

Integration of Technology in Business Education: Emerging Voices from Secondary School Classrooms in Nigeria



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ABSTRACT

Secondary education is a vital part of a productive circle of economic growth within the context of a globalised knowledge economy. The teaching of Business Education entails teaching learners the essentials, rudiments, assumptions, and methods of business. This study sought to investigate technology integration as part of Business Education. Drawing from the theoretical frameworks of a Unified Theory of Acceptance and Use of Technology (UTAUT), the study observes teachers' levels of technology use in Business Education classrooms. Using a mixed-methods sequential explanatory design, probability and purposive sampling in several secondary schools across Nigeria, the majority of participants were found not to be integrating technology to an acceptable level though a small percentage were. After an analysis of constructs from UTAUT, some of the challenges were attributed to the lack of facilitating conditions in the teaching and learning of Business Education. The study findings imply that poor investment in technology integration in secondary schools in Nigeria affects the pedagogical implementation and effective teaching and learning of Business Education subjects. The study concludes that if facilitating conditions and professional development are considered to address the shortfalls in terms of UTAUT, technology integration will become a reality in secondary schools in Nigeria.

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INTRODUCTION

The fundamental philosophy of the Business Education program in Nigeria secondary school education is geared toward equipping its recipients with employable skills and knowledge which would enable them to create or acquire jobs, stay on the jobs, and grow in the jobs.¹ Research has identified that there are numerous challenges facing the teaching of Business Education in secondary schools in Nigeria. These challenges are both technological and pedagogical, which have led to a lack of interest and motivation to study Business Education in Nigeria. There are also limited studies in Nigeria that have focused on technology integration

¹ Sulayman Dauda Gidado, and Philo Akaeze. "Role of Business Education in Promoting Entrepreneurship in Nigeria." *International Journal of Academic Research in Progressive Education and Development* 3, no. 4 (2014): 72-77.

in the teaching and learning of Business Education in secondary schools. The existing research centres on the teaching and learning of Business Education in higher educational institutions.

The purpose of this paper is to outline challenges that are being encountered with technology integration in the teaching and learning of Business Education and to explore factors that motivate teachers in the use of technology in the study of Business Education in secondary schools in Nigeria. The researchers also deem it important to investigate technology integration in Business Education in Nigerian secondary schools. This paper intends to address the following research questions. What challenges are being encountered with technology integration in the teaching and learning of Business Education in secondary schools? And what factors motivate teachers in the use of technology in teaching Business Education in secondary schools in Nigeria? The paper begins by describing the theoretical framework and methodology that was employed in collecting the data for the research. The Business Education course in secondary schools and the policy landscape for the introduction of technologies in the Nigerian education system are also discussed. This is followed by an overview of digital technologies and their use in teaching and learning, including a description of their use in Business Education. The study findings are presented and recommendations are made for further research.

THEORETICAL FRAMEWORKS

The Unified Theory of Acceptance and Use of Technology (UTAUT) was used to examine factors that motivate Business Education teachers to use or not to use technology in their teaching.² Venkatesh et al. have listed seven constructs which appeared to be relevant in determining the intention of usage in one or more of the individual models examined.³ They posited that four of the constructs (performance expectancy, effort expectancy, social influence and facilitating conditions), will play a major role in determining user acceptance and usage behavior.⁴ The performance expectancy refers to the degree to which an individual believes that using the system will help him or her to attain gains in job performance.⁵ Effort expectancy represents “the degree of ease associated with the use of the system.”⁶ Social influence is the extent to which the individuals believe that important others believe that they should use the technologies.⁷ Facilitating conditions denote the degree to which an individual believes that an organisational and technical infrastructure exists to support the use of the system.⁸ To understand teachers’ technology use in the teaching and learning of Business Education in the Nigerian secondary schools, the use of UTAUT in this study involved examining how the use of technology is integrated into the Business Education classroom.

LITERATURE REVIEW

Business Education as a field of study

The introduction of Business Education programs was a result of the country’s educational goals which were clearly set out in terms of their relevance to the needs of the individual and those of the society in agreement with the realities of the Nigerian economy and the modern world.⁹ Business Education as a discipline in secondary education is an integral part of the Nigerian education system and has the potential

² Viswanath Venkatesh, Michael G. Morris, Gordon B. Davis and Fred D. Davis. “User Acceptance of Information Technology: Toward a Unified View.” *MIS quarterly* (2003): 425-478.

³ Venkatesh, Morris, Davis and Davis. “User Acceptance of Information Technology, 444.

⁴ Venkatesh, Morris, Davis and Davis. “User Acceptance of Information Technology, 433.

⁵ Viswanath Venkatesh and Fred D. Davis. “A Theoretical Extension of the Technology Acceptance Model” Four longitudinal field studies.” *Management science* 46, no. 2 (2000), 188.

⁶ Venkatesh, and Davis. “A Theoretical Extension of the Technology Acceptance Model”, 206.

⁷ Barroon Isma’eel Ahmad. “User Acceptance of Health Information Technology (HIT) in Developing Countries: A Conceptual Model.” *Procedia Technology* 16 (2014): 1287-1296.

⁸ Ahmad, User Acceptance of Health Information Technology (HIT) in Developing Countries , 1290.

