teaching and Learning Accounting in Universities in South-East, Nigeria

Ernest Ugwoke
University of Nigeria - Nsukka

Nathaniel Ifeanyi Edeh
University of Nigeria - Nsukka, ifeanyi.edeh@unn.edu.ng

Joseph C. Ezemma
University of Nigeria - Nsukka

BUSINESS EDUCATION LECTURERS' PERCEPTION OF LEARNING MANAGEMENT SYSTEMS FOR EFFECTIVE TEACHING AND LEARNING OF ACCOUNTING IN UNIVERSITIES IN SOUTH-EAST, NIGERIA

Keywords: Lecturers' perception**,** Learning-Management-Systems, Students' achievement, Accounting.

Introduction

Advancement in ICT has revolutionized teaching and learning environment in different ways. Lecturers and students can easily access wealth of knowledge online, engage in synchronous and asynchronous learning, collaborate with one another and share information. Many tertiary institutions have integrated ICT into teaching and learning to prepare their students for work in modern society especially in developing countries (Dahlstrom, Brooks, & Bichsel, 2014). Among the technological tools that have gained acceptance in teaching and learning is learning management system (LMS). A Learning Management System (LMS) is a web-based software that supports instructional planning, delivery, mentoring, tracking, and reporting of learners' progress in learning. However, there has been a strong craving for technology integration into teaching and learning particularly in Nigerian universities (Liverpool, Marut, Ndam, & Oti, 2016). Although many universities in Nigeria have integrated many technological tools and models into their curriculum, lecturers in most of the country's universities are still reluctant to fully embrace them. The lecturers are still led by the conservative notion that they still cling to the traditional lecture method and other teacher-centered methodologies.

However, researches have shown that effective learning takes place through interactive and collaborative learning approaches using ICT integrated learning environment such as LMS (Felder, 2002; Martherly & Burney 2013). Although several studies have been conducted on lecturers' perception and acceptance of ICT facilities and models in instructional delivery, no study has been

carried out on the topic of this investigation especially in developing countries like Nigeria. Thus, the thrust of this study is to investigate business education lecturers' perception of LMS for effective teaching and learning of accounting in universities in South-East, Nigeria. The outcome of this study when implemented would help to build new polices on ICT integration into teaching and learning in universities in Nigeria. The integration of LMS into the teaching and learning of accounting, by extension will facilitate instructional delivery and improve students' achievement in accounting. The interactivity and intercreativity that will flow from the use of LMS in teaching and learning will increase students' participation, interest, and enhance their performance (Moses, Ali, & Krauss, 2014).

Effect of learning management systems in teaching and learning

An LMS is a set of software package that support administration of one or several courses to a student or group of students in a centralized repository resources (online) environment. Goh, Hong, and Gunawan (2014) defined LMS as "a course management application that provides 24/7 accessibility to course materials". It is a platform that assist lecturers and instructors in delivering instructional resources, supports knowledge sharing and communication among students (Nair, 2011; Mabed, & Kohler, 2012; Choo, & Rahmat, 2013).

The Learning management systems enable learners to authenticate themselves, enroll/register for courses, complete courses and engage in evaluation (LSAL, 2004). LMS works as central repositories to address all type of educational needs. It has contributed in advancement of different aspects of educational activities such as: curriculum planning, learner engagement and content management as well as evaluation (Kulshrestha & Kant, 2013; Goh, et al, 2014). Due to its benefits in teaching and learning, several universities across the world and Nigeria in particular, have integrated LMS into their educational systems (Nasser, Cherif, & Romanowski, 2011; Dahlstrom,

Brooks, & Bichsel, 2014; Olatubosun, Olusoga, & Samuel, 2015; Nicholas-Omoregbe, Azeta, Chiazor, & Omoregbe, 2017). LMS has helped both lecturers and students to access learning content at anytime, anywhere, and to share courseware with friends and colleagues. It also helps in creating a centralized source of learning; supports tracking and reporting of students engagement and progress made; increases students' seriousness particularly in turning-in their assignments; it also increases communication and interaction between lecturers and students, and students-to-students (Goh, Hong, & Gunawan, 2014); and enhances learning analytics (Jones, 2009; Monarch Media, 2010; Kulshrestha & Kant, 2013; Center for Educational Innovation (CEI) 2017).

There are several types of LMS learning environment such as proprietary, cloud-based, and open source LMSs (Dobre, 2015). Each of these types are adopted by educational institutions to meet up with their specific academic activities and needs (Dahlstrom, Brooks, & Bichsel, 2014; Brown, Dehoney, & Millichap, 2015; Berking & Gallagher, 2016; CEI, 2017). However, research has shown that LMS is not meant to replace the traditional teaching approach but can serve as a supplementary learning environment to facilitate learning (Legris, Ingham, & Collerette, 2003) and instil student-centered learning approach (Tanner, Conway, Bottoms, Feagin & Bearman, 2001). Effective utilization of LMS requires some skills such as ICT skills, computer skills and technical skills.

Skills required for effective use of LMS teaching and learning in universities

Skill is the ability to accomplish a task expertly and professionally (Bolt-Lee & Foster, 2003). It is the tendency to do something successfully and very well. According to Okute and Agomuo (2010), the emergence of ICT has brought about globalization, which has placed a demand on lecturers for new pedagogical skills, procedures, and approaches. This assertion collaborates with Osuala (2004), who accentuated that Business Education lecturers must prepare business teachers by effectively applying new computer technologies in their classrooms. Osuala and Okeke (2006) also

charged Business Education lecturers to update their teaching skills and knowledge, secure relevant information that can make business graduates employable on graduation.

The skills that are required by lecturers for effective utilization of LMS in teaching and learning include: ability to upload and download courseware or files; the ability to manage the editing/settings features of the LMS; being proficient in delivering lecturer on the LMS platform; ability to create additional learning resources and tools that can help in facilitating students' participation and improving their performance (Moses, Ali, & Krauss, 2014). Other skills include; computer skills; ability to create interactive quizzes, videos, online games, and group project, among others. To excel in the use of LMS, it is expected that a lecturer or the course developer should have a good working knowledge of computers, and word processing to be able to succeed in an online class. The lecturers should also be able to set password and login particulars for students and other users of the LMS platform; create email messages and attach files; possess keyboarding skills such as type, cut, copy, paste, name, re-name, save, and retrieve, among others (AMCIS, 2011); use Web browsers very well; fill or complete online forms; knowing how to backup files; knowing how to install and maintain anti-virus and other necessary software (Clemson Computing & Information Technology, 2017). If a lecturer possesses the requisite skills for using LMS, he or she can create and deliver content, track students' participation in the learning process, and also evaluate their performance thereby increasing their level of proficiency both in skill and professionalism (Nair & Patil, 2012; Okoro & Ursula, 2012).

Barriers to utilization of learning management system in instructional process and learning

Despite the various advantages of LMS, there are different barriers that inhibit its full implementation in educational institutions (Drent & Meelissen, 2008). For example, the EDUCAUSE

identifies five challenges in teaching and learning with technology to include: (1) Creating learning environments that promote active learning, critical thinking, collaborative learning, and knowledge creation; (2) Developing 21st century literacy (information, digital, and visual) among students and faculty; (3) Reaching and engaging today's learner; (4) Encouraging faculty adoption and innovation in teaching and learning with IT; and (5) Advancing innovation in teaching and learning with technology in an era of budget cuts (Liverpool, Marut, Ndam & Oti, 2016). Research shows that integration of the state-of-the-art ICT facilities like LMS into education system has experienced a lot of setbacks most especially in developing countries (Drent & Meelissen, 2008). One of the major setbacks of integration of ICTs into teaching and learning is the digital divide between developed and developing countries of the world (Federal Ministry of Education (FME), 2004).

Some researchers classified the barriers to integrating ICT facilities into teaching and learning into four, namely; technical, non-technical, human, and financial barriers (Association of African Universities AAU 2000; British Educational Communications and Technology Agency BECTA, 2004; Yusuf 2005). However, Xia and Jenny (2015) noted that teaching always have some barriers. According to the authors, these barriers can be grouped into three categories, namely; first, second, and third-order barriers. Some of the barriers identified as first-order barriers include: lack or inadequacy of equipment and facilities, processing requirements, and faculty attitudinal dispositions (Pelgrum 2001; Mulkeen, 2003; BECTA 2004; Chen, Tan, & Lim 2012; Goktas, Gedik, & Beaydas, 2013); poor knowledge of ICT by faculty members (Preston, Cox, & Cox, 2000; Schoepp 2005; Drent & Meelissen, 2008; Al-Senaidi, Lim, & Poirot, 2009; Khan, Hasan, & Clement, 2012); inadequate professional training and development in the use of ICT (particularly LMS) (Becker, 2000; Schoepp 2005; Yusuf 2007; Jegede 2009; Khan et al. 2012). Other first-order barriers include: lack of technical support in form of instructional, funding, and administrative (Pelgrum 2001; BECTA 2004; Copley

& Ziviani, 2004; Schoepp 2005; Al-Senaidi et al. 2009; Goktas et al. 2013; Khan et al. 2012). Similarly, on the side of the students, Drent and Meelissan (2008) found that many students experience little support and motivation from faculty members and this constitutes a heavy barrier to their usage of the LMS; insufficient technical skills, poor student–student collaboration and interaction, as well as inadequate support at the higher education level (Selim, 2007). Other barriers against effective integration of LMS in teaching and learning process include: curriculum barrier (no provision in curriculum) (Chen et al. 2012) lack of encouragement, motivation and support from hosting institutions' (Williams 1995), insufficient ICT support space (Hadley and Sheingold 1993).

The second-order barriers as observed by Xia and Jenny (2015), include lecturers' attitudes and unwillingness to learn, develop, use, and upload instructional materials on the LMS environment and their instructional technique (Drent & Meelissen, 2008). Becker (2000) lamented that most of the older lecturers are prone to teach using traditional/conventional teaching environment (i.e. face-to-face approach); inexperience lecturers with limited ICT skills are scared of using the LMS. In addition, Mulkeen (2003) found that some faculty members consider themselves confident and knowledgeable particularly in the use of ICT tools while some are naive and full of uncertainty and are gripped with fear of not doing well in it. The later have a greater tendency to reject utilization of LMS and technology generally in their instructional process (Looker & Thiessen, 2003); teachers' lack of knowledge and skills (Hadley & Sheingold 1993; Williams 1995; Pelgrum 2001; BECTA 2004; Schoepp 2005; Bingimlas 2009; Khan et al. 2012); and lecturers' stereotyped ideologies, beliefs and practices of teaching also hinders effective utilization of LMS in teaching and learning (Mulkeen, 2003; Drent & Meelissen, 2008).

The third- order barriers are associated with perceived level of importance attached to LMS by faculty members, institutions and managements. Pituch and Lee (2006) found that both faculty and students are influenced to use an LMS based on their perception of the system characteristics and their functionality. Hayashi, Chen, Ryan, and Wu (2004) affirmed that individuals' perceived usefulness and satisfaction have influence on their acceptance and utilization of LMS. Some of the barriers affecting integration of IT in teaching and learning in South East, Nigeria include: insufficient of ICT facilities and tools (Yusuf 2007; insufficient ICT training (Ihmeideh, 2009); lack and poor ICT skills by lecturers (Turbill, 2001).

