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## **DIGITAL TECHNOLOGY AND CLASSROOM LEARNING EFFECTIVENESS IN BUSINESS EDUCATION PROGRAMME OF UNIVERSITY OF CROSS RIVER STATE, CALABAR - NIGERIA**

**Mfam, Kyrian Ibi**

Department of Entrepreneurship Education, Faculty of Vocational and Technical Education,  
University of Nigeria, Nsukka  
kyrianfam@yahoo.com

**Ekwutosi Ozioma Chukwu**

Department of Entrepreneurship Education, Faculty of Vocational and Technical Education,  
University of Nigeria, Nsukka  
oziuma.chukwu.ozy@gmail.com

**Inyang, Rita Stanley**

Department of Vocational and Technical Education, Faculty of Education  
University of Cross River State, Calabar

### **Abstract**

This study determined the extent of utilization of digital technology for classroom learning effectiveness in the business education programme at the University of Cross River State (UNICROSS), Calabar. Ineffective learning negatively impacts students' grades, leading to a low overall average that may cause students' weak academic achievement or probation/suspension, delayed graduation, and a reduced chance of pursuing further education. To guide the study, three null hypotheses were postulated and tested at 0.05 level of significance. Related literatures were reviewed. A descriptive survey design was adopted. The population of the study consisted of 282 business education students (50 in accounting) and 232 in management). The sample was 165 business education students (29 in accounting and 136 in management). A sample was drawn using Taro Yamane's formula. A 15-item structured questionnaire was used for data collection. The reliability coefficient of the instrument was 0.80. Critical ratio (z-test) was used to test the hypotheses. Findings of the study showed no significant difference in the mean responses of Business education - accounting and management students on the extent to which: flip classroom is utilized in Business Education classrooms in UNICROSS; personal learning network is utilized in Business Education classrooms in UNICROSS; and virtual learning environment is utilized in Business Education classrooms in UNICROSS. It was therefore recommended that administrators of business education programme should use the flip classroom, personal learning network, and virtual learning environment technologies in their classrooms for effective learning by students.

**Keywords:** Digital technology, Flip classroom, Personal learning network, Virtual learning environment, Business education

### **Introduction**

The integration of digital technology tools into classroom learning significantly improves the efficacy of teaching and effectiveness of learning in business education programme within Nigeria's university system. As lecturers increasingly adopt relevant and fit-for-purpose digital tools and gadgets in the teaching-learning environment, they facilitate

interactive learning systems that addresses diverse learning styles, thereby facilitating student engagement, experiences, collaboration and knowledge retention (Nguyen, 2020). Furthermore, the accessibility of digital resources allows for more comprehensive curricula, preparing students for the complexities of the modern educational landscape (Ogunleye, 2021). Leveraging digital technology not only optimizes learning outcomes but also equips graduates with essential skills needed to thrive in an evolving workforce driven by technology. Extant revolutionization of digitalization in education has technological implications for classroom roles. Technological advancements have made life easier for students, replacing traditional pen and paper with software and tools for teaching and learning (Parveen & Ramzan, 2024).

At the University of Cross River State (UNICROSS) in Calabar, the seemingly limited use of digital technology among business education students and lecturers poses significant challenges for teaching and learning. This lack of engagement with digital tools can adversely affect lecturers' productivity and students' academic performance, as traditional methods may not fully engage today's learners or prepare them adequately for a technology-driven workforce. Without the integration of modern digital technology in the instructional process, students miss out on valuable resources and interactive learning opportunities, which are essential for enhancing their educational experience and developing crucial skills needed in educational and business environments.

Digital technology in the classroom embodies diverse electronic devices and software (Kumi-Yeboah et al., 2020) that facilitate digital information receiving and processing (Haleem et al., 2022), such as computers, tablets, interactive whiteboards, learning management systems, and various educational technology applications. Digital technologies encompass devices (e.g. personal computers and tablets), tools (e.g. cameras, calculators and digital toys), systems (e.g. software and apps, augmented and virtual reality), and less tangible forms of technology (e.g. internet) (Johnstone et al., 2022). “Digital technology means electronic tools, devices, systems, and resources organizations utilize as they process or store data and complete many other functions, increasing employee productivity and efficiency” (Arignar Anna Government Arts and Science College, 2025, p.1). Digital technology is the foundation of contemporary society that adopts electronic systems to convert information into binary code—0s and 1s—for easy storage, processing, and transmission of data while powering devices, tools, systems and less tangible forms of technology to advanced Artificial Intelligence (AI), enabling seamless communication, automation, and innovation (Roberts, 2025). Operationally,

digital technology is electronic tools, devices, systems, and resources available for use in the teaching-learning process for effective, efficient and productive classroom encounter.