⁹ The Federal Republic of Nigeria. *National Policy on Education.*, (Federal Republic of Nigeria, Federal Government Press 1981).

to provide citizens with useful business orientation and knowledge for personal and national development.¹⁰ In the school curriculum, Business Education represents a broad and diverse discipline that is included in all types of educational delivery systems in the secondary education system in Nigeria. Business Education includes education for office practice, Accounting, Business Teaching/Studies, Economics, Commerce, Typewriting, Stenography and Secretarial Education/Studies.¹¹ Business education involves teaching students the fundamentals, theories and processes of the business. Education in this field occurs at several levels in Nigeria, including secondary education and higher education or university education. In Nigeria, approximately 40% of students enrol in one or more business courses during their secondary and higher education.¹²

Challenges Facing Business Education Teaching and Learning

Gidado and Akaeze describe the lack of teaching and learning equipment, such as computer accessories, internet facilities, and other technological resources to assist learners, as major problems that face Business Education in Nigerian secondary schools.¹³ Olutola and Olatoye further state that in some secondary schools in Nigeria equipment such as computers, projectors, software, and the internet are not available for proper utilisation.¹⁴ New technologies in teaching and learning pose many challenges to the teaching and learning of Business Education in Nigeria.¹⁵

Furthermore, lack of training for the teachers and students to use the equipment has been identified as among the challenges that face Business Education in Nigeria. Therefore, to ensure that Business Education is able to deal with global, technological and market changes, it is imperative to encourage Business Education teachers to adopt interactive and participative teaching methodologies that are not only up to date but also internationally competitive.¹⁶ Hence, as an important area of education in Nigeria, the goals of Business Education will be better achieved when combining its teaching and learning with technology. This is essential due to the present demand of today's office work.

The Technology Policy Landscape for the Introduction of Technologies in Nigeria Schools

In 2005, the need to carry out a system-wide reform was consolidated and implemented under the pre-Nigeria/ UNESCO Science, Technology, and Innovation (STI) reform initiative.¹⁷ It adopted the National Innovation System approach as a framework for STI system reform. The reform, among other issues, stressed that economic development initiatives, institutional governance, the research and development (R&D) agenda for the country, funding mechanisms, Intellectual Property (IP) and STI Infrastructure development be addressed in any revised STI policy.¹⁸ Thus, the need to design a new policy that will address these challenges becomes indispensable. The new STI policy, taking advantage of the experiences in the design and implementation of science and technology policy in the last two decades and a half, is a product of a novel, all-inclusive, participatory policymaking; involving consultative meetings with various stakeholders across the length and

¹⁰ K. O. Nwaigburu, and Victoria N. Eneogwe. "Business Education for Self Reliance and Sustainable Development in Nigeria." *Academic journal of interdisciplinary studies* 2, no. 10 (2013): 113-113.

¹¹ Festus Oluwale Alabi. "Implementing the New Senior Secondary School Curriculum for the Realization of the Objective of Entrepreneurship Education in Ondo state, Nigeria." *European Scientific Journal* (2014), 24

¹² The Federal Republic of Nigeria, *National Policy on Education*, 110.

¹³ Gidado and Akaeze "Role of Business Education in Promoting Entrepreneurship in Nigeria" 14.

¹⁴ Adekunle Thomas Olutola, and Olufunke Omotoke Olatoye. "Challenges of E-learning Technologies in Nigerian University Education." *Journal of Educational and Social Research* 5, no. 1 (2015): 301-301.

¹⁵ Edwin Iroroeavwo Achugbue. "E-Business in Education: The Case of Delta State University." In *Handbook of Research on Demand-Driven Web Services: Theory, Technologies, and Applications*, (IGI Global, 2014), 356-375

¹⁶ Nishad Nawaz, and Anjali Mary Gomes. "An Effective Teaching Pedagogy in Changing Business Education." *Journal of Education and Practice* 5, no. 19 (2014).

¹⁷ Nawaz and Gomes. "An Effective Teaching Pedagogy in Changing Business Education." 11.

¹⁸ Mudasiru Olalere Yusuf. "Information and Communication Technology and Education: Analysing the Nigerian National Policy for Information Technology." *International education journal* 6, no. 3 (2005): 316-321.

breadth of the country as well as International Development Partners. The general policy objective is to build the strong, technological and innovation capability needed to evolve a modern economy.¹⁹

Technology Integration and Business Education in Nigerian Secondary Schools

Technology integration has been defined in numerous ways by different authors. For instance, Ntuli, and Kyei-Blankson refer to technology integration as the use of various digital and hardware tools to facilitate the process of teaching and learning in and outside the classroom.²⁰ Dockstader believes that technology integration is about using computers effectively and efficiently in the general content areas to allow students to learn how to apply computer skills in meaningful ways.²¹ Similarly, Kafyulilo maintains that technology integration is using software supported by the business world for real-world applications, so students learn to use computers flexibly, purposefully, and creatively.²² Belland believes that technology integration means using technology to make learning more efficient or effective as well as the use of technology to help students solve problems.²³ Technology integration is organising the goals of curriculum and technology into a coordinated, harmonious whole.²⁴