Technology Acceptance Model (TAM)

Technology Acceptance Model was propounded by Fred Davis in the year 1986. Davis' model anchored on Fishbein and Ajzen Theory of Reasoned Action (TRA). TAM modified TRA's attitude measures by focusing its intent on two technology acceptance cognitive beliefs, namely: ease of use, and usefulness (Fishbein, & Ajzen, 1975; Park, 2009). The theorists believed that TAM is meant to explain reasons why an individual can accept or negate ICT by adapting TRA (Davis, 1989; Davis, Bagozzi, & Warshaw, 1989). To achieve the objectives of TAM, which is identifying reasons why workers fail to use ICTs facilities provided to them by management; how external variables influence information technology (ICT) users' belief, attitude, and intention, Davis extended TAM to include five psychological variables: "perceived ease of use, perceived usefulness, attitude toward using, behavioral intention to use, and actual system use" (Davis, 1989; Jonas, & Norman, 2011). See figure 1 below:
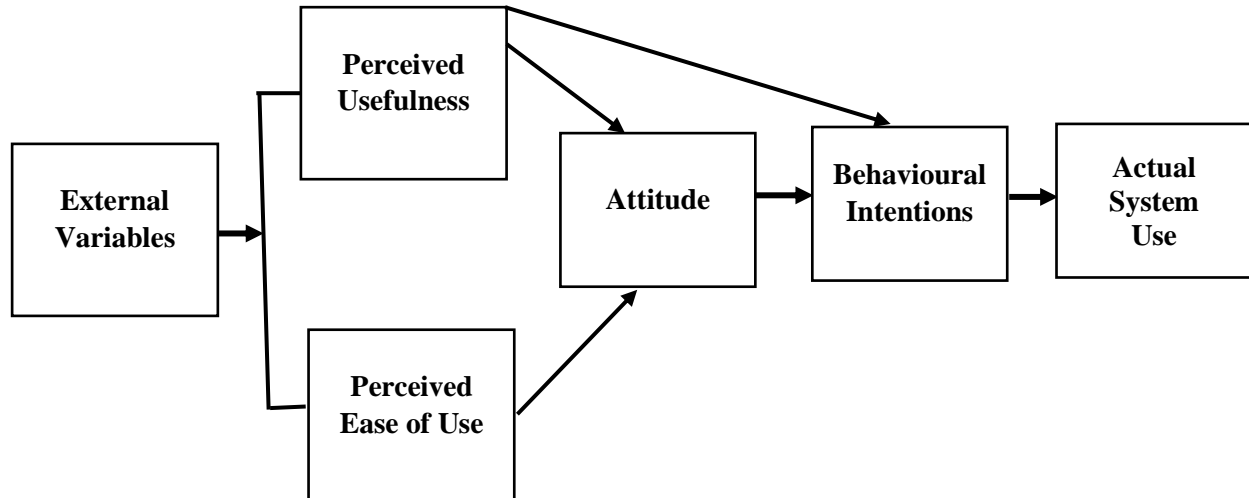
```
                    Perceived
                    Usefulness
    External                        Attitude      Behavioural      Actual
    Variables                                     Intentions      System
                                                                   Use
                    Perceived
                    Ease of Use
```

Fig. 1: *Adapted Technology Acceptance Model (Davis, 1986)*

Davis (1989) argued that ease of use and perceived usefulness of ICT tool are the major determinants of actual system use. Hence, the two factors are influenced by external factors such as cultural, social factors (skills, language, and facilitating conditions), and political factors. The political factors according to Davis is concerned about the influence of using ICT in politics and political crisis while the attitude relates to user's conviction or his desirability of using a given ICT facility. Behavioural intention refers to the degree of likelihood of an individual adopting the ICT facilities or tools. Still in Davis (1989), one of the major approaches of increasing ICT use in instructional delivery is by increasing its acceptance by user. This can be achieved by making deliberate inquiries on the lecturers to determine their perceptions and future aspiration to use the ICT facilities in instructional delivery. Identifying the factors that influence lecturers' intentions would guide managements to manipulate the identified factors to increase users' acceptance and use of ICT for instructional delivery.

Authors are in agreement that one of the benefits of TAM is that as a theoretical model, it assists in explaining and predicting users' attitudes over ICT (Legris, Ingham, & Collerette, 2003). This has to do with degree to which a lecturer or student believes that the use of LMS will assist him/her in academic activities and set goals (Jonas, & Norman, 2011). TAM has been applied in several disciplines such as e-commerce, information system research, telemedicine technology, education, among others, to predict and envisage reasons behind peoples' acceptance of IT (Hu, Chau, Liu, & Tam, 1999; Gefen & Straub, 2000; Isshan, Johari,. & Idrus, 2010; Sumak, Hericko, Pusnik, & Polancié, 2011; Goh, et al, 2014). Isshan, Bokhare, Azizan, and Azman, (2012) also found that

TAM has been used extensively in universities as a theoretical framework and to predict technology acceptance. Similarly, TAM is a suitable model for assessing technology acceptance and usage in the area of teaching and learning (Nair, 2011; Choo & Rahmat; Choo. & Rahmat, 2013).

TAM is related and relevant to the intent of this study because the extent to which business education lecturers believe that LMS will improve their performance in instructional delivery, will determine if they accept it, and if they will use it or not. Again, finding out business education lecturers' perception of LMS is very important because their attitude, acceptance and willingness to use the LMS will determine the extent to which students will be motivated to use the LMS too. The lecturers' perception can be influenced by several factors such as the mode of implementation, system reliability (Goh, et al, 2014), its benefits to lecturers and students, level of ICT skills possessed, course curriculum limitation and barrier (Chen et al. 2012), as well as flexibility of the system.

Furthermore, Agboola (2006) identified four key parameters that can be used in measuring lecturers' perception towards using ICT tools like LMS. They are: adoption, ICT readiness, confidence, and e-learning training. Adoption in this context is the decision of universities, lecturers and students to use LMS as a teaching and learning tool. ICT readiness is the state or condition of institution, lecturers and instructors as well as students to embark on utilizing LMS tools in instructional delivery (Edumadze, Ossei-Anto, Edumadze, Tamakloe, Asamoah, & Boadi, 2014). According to Edumadze et al (2014), the level of ICT readiness of an institution, faculty and students affect the acceptability and usage of LMS. The author added that ICT readiness has 3 major considerations, namely: do the institution possess the necessary facilities and equipment? Which aspect of the learning objectives of courses will the LMS innovation meet? Are there trained lecturers and instructors? The last question borders on ICT confidence. The confidence and perception of lecturers has positive or negative influence on students' learning capabilities and outcome (Edumadze et al., 2014). ICT training is very important for effective use of LMS in instructional delivery.

Speaking on lecturers ICT skill and confidence level, Edumadze et al., (2014) observed that most lecturers in the developing world lack ICT skills and that many of them have not had privilege to use LMS. The author recommended that the lecturers should embark on ICT training that is not only skill focused but includes how to use LMS tools to teach effectively to enable them unravel the potentials in LMS.

Since TAM has been adopted in universities and applied in teaching and learning (Isshan, Johari, & Idrus, 2010; Sumak, Hericko, Pusnik, & Polancié, 2011; Goh, et al, 2014), we therefore, adopted TAM as the theoretical framework of this study to determine business education lecturers' perception of LMS in teaching and learning especially as it concerns their perceived usefulness and ease of use.

Problem of the Study

Research has shown that most students learn better if they are exposed and engaged in interactive and collaborative learning using activity-based learning approach in a health learning environment (Parnham, 2001; Felder, 2002; Martherly & Burney 2013). One of the instructional tools and Web-based technology/environment that support interactive learning and can engage students actively as well as increase their collaboration in learning management systems (LMS) (Nair and Patil, 2012; Aboderin, 2013). Literature has revealed that if LMS is appropriately and innovatively integrated into teaching and learning, it has the potential to increase students' interest (Agboola, 2006; Appana, 2008; Moses, Ali, & Krauss, 2014) and improve their academic performance (Paulsen, 2003). Although LMS has many potentials and benefits to institutions of learning, faculties and students; it is observed that most business education lecturers in universities in South East, Nigeria have not fully maximized its potentials. Again, the integration of LMS into teaching and learning has not been fully implemented in the universities because most of the old lecturers who received their

training before the advent of ICT find it hard going back to be trained on the requisite ICT skills that will allow for full use of LMS into instructional delivery. Literature revealed that most of these lecturers have not had the opportunity to use LMS and they lack ICT skills (Al-Faki & Khamis, 2014; Edumadze et al., 2014). The lecturers have resigned to traditional method of teaching which research has considered as retrogressive, inadequate, teacher-centered and unsatisfactory in meeting the needs of the modern society (Parnham, 2001; Ellington & Earl in Jayaprakash, 2005). More worrisome to the situation is that most of the business education lecturers in universities (federal, state and private universities) in South-East Nigeria, seem not to be enthusiastic in adopting LMS in teaching and learning despite the magnitude of its potentials. Apart from the identified barriers, literature revealed that there is divergence in the usage of LMS by lecturers in federal, state, and private universities due to ICT availability and school culture as well as the level of ICT skills possessed by the lecturers (Akuegwu., Ntukilem., Njukidem, Jaja., Akinde & Adetimirin, 2017). Akuegwu et al (2017) noted that university lecturers' utilization of ICT facilities for quality instructional delivery differ significantly on the basis of ownership because lecturers from federal universities utilized ICT facilities more than their counterparts from state and private universities. This is because federal universities are better funded despite low background allocation to education in Nigeria. Therefore, they stand better chance to have more provision of ICT facilities and engaging in professional/skill development than the state-owned universities. However, Trucano (2005), Agboola (2006) and Kumar et al. (2008) argued that the effectiveness of educational technology is not solely determined by its availability but by the educators' acceptance, readiness, accessibility and use of the technology as well as the institutions' culture, which are varied among federal, state and private universities. Akinde and Adetimirin, (2017) noted that every school has a culture which may affect ICT integration for teaching. School culture are basic assumptions, norms and values, and cultural artifacts that are shared by the school members. These meanings and perceptions indirectly affects behaviour of staff in the organization of the schools. Hence, if the technology is not well-received by

educators, there must be a mismatch of values between the school cultural perception and the perception of the cultural fit of the technology. The educators who have positive perception about the cultural relevance of educational technology will apply technology instruction (Zhao & Cziko, 2001; Zhao & Frank, 2003; Afshari, et al., 2009). The cultural differences that might exist among the federal, state and private universities could therefore significantly affect the perceptions of the lecturers in relation to the use of LMS in the teaching of accounting. The implication of this is that business education students would be inadequately prepared for employment since they lack the required skills necessary for knowledge-based economy. For instance, National Bureau of Statistics as cited by Olaiya (2013) observed that unemployment rates among graduates, including business education graduates in Nigeria has continued to increase drastically despite government efforts to alleviate it. The unemployment range is as follow: "2006 = 12.3%, 2007 = 12.7%, 2008 = 14.9%, 2009 = 19.7%, 2010 = 21.1%, 2011 = 23.9, 9.9% in 2015 and 13.9% in 2016. According to the National Bureau of Statistics (NBS) (2017), the unemployment rate recorded geometric increased to 18.8% at the 3rd quarter of 2017. Some of the factors attributed to the high rate of unemployment in Nigeria include: lack of 21st century ICT skills, poor technological skills, government policies, and inadequate preparation of students to meet up with the competitive trend of the modern society among others (Pacific Policy Research Center 2010). Unemployment level in Nigeria has in turn increased conflict, drug addiction, armed robbery, kidnappings, prostitution, and drunkenness in Nigeria (Dalhatu, & Bagaji, 2014). Since the increase in unemployment, social vices and poor performance of students are attributable to non-integration of ICT technologies like LMS in instructional delivery, this study investigated business education lecturers' perception of LMS for effective instructional delivery in universities in South-East, Nigeria. Specifically, the study answered the following research questions:

1. What are the perceptions of business education lecturers toward using learning management systems for teaching of accounting courses in universities in South East, Nigeria?

2. What are the skills possessed by business education lecturers for effective use of learning management systems for teaching of accounting courses in universities in South East, Nigeria?

3. What are the barriers to effective utilization of learning management systems for teaching of accounting courses in universities in South East, Nigeria?

Hypotheses

The researchers tested the hypotheses below to determine the perceptual differences among the lecturers in federal, state and private universities on the ICT skills possessed by them and the barriers to their use of LMS in instructional delivery.

Ho1: There is no significant difference in the mean responses of business education lecturers in Universities on the skills possessed by lecturers for effective use of learning management systems for teaching of accounting courses in universities in South East, Nigeria.

Ho2: There is no significant difference in the mean responses of business education lecturers in Universities on the barriers to effective use of learning management systems for teaching of accounting courses in universities in South East, Nigeria.

Area of the study

South East is one of the six zones in Nigeria. The South-East zone consists of 5 Igbo speaking states, namely: Enugu, Anambra, Abia, Ebonyi, and Imo States with 207 Local Government Areas. South East is bounded on the west axis by Cross River State and on the North by Kogi and Benue States. The South-East zone is bounded on the East by Edo and Delta States, and the South by Akwa

Ibom and River States. Its eastern boundary is between Nigeria border with Cameroon and at the southern coast, it lies along the Gulf of Guinea. South-East is approximately 40,900 to 41,400 km2 which is about (15,800 to 16,000 sq mi) (Uchem, 2001). The population of the South East ranges from 140 to 390 inhabitants/square km (350 to 1,000/sq mi) (Ezeokana, 1999). This figure has increased over time. As indicated in Table 1 below, the population of South-East as recorded in the 2006 population census is 16, 395,555 persons (FGN, 2009). This shows a population density of approximately 728 persons/ square kilometer indicating a far greater density as against the national average population density of 168 persons/ square kilometer. Considering sex distribution in South East, the male are 8,184,951 while the female are 8,210,604 (2006 National Census). .