Digital technology utilization is the application of electronic tools, systems, and resources to create, store, process, retrieve and communicate information. Demsash et al. (2023) stated that digital technology utilization is the effectiveness deployed by individuals or organizations in the use of digital tools, systems, and processes to achieve their designated goals. Digital technology utilization is the effective application of technological resources by individuals and organizations to achieve their predetermined goals (Anderson, 2024). Operationally, technology utilization is the proficiency in adopting technological tools, devices, systems, and resources to achieve specific objectives of teaching and learning. The utilization of digital technologies in teaching and learning has the potency to facilitate greater academic achievement among students and higher productivity amongst lecturers in the teaching and learning process through collaborations/improved communication with students/researchers in other institutions and opening of wider opportunities to share information (Idika et al., 2021). Utilization of digital technologies in teaching and learning of business education opens up a range of choices and opportunities through enhancement of greater access to digital educational resources. The wide range of digital technologies also provides even opportunities and level up the teaching-learning process by increasing students' participation and lecturer involvement.

Digital technology covers a wide range of technologies such as computers and smartphones including the internet and artificial intelligence. Some classroom technologies are personal learning network, flip classroom; and virtual learning environment. Martindale & Dowdy (2010) stated that a PLE is a manifestation of a learner's informal learning processes using the web learning resources and tools. Personal learning network (PLN) is a network of people that a learner interacts with for learning and development (Rajagopal et al., 2012). The successful utilization of PLNs as educational tools relies significantly on the networking abilities of the learners. These abilities encompass (i) content-specific skills, which involve engaging in discussions and effectively conveying ideas, thoughts, and perspectives to others, as well as (ii) skills related to the networking process itself, which are essential for the continual development, upkeep, and activation of PLNs. This includes the ability to recognize the experiences and expertise available within their network connections (Rajagopal et al., 2012). Operationally, PLN is a learning network that connects people with shared learning needs for the purpose of interaction which derives knowledge from personal learning environment. Just

like PLN, flipped classroom is one of the digital tools deployed to give students instruction through electronic means.

A flipped classroom is organized around the thinking that direct instruction is not the best use of class time. Rather, students access information prior to class contact, allowing class time for activities that involve higher order thinking and reasoning (Harvard University, 2025). The flipped classroom seems to be the latest buzz in educational trends. The flipped classroom can be defined as “inverting the classroom” – referring to a situation where events that have traditionally taken place inside the classroom now take place outside the classroom and vice versa (Lage et al., 2000). Prabakaran (2025) described the flipped classroom approach as a method to enhance interaction and personalized time between students and teachers. It creates an environment where students take charge of their own education. In this setting, the teacher acts not as the “sage on the stage,” but as a “guide on the side.” This approach combines direct instruction with constructivist learning principles. Additionally, it ensures that students who miss class due to illness or extracurricular activities, such as sports or field trips, are not left behind. The flipped classroom effectively archives content for future review or remediation, fosters engagement among all students, and provides opportunities for personalized education. Operationally, a flipped classroom is a pedagogical technique and an archetype of blended learning that defines a paradigm shift from the traditional lecture-based model, inculcating the instructional values of direct instruction (e.g., lecture videos) outside of class time and using class time for active learning, engagement and interaction. With this instructional paradigm, students are exposed to and gain new knowledge beforehand, often through available online resources, and then apply and practice that knowledge in the classroom through activities, discussions, and problem-solving, often with peer and teacher guidance. The flipped classroom infrastructural pedagogy shares some characteristics with virtual learning environment in a digitalized educational scenario.

Finally, the term "virtual learning environment" refers to online educational services (Tandel & Dhimar, 2017). It is often described as a learning platform that organizes and offers students access to both textual and multimedia content. In a virtual learning environment, the learner is situated away from the instructor or teacher, utilizes technology (typically an internet-connected computer), accesses web-based learning resources, engages with the instructor and fellow students, and receives support tailored to their needs. Virtual learning environment (VLE) is a digital space where students and teachers take online studies (Dayag & Famararzi, 2024). It is a part of e-learning hence, uses digital tools to deliver teaching and learning of