The main purpose of integrating new technologies in teaching and learning is to improve the quality of education and to expand access to education.²⁵ Teaching and learning in any educational context presently are expected to be technologically driven and require full integration of technological resources. Akram et al. posit that integrating ICT in teaching and learning makes teaching fast, easy, and flexible.²⁶ In the study conducted by Nnadozie, Anyanwu, Ngwenya and Khanare, it was found that the few available ICT resources are rarely utilised in the teaching of Business Education.²⁷ The study recommended among other things, that government and stakeholders in education should make adequate budgetary allocation for the provision of ICT resources and that the identified barriers that stand against effective utilisation of ICT should be tackled and removed to better equip products of secondary and tertiary institutions to fit into various workplaces.²⁸

Challenges with Technology Integration

The authors found several studies that focused on perceived challenges to integrating technology in teaching.²⁹ Nnadozie et al. focused their review on studies that provided information about the actual challenges faced when integrating technology in classroom teaching.³⁰ Lack of infrastructure and restricted access to digital

¹⁹ Yusuf, Information and Communication Technology and Education, 13.

²⁰ Esther Ntuli, and Lydia Kyei-Blankson. "Teacher Assessment in Technology: Integrated early childhood classrooms." In *Handbook of Research on Teaching and learning in K-20 Education*, (IGI Global, 2013), 300-316.

²¹ Jolene Dockstader, "Teachers of the 21st Century know the What, Why, and How of Technology Integration." *THE Journal* 26, no. 6 (1999): 73-74.

²² Ayoub Kafyulilo, Petra Fisser, Jules Pieters, and Joke Voogt. "ICT Use in Science and Mathematics Teacher Education in Tanzania: Developing Technological Pedagogical Content Knowledge." *Australasian journal of educational technology* 31, no. 4 (2015).

²³ Brian R. Belland "Using the Theory of Habitus to Move Beyond the Study of Barriers to Technology Integration." *Computers & education* 52, no. 2 (2009): 353-364.

²⁴ Clinton Chidiebere Anyanwu "Investigating Technology Integration in Business Education in Nigeria Secondary Schools: A Critical Analysis." PhD Thesis., 2020.

²⁵ Anyanwu, Investigating Technology Integration in Business Education in Nigeria Secondary Schools, 22.

²⁶ Huma Akram, Yang Yingxiu, Ahmad Samed Al-Adwan, and Ali Alkhalifah. "Technology Integration in Higher Education During COVID-19: An Assessment of Online Teaching Competencies Through Technological Pedagogical Content Knowledge Model." *Frontiers in Psychology* 12 (2021), 23.

²⁷ Nnadozie Victor, Anyanwu Clinton Chidiebere, Ngwenya Jabulisile, and Khanare Fumane Portia. "Divergence and the Use of Digital Technology in Learning: Undergraduate Students' Experiences of Email Feedback in a South African University." *Journal of University Teaching and Learning Practice* 17, no. 3 (2020): 10.

²⁸ Peggy A Ertmer. "Teacher pedagogical beliefs: The Final Frontier in Our Quest for Technology Integration?." *Educational technology research and development* 53, no. 4 (2005): 25-39.

²⁹ Tabile Loqo. "Academic Staff Perceptions and Challenges in Technology Integration: A Case Study of Walter Sisulu University." In *European Conference on e-Learning*, pp. 318-325. Academic Conferences International Limited, 2017.

³⁰ Nnadozie, Anyanwu, Ngwenya and Khanare. "Divergence and the Use of Digital Technology in Learning, 16.

devices were obstacles to technology adoption, which limited Business Education lessons.³¹ Lack of technical support was reported in Business Education and in other subject areas.³²

Also, it was reported that it was difficult to integrate technologies in Business Education teachings due to time constraints during the school hours, given the time that needed to be spent on scripted lessons and testing.³³ Besides, sometimes teachers had difficulty selecting high-quality technology, and so they often end up selecting poor-quality technology with digital features that did not support the objectives, had limited content, or were not intuitive enough for learners to learn to use independently.³⁴ When implementing technology in Business Education teaching, teachers felt a lack of expertise and this posed a challenge to their integration.³⁵ The above discussions show that in the present-day education systems, it is critical to support teachers' needs in using technology in teaching and learning in order to build an atmosphere where technology is used widely and effectively.

Motivation for Integrating Technology in Teaching

The use of education technology is typically an innovation for Business Education teachers in Nigerian secondary schools, as it differs from their personal use of technology and necessitates the adoption of teaching and educational planning technologies.³⁶ What motivates teachers to change their behaviours and attitudes toward technology integration can be explained in the following areas: perceived usefulness (relative advantage) and ease of use (complexity).³⁷ These factors influenced technology use significantly among secondary school teachers in Nigeria.³⁸ Similarly, the ability of technology to spark much-needed in-depth debates around secondary education in Nigeria, and the ability to cause teachers to reconsider their pedagogical models, are said to be the main reasons for integrating technology.³⁹

Furthermore, in secondary school teaching and learning, technology provides both teachers and students with many opportunities to adapt and be versatile in their teaching and learning practices, which is critical for transforming instructional approaches.⁴⁰ For instance, reflective activities can be enabled by the interactive design of educational technology. This is important because learning processes need reflection, and reflection needs a link to earlier learning, as well as discussion with other perspectives, which can assist students in becoming change agents.⁴¹ Besides, the researchers discovered that various other motivational factors attributed to technology integration by teachers, for instance, making lessons more exciting for the

³¹ Conrado I. Dotong, Evelyn L. De Castro, Joselito A. Dolot, and M. Prenda. "Barriers for Educational Technology Integration in Contemporary Classroom Environment." *Asia Pacific Journal of Education, Arts and Sciences* 3, no. 2 (2016): 13-20.