Table 1: Population density of South East

South-East States	Males	Percentage Ratio	Females	Percentage Ratio	Total Population
Enugu	1,596,042	48.84	1,671,795	51.16	3,267,837
Anambra	2,117,984	50.69	2,059,844	49.31	4,177,828
Imo	1,976,471	50.32	1,951,092	49.68	3,927,563
Ebonyi	1,064,156	48.88	1,112,791	51.12	2,176,947
Abia	1,430,298	50.27	1,415,082	49.73	2,845,380
Total	**8,184,951**	**49.92**	**8,210,604**	**50.08**	**16,395,555**

Source: (FGN, 2009).

PERCENTAGE RATIO

Abia — Male 50.27 Female 49.73

Enugu — Male 48.84, Female 51.16

Anambra — Male 50.69 Female 49.31

Imo — Male 50.32 Female 49.68
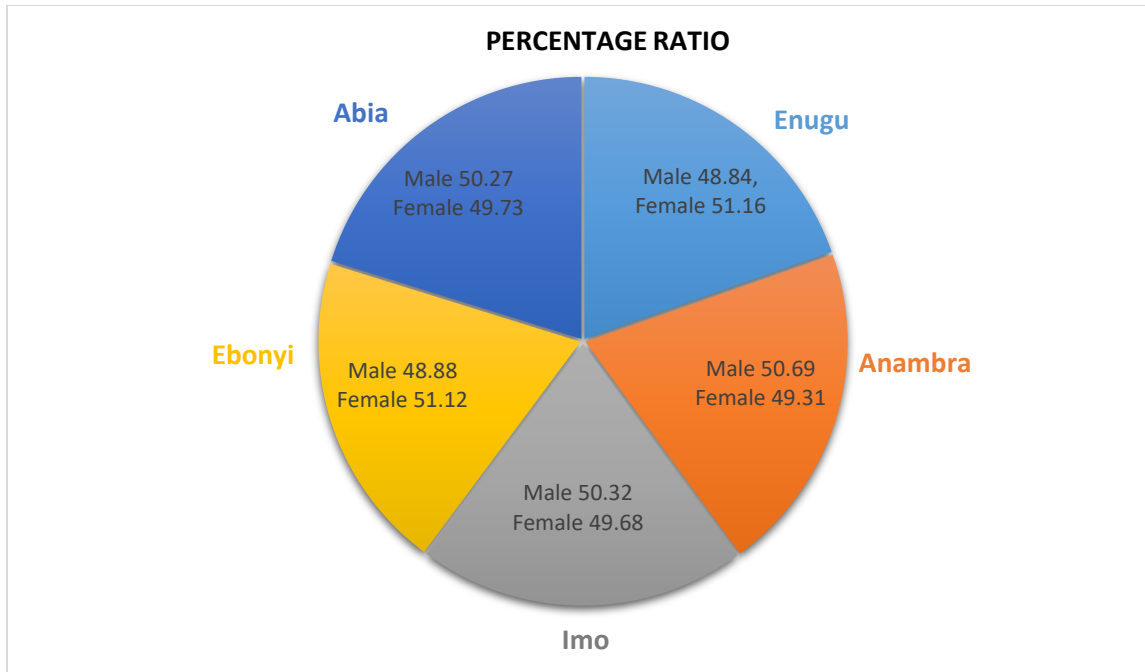
Ebonyi — Male 48.88 Female 51.12

Fig: 2. *Percentage ratio of South-East states*

Furthermore, the population distribution according to the states are: Enugu: male 1,596,042, (48.84%), female 1,671,795 (51.16%); Anambra: male 2,117,984 (50.69%), female 2,059,844 (49.31%); Imo: male 1,976,471 (50.32%), female 1,951,092 (49.68%); Ebonyi: male 1,064,156 (48.88%), female 1,112,791 (51.12%); and Abia: male 1,430,298 (50.27%), female 1,415,082 (49.73%). These gave rise to a grand total of 49.92% and 50.08% for males and females of all the states respectively (see table 1 above).

South-East has 9 federal, state and private universities offering business education programme. They are: University of Nigeria, Nsukka (UNN); Enugu State University of Science and Technology (ESUT); Godfrey Okoye University; Thinkers Corner, Enugu; Caritas University, Amorji-Nike Enugu; Nnamdi Azikiwe University (UNIZIK), Awka;, Chukwuemeka Odumegwu Ojukwu University, Anambra State; Madonna University, Okija, Anambra State; Tansian University, Umunya, Anambra State; and Ebonyi State University (EBSU), Abakiliki. All the states in South East are rated as educationally advantaged states except Ebonyi State which is one of the educationally disadvantaged state in Nigeria. The researchers chose South-East, Nigeria for this study because there

are many universities offering business education programmes in the zone and the universities have the needed resources that support distance and e-learning. Some of the universities have centers for distant and e-learning, learning management systems and other ICT facilities that support the integration of LMS technologies into teaching and learning.

Methodology

Population

The population of the study is 241 Business Education lecturers from the 9 universities (federal, state, and private) in South-East, Nigeria. The population is made up of 38 lecturers from University of Nigeria, Nsukka (UNN); 31 lecturers from Enugu State University of Science and Technology (ESUT); 25 lecturers from Godfrey Okoye University, Thinkers Corner, Enugu; 20 lecturers from Caritas University, Amorji-Nike Enugu; 36 lecturers from Nnamdi Azikiwe University (UNIZIK), Awka; 22 lecturers from Chukwuemeka Odumegwu Ojukwu University, Anambra State; 21 lecturers from Madonna University, Okija, Anambra State; 17 lecturers from Tansian University, Umunya, Anambra State; and 31 lecturers from Ebonyi State University (EBSU) Abakiliki (Office of the Registrar of each of the universities, 2017). It is salient to note that these business education lecturers used for the study teach accounting courses to students in their respective institutions. Sampling was considered not necessary since the population of the study was of a manageable size. Therefore, the entire population was used. This is in congruence with Azuka (2011) who postulated that an entire population of study can be used if the population size is of manageable size. The author asserted that the sample for the study should be adequately described, and it should be representative otherwise reasons behind that should be given. A more detailed demographic information about the population according to institution, gender, educational qualification and availability of LMS platform is shown in table 2.

Instrument

The researchers used structured questionnaire titled: Business Education Lecturers' Perception of LMS Questionnaire (BELPLMSQ) to gather information from the respondents (Fraenkel & Wallen, 2009; Chen, Tan, & Lim, 2012; Xia and Jenny 2015; Pelgrum 2001; Khan, Hasan, & Clement, 2012; Wood, Specht, Willoughby, & Mueller, 2008). The questionnaire was developed by the researchers from the literature reviewed. To achieve the objective of the study, the research instrument was treated in categories as follow: introduction, literature review, research questions, methodology and discussions. Under the introduction, the researchers used open-ended questionnaire items to elicit demographic information of the respondents which include: their gender, teaching qualifications, years of experience, availability of LMS, and type of institution. Research questions 1 contained 26-item statement with two response options: Agree (A) 1, Disagree (DA) 0. This cluster was used to generate information about Business Education lecturers' perception on the utilization of LMS for teaching and learning of accounting courses in their various institutions. Research question 2 contained 22-item statements that focused on the skills possessed by Business Education lecturers for effective utilization of LMS in teaching and learning. Four-point rating scale was used as follows: Highly Possessed (HP) = 4, Moderately Possessed (MP) = 3, Fairly Possessed (FP) = 2, Lowly Possessed (LP) = 1. Research question 3 is on barriers militating against effective use of LMS in teaching and learning of accounting was elicited from the respondents. It contained 18 item statements and 4-point rating scale was used as follows: Strongly Agree, (SA) = 4; Agree, (A) = 3; Disagree, (DA) = 2; and Strongly Disagree, (SDA) = 1). This supports Fraenkel and Wallen (2009); Azuka (2011) that rating scale is an undimentional scaling method of eliciting information pertinent to attitudinal and affective variable that allows a respondent to select only an option which must be exhaustive and mutually inclusive.

The instrument for data collection was subjected to face-validatation by 5 experts. Two of the experts were from the Department of Business Education, University of Nigeria, Nsukka, Enugu State, 1 from Nnamdi Azikiwe University, Awka, Anambra State, 1 from Measurement and Evaluation, Department of Science Education, Ebonyi State University, Abakiliki, and 1 from Enugu State University of Science and Technology (ESUT) Enugu. Copies of the research questions and hypotheses were given to the experts in addition to the instrument. They were advised to make corrections, delete and to add new information where necessary. The corrections and inputs made by the experts were used to develop the final copy of the instrument. To assess the reliability of the instrument (i.e. determining the degree to which instrument items that make up the scale measure the same underlying attributes), Cronbach's alpha test was computed on all clusters using SPSS version 20. Cluster results obtained are as follows: Business Education lecturers' perceptions on usage of LMS (a = .821, N = 232); level of LMS skills possessed by Business Education lecturers (a = .733, N = 232), and barriers militating against effective usage of LMS (a = .860, N = 232), yielding an overall reliability index of a = .805 N= 232. In line with Nunnally (1978) and Pallant (2005) recommended that a minimum of .70 reliability index. This implies that the questionnaire is highly reliable.

Table 3 presented the statistical means, standard deviations and population size for all the 3 clusters with their item statements. The results showed homogeneity of item spread. Furthermore, results presented in Table 3 also indicated a positive value of Kaiser–Meyer–Olkin Measure of Sampling Adequacy (KMO) and the result showed a grand value of .759, .803, and .722 respectively. Factor analysis is considered fit for this study because according to Fraenkel and Wallen (2009) it permits a researcher to ascertain whether many variables can be described by a few factors. Again, Bartlett's Test of Sphericity for all the clusters revealed associated significant values of 0.001**.** These

results concur with Pallant (2005) who noted that for factor analysis to be considered appropriate for data analysis, the KMO value must be .6 and above and the Barlett's Test of Sphericity value should be .05 or smaller. Finally, the Table 3 again indicated that the factor loadings of the three research cluster has a closer relationship. The values are as follows: .581–.950 for the BLP1, .556–.914 for LSP2, and .426–.850 for B3.

Procedure

The instrument for data collection was distributed and retrieved by the researchers who were assisted by five research assistants. The researchers covered 4 institutions and analyzed the data using SPSS version 20, while the research assistants covered the 5 other institutions. Out of 241 copies of the questionnaire distributed, 232 copies were correctly filled and retrieved representing 96.2% return. It was on this value that data analysis was computed using SPSS version 20. The statistical tools used for analysis of research question 1 and the demographic information of the respondents were simple percentages, while mean was used to analyze the data collected for research questions 2 and 3. The standard deviation was used to determine the closeness or otherwise of the responses from the mean. Again, the two null hypotheses were tested using One-way ANOVA at 0.05 level of significance. Going by the 4-point rating scale used 2.50 real limit of number was used. Therefore, any item with a mean score of 2.50 and above was accepted as Agreed/Possessed, while items with mean score below 2.50 was taken as Disagreed/Not Possessed. In taking decision on the hypotheses, a hypothesis of no significant difference was accepted if the probability value is greater than or equal to 0.05, while hypothesis with the probability value less than 0.05 was rejected at 0.05 level of significance.

Results

Table 2 presented the demographic information of business education lecturers who were the respondents of the study. From the information gathered by the researchers, business education lecturers in the federal universities studied are 96, thus constituting 42% of the entire population, the lecturers in the state universities are 77 (33%) and those lecturing in private universities are 59 (25%). Gender was also considered and the findings revealed that the male lecturers were 124 in number constituting 53% of the entire population, while their female counterparts were 108 constituting 47% of the population. Research showed that one of the major causes of gender differentiations in educational quality and outcome is gender bias and disparity (Olaitan, 2014; Dee, 2007). However, the findings strengthens, Stephen, Donna, Shulamit, and Wendy (2014) who observed that sex differences for the past two decades has been minimized. As can be seen from Table 2, there is a very slime difference in the number of male and female business education lecturers in relation to gender disparity in employment.