educational content. Operationally, a VLE which is often called a Learning Management System (LMS), is a digital platform designed to provide online teaching and learning by giving access to educational content, enabling communication between and among students and instructors, and supporting collaboration, interaction and assessment. It's a tool that uses digital technology to create a virtual classroom that allows for distance learning and online instruction. Learning in the context of education, refers to the process of acquiring knowledge, skills, understanding and attitudes through self-discovery and experiences, study, or teaching. Learning is a relatively long-lasting change in human behaviour or thinking pattern resulting from observation and experience. This change can be intentional, as in formal learning within a school system, or it can occur naturally through everyday interactions and experiences. Hilgard and Bower (1975) conceptualized learning as “the relatively permanent change in a subject’s behaviour to a given situation brought about by his (or her) repeated experiences in that situation, provided that the behaviour change cannot be explained on the basis of native response tendencies, maturation, or temporary states of the subject (e.g., fatigue, drugs, etc.)”. Domsch (2014) asserted that learning is a phenomenon that is influenced by a complex interplay of factors such as physiological, environmental, cognitive, emotional, motivational, and social factors. Montelli (2025) explained that learning is a permanent change in behaviour from practice indulged or past experiences gained. It is the application of routine human processes facilitated by past experiences and cognitive, environmental, and emotional factors developed overtime (IGI Global, 2025). Operationally, learning refers to (1) a likely permanent change in human disposition or behaviour or capability that persists over a period of time and is not simply ascribable to processes of growth (2) the acquisition and mastery of established knowledge about a phenomenon, (3) the extension and clarification of meaning of one’s understanding or experience, or (4) an organized, intentional process of testing ideas relevant to problems based on personal disposition or capability. In a formal setting, learning takes place in an arena designated as classroom.

A classroom is the smallest and lowest unit in the school where the teachers and the students interact. Jannah (2018) stated that it is a room used by teachers and students in an educational institution to channel knowledge through the teaching-learning process so that the instructional objectives can be implemented. Taiwo and Opadokun (2025) described a classroom as a room that is provided in a given educational institution (school) where teaching and learning takes place. Operationally, a classroom is a place designated for conducting effective teaching and learning activities.

Effective learning is a process where learners adequately respond to teaching, learning-by-observation or experience by actively engaging with novel information, relating it to prior knowledge, and constructing meaningful understanding and accurate interpretation. It involves students' active participation, reflection, and the ability to apply experience or learned knowledge in real-world contexts. Sekar (2019) upheld that effective learning is a process where learners connect or relate new experience or understanding to current experience and assimilate new ideas. Effective learning can be achieved through four learning styles: learning-by-being shown, learning-by-being told, learning-by-constructing meaning, and learning-by-joining a knowledge-generating community. Watkins (2002) asserted that effective learning is an activity of construction handled with (or in the context of) others, and driven by learner's agency at their best, as well as the monitoring and review of whether approaches and strategies are proving effective for the particular goals and context. Operationally, effective learning happens when learners have retrieval cues available that permit them to express their knowledge by relating what is learned with present experience.

The adoption of PLN, flipped classroom and VLE technologies in the classroom is to facilitate effective teaching and optimization of learning. The learning received in business education programme is vocational and effective learning is to bring out the best of learning. Mfam and Ntino (2018) noted that business education is a vocational education programme focused on lifelong learning and practical skills in areas like bookkeeping, office management, entrepreneurship, and marketing and on business teaching methodology. Operationally, business education is that commercial instruction that gives meaning to business (education about business), instruction that prepares learners for business (education for business); and instruction that empowers potential instructors with business pedagogy (education for the teaching of business). In Technical and Vocational Education and Training (TVET) ecosystem, vocational business education is prominent in its manpower development as driven by universities and other tertiary education institutions in Nigeria.

A university is a tertiary institution that provides quality education and research and development opportunities, often larger and more diverse than a college or polytechnic, offering a broad range of undergraduate and graduate degrees. University of York (2024) described a university as an institution of higher education with a physical location made up of teaching spaces and other facilities, which awards academic degrees and also conduct research to explore new ideas and technologies. Operationally, a university is a tertiary education institution that facilitates quality education (teaching and learning) and promote research and

development activities and provides intellectual opportunities in diverse knowledge areas for the award of a broad range of undergraduate and graduate degrees, diplomas and certificates. Scholars in universities, especially those with an interest in educational technology, have been advancing research in digital education technology.