³² Clinton Chidiebere Anyanwu. "Exploring Students' Experiences of Information and Communication Technology (ICT) Facilitated Feedback: A Case Study of Business Management Education Students at a Higher Institution in KwaZulu-Natal." Masters dissertation., 2014.

³³ Eloho Ifinedo, Jenni Rikala, and Timo Hämäläinen. "Factors Affecting Nigerian Teacher Educators' Technology Integration: Considering Characteristics, Knowledge Constructs, ICT Practices and Beliefs." *Computers & education* 146 (2020):103760.

³⁴ D. İ. N. C Emre. "Prospective Teachers' Perceptions of Barriers to Technology Integration in Education." *Contemporary Educational Technology* 10, no. 4 (2019): 381-398.

³⁵ Anam Bilwani and Rida Zehra. "Perceptions of Teachers Regarding Technology Integration in Classrooms: A Comparative Analysis of Elite and Mediocre Schools." *Journal of Education and Educational Development* 3, no. 1 (2016), Add page number.

³⁶ Desmond W. Govender. "A Model to Predict Educators' Attitudes Towards Technology and Thus Technology Adoption." *Africa Education Review* 9, no. 3 (2012): 548-568.

³⁷ Venkatesh, and Davis. "A Theoretical Extension of the Technology Acceptance Model: Four longitudinal field studies," 186-204.

³⁸ Tanya Christ, Poonam Arya, and Yu Liu. "Technology Integration in Literacy Lessons: Challenges and Successes." *Literacy Research and Instruction* 58, no. 1 (2019): 49-66.

³⁹ Ebele N. Anyaoku, Nkem E. Osuigwe, and Chikelunma N. Oguaka. "Technology and Job Satisfaction in Academic Libraries: Role of Leadership Style and Librarians' Attitude." *International journal of library science* 4, no. 4 (2015): 73-80.

⁴⁰ Anita L Cloete. "Technology and Education: Challenges and Opportunities." *HTS: Theological Studies* 73, no. 3 (2017): 1-7.

⁴¹ Dotong, De Castro, Dolot, and Prenda. "Barriers for Educational Technology Integration in Contemporary Classroom Environment," 17.

teachers and learners, increasing pupil motivation, improving material presentation, making teaching more fun, improving lesson quality, and making lessons simple for the learners.⁴²

METHODOLOGY

This study employed a mixed-methods sequential explanatory design⁴³ to examine the participants' lived experiences of technology integration in the teaching of Business Education in secondary schools.⁴⁴ The participants were Business Education teachers in secondary schools in Nigeria. Purposive sampling was used in selecting schools. The schools involved in the study were schools registered with the government, offering Business Education subjects, for instance, Accounting, Business Studies, Commerce and Economics. A total of 45 government secondary schools located in different local government areas in a state in Nigeria that offer at least one to five Business Education subjects were identified.

The study used three major methods of data generation, that is, a questionnaire, interviews, and focus group discussions. To generate quantitative data for this study, a questionnaire consisting of closed-ended questions was used. The questionnaire covers the seven areas of user intentions to use or not to use information systems, and to understand the factors that cause Business Education teachers either to use or not to use technology in their modes of teaching. The questionnaire used in this study operationalised each of the four constructs for user acceptance and user behavior, together with different statements that the researchers used to measure performance expectancy, effort expectancy, social influence and facilitating conditions. The questionnaires were distributed to 400 teachers in the 45 selected secondary schools. A total of 387 Business Education teachers responded to the questionnaire. Eleven of the responses were not captured because they were partially completed, were illegible, or had contradictory entries. Hence, data from 376 questionnaires were analysed.

The questionnaire was created with items validated in previous research and adapted for this study.⁴⁵ A five-point scale was used for all the constructs' measurements, with one being the strongly negative end of the scale and 5 being the strongly positive end of the scale. The development of the questionnaire was guided by an extensive review of the literature. The questionnaire consisted of 17 elements. The elements comprise demographic and perceptual data. The survey questionnaire was used because surveys are more useful in describing the characteristics of a large population.⁴⁶ Individual interviews and focus group discussions (FGDs) were also used to gather data.⁴⁷ Individual interviews, which lasted approximately 45 minutes each, were conducted with fifteen participants.⁴⁸ Salient points that were not made explicit in the focus group discussions were pursued in-depth for richer meanings during the individual interviews.⁴⁹ Seven different focus group discussions were held with groups of five participants, each lasting 45 minutes. All interview sessions took place during teachers' free periods at venues they selected.⁵⁰ Participants were assured of confidentiality and informed consent was obtained from all participants as well as permission to record the interviews and group discussions.⁵¹

⁴² Dotong, De Castro, Dolot, and Prenda. "Barriers for Educational Technology Integration in Contemporary Classroom Environment," 18.