Respondents' Bio-data

Table 2: *Demographic information of business education lecturers who participated in the study*

Variables		N	Percentage %
Lecturers	Federal	96	42
	State	77	33
	Private	59	25
Gender	Male	124	53
	Female	108	47
Educational Qualification	Ph.D.	87	38
	M.Ed./M.Sc.	91	39
	B.Ed./B.Sc.	54	23
Teaching Experience	0 – 5	36	15
	6 -10	43	19
	11 – 14	64	28
	15 – 19	58	25
	20 and above	31	13
Availability of LMS Platform in Universities	Yes	184	79
	No	48	21

Concerning the educational qualification of the lecturers, it was gathered that 87 persons have Ph.D., 91 have M.Ed./M.Sc., and 54 holds B.Ed./B.Sc., representing 38%, 39% and 23 % respectively. Similarly, table 2 also presented the respondents lecturing experience in the following order: 36 (15%) have about 5 years lecturing experience, 43 (19%) have lecturing experience between 5-10 years, 64 (28%) persons have taught between 11-14 years, 58 (25%) have spent between 15 – 20 years in lecturing work, and 31 (13%) lecturers have lectured for about 20 years and above. From the findings, the researchers inferred that the lecturers are majorly young aged persons. One hundred and eight four (184) (79%) of the lecturers agreed that their institutions have LMS platform, while 48 (21%) indicated that LMS platform is not available in their institutions. Literature revealed that teaching experience has a positive influence on students' academic achievement, because if the lecturers make effort to improve in their lecturing and ICT skills, students' level of understanding of the subject matter increases by extension (Tompang, 1997; Tri Diyah Prastiti, 2001).

Table 3 presented the factor loadings of the perception of business education lecturers on the use of LMS for instructional delivery in universities in South East Nigeria, LMS skills possessed by the lecturers, and the barriers affecting the usage of the LMS for instructional delivery. For the perception of the lecturers on the usage of LMS for teaching and learning, the researchers used 2 scales: agree (1) and disagree (0). This section consists of twenty six items describing different perceptions of business education lecturers on the use of LMS for instructional delivery. The items were subjected to principal components analysis (PCA). PCA is considered suitable for this analysis because it helps researchers who are interested in scale and wish to generate an empirical summary of any given data set (Tabachnick, & Fidell, 2001) e.g. emotions, feelings, attitudes etc. (Watson, Clark, & Tellegen, 1988).

Table 3 Factor loadings, means, and standard deviations of the three clusters and their items 26, 21, and 18 items respectively

Item Statement Lecturers' perception of LMS use		Factor			X	SD	N
		BLP1	LSP2	B3			
BLP1	I am efficient and comfortable using LMS for instructional delivery.	.821			1.88	.33	232
BLP2	I found that using LMS in teaching and learning arouses my interest and that of the students.	.839			1.93	.26	232
BLP3	I experience technophobia (technological anxiety) using LMS in teaching.	.803			1.77	.42	232
BLP4	I consider LMS important for my professional practice.	.764			1.74	.44	232
BLP5	I found that using LMS in teaching improves my professional practice.	.950			1.91	.29	232
BLP6	I have attended training or conference delivered on LMS platform.	.824			1.49	.50	232
BLP7	I experience fulfilment posting lecture materials on LMS for student.	.950			1.91	.29	232
BLP8	I feel that using LMS in instructional delivery increases ICT skills of the students.	.793			1.88	.33	232
BLP9	I feel using LMS in instructional delivery is waste of time.	.595			1.15	.36	232
BLP10	LMS is an interactive platform and can motivate students to learn.	.695			1.91	.28	232
BLP11	LMS makes me think critically about how to achieve my learning objective.	.707			1.87	.34	232
BLP12	I can use all the LMS tools very well.	.694			1.53	.49	232
BLP13	I depend on other lecturers to effectively use the LMS platform.	.848			1.35	.48	232
BLP14	I conduct online quiz for my students on LMS platform.	.671			1.15	.35	232
BLP15	I administer computer-based examination for my students on LMS.	.581			1.20	.40	232
BLP16	I assist other lecturers in using the LMS for their learning activities.	.748			1.18	.38	232
BLP17	I can easily handle LMS settings without being assisted.	.636			1.07	.26	232
BLP18	I attend trainings on the use of LMS to up-skill myself.	.827			1.17	.37	232
BLP19	The training received on the use of LMS is not sufficient.	.612			1.94	.23	232
BLP20	I am not motivated by school authorities to use LMS for instructional delivery.	.720			1.77	.42	232
BLP21	I lack ICT skills required to manipulate the LMS platform.	.666			1.74	.44	232

Code	Statement		Mean	SD	N
BLP22	I am encouraged by the school authorities to use LMS in teaching.	.827	1.65	.47	232
BLP23	I support that the use of LMS should be made compulsory in universities.	.657	1.85	.35	232
BLP24	I am often discouraged using LMS because of inconsistent power supply.	.835	1.83	.37	232
BLP25	I am discouraged using LMS because of poor network.	.870	1.70	.46	232
BLP26	I will be interested using LMS if am trained and adequate facilities provide.	.806	1.91	.28	232
Cronbach's alpha		.821			
Kaiser–Meyer–Olkin Measure of Sampling Adequacy.		**.759**			
Possession of skills by lecturers					
LSP27	Ability to key in, delete, copy, paste text.	.776	3.80		232
LSP28	Ability to upload text-based or graphic documents on LMS.	.620	1.61		232
LSP29	Ability to manipulate settings for all the tools like forum, quiz, etc.	.556	1.53		232
LSP30	Ability to enroll participants to specific course.	.713	1.56		232
LSP31	Ability to upload and time a quiz using question bank.	.839	1.59		232
LSP32	Ability to send email or notifications to students.	.836	2.94		232
LSP33	Ability to use video conferencing application on the LMS platform for asynchronous interaction between students and lecturer	.874	1.78		232
LSP34	Ability to import files.	.792	1.56	.39	232
LSP35	Ability to create course using add activity tool.	.837	1.15	.48	232
LSP36	Ability to edit created activities e.g. quiz, announcement etc.	.750	1.47	.53	232
LSP37	Ability to use feedback tool to track students' performance.	.756	1.72	.49	232
LSP38	Ability to navigate from one activity to the other.	.867	1.52	.49	232
LSP39	Ability to sign roles to different persons in a course e.g. manager, admin, etc.	.836	1.58	.77	232
LSP40	Ability to use file picker to import pictorial images, audio, video or text-based files.41	.841	1.46	.64	232
LSP41	Ability to set participants' authentication details like user name, password, and mode of enrollment.	.813	1.41	.53	232
LSP42	Ability to use URL tool to link websites.	.785	1.63	.49	232
LSP43	Ability to use survey tools to elicit information from students on interest, motivation, interaction etc. they gain from LMS	.904	1.59	.57	232

Code	Description	Loading	Mean	SD	N
LSP44	Ability to generate grade sheets for quiz or examination.	.833	1.41	.50	232
LSP45	Ability to use chat tool for inter-group and students' collaborative learning and interactions.	.845	1.61	.69	232
LSP46	Ability to use different restriction settings e.g. guest restriction to course.	.914	1.73	.50	232
LSP47	Ability to use wiki tools to create group assignment.	.823	1.48	.49	232
LSP48	Ability to use security codes to restrict third parties access to the platform.	.850	3.80	.47	232
Cronbach's alpha		**.733**			
Kaiser–Meyer–Olkin Measure of Sampling Adequacy.		**.803**			

Barriers to LMS use in the Universities

Code	Description	Loading	Mean	SD	N
B49	Lack of ICT skills.	.721	3.56	.49	232
B50	Technophobia and anxiety over the use of LMS.	.747	3.75	.44	232
B51	Poor power supply.	.783	3.83	.38	232
B52	Lack of training on how to use LMS.	.822	3.85	.35	232
B53	Lack of technical support for effective take-off.	.745	3.77	.42	232
B54	Poor internet connectivity.	.755	3.75	.43	232
B55	Insufficient facilities e.g. video conferencing tools.	.642	3.69	.47	232
B56	Excess work load interferes with time to develop LMS teaching materials.	.693	3.88	.33	232
B57	Lack of motivation and support from the institution.	.850	2.17	.81	232
B58	Discouragement from colleagues.	.426	1.69	.48	232
B59	Inadequate computer skills for effective manipulation of LMS.	.737	3.76	.43	232
B60	Poor funding of LMS scheme by government.	.800	2.98	.75	232
B61	Lack of curriculum inclusion of LMS learning environment.	.839	3.44	.71	232
B62	LMS has ergonometric hazards e.g. sitting before computer and straining one's eyes for a long time.	.741	1.75	.43	232
B63	Lack of interest in LMS and technology integration in teaching and learning.	.508	3.77	.49	232
B64	Developing LMS platform and courseware consumes time.	.826	3.70	.46	232
B65	Insufficient ICT space.	.743	3.66	.60	232
B66	Lack of institutional collaboration.	.622	1.77	.61	232
Cronbach's alpha		**.860**			
Kaiser–Meyer–Olkin Measure of Sampling Adequacy.		**.722**			
Overall Cronbach's alpha		**.805**			

Extraction Method: Principal Component Analysis

Key: Factor 1 (BLP1): Business Education Lecturers' Perception of LMS; Factor 2 (LSP2): level of LMS Skills Possessed, Factor 3 (B3): LMS Barriers, $\overline{X}$ mean, SD standard deviation, N sample size

More than 70% of the respondents perceived each of the items as an effective, interactive and interesting platform for teaching and learning. Majority of the lecturers (more than 70%) also affirmed that LMS is capable of improving their professional practice and improve students' performance and achievements. Although 189 (81%) of the lecturers agreed that they are not yet effective in the use of LMS, but depend on other lecturers for the use of LMS because they lack the necessary skills, many of them 181 (78%) agreed that they attend LMS training which is not yet sufficient for full acquisition skills for the use of LMS.

The lecturers, however, indicated that they are interested in using LMS in their teaching for students' learning. Again more than 80% of lecturers surveyed stated that they were discouraged to use LMS by incessant poor power supply and poor network which is the reason why they do not conduct online quiz or computer based examination.

Table 4 *Perceptions of Business Education lecturers on the usage of LMS for teaching and learning (in percentage)*

S/No	Perceptions	N	Agree (%)	N	Disagree (%)
1	I am efficient and comfortable using LMS for instructional delivery of accounting concepts.	42	(19)	189	(81)
2	I found that using LMS in teaching and learning of accounting arouses my interest and that of the students.	163	(70)	69	(30)
3	I experience technophobia (technological anxiety) using LMS in teaching of accounting.	34	(15)	198	(85)
4	I consider LMS important for accounting professional practice.	224	(96)	8	(04)
5	I found that using LMS in teaching accounting improves my professional practice.	184	(79)	48	(21)
6	I have attended training or conference delivered on LMS platform.	67	(29)	165	(71)
7	I experience fulfilment posting accounting lecture materials on LMS for student.	168	(72)	64	(28)
8	I feel that using LMS in instructional delivery of accounting topics increases ICT skills of the students.	194	(83)	38	(17)
9	I feel using LMS in instructional delivery of accounting courses is waste of time.	25	(11)	207	(89)

No	Statement				
10	LMS is an interactive platform and can motivate accounting students to learn.	178	(76)	54	(24)
11	LMS makes me think critically about how to achieve my learning objective.	171	(73)	61	(27)
12	I can use all the LMS tools very well in teaching accounting.	55	(24)	177	(76)
13	I depend on other lecturers to effectively use the LMS platform for teaching of accounting.	43	(19)	189	(81)
14	I conduct online quiz for my accounting students on LMS platform.	49	(22)	183	(78)
15	I administer computer-based accounting examination for my students on LMS.	59	(25)	176	(75)
16	I assist other accounting lecturers in using the LMS for their learning activities.	72	(32)	160	(68)
17	I can easily handle LMS settings without being assisted.	65	(29)	167	(71)
18	I attend trainings on the use of LMS to up-skill myself.	181	(78)	51	(22)
19	The training received on the use of LMS in teaching of accounting courses is not sufficient.	153	(65)	79	(35)
20	I am not motivated by school authorities to use LMS for instructional delivery of accounting courses.	28	(13)	204	(87)
21	I lack ICT skills required to manipulate the LMS platform.	174	(75)	56	(25)
22	I am encouraged by the school authorities to use LMS in teaching of accounting courses.	189	(81)	43	(19)
23	I support that the use of LMS should be made compulsory in universities for accounting courses.	168	(72)	64	(28)
24	I am often discouraged using LMS because of inconsistent power supply.	186	(80)	44	(20)
25	I am discouraged using LMS because of poor network.	193	(83)	39	(17)
26	I will be interested using LMS in teaching of accounting courses if am trained and adequate facilities provided.	192	(82)	40	(18)
	Grand percentage of cluster		**(54)**		**(46)**

Table 5 showed the results of the LMS skills possessed by business education lecturers for effective use of LMS in instructional delivery in universities in South East, Nigeria.