Recently, these researchers have conducted several studies focusing on personal/professional learning network and social media (Miller, 2009; Davis, 2013), problem-based learning and virtual learning environment (Phungsuk et al., 2017), digital technology and classroom (Solas & Sutton, 2018), virtual learning environment and google classroom implementation (Awang et al., 2019), technology and student learning (Carstens *et al.*, 2021), digital technologies and academic performance (Cabi, 2018, Okocha et al., 2023), generative artificial intelligence (AI) and digital multimodality (Lin et al., 2025), flipped classroom, academic engagement and satisfaction levels (Maneeratana et al., 2017; Martinelli et al., 2018; Talan & Gulsecen, 2019), students' attitude and academic achievement in a flipped classroom (Nja et al., 2022), collaborative learning environment, cognition and interaction (Sun et al., 2024); and virtual reality and game teaching emotion analysis (Liu, 2025). However, these studies have failed to address the extent of utilization of flip classroom, personal learning network; and virtual learning environment on classroom learning effectiveness in business education.

The need to address this lack of studies and research insufficiency through this investigation is driven by the practical problem of students' ineffective learning associated with traditional teaching-learning approaches that needs to be fixed. Blessing (2024) stated that ineffective learning can result in negative consequences. These could lead to low grades and could further lead to low overall average which connects with probation or suspension, delayed graduation, and a reduced chance of pursuing further education. So, utilization of digital technologies in the classroom is essential for students' academic performance. To buttress the fact, studies by White-Harris (2017) and Arzal (2017) revealed a relationship between technology and students' performance. It is on the basis of the above therefore, that this study sought to address the question: What is the extent of utilization of digital technology (flip classroom, personal learning network, and virtual learning environment) for classroom learning effectiveness in the business education programme of the University of Cross River State, Nigeria?

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## **Statement of the Problem**

Universities evolve strategic initiatives and design programmes to improve the knowledge, skills, and capabilities of lecturers in the teaching endeavour and of students aiming to improve their overall academic quality through effective learning. This is because effective teaching significantly impacts on learning which also affects students' future career prospects. One of the ways of improving instructional delivery and learning is through utilization of digital technology in the classroom. Digital technology utilization in the lecture room should enhance teaching and learning through interactive and personalized learning experiences, promotion of collaboration among lecturers and students, and offers access to a vast repository of resources. Digital technology application should also help lecturers in delivering quality instruction, monitoring of student progress, and improving administrative processes designed for teaching-learning effectiveness.

Unfortunately, digital technology is not being used in lecture rooms in Business education programme of UNICROSS to facilitate effective teaching and learning. None utilization of digital tools in the teaching-learning context in business education programme of UNICROSS makes interaction among and between lecturers and students ineffective. This negatively impacts on personalized learning experiences sharing in business education programme of UNICROSS. The lack of utilization of digital technology in teaching-learning does not promote collaborative learning making instructional delivery and makes learning ineffective in business education programme of UNICROSS despite the global quest for digitalized quality tertiary education.

Ineffective learning could negatively impact on students' grades. Low grades could lead to a low overall average which connects with suspension, delayed graduation, and a reduced chance of pursuing further education; ultimately impacting a student's overall professional and personal life trajectory. Arising from the concerns, this study was designed to ascertain the extent of utilization of digital technology for classroom learning effectiveness in business education programme in University of Cross River State (UNICROSS), Calabar.

## **Purpose of the Study**

The general purpose of this study was to ascertain the extent of utilization of digital technology for classroom learning effectiveness in business education programme in University of Cross River State (UNICROSS), Calabar. Specifically, the study sought to ascertain the:

1. extent of utilization of flip classroom technology for classroom learning effectiveness in the business education programme in UNICROSS, Calabar.
2. extent of utilization of personal learning network technology for classroom learning effectiveness in the business education programme in UNICROSS, Calabar.
3. extent of utilization of virtual learning environment technology for classroom learning effectiveness in the business education programme in UNICROSS, Calabar.

### **Statement of Hypothesis**

The following null hypotheses were formulated for the study and tested at 0.05 level of significance:

1. there is no significant difference in the mean responses of Business education - accounting and management students on the extent of utilization of flip classroom technology for classroom learning effectiveness in business education programme in UNICROSS, Calabar
2. there is no significant difference in the main responses of Business education - accounting and management students on the extent of utilization of personal learning network technology for classroom learning effectiveness in business education programme in UNICROSS, Calabar.
3. there is no significant difference in the main responses of Business education - accounting and management students on the extent of utilization of virtual learning environment technology for classroom learning effectiveness in business education programme in UNICROSS, Calabar.