⁴³ John W Creswell. "Educational Research: Planning." *Conducting, and Evaluating* 260 (2012): 375-382.

⁴⁴ Louis Cohen, Lawrence Manion, and Keith Morrison. "Planning Educational Research. Research Methods in Education." Routledge, New York (2011): 377 - 412.

⁴⁵ Creswell, J. "Educational research: Planning Conducting and Evaluating Quantitative and Qualitative Research (4th ad.)," 67.

⁴⁶ Cohen, Manion, and Morrison, "Planning Educational Research," 56.

⁴⁷ Cohen, Manion, and Morrison, "Planning Educational Research, 45.

⁴⁸ Adamantios Diamantopoulos and Bodo B. Schlegelmilch. *Taking The Fear Out of Data Analysis: A Step-by Step Approach*. No. 118. Cengage Learning EMEA, (2000), 2012 -227 r.

⁴⁹ Daniel Arkkelin,. "Using SPSS to Understand Research and Data Analysis." (2014).

⁵⁰ Virginia Braun, , and Victoria Clarke. "Using Thematic Analysis in Psychology." *Qualitative Research in Psychology* 3, no. 2 (2006): 77-101.

⁵¹ Braun, and Clarke. "Using Thematic Analysis in Psychology, 18.

DATA ANALYSIS

The quantitative data was analysed using the statistical package SPSS®. Descriptive statistics were used to describe and summarize the properties of the mass of data collected from the respondents.⁵² The SPSS package enabled the researchers to obtain statistics (descriptive numbers) needed for the study as the study is a mixed-method research.⁵³ Thematic analysis was applied as a guiding framework to analyze qualitative data.⁵⁴ Two broad themes emerged, namely, factors affecting technology integration in teaching and learning, and factors motivating teachers to integrate technology in teaching and learning.

FINDINGS

This section discusses the study's findings under the themes: factors motivating teachers to integrate technology in their teaching and factors affecting technology integration in teaching and learning of Business Education. The accounts from the teachers illustrate the differences and complexities in Business Education teachers' experience of integrating technology in the teaching of Business Education.

Factors Motivating Teachers to Integrate Technology in their Teaching Technology Encourages Participation

The responses from participants show that technology integration motivates learners to participate actively in class discussions and activities. Teachers' experiences of technology integration in the classroom suggest that learners are more motivated when teachers integrate technology into their teaching activities. In the FGDs, participants affirm that:

"I do not use technology in my teaching always, but I have noticed that whenever I use technology to teach, my learners pay much attention and are motivated. They also participate in class discussions because they see pictures, and graphs and most of the time, I project video clips for them to watch. They get more inspired to learn with technology than when I teach them using the traditional method of teaching"

"Sometimes if I give my learners homework or any activity that does not include use of technology, they do not complete it on time, some will not even do it and they usually come with one reason or the other why they could not complete the task. But I have noticed that, if I give activities that include use of technology they are always motivated to complete it on time; probably they want to show that they got some technological skills"

These views were corroborated in the individual interviews:

"Basically, when one is motivated to do something, he does it with all ability. Due to the availability of technology learners are now more motivated than ever before to do their assignments, and contribute to class discussions, which is better than any style of teaching, as they are sometimes given tasks to search the internet for more information and you observe them being motivated in completing their task"

These responses illustrate participants' support for the use of technology in teaching and learning Business Education. Also, the quantitative data on the degree to which an individual believes that using technology will help him or her to attain gains in job performance was collected and tested using the following statements: (1) Computers can enhance learners' learning. (2) Computers would motivate learners to do more study. (3) Using computer technology in the classroom will make the subject matter more interesting. (4) Computers use fits well with my curriculum goals. The following variables were used to indicate their responses:

⁵² Arkkelin., "Using SPSS to Understand Research and Data Analysis." 44.

⁵³ Arkkelin., "Using SPSS to Understand Research and Data Analysis.", 12.

⁵⁴ Braun, and Clarke. "Using Thematic Analysis in Psychology." 80.

Enhance Learning, Motivate, More Interesting and Curriculum Goals.

The results showed that the respondents' degree of agreement that using technology will enhance the learners' learning was positive at 79.8%. Interestingly, more than 75% of the respondents strongly agreed that using technology in the classroom will enhance the learners learning. Among the four constructs investigated, curriculum goals, in particular, had the highest percentage of strongly agreed with (81.5 %) of the respondents indicating that technology use fits well into their curriculum goals. The result also indicates that 78.1% of the respondents strongly agreed with motivation, then 76.4% with more interest. The results from the analysis could be an indication that the respondents strongly agree that technology could be an added advantage to effective curriculum delivery.

Therefore, performance expectancy, which means the expected benefits gained by using technology, had a significant positive effect on the perceived intention to use technology in their teaching and learning of Business Education.

Extended Learning Time

Teachers indicated that the learners could access these study materials from anywhere and at any time as long as they have an internet connection where they are. One participant during a face-to-face interview affirmed that:

“Technology offers learners extended learning time on a daily basis. With technology at the learners reach, education does not stop at the end of the school day because students have access to their teachers even after school hours, they have unlimited access to resources and materials related and relevant to subjects via their school websites which they can access from anywhere and at any time”
“After school hours learners can still get help and tutoring online at any time, irrespective of where they are as far as they have access to the internet. They can receive help whether from the teacher via email or through online collaboration or from help websites. Such help the learners receive extends their learning time.”