***Table 5:** Means, standard deviation ratings, and ANOVA results of skills possessed by business education lecturers for effective use of LMS for teaching and learning in universities*

S/No	Possession of Skills	PS	$\bar{X}$	SD	Rem.	F. ratio	Sig.	Rem.
1	Ability to key in, delete, copy, and paste accounting information/text on LMS.	232	3.80	.39	P	.103	.902	NS
2	Ability to create accounting course(s) using add activity tool.	232	1.41	.49	LP	.079	.924	NS
3	Ability to upload accounting text-based or graphic documents on LMS.	232	1.61	.48	LP	.209	.811	NS
4	Ability to engage students on forum interaction using forum platform.	232	1.53	.53	LP	.136	.873	NS
5	Ability to enroll participants to specific accounting course.	232	1.57	.50	LP	.047	.954	NS
6	Ability to upload and time an accounting quiz using question bank.	232	1.59	.49	LP	.707	.494	NS
7	Ability to send email or notifications to accounting students from LMS environment.	232	2.94	.77	P	.306	.736	NS
8	Ability to use video conferencing application on the LMS platform for asynchronous interaction between accounting students and lecturer.	232	1.78	.64	LP	.183	.833	NS
9	Ability to export files from LMS arena to external environment.	232	1.56	.53	LP	.179	.836	NS
10	Ability to edit created online accounting activities e.g. quiz, announcement etc. on LMS.	232	1.51	.57	LP	.065	.937	NS
11	Ability to use feedback tool to track accounting students' performance.	232	1.48	.50	LP	.060	.941	NS
12	Ability to navigate from one activity to the other.	232	1.72	.69	LP	.189	.828	NS
13	Ability to sign roles to different persons in accounting course e.g. manager, admin, etc. in LMS arena.	232	1.52	.50	LP	.168	.845	NS
14	Ability to use file picker to import accounting pictorial images, audio, video or text-based files.	232	1.58	.49	LP	.153	.859	NS
15	Ability to set accounting students' authentication details like user name, password, and mode of enrollment.	232	1.46	.49	LP	.074	.929	NS
16	Ability to use URL tool to link online accounting websites.	232	1.41	.49	LP	.027	.973	NS
17	Ability to use survey tools to elicit information from accounting students about interest, motivation, interaction etc. they gain from LMS	232	1.63	.52	LP	.191	.826	NS

S/No	Skills required:	PS	X̄	SD	Rem.	F. ratio	Sig.	Rem.
18	Ability to generate accounting grade sheets for quiz or examination.	232	1.57	.49	LP	.128	.880	NS
19	Ability to use chat tool for inter-group and students' collaborative learning and interactions.	232	1.41	.49	LP	.247	.781	NS
20	Ability to use different restriction settings e.g. restriction of guest access to accounting course, self, or group enrolment restriction etc.	232	1.61	.56	LP	.158	.854	NS
21	Ability to use wiki tools to create group accounting assignment.	232	1.73	.60	LP	.032	.969	NS
22	Ability to use "turn edit on" tool to start creating accounting activities.	232	1.48	.50	LP	.060	.941	NS
	Cluster Grand	**232**	**1.72**	**.53**	**LP**	**.159**	**.867**	**NS**

Key: X̄ = mean, SD = Standard deviation, PS = Population size, P = Possessed, LP lowly possessed, NS not significant, S significant, df = (2, 249), F-ratio from one-way ANOVA, sig. p value, rem. Remark

The data presented in Table 5 showed that all the skill items except items 1 and 7 are lowly possessed by the lecturers because their mean values ranged from 1.41 to 1.78. The grand mean which is 1.72 also showed that the level of possession of LMS skills by the lecturers is significantly low. However, the mean of items 1 and 7 which are 3.80 and 2.94 imply that the lecturers possess those skills. The standard deviation (SD) of the 22 items in the table as well as the grand SD ranged between 0.39 and 0.77. This means that the opinions of the lecturers on their possession of the LMS skills were similar and close to the mean values. The result of the ANOVA analysis for each item as well as the grand value show that there is no significant difference among the mean responses of the lecturers. This is because the significant value to F-value on each item is greater than the criterion significant value of 0.05 level of significance.

Table 6: *Mean, standard deviation, and ANOVA results on the barriers militating against effective usage of LMS in teaching and learning in universities*

S/No	Skills required:	PS	X̄	SD	Rem.	F. ratio	Sig.	Rem.
1	Lack of ICT skills for instructional delivery of accounting courses.	232	3.56	.50	A	.240	.787	NS
2	Technophobia and anxiety over the use of LMS in teaching of accounting.	232	3.75	.44	A	.072	.930	NS
3	Poor power supply.	232	3.83	.38	A	.302	.740	NS

No	Item	P	X̄	SD		F-ratio	Sig.	Rem.
4	Lack of training on how to use LMS in teaching accounting courses.	232	3.85	.35	A	.148	.862	NS
5	Lack of technical support for effective take-off.	232	3.77	.42	A	.785	.457	NS
6	Poor internet connectivity.	232	3.75	.43	A	.030	.970	NS
7	Insufficient facilities e.g. video conferencing tools, accounting software.	232	3.69	.47	A	.068	.934	NS
8	Excess work load on accounting lecturers interferes with time to develop LMS teaching materials.	232	3.88	.33	A	1.278	.281	NS
9	Lack of motivation and support from the institution.	232	2.17	.81	DA	.084	.920	NS
10	Discouragement from colleagues.	232	1.68	.48	DA	2.868	.059	NS
11	Inadequate computer skills for effective manipulation of accounting courseware on LMS platform.	232	3.76	.43	A	.107	.898	NS
12	Poor funding of LMS scheme for accounting lecturers by government.	232	2.98	.75	A	.049	.952	NS
13	Lack of curriculum inclusion of LMS learning environment in accounting.	232	3.44	.71	A	.217	.805	NS
14	LMS has ergonometric hazards e.g. sitting before computer and straining one's eyes for a long time.	232	1.75	.43	DA	.619	.539	NS
15	Lack of interest in LMS and technology integration in teaching and learning of accounting courses.	232	3.76	.49	A	.415	.661	NS
16	Developing LMS platform and online accounting courseware consumes time.	232	3.70	.46	A	.022	.979	NS
17	Insufficient ICT space.	232	3.66	.60	A	.088	.916	NS
18	Lack of institutional and accounting educators' collaboration.	232	1.86	1.40	DA	.670	.513	NS
	Cluster Grand	**232**	**3.27**	**.55**	**A**	**.45**	**0.73**	**NS**

Key: P = Population size, X̄ = Mean, SD = Standard deviation, A = Agree, DA = disagree, F-ratio from One-way ANOVA, Sig. = p value, Rem. = Remark, S = Significant, NS = Not significant

Table 6 also showed that 4 items (9, 11, 14, and 18) had mean scores ranging from: 1.68 –

2.17 which are below 2.50, suggesting that the respondents do not agree that the items are barriers

militating against effective use of LMS by business education lecturers for teaching of accounting in

universities. On the other hand, the standard deviation of the 4 items ranged from .43 – 1.40 showing

that the respondents were very close in their opinions. The result of one-way ANOVA as seen in the F-ratio for the overall mean of the cluster as presented on Table 6 showed no significant difference at 0.05 level of significance: $F(2, 231) =.45$; $p\backslash 0.05$. Thus, the F-ratio of .45 with a p-value of .73 computed at 0.05 level of significance at 229 degree of freedom is far above .05. Therefore, the null hypothesis of no significant difference was not rejected because all the lecturers have similar opinion that the items are barriers to the use of LMS in teaching and learning of accounting.

Discussions of Findings

A total of 232 business education lecturers made up of 124 (53%) males and 108 (47%) females participated in the study. Gender was considered an important variable, particularly as it concerns students' performance and academic outcome. This indicates that there is no gender discrimination and disparity in employment of business education lecturers. The finding validates UNESCO (2003) that postulated that gender equality should be put into consideration in making provision for learning opportunities in education. The finding supports the 2013 NDHS report that more than 7 in 10 women age 15-49 were employed in the past few years (National Population Commission (Nigeria) and ICF International, 2014).

Furthermore, the study found that business education lecturers' perceived LMS as an effective learning environment and ICT tool that can facilitate effective instructional delivery of accounting courses, inspire accounting students' interest, and reinforce their academic performance in accounting. This is shown in the opinions of the majority of the lecturers 184 (79%) who maintained that constant use of LMS in teaching improves their professional practice, increases ICT skills of students, and arouses the lecturers and students interest. The finding agrees with Phillips, and Trainor (2014) who posited that LMS has the potential of increasing students' interest in learning and meeting their learning needs. The finding is also congruent with Anyagh and Okwu (2011); Iyekekpolor

(2007) who maintained that factors such as text-book, curriculum, teacher's skills (ICT), and environment etc. can mar or improve students' interest and achievement in education. The finding on the availability of LMS in various universities studied revealed that 184 (79%) of the respondents confirmed that their institutions have LMS platform, which is in consonance with Brenda, et al (2004); and Onojetah (2014) who expressed that successful schools are those that provide integrated technology experiences for their students to increase their technology capabilities, and that higher institutions that fail to incorporate new technologies into teaching and learning with reference to industry requirements and trend cannot seriously claim to prepare their students for life in the 21st century. The finding also agreed with Anie (2011) who emphasized that educational policies on ICT should include the provision and utilization of ICT tools for instructional delivery in universities. The study also found that the number of business education lecturers who can effectively and comfortably use it for instructional delivery of accounting courses is low 42, (19%) and that LMS platforms are underutilized for instructional delivery by the lecturers in accounting courses. This could be as a result of poor ICT skills indicated by many of the lecturers. However, 192 (82%) showed interest that they are willing to use LMS learning environment for teaching and learning if they are trained and if necessary facilities such as regular power supply, internet connectivity, among others are provided.

The finding on skills possessed by business education lecturers for effective usage of LMS for teaching and learning of accounting courses showed a low mean score in most of the identified skills. The finding on "ability to create accounting course(s) using add activity tool", "ability to upload accounting courseware i.e. text-based or graphic documents on LMS", "ability to engage accounting students on forum interaction using forum platform", "ability to enroll participants to specific course", "ability to upload and time an accounting quiz using question bank, among others, showed that most of the lecturers possess low skills in these items. This conforms to Becker (2000);

Schoepp (2005); Yusuf (2007); Jegede (2009); Khan et al. (2012) who emphasised that inadequate professional training and development in the use of ICT are major barriers to ICT utilization. Again, the finding on null hypothesis 1 which was tested using one-way ANOVA showed that there was no significant difference, hence the hypothesis was not rejected, indicating that lecturers in all the universities (federal, state, and private) studied possess similar level of skills for the use of LMS in instructional delivery of accounting.

Furthermore, many barriers to LMS use for instructional delivery of accounting courses in business education including lack of technical support for effective take-off were identified. This is consistent with (Selim, 2007) who noted that inadequate support at the higher education level is a barrier to LMS usage in schools. Other barriers militating against effective integration of LMS in teaching and learning process of accounting include: curriculum barrier (no provision in curriculum) (Chen et al. 2012), lack of encouragement, motivation and support from hosting institutions' (Williams 1995), insufficient ICT support space (Hadley and Sheingold 1993). However, the respondents did not think that lack of motivation and support from the institution, discouragement from colleagues, ergonometric hazards of LMS e.g. sitting before computer and straining one's eyes for a long time, and low institutional collaboration were barriers to effective utilization of LMS for teaching and learning of accounting courses.

Implications of the Study

Exploring the perception of business education lecturers on the use of LMS in instructional delivery of accounting courses, identifying LMS skills they possessed, and finding out barriers affecting the effective utilization of LMS in teaching and learning of accounting in universities in South East, Nigeria have great significant implications for the lecturers, technical staff, the university

administrators, curriculum planners as well as business education students. The implication of LMS skills deficiency among business education lecturers in accounting is that such lecturers would resign their teaching to the traditional method which research has proved to be incapable of producing students that will be relevant in today's technological driven economy. This implies according to literature that any faculty or institution has fails in that regard cannot produce individuals who will be relevant in the society.

Similarly, this study has a far reaching implication on university administrators and government most especially as it concerns poor network services, inconsistent power supply, and insufficiency of state-of-the-art facilities like computer systems with necessary ICT tools that support LMS integration. The lack of these facilities could be that government has not provided the required fund or that the fund provided was insufficient, misused or misappropriated by the institution administrators. This has a detrimental effect on learning outcome, thus students will be greatly disadvantaged as the quality of instruction continues to deteriorate. There is therefore, an alarming need for policy prioritization on ICT integration in universities and a close watch-dog-approach should be put in place to see that ICT policies are effectively and efficiently implemented. The effective implementation can be ensured through positive perception, increase in funding and supply of facilities, and staff development strategies such as seminars, workshops, conferences and provision of other relevant ICT resources.