### **Methodology**

This research study adopted the descriptive survey design. Descriptive survey research design allows for collection of data from peoples' opinions and concentrates on finding facts to ascertain the nature of something as it exists (University of Kashmir, 2025). The research design was considered suitable for this study since the independent opinions of respondents for the study was sought and used for data analysis in this study. The study was carried out in Calabar South Local Government Area of Cross River State, Nigeria. The population of the study was 282 business education students consisting of 50 students in accounting and 232 in management of 2024/2025 academic session in UNICROSS (Business Education Unit - UNICROSS, 2025). The sample of this study was 165 business education students (29 in accounting) and (136 in management). This was done to have a manageable number of subjects

for the study. The sample size was determined using Taro Yamane formula given as:  $n = \frac{N}{1+N(e)^2}$  where:  $n$  = the sample size,  $N$  = the finite population,  $e$  = level of significance (i.e., limit of tolerable or allowable error); and  $1$  = unity (a constant). The sample was further proportionately distributed into accounting option students and management option students using the ratio:  $\frac{50}{282} \times 165 = 29$  business education students in accounting opt and  $\frac{232}{282} \times 165 = 136$  business education students in management option. Stratified random sampling technique was adopted in selecting the sample. A researcher-made, 4-point response options scale of 15 questionnaire items was used for data collection. The values of the response options scale were: Strongly Agree (SA) - 4 points, Agree (A) - 3 points, Disagree (D) – 2 points, and Strongly Disagree (SD) - 1 point. The instrument was face-validated by three experts, and the internal consistency of the instrument was tested through the Cronbach's Alpha Reliability Test. The test yielded a reliability co-efficient of 0.80. The instrument was administered by the researchers. Out of the 165 questionnaires administered, 132 were returned making a return rate of 82%. Critical ratio (z-test statistic) was used to test the hypotheses at 0.05 level of statistical significance.

## Results

### Hypothesis One

There is no significant difference in the mean responses of Business education - accounting and management students on the extent of utilization of flip classroom technology for classroom learning effectiveness in the business education programme in UNICROSS, Calabar

**Table 1: z-Test on the extent to which the flipped classroom is utilized in business education classrooms in UNICROSS, Calabar**

Respondents	$\bar{X}$	SD	N	df	Standard Error	z-Cal	z-Critical	Decision
Accounting	18.77	24.51	19	130	1.26	1.16	1.65	Accept $H_{01}$
Management	17.31	27.87	113					

In Table 1, the z – ratio (z distribution or z-test) indicates that the critical value of z with 130 degrees of freedom at 0.05 level of statistical probability is 1.65. Since the calculated value of z is 1.16, being less than the critical value, we accept the null hypothesis ( $H_{01}$ ). That is, there is no significant difference in the mean responses of Business education - accounting and

management students. This means that, flip classroom is not utilized in business education classrooms.

### Hypothesis Two

There is no significant difference in the main responses of Business education - accounting and management students on the extent of utilization of personal learning network technology for classroom learning effectiveness in business education programme in UNICROSS, Calabar.

**Table 2: z-Test on the extent to which personal learning network is utilized in business education classrooms in UNICROSS, Calabar**

Respondents	$\bar{X}$	SD	N	df	Standard Error	z-Cal	z-Critical	Decision
Accounting	17.30	26.01	19	130	1.23	1.05	1.65	<b>Accept Ho<sub>2</sub></b>
Management	16.01	25.32	113					

In Table 2, the z – ratio (z distribution or z-test) indicates that the critical value of z with 130 degree of freedom at 0.05 level of statistical probability is 1.65. Since the calculated value of z is 1.05, being less than the critical value, we accept the null hypothesis (Ho<sub>2</sub>). That is, there is no significant difference in the mean responses of Business education - accounting and management students. This means that, personal learning network is not utilized in business education classrooms.

### Hypothesis Three

There is no significant difference in the main responses of Business education - accounting and management students on the extent of utilization of virtual learning environment technology for classroom learning effectiveness in business education programme in UNICROSS, Calabar.

**Table 3: z-Test on the extent to which virtual learning environment is utilized in business education classrooms in UNICROSS, Calabar**

Respondents	$\bar{X}$	SD	N	df	Standard Error	z-Cal	z-Critical	Decision
Accounting	18.19	22.90	19	130	1.16	1.43	1.65	<b>Accept Ho<sub>3</sub></b>
Management	16.53	22.82	113					

In Table 3, the z – ratio (z-test) indicates that the critical value of z with 130 degrees of freedom at 0.05 level of statistical probability is 1.65. Since the calculated value of z is 1.43, being less

than the critical value, we accept the null hypothesis ( $H_{03}$ ). That is, there is no significant difference in the mean responses of Business education - accounting and management students. This means that, virtual learning environment is not utilized in business education classrooms.