The participants' responses reveal that through technology, teachers were able to provide support to the learners even after school hours. Furthermore, using the variables; Efficient, Save time, Enjoyable and Real advantages on technology integration, the analysis results of participant's responses on effort expectancy, which is the degree of ease of technology use. The result of the analysis shows that more than 75% of the respondents indicated that using technology is innovative and effortless in teaching and learning. In particular, “Enjoyable” receives the highest percentage (84.9%) which shows the respondents' degree of agreement that using technology is enjoyable. Also, 81.3% of the respondents indicated that using technology is an efficient way to teach, while 83.5% perceive that using technology in teaching and learning saves time. Additionally, 78.4% of the teachers responded that technology offers a real advantage over other methods of teaching Business Education subjects.

The results from the four categories (Efficient, Save time, Enjoyable and Real advantages) appeared to show teachers' perceptions of effort expectancy. The results imply that the teachers perceive the use of technology in teaching and learning to be an efficient way to do work as well as being enjoyable. Teachers consider technology integration as a perfect way of saving time and also believe that technology use offers a real advantage over any other means of teaching and learning.

Technology Integration Enhances Communication

The participants views indicate that integration of technology in teaching and learning enhances communication, in which members of the school community can share and talk about academic issues, and even communicate with people outside the school environment.

“One good thing about technology integration is that it provides you with choices and a pattern of communication. You may decide to call your learner or their parents on a cell phone, leave a

voice message, send SMS or send electronic mail. You are not restricted to a particular pattern of communication”

“Web applications can be used by the teachers as well as the students to communicate to each other or as a group. For instance, school enable web page, School Facebook page, Twitter, WhatsApp group, Gmail, Yahoo and many others to connect and communicate, there is no limit when it comes to communication between teacher-to-teachers, students-to-students; teacher-to-student and other members of the school community, and technology has broken the boundary”

What emerged clearly from the excerpts above is that in the past, there used to be a challenge in communication between the learners and their teacher or between teacher and teacher, but because of the advent of technology integration in schools such challenges have been minimised. The teachers appreciate the power of technology to enable the bulk delivery of messages. Social influence is referred to as a direct determinant of behavioural intention which is represented as an image in the Diffusion of Innovation (DOI). In the diffusion of innovation model, image is described as the degree to which the use of an innovation is understood to enhance one's image or status in one's social system.⁵⁵ To analyse the participant's responses, the following variables were used, Learning tools, Computers earning respect, and Privileges.

The results of the analysis indicate that 71.9% of the respondents strongly agree that technologies have proven to be an effective teaching and learning tool. Also, the construct “Computers Earn Respect” investigates the degree of the respondents agreement that knowing about computers earns one the respect of others. The result shows that the highest number of respondents (81.5%) strongly agree that computer knowledge earns one respect. Furthermore, the construct “Privileges” focuses on investigating the degree to which the user agrees that people who are skilled in computers have privileges not available to others. The result shows that 66.2% of the participants strongly agree that if one is skilled in computer use, he or she has privileges not available to others who do not have such skill. The results indicate that teachers perceive that computers have proved to be effective learning tools; they believe that knowing about computers earns one the respect of others, and the teachers have the perception that people who are skilled in computers have privileges not available to others.

Factors Affecting Technology Integration in Teaching and Learning

The teachers' experiences of integration of technology seem to be contradictory because the same teachers who commented on the motivating factors to integrating technology also complained about challenging factors to integrate technology in their teaching. Teachers pointed out numerous contextual factors that prohibit technology integration in the teaching and learning of Business Education in secondary schools.

Non-availability of Modern Technologies

Teachers acknowledged the lack of modern technological facilities and equipment in their various classrooms. They regarded the lack of technical facilities in the teaching of Business Education as a challenge to teaching and learning of Business Education in secondary schools.

“There is a lack of technological facilities and resources for me to use in teaching Business Education subjects in our school. No technology has been made available to me since I started teaching.”

“There is a lack of modern technology equipment and resources like computers, Wi-Fi, projectors and printers in our school. Hence, the absence of such technologies in teaching and learning poses a challenge for proper integration of technologies in our classrooms and the school at large.”

The participants indicated that in their school there is a major absence of modern technologies like

⁵⁵ Peggy A. Ertmer, Anne T. Ottenbreit-Leftwich, Olgun Sadik, Emine Sendurur, and Polat Sendurur. “Teacher Beliefs and Technology Integration Practices: A Critical Relationship.” *Computers & education* 59, no. 2 (2012): 423-435.

computers, Wi-Fi, scanners and projectors. Additionally, the participant revealed that due to lack of access to technologies, teachers do not integrate technology into their teaching of Business Education subjects.

‘Here in our school, we do not integrate technology in our teaching due to non-availability of necessary technology equipment like computers, Wi-Fi, scanner, projectors, therefore we cannot talk about the integration of technologies when the equipment is not available to us.’