The implications of the study to curriculum planners is that they should in their regular review and update of business education curriculum ensure that content and methods that will speed up the use of LMS in instructional delivery is included in the curriculum.

Conclusion

This study investigated the perception of business education lecturers on the use of LMS in instructional delivery of accounting courses, LMS skills possessed by the lecturers, and the barriers affecting the effective utilization of LMS in instructional delivery of accounting in universities in South-East Nigeria. Two hundred and thirty two (232) business education lecturers from nine universities (federal, state and private) offering accounting were used as the respondents. A structured self-made questionnaire consisting of 66 item statements was used as instrument for data collection. Statistical mean, standard deviation, and one-way ANOVA were used to analyze the data using SPSS version 20. The findings of the study revealed that majority of business education lecturers perceived LMS as an important technological tool and learning environment that supports teaching and learning of accounting courses, helps accounting students and teachers achieve the stated learning objectives, helps in arousing students interest in accounting and therefore should be made compulsory in all the universities in Nigeria. Unfortunately, the LMS skills possessed by the accounting lecturers were very low, thereby making the efforts of the institutions that provided LMS platform counter-productive.

Furthermore, there are many factors posing challenges to effective utilization of LMS for instructional delivery in accounting in universities studied. Such factors include insufficiency of state-of-the-art LMS facilities, poor network services, poor power supply, poor ICT skills by the lecturers, and insufficient training on how to use the LMS for instructional delivery of accounting courses among others. It is therefore, imperative to find out measures for improving ICT integration in instructional delivery of accounting courses in universities in Nigeria. The improvement can be possible through staff development and training as well as supply of necessary facilities and supports so as to meet up with the innovative ICT policies in education for global trends in industries and education.

Limitations of the study

There are a few limitations to this study. The first limitation is that the findings were obtained from only the federal, state, and private universities in South-East Nigeria. This will affect the generalizability of result of the study to other universities in Nigeria. Another limitation is that the respondents may be biased towards the questionnaire items provided, and also due to their different background, knowledge level and experience they may not have given objective response to the questionnaire items. Another limitation is that most of the respondents has limited LMS skills, thus, making the generalization of the finding difficult. The researchers therefore recommend that further studies can be conducted on lecturers who have LMS skills only. They also recommend that further investigation should include other staff that work in computer laboratories such as technical staff, laboratory attendants etc. and again the sample size of the study should increase to enhance variety of perceptions and opinions. The effect of lecturers' knowledge and experience on their perception and level of their skills possessed and use of LMS should be explored. Such enhanced perceptions and opinions would increase the efficacy of the study.

Policy recommendations

The following recommendations are made based on the findings of the study:

1. Integration of ICT into all accounting courses should be made compulsory in all the universities in Nigeria, and institution administrators should make the use of LMS mandatory for lecturers.

2. Government should make and implement innovative policies that will reduce misappropriation of ICT funds and mismanagement of ICT facilities.

3. Government, Non-governmental agencies and other stakeholders should make effort to provide more fund for procurement of state-of-the-art ICT facilities across universities in Nigeria.

4. Institution administrators and management should organize ICT and LMS training programmes regularly to increase capacity building of the lecturers so as to maximize the numerous benefits that accrue in the use of LMS in instructional delivery.

5. Dean of Faculties and Head of Departments should be mandated to enforce the use of LMS in instructional delivery by all the lecturers.

6. Both government and administrators of the universities should create special funds for sponsoring the lecturers for conferences, seminars, workshops, and other training that will improve their skill for the utilization of LMS in instructional delivery.

Appendix: Fig(s) 3, 4, 5
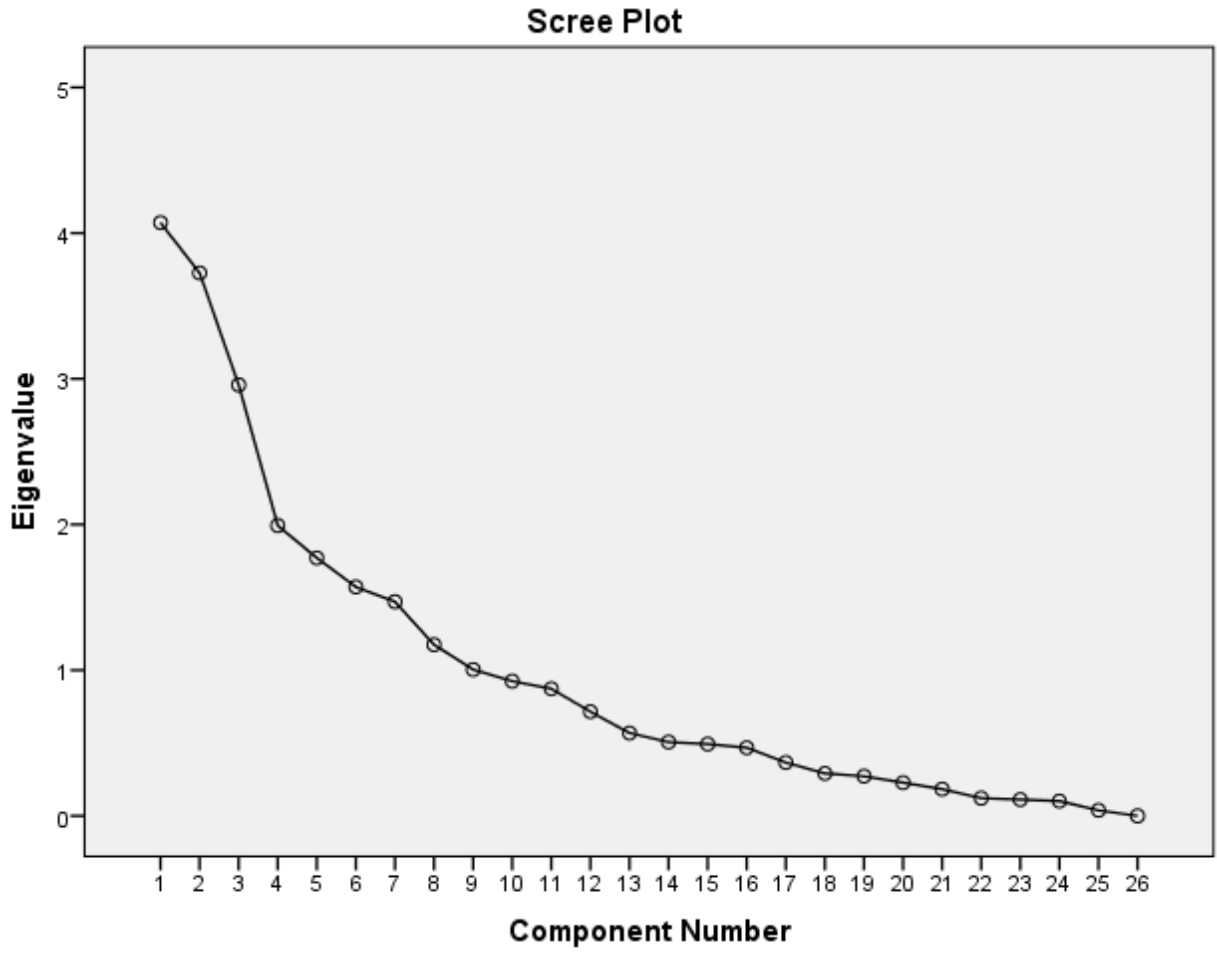
Fig.3: Scree Plot of Business education lecturers' perception on LMS (cluster 1)
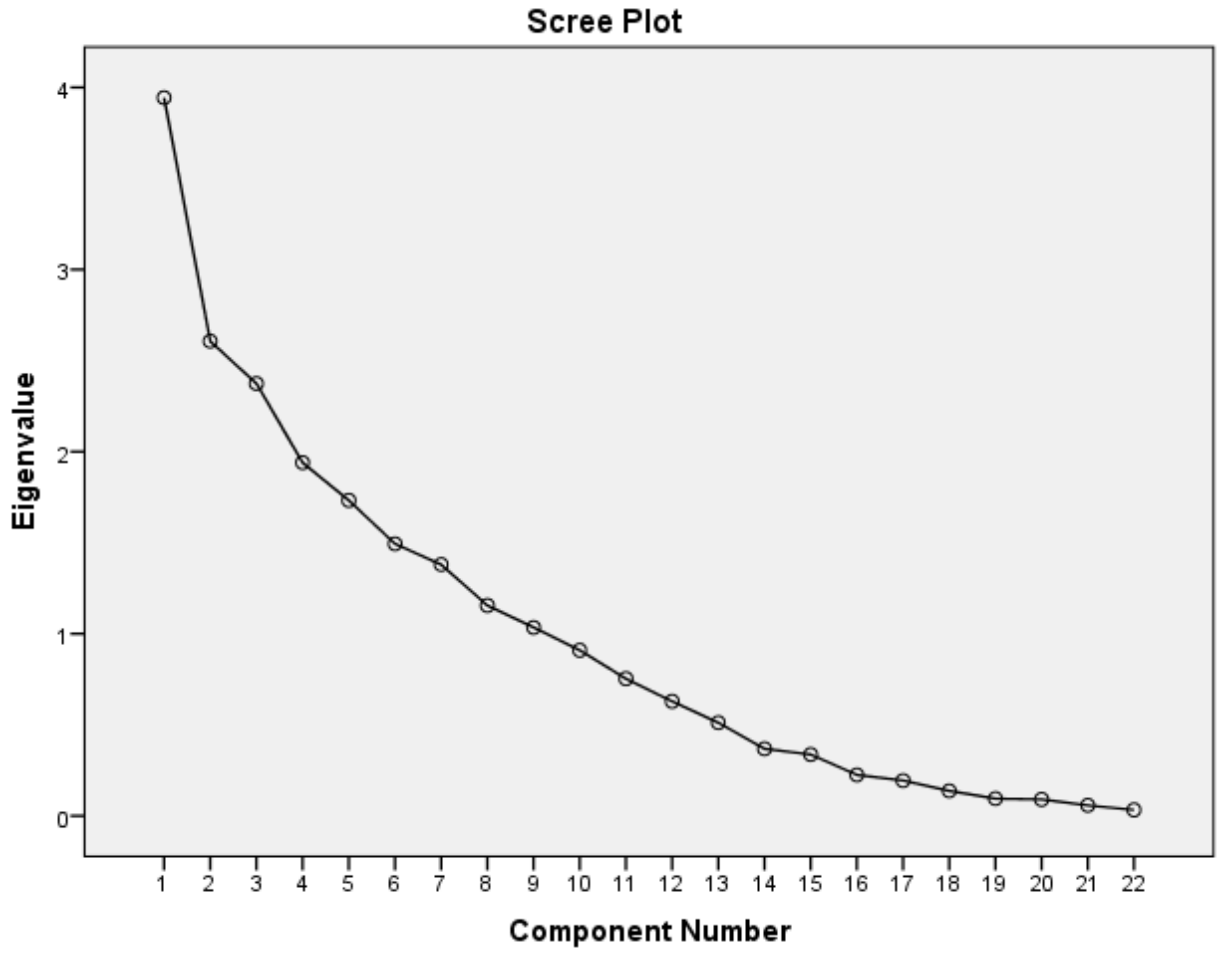
Fig. 4: Scree plot of LMS skills required for effective utilization (cluster 2)
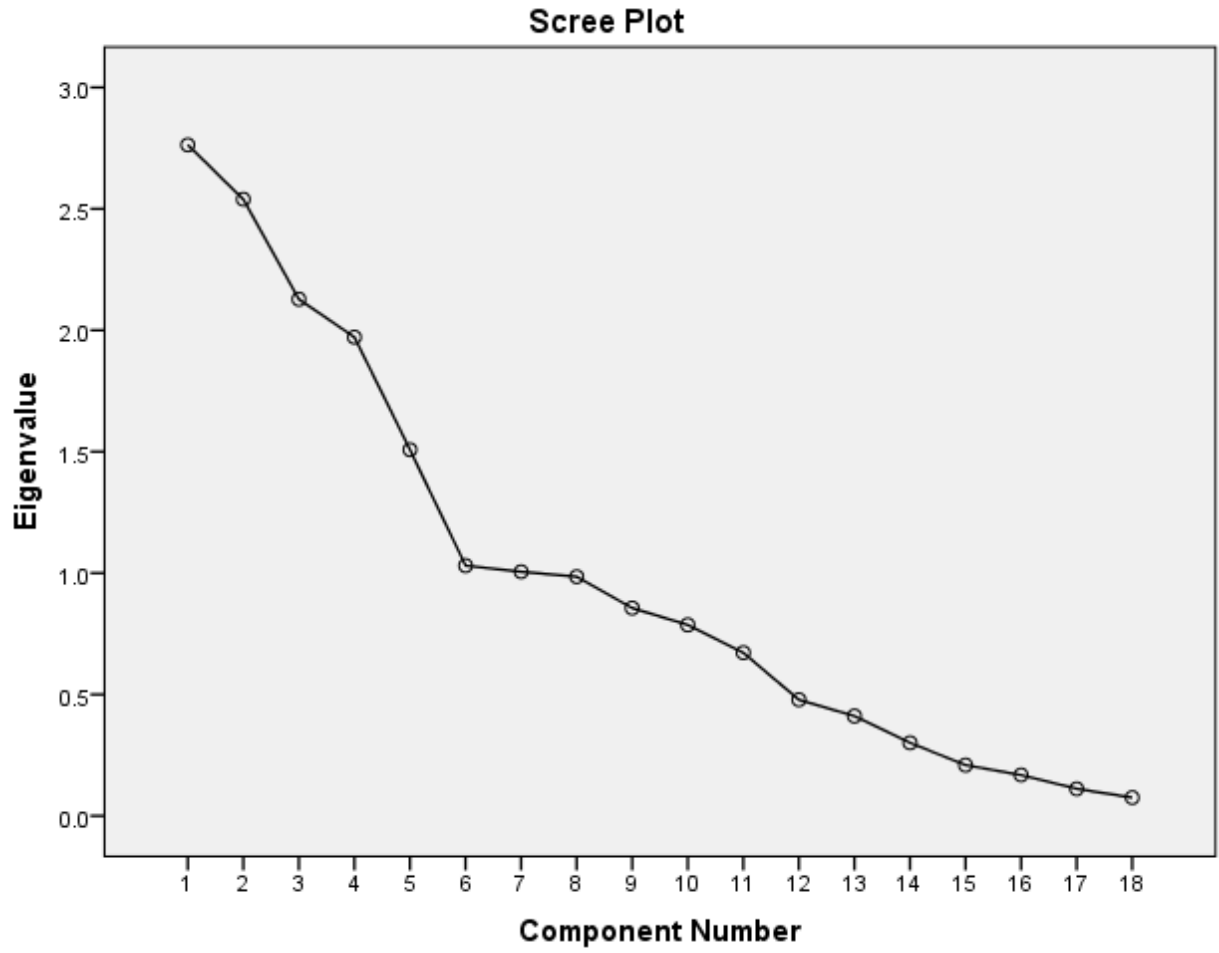
Fig. 5: Scree plot of barriers militating against LMS usage