### **Discussion of Findings**

There are three key findings of the present research. Firstly, flip classroom is not used in business education classrooms. Secondly, personal learning network is not used in business education classrooms. Lastly, virtual learning environment is not used in business education classrooms.

The findings with respect to flip classroom utilization, are dissimilar to the works of Carstens et al. (2021) who found that more training for teachers and students is necessary to better implement technology in the classroom; Nja et al. (2022) who's result showed that students have a positive attitude towards chemistry, when taught using flipped classroom; Maneeratana et al. (2017) who's results showed that the performances from the flipped classroom sections were at least as good as the sections with traditional teachings; and Martinelli et al. (2018) who found that 57% of faculty utilized flip classroom in their personal teaching practice during springs 2015 and 2016. Furthermore, with respect to personal learning network, the findings are at variance with Miller (2009) who's results indicated a heightened engagement in learning, the development of collaborative learning and research skills, and a greater understanding of how to use social network tools for effective in public communication, Davis (2013) who found that personal learning network enhances individual educator knowledge through asking questions and seeking new resources for classroom use; and Sun et al. (2024) who discovered that students engaged in complete online learning with CSCL and those in face-to-face teaching with CSCL achieved similar levels of conceptual understanding.

Lastly, the finding with respect to virtual learning environment is incongruent with that of Phungsuk et al. (2017) who found that student group in the problem-based learning model via virtual learning environment achieved higher test scores compared to a group of students in a normal classroom, Awang et al. (2019) who discovered that schools gave positive feedbacks of virtual learning environment (Google Classroom) implementation; and Liu (2025) who discovered that interactive English e-learning video entertainment teaching environment based on virtual reality and game teaching not only improves the learning effect of students, but also significantly improves their learning interest and participation..

The results strongly and practically imply that educational curriculum developers may think of incorporating the use of digital technologies alongside traditional learning approaches in their policy document for implementation by universities offering business education programme. It also has implication for increased funding by National Universities Commission (NUC), and Tertiary Education Trust Fund (TETFund) for adequate provision of technology facilities and equipment in that regard. Lastly, if digital technology facilities are provided, the university-level administrators of business education programme might consider retraining of lecturers and orientation of students on the utilization of available digital technologies in classrooms (when provided).

This study has some strengths and limitations. This study used descriptive survey design which took cognizance of the collective opinions of the subjects of study. The data upon which results are derived were generated by students who are supposed to be directly using digital technology in learning. The units of data collection are seemingly neglected by previous studies as no research has been conducted with data from them. Fortunately, they have been given a chance in this study. The instrument for data collection was validated by experts to ensure that the questionnaire items cover the subject-matter of this study. It was also subjected to a reliability test to ascertain its internal consistency overtime. However, the limitations of the study include relatively small number of participants who were mostly final year business education students. Years one to three students were neglected. The results cannot be too certain as a result of the relative sample size and this would affect the generalizability on the population.

In spite of these limitations, the results opened a window of further inquiry. If, as the present study suggests, digital technology is not used in business education classrooms, then there is a need for research that explores the challenges associated with the non-utilization of digital technology in business education programme in UNICROSS. This is because, the present research has contributed to a growing body of evidence suggesting the non-utilization of digital technology in business education classroom in a 21<sup>st</sup> century global learning environment.

## **Conclusion**

The study sought to ascertain the extent of utilization of digital technology (flip classroom, personal learning network, and virtual learning environment) for classroom learning effectiveness in business education programme in UNICROSS. The results indicate non-

utilization of these technologies. This result implies that traditional instructional approaches are still adopted in business education classrooms in UNICROSS. It also implies that funding for business education programme is not geared towards the provision of the digital instructional gadgets and that lecturers have not come to terms with modern classroom technology for teaching and learning in business education programme in UNICROSS. Based on the findings of this study, it is recommended that:

1. Heads of departments and lecturers of the business education programme should use flip classroom technology in their classrooms for effective learning by students.
2. Heads of departments and lecturers of the business education programme should use personal learning network technology in their classrooms for effective learning by students.
3. Heads of departments and lecturers of the business education programme should use virtual learning environment technology in their classrooms for effective learning by students.

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