The statements above depict a lack of technological facilities in schools. From the statements, what emerged clearly is the teachers’ lack of access to technological equipment to use in their Business Education classrooms.

Teachers’ Lack of Technological Knowledge and Skills

Teachers’ lack of knowledge and skills contribute to the lack of use of technology in the teaching of Business Education in Nigerian secondary schools. Not having the right knowledge and skills to use technology is a factor that prevents teachers’ use of technology in teaching.

“For me, I do not have the knowledge or skills to operate all these modern technologies apart from my personal cell phone.”

Participants views revealed that teachers do not use technology to teach because they do not have the right knowledge to integrate it into their teaching

“I have not used technology in my teaching before; because I do not have the necessary skills to use the tools”

“No not at all ... they do not have technology skills or the knowledge including myself ... am certain about that because I have not come across any one of them using technology, anyway, we do not use technologies to teach.”

The participants' response above means that many Business Education teachers in secondary schools do not possess the necessary technological skills that could enable them to integrate technology in their teaching of Business Education. In a focus group discussion, one of the participants affirm that:

“In my school, we are about 25 teachers both in junior secondary and senior secondary sections. Believe me when I say that it's not up to four or five of us that can claim to have technology skills to use modern technologies. There is a massive lack of technology knowledge and skills among Business Education teachers.”(FGD)

From the participants' views, it is clear they do not have the necessary technological (TK) and skills required from 21st-century teachers in order to provide effective teaching to the learners.

Lack of Training Support and Staff Development Programs

The participants’ responses indicate a lack of training support and staff development programs as among the challenges facing the integration of technology in the teaching and learning of Business Education in secondary schools.

“The teachers are not receiving the support they required concerning technology. They should be provided with training assistance or even the government should organise a development program on technology use for teachers. Through such a program many will learn to use different technologies to support their teaching.

They emphasised that training is important in the teaching profession to enable the adequate application of the knowledge obtained.

“We have been promised on several occasions that we will go on a computer training seminar during the last holiday but that did not happen and there was no information why it did not take place.

Such training is important because the more the government trains teachers on how to make use of technology in the field of teaching, the more the knowledge acquired will be applied in teaching students.”

What is evident is that many teachers do not receive support for technical training as they are supposed to in order to develop their teaching skills. The statements from the participants indicated that the teachers should be provided with training assistance or even that government should organise a development program on technology use for teachers. To analyse the data collected, the following variables were used, Place to go, Institutional support, Technical infrastructure, Solving own technical problems.

The construct “place to go” investigates the degree to which the respondents agree that they have a place to go if they need to ask questions about technology. The result indicates that 67.3% of teachers strongly disagree that they have a place to go within their school if they need information about technology integration. Also, 86.4% of the respondents strongly disagree that they have institutional support to enable them to use technology in their teaching. The result further indicates that the majority of the respondents strongly disagree that technical infrastructure exists to enable technology integration in their schools with 86.9%. Meanwhile, 81.3% reveal that they do not have the knowledge to solve their own technical problems.

The results show that the majority of the teachers perceive that there is a lack of facilitating conditions in their schools that could enable technology integration. The results could be indicating challenges that prohibit the integration of technology in schools. The results could be revealing the reasons Business Education teachers are not using technology to teach. The analysis result on facilitating conditions is not good news for the Nigerian secondary education system in terms of technology integration.

DISCUSSION

The study’s findings suggest that Business Education teachers experienced a mix of difficulty and ease in the use of technology in the teaching of Business Education subjects. On one end, teachers found some factors that encouraged them to use technology in their teaching. On the other hand, they found factors that made them not want to try to integrate technology in their teaching of Business Education. More so, the inability to integrate technology into their teaching was due to their lack of prior knowledge or exposure to the use of digital technologies, as well as lack of access to relevant technologies in their schools.

Nnadozie et al. have asserted that despite continuous increased access to related technology for students and teachers in schools; schools are still having trouble effectively integrating technologies into existing curricula.⁵⁶ Studies indicated that the lack of teacher training on technology integration is one of the greatest roadblocks to integrating technology into a school’s curriculum.⁵⁷ Therefore, much needs to be done in Business Education teaching and learning in secondary schools in Nigeria concerning access to training opportunities and staff development programs. Perhaps the starting point would be to explain the need for training the teachers in technology integration. Also, the schools may be able to afford to integrate technology in the classroom, but there is a need also to support the teachers to receive necessary technology training and other needed development programs. It would be pointless to provide technologies in the schools without training the teachers on how to use them. It is very important to train the teachers on how to make use of the technology, inform them on the need to use technology in their teaching, train them to engage their learners and encourage them to integrate technology more often in their classrooms.

UTAUT construct of facilitating conditions states that relevant conditions should exist in any organisation in determining the intention of technology usage.⁵⁸ Facilitating conditions, such as the availability of technology training programs, technical support, as well as development programs will play a major role in determining user technology acceptance and usage behavior.⁵⁹ On the other hand, the quantitative analysis

⁵⁶ Nnadozie, Anyanwu, Ngwenya and Khanare, Divergence and the Use of Digital Technology in Learning, 13.

⁵⁷ Anyanwu, “Investigating Technology Integration in Business Education in Nigeria Secondary Schools,” 66.