References

Afshari, M., Bakar, K. A., Luan., W. S., Samah, B. A., & Fooi, F. S. (2009). Factors affecting teachers' use of information and communication technology. *An International Journal of Instruction,* 2(1): 77-104.

Agboola, A. (2006). Information and communication technology (ICT) in banking operations in Nigeria: An evaluation of recent experiences, Retrieved on May 20, 2018 from: http://unpan1.un.org/intradoc/ groups/public/documents/AAPAM/UNPAN0 26533. pdf, on Nov. 10, 2010.

Agboola, A. K. (2006). Accessing the awareness and perceptions of academic staff in using e-learning tools for instructional delivery in post-secondary institution: A case study. The Innovation Journal. *The Public Sector Innovation Journal*, 11(3), 1-12.

Akinde T. A, Adetimirin A. A. (2017). Perceived usefulness as a correlate of extent of information and communication technologies (ICTs) use for teaching by library educators in universities in Nigeria. Int. J. Lib. Inf.Sci. 9 (3):14-24.

Akuegwu, B. A., Ntukidem, E. P., Ntudikem, P. J. & Jaja, G. (2017). Information and communication technology (ICT) facilities' utilization for quality instructional services delivery among university lecturers in Nigeria. *Review of Higher Education in Africa* 3 (1), 78-85. Retrieved on March 12, 2018 from: https://oapub.org/edu/index.php/ejes/article/ viewFile/1221/3559.

Al-Faki, I. M., & Khamis, A. H. A. (2014). Difficulties facing teachers in using interactive whiteboards in their classes. *American International Journal of Social Sciences*, 3(2), 136–158.

Al-Senaidi, S., Lim, L., & Poirot, J. (2009). Barriers to adopting technology for teaching and learning in Oman. Computers & Education, 53(3), 575–590.

Anie, S. O. (2011). The Economic and Social Benefits of ICT Policies in Nigeria. Library Philosophy and Practice. Retrieved on December 20, 2017 from: http://www.webpages. uidaho.edu/*mbolin/anie.htm.

Anyagh, P. I. & Okwu, E. I. (2010). Effects of formula teaching approach on students" achievement in Algebra. *Journal of Research in Curriculum and Teaching,* 5(1): 374-379.

Appana, S. (2008). A review of benefits and limitations of online learning in the context of the student, the instructor, and the tenures faculty. *International Jl. on E-Learning*, 7(1), 5–22.

Association of African Universities (2000). Report of Technical Experts meeting on the use and application of information and communication technologies in higher education institutions

in Africa. Retrieved on December 21, 2017, from www.org/english/ documents/aau-ictreport-p4.htm.

Azukka, E. B. (2011). Research Methods Theory and Application. Oko: Noben Publishers.

Federal Ministry of Education, (2004). Ministerial initiative in e-education for the Nigerian education system. Abuja: Federal Ministry of Education.

Barsnica, P., Beise, C. R., Lewis, D., Fox, J., & Klema, C. (2010). Learning management system implementation: challenges and opportunities. Retrieved on 20th December, 2017 from: http://www.davidlewisphd.com/publications/2010_SALT_paper.pdf

Becker, H. J. (2000). Access to classroom computers. *Communications of the ACM, 43*(6), 24–25.

Berking, P., & Gallagher, S., (2016). Choosing a learning management system (Ver. 7.0). *Advanced Distributed Learning (ADL) Co-Laboratories, 14*, 40–62. Retrieved on January 10, 2018 from: https://www.adlnet.gov/public/uploads/ChoosingAnLMS.docx.

Bolt lee, C. and Foster, S. (2003). The core competency framework: *A new element in continuing call for accounting education change in the United States.* Accounting Education, 12 (1), 33-47.

Brendan, C. N., Joe, D., Greg, G., Sharon, G., Dana, H., Ginny, R., & Don. T. (2004). Integrating Technology in Teaching and Learning. Retrieved from March 5, 2015 from www.nnefoundation.org/getmedia.befa.on.

British Educational Communications and Technology Agency BECTA (2004). A review of the research literature on barriers to the uptake of ICT by teachers. Resource document. Retrieved on December 20, 2017 from: http://dera.ioe.ac.uk/1603/1/becta_2004_barriers_touptake_litrev.pdf.

Brown, M., Dehoney, J., & Millichap, N. (2015). The next generation digital learning environment. *A Report on Research*. Educause Learning Initiative paper. Retrieved on January 10, 2018 from: https://net.educause.edu/ir/library/pdf/eli3035.pdf.

Center for Educational Innovation, (CEI) (2017). Trends and the future of learning management systems (LMSs) in higher education. University at Buffalo. Retrieved on December 21, 2017 from: http:// www.buffalo.edu/ubcei.

Chen, W., Tan, A., & Lim, C. (2012). Extrinsic and intrinsic barriers in the use of ICT in teaching: A comparative case study in Singapore. In M. Brown, M. Hartnett, & T. Stewart (Eds.), Future challenges, sustainable futures. Wellington: Proceedings Ascilite Wellington 2012.

Choo P. S. & Rahmat, M. K. (2013). Understanding student teachers 'behavioural intention to use technology: Technology acceptance model (TAM) validation and testing. *International Journal of Instruction*, 6(1).

Clemson Computing & Information Technology CCIT (2017). Skills for online learning. Retrieved on March 8 from: http://www.clemson.edu/ccit/learning_tech/distance_ed/ prospective/about_de/ol_skills.html.

Copley, J., & Ziviani, J. (2004). Barriers to the use of assistive technology for children with multiple disabilities. *Occupational Therapy International, 11*, 229–243.

Dahlstrom, E., Brooks, D. C., & Bichsel, J. (2014). The current ecosystem of learning manage- ment systems in higher education: Student, faculty, and IT perspectives. *Research Report*. Louisville, CO: ECAR. Retrieved January 10, 2018 from: https://net.educause. edu/ir/library/pdf/ers1414.pdf.

Daigle RJ, Morris PW (1999). Gender differences in accounting student attitudes and experience towards computers. *Rev. Account. Inf. Syst.* (3): 75-84.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3): 319–340. Retrieved on January 5, 2018 from: http://dx.doi.org/10.2307/ 249008.

Davis, F. D. (1986). *A Technology Acceptance Model for Empirically Testing New End-User Information Systems: Theory and Results*. Doctoral dissertation. Cambridge, MA: MIT Sloan School of Management.

Dalhatu, D. D., & Bagaji, A. S. Y. (*2014*). Implications of unemployment on Nigeria's sustainable development. International Journal of Public Administration and Management Research (IJPAMR). 2(2), *56-65.* Retrieved on January 5, 2018 from: http://www.rcmss.com.

Dobre, I. (2015). Learning management systems for higher education: An overview of available options for higher education organizations. *Procedia-Social and Behavioral Sciences*, 180, 313–320. doi:10.1016/j.sbspro.2015.02.122.

Drent, M., & Meelissen M. (2008). Which factors obstruct or stimulate teacher educators to use ICT innovatively? Computers & Education, 51, 87–199.

Edumadze, J. K. E., Ossei-Anto, T. A. Edumadze, G., Tamakloe, W. K., Asamoah, E., & Boadi, E. (2014). Evaluating the awareness and perceptions of lecturers in using e-learning tools for teaching in university of Cape Coast. *International Journal of Computing Academic Research (IJCAR)*, 3 (1), 1-11. Retrieved on January 3, 2018 from: http://www.meacse. org/ijcar/archives/37.pdf.

Ezeokana, J. O. (1999). Divorce: Its Psychological Effects on the Divorced Women and Their Children: A Study on the Igbos of Southern Nigeria. Peter Lang.

Felder, R. M (2002). Reaching the Second Tier Learning and Teaching Styles in Colleges *Science Education Journal of College Science Teaching, 23(2),* 286-290.

Fishbein, M. & Ajzen, I. (1975). Belief, attitude, intention, and behavior: An introduction to theory and research," Reading, MA: Addison-Wesley.

Fraenkel, J. R. & Wallen, N. E. (2009). How to Design and Evaluate Research in Education. Boston: MacGraw-Hill.

Gefen, D. & Straub, D. (2000). "The relative importance of perceived ease of use in IS adoption: A study of e-commerce adoption, *Journal of the Association for Information Systems,* 1(8) 1–28.

Goh, W. W., Hong, J. L., & Gunawan W. (2014).exploring lecturers' perceptions of learning management system: An empirical study based on TAM. *International Journal of Engineering Pedagogy* 4(3). Retrieved on January 5, 2018 from: https://pdfs.semantic scholar.org/2931/bdfbb63bd5be73e94bc25e2e900 ebca 86f5c.pdf.

Goktas, Y., Gedik, N., & Beaydas, O. (2013). Enablers and barriers to the use of ICT in primary schools in Turkey: A comparative study of 2005–2011. Computers & Education, 68, 211–222.

Hadley, M., & Sheingold, K. (1993). Commonalities and distinctive patterns in teachers' integration of computers. *American Journal of Education*, 101(3), 261–315.

Hayashi, A., Chen, C., Ryan, T., & Wu, J. (2004). The role of social presence and moderating role of computer self-efficacy in predicting the continuance usage of e-learning systems. *Journal of Information Systems Education, 15*(2), 139–154.

Hsu, H. H, & Chang, Y. Y. (2013). Extended TAM model: Impacts of convenience on acceptance and use of Moodle. *US-China Education Review A*, 3(4), 211–218.

Hu, P. J., Chau, Y. K., Liu, R., & Tam, K. Y. (1999). Examining the technology acceptance model using physician acceptance of telememedice technology. *Journal of Management Information Systems*, 16(2), 91–112.

Isshan, I., Johari, S. S. & Idrus, R. M. (2010). Acceptance on mobile learning via SMS: A rasch model analysis," iJIM. 4(2), 10.