⁵⁸ Ahmad, User Acceptance of Health Information Technology (HIT) in Developing Countries, 1288.

⁵⁹ Ahmad, User Acceptance of Health Information Technology (HIT) in Developing Countries, 1291.

results on the analysis of facilitating conditions revealed that there is a lack of facilitating conditions to enable the use of technology in the teaching and learning of Business Education in secondary schools.

The Business Education teachers' perception indicated that the school, students, teachers and society would benefit from technology integration in teaching and learning. The statistical analysis results show that a majority of the respondents are of the opinion that technology integration will benefit them both in their teaching and in general and will motivate learners to study. The reason for their agreement could be because they understand that the integration of technology has the potential to widen the sphere of educational information, making it easy to access information anytime and everywhere.⁶⁰ Therefore, a high number of the respondents were positive that using technology in the classroom would make the subject matter more interesting, according to the table below.

Table 1: Distribution of overall UTAUT constructs scores

	PE	EF	SI	FC
Mean	4.79	4.87	4.49	1.60
Median	5.00	5.00	5.00	1.50
Mode	5	5	5	1
Std. Deviation	.676	.422	.750	.741

Performance Expectancy (PE), Effort expectancy (EF), Social influence (SI), Facilitating conditions (FC)

The results also reveal that the majority of the teachers reported a lack of facilitating conditions to enable technology integration in almost all the schools. This implies that although the teachers perceive using technology to teach as easy and fun, and that it enables learners to learn, that could remain only a dream if there is a lack of facilitating conditions to encourage technology integration. For instance, if the teachers and learners do not have access to technologies, constant electricity, a computer laboratory, development programs, technology seminars/workshops, technicians to assist them in technology use, then the integration of technology in the teaching and learning of Business Education will not be realisable.

Literature indicates that teachers who are trained technologically and have acquired technical skills develop a more positive attitude towards technology integration in their teaching. However, Olutola and Olatoye ⁶¹ suggested that teachers should be encouraged to acquire technology skills and knowledge and make it a priority to integrate technology into their teaching. The teachers need to be trained to acquire knowledge of integrating technology in their classroom teaching. Olutola and Olatoye ⁶² believe that secondary school teachers in Nigeria are not trained to make use of some of the technological equipment and that it affects teaching and learning activities massively in secondary schools. Teachers teaching Business Education need subject-specific training to enable them to gain technical knowledge and master the skill of integrating technology in their subject area. Business Education teachers' lack of technology skills can impact negatively the integration of technology and in the teaching of Business Education.

Evidently, much can be achieved in teaching and learning Business Education with the use of technologies in the classroom. With technology in the classrooms, the quality of teaching could be enhanced considerably. This study found that, currently, there are very many contextual factors ranging from non-availability of modern technologies, poor electricity supply, poor maintenance culture; underutilisation of technology resources in the schools; poor technology policy implementation; and lack of training support and staff development programs. All of these are prohibiting the integration of technology in the teaching of Business Education in Nigerian secondary schools. The results indicate that non-availability of modern

⁶⁰ Anyanwu, Investigating Technology Integration in Business Education in Nigeria Secondary Schools, 15.

⁶¹ Olutola and Olatoye, "Challenges Of E-learning Technologies In Nigerian University Education," 315

⁶² Olutola and Olatoye, "Challenges Of E-learning Technologies In Nigerian university Education, 317.

technologies is the major challenge to the integration of technology in the teaching of Business Education in Nigerian secondary schools. Because of the non-availability of technologies in secondary schools, many Business Education students graduated without acquiring any technology knowledge throughout their secondary schools years. This could well be the case, as Business Education teachers do not have access to technology training and development programs, therefore, they lack technical skills and knowledge. The teachers also do not have access to the necessary technologies. However, even if other factors are being taken care of, there is still poor electric power supply to the schools. The results imply that there is a lack of facilitating conditions in the schools investigated to enable technology integration.

Additionally, it is evident that Business Education teachers are willing to integrate technology into their various subjects, but they are faced with many prohibitive factors.

RECOMMENDATIONS

Based on this recognition of Business Education, teaching and learning activities in Nigerian secondary schools must be enhanced with adequate and up-to-date technologies. There is an urgent need for the Government of Nigeria through the Federal Ministry of Basic Education to organise development programs (technology training sessions/ seminars), for Business Education teachers that would specifically incorporate the integration of technology in their specific subject areas and provide the needed equipment in addition. After the training sessions, there is a need for follow-up workshops to be organised for participants. This should be to ascertain whether there is an improvement in the teachers' use of technology in teaching Business Education.

CONCLUSION

The integration of technology in teaching and learning has been found to improve student learning in terms of extended learning time and effective and efficient communication. However, some factors were also recounted as prohibitive to technology integration in this study. The authors argue that it implies the provision of a proper amount and type of technology and training that enables both teachers and learners to integrate it into their day-to-day teaching and learning activities effectively. The current study's findings suggest there is a lack of facilitating conditions in schools to encourage technology use. The study concludes that if facilitating conditions are considered and made available, together with professional development to address the shortfalls in terms of UTAUT, technology integration into the teaching and learning of Business Education will become a reality in secondary schools in Nigeria.

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