Isshan, I., Bokhare, S. F., Azizan, S. N. & Azman, N. (2012). Teaching via mobile phones: A case study on malaysian teachers' technology acceptance and readiness," Journal of Educators Online.

Iyekekpolor, A. S. O. (2007). *Cooperative Strategies for Combatting Poor Performance in Mathematics*. Makurdi: Onavi publishers.

Ihmeideh, F. M. (2009). Barriers to the use of technology in Jordanian pre-school settings. *Technology, Pedagogy and Education*, 18(3), 325–341.

Jayaprakash, J. C. M. (2005). Strategies in teaching accounting in higher education. *The Reflective Practitioner*. Proceedings of the 14th Annual Teaching Learning Forum, 3-4 February 2005. Perth: Murdoch University. Retrieved on June 4, 2016 from: http://clt. curtin.edu. au/events/conferences/tlf/tlf2005/refereed/jayaprakash.html.

Jegede, P. O. (2009). Issues in Informing Science and Information Technology Volume 6, Ile-Ife: Assessment of Nigerian Teacher Educators' ICT Training, Obafemi Awolowo University, Ile-Ife.

Jones, R. D. (2009). Student engagement teacher handbook, international center for leadership in education. Retrieved on November 8, 2017 from: http://heatherschool.org/wp-content/ uploads/2012/04/Student-Engage-handbook-excerpt-4.pdf.

Jonas, G. A. & Norman, C. (2011). Textbook websites: User technology acceptance behaviour," *Behaviour & Information Technology*, 30(2), 147–159. Retrieved on December 21, 2017 from: http://dx.doi.org/10.1080/ 01449290903353021.

Khan, M. S. H., Hasan, M., & Clement, C. K. (2012). Barriers to the introduction of ICT into education in developing countries: The example of Bangladesh. International Journal of Instruction, 5(2), 61–80.

Kulshrestha, T. & Kant, A. R. (2013). Benefits of learning management system (LMS) in Indian education. *International Journal of Computer Science & Engineering Technology (IJCSET).*

Kumar, A., Nitendra, R., Sheetal, A., Dipanjan C., & Amit, A. N. (2008). Organizing the unorganized: Employing IT to empower the under-privileged." Proceedings of the 17th International Conference on the World Wide Web. Beijing, China.

Learning Systems Architecture Lab [LSAL]. (2004). *SCORM Best Practices Guide for Content Developers (2004 ed.).* Pittsburgh: Carnegie Mellon University.

Tabachnick, B. G., & Fidell, L. S. (2001). *Using Multivariate Statistics* (4th edn). New York: HarperCollins**.**

The National Bureau of Statistics (NBS) (2017). Nigeria's unemployment rate rises from 14.2% to 18.8%. Retrieved on June 12, 2018 from: www.vanguardngr.com/2017/12/nigerias-unemployment-rate-rises-14-2-18-8/.

Tompang, K. (1997). Kompetensi Pensyarah Penyelia: Persepsi Terhadap Kompetensi Pensyarah Dalam Pengajaran: Satu Kajian Di Sebuah Maktab Perguruan. Unpublished doctoral dissertation. Samarahan:Universiti Malaysia Sarawak Lipe, M. G. (1989). Further Evidence on the Performance of Female Versus Male Accounting Students, Issues in Accounting Education, 4(1), 147.

Trucano, M. (2005). ICT components in World Bank Education Projects. *infoDev*. Available: print only.

Turbill, J. (2001). A researcher goes to school: Using technology in the kindergarten literacy curriculum. *Journal of Early Childhood Literacy*, 1(3), 255–279.

Nair, I. (2011). Analysis of recent studies undertaken for assessing acceptance of technology among teachers using TAM. *International Journal of Computer Applications*, 32(8), 38–46.

Nasser, R., Cherif, M., & Romanowski, M. (2011). Factors that impact student usage of the learning management system in Qatari schools.

Mabed, M., & Kohler, T. (2012). The impact of learning management system usage on cognitive and affective performance, Geneme.

Monarch Media (2010). Business white paper open–source learning management systems: Sakai and Moodle. Retrieved on December 23, 2017 from: www.monarchmedia.com.

Moses, P., Ali, W. Z. W., & Krauss, S. E. (2014). Cause analysis of learning management system: role of moderator in improving students' performance. *Research and Practice in Technology Enhanced Learning,* 9(1), 83-105. Retrieved on March 6, 1017 from: http://www.apsce.net/uploaded/filemanager/26a91856-6196-4566-a6bf-fd4d2c879a6.pdf.

Selim, H. M. (2007). Critical success factors for e-learning **ac**ceptance: Confirmatory factor models. *International Journal of Technology Marketing 2*(2), 157–182.

Schoepp, K. (2005). Barriers to technology integration in a technology-rich environment. Learning and Teaching in Higher Education: *Gulf Perspectives*, 2(1), 1–24.

Stephen, J. C., Donna, K. G., Shulamit, K., & Wendy, M. W. (2014). Women in academic science: A changing landscape. Psychological Science in the Public Interest, 15(3), 75–141. doi:10.1177/1529100614541236.

Sumak, B., Hericko, M., Pusnik, M. & Polancié, G. (2011). Factors affecting acceptance and use of moodle: An empirical study based on TAM. *Informatica*, 35, 91–100.

Landry, B. Griffeth, R. and Hartman, S. (2006). Measuring student perception of blackboard using the Technology Acceptance Model. *Decision Sciences Journal of Innovative Education.* 4(1), 87–99. Retrieved on January 5, 2018 from: http://dx.doi.org/10.1111/ j.1540-4609.2006.00103.x.

Legris, P., Ingham, J., & Collerette, P. (2003). Why do people use information technology? A critical review of the technology acceptance model. *Information & Management*, 40, 191–204.

Liverpool, L. S. O., Marut, M. J. Ndam, J. N., & Oti, D. A. (2016). Towards a model for e-learning in Nigerian HEIS: Lessons from the university of Jos ICT Maths initiative. Retrieved on December 15, 2017 from: http://forum.org.ng/system/files/IFE+paper.pdf.

Martherly, M. & Burney, L. L. (2013). Active learning activities to revitalize managerial accounting principles. Issues in Accounting Education, 28(3), pp 653-680. DIO: 10.2308/iace-50465. Retrieved on March 6, 2016 from: http://aaapubs.org/doi/ pdf/10.2308/iace-50465

Mulkeen, A. (2003). What can policy makers do to encourage integration of information and communications technology? Evidence from the Irish school system. *Technology, Pedagogy and Education, 12*(2), 277–294.

Nair, I. (2011). Analysis of recent studies undertaken for assessing acceptance of technology among teachers using TAM. *International Journal of Computer Applications*, 32(8), 38–46.

Nair, C. S., & Patil, R. (2012). A Study on the Impact of Learning Management Systems on Students of a University College in Sultanate of Oman. International Journal of Computer Science Issues, 9(2) 2. Retrieved on March 3, 2017 from: http://www.ijcsi.org/papers/ IJCSI-9-2-2-379-385.pdf.

National Population Commission [Nigeria] and ICF International (2014). Gender in Nigeria: Data from the 2013 Nigeria Demographic and Health Survey (NDHS). Rockville, Maryland, USA: National Population Commission and ICF International.

Nicholas-Omoregbe, O. S., Azeta, A. A., Chiazor, I. A., & Omoregbe, N. (2017). Predicting the adoption of e-learning management system: A case of selected private universities in Nigeria. *Turkish Online Journal of Distance Education-TOJDE*, 18(2). Retrieved on March 15, 2018 from: http://www.savap.org.pk/journals/ARInt./Vol.2(3)/2012(2.3-55).pdf.

Okoro, I. F and Ursula, O. I. (2012). The teacher and skills acquisition at basic education from the perspective of cake making in home economics. *International Journal of the Common Wealth Research and Capacity Education Initiative (IJCWRCEI)* 3 (3).

Okute, A. L., & Agomuo, E. E. (2010). Business teachers' perception of the application of e-learning in information and communication technology in reforming business courses delivery system in tertiary institutions in Cross-River and Akwa Ibom States. *Nigerian Vocational Association Journal*. 15(1), 41-54.

Olaitan, L. T. (2014). Gender differentials in Nigeria: Implementation for sustainable urban development.

Olaiya, S. A. (2013). Towards vision 20:2020: Need for attitudinal change emphasis on youth unemployment. *African Journal of Stability and Development.* Afe Babalola University, Ado-Ekiti.

Olatubosun, O., Olusoga, F. A., & Samuel, O. A. (2015). Adoption of elearning technology in Nigerian tertiary institution of learning. *British Journal of Applied Science & Technology* 10(2), 1-15.

Osuala, E. C. (2004). *Principles and practices of small business management in Nigeria.* Enugu: Cheston Agency Ltd.

Osuala, E. C. and Okeke, A. U. (2006). *Administrative Office Management*. Enugu: Cheston Agency Ltd.

Park, S. Y. (2009). An analysis of the technology acceptance model in understanding university students' behavioral intention to use e-learning. *Educational Technology & Society*, *12* (3), 150–162.

Parnham, J. (2001). Lifelong learning: A model for increasing the participation of non-traditional adult learners. *Journal of Further and Higher Education,* 25(1), 57-65.

Pacific Policy Research Center. (2010). 21st century skills for students and teachers. Honolulu: Kamehameha Schools, *Research & Evaluation Division.*

Paulsen, M. F. (2003). Experiences with Learning Management Systems in 113 European Institutions. *Educational Technology & Society*, 6 (4), 134-148. Retrieved on March 5, 2017 from: http://ifets.ieee.org/periodical/6_4/13.pdf.

Pelgrum, W. J. (2001). Obstacles to the integration of ICT in education: Result from a worldwide educational assessment. *Computers & Education*, 37(2), 163–178.

Phillips, C. R. & Trainor, J. E. (2014). Millennial students and the flipped classroom. *Proceedings of ASBBS 21 (1).* Retrieved July 10, 2017 from: http://asbbs.org/ files/ASBBS2014/PDF/P/Phillips_Trainor(P519-530).pdf.

Preston, C., Cox, M., & Cox, K. (2000). Teachers as innovators: An evaluation of the motivation of teachers to use information and communications technology. Croydon: Mirandanet.

Pituch, K. A., & Lee, Y.-k. (2006). The influence of system characteristics on e-learning use. *Computers & Education, 47*(2), 222–244.

Xia, L., & Jenny, P. (2015). Early childhood teachers' perceived barriers to ICT integration in teaching: A survey study in Mainland, China. *Journal of Computer in Education*, 2(1), 61–75. doi:10.1007/s40692-014-0025-7.

Uchem, R. N. (2001). Overcoming Women's Subordination in the Igbo African Culture and in the Catholic Church: Envisioning an Inclusive Theology with Reference to Women. *Universal-Publishers. Retrieved on December 22, 2017 from:* https://books.google.com.ng/books? id=3Zhfu363kfkC&pg *=PA36&redir _esc=y#v=onepage&q&f=false.*

UNESCO. (2003). EFA global monitoring report 2003/2004, gender and education for all. UNESCO: The Leap to equality Paris.

Yusuf, O. M. (2005). An investigation into teachers' self-efficiency in the implementation of computer education in Nigerian secondary schools. Meridian: A Middle School Computer Technologies Journal, 8(2). Retrieved December 19, 2017 from http://www. ncsu.edu/meridian/sum2005/index.html.

Yusuf, O. M. (2007). Trends and barriers on the integration of information and communication technology in the Nigerian school system. Retrieved December 18, 2017, from https://www.google.com/search?q=Yusuf%2C?M.?O.?%282007%29.??Trends?and?barriers ?on?the?integration?of?information?and?communication?technology?in?the?Nigerian?scho ol?system.&i.e.=utf-8&oe=utf-8.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: the PANAS scales. *Journal of Personality and Social Psychology, 54*, 1063–1070.

Williams, B. (1995). Factors contributing to successful implementation of computer technology in schools. Dissertation Abstracts International, 56(8), 3092.

Wood, E., Specht, J., Willoughby, T., & Mueller, J. (2008). Integrating computer technology in early childhood education environments: Issues raised by early childhood educators. *The Alberta Journal of Educational Research*, 54(2), 210–226.

Zhao, Y., & Cziko, G. A. (2001). Teacher adoption of technology: A perceptual control theory perspective. *Journal of Technology and Teacher Education*, 9(1), 5-30.

Zhao, Y., & Frank, K. A. (2003). Factors affecting technology uses in schools: An ecological perspective. *American Educational Research Journal, 40(4)*, 807-840.