



INNOVATIVE STRATEGIES AND PEDAGOGICAL ICT SKILLS FOR EFFECTIVE INSTRUCTIONAL DELIVERY IN BUSINESS EDUCATION PROGRAMME

JANE NWAKEGO EGBRI¹ AND PETER OMOLOJU ONAIVI^{2*}

^{1,2}*Department of Vocational and Technical Education, Faculty of Education, University of Benin, P.O. Box 1154, Benin City, Edo State, Nigeria*

**Corresponding Author: onaiviomolopeter22@gmail.com*

Abstract

For business education students to acquire the 21st century skills, business educators need to be innovative in the use of pedagogical ICT skills in the teaching and learning of business education for employability skills acquisition. It is on this premise that the paper discussed the place of innovative strategies and pedagogical ICT skills for effective instructional delivery in business education. The paper discussed concept of pedagogy and pedagogical ICT skills, relevance of pedagogy in relation to business education and concept of business education and Business Educators and their roles. The paper also discussed the concept of teaching and learning. The paper also discussed innovative strategies for instructional delivery of business education. Lastly, the paper discussed the challenges hindering the implementation of ICT in relation to pedagogy. The paper, therefore, concludes that effective teaching and learning in business education is a function of effective implementation of innovative strategies and pedagogical ICT skills. It was recommended, among others, that business educators should endeavour to undergo constant and periodic training through seminars, conferences and workshops to acquire the modern ICT skills for effective instructional and pedagogical delivery.

Keywords: *Pedagogical ICT skills, Teaching-Learning, Business education, Business Educators, Innovative strategies.*

Introduction

The internet has substantially changed the way things are done in the world. Usually, every aspect of life is amenable to modern technology, especially information and communication technology (ICT) of which the internet is a major frontier. All spheres of human endeavour have greatly been impacted by ICT. The education sector to a very large extent influence or predict the developments that occur in other sectors of the sociopolitical and economic space of any country. This is one of the reasons why the developed countries are advancing in several areas of life because the effective implementation of their educational systems responds to the needs of their environments through pedagogical innovativeness, creativity and scientific inventions. Many aspects of educational programmes are acquainted with these developments of which Business Education is not left out (Aiguekegbe&Onaivi, 2021).

From the current situation of the society, it is expected that Business Education graduates are supposed to have acquired the employability skills needed in the labour market of which ICT is highly needed in the job performance of business education graduates. And these skills can only be acquired if Business Educators utilize the pedagogical ICT skills in their instructional delivery to their recipients. This will give them competitive advantage over their competitors. It will be a total failure if the right skills are not inculcated and acquired sufficiently from the programme. It becomes necessary to look into the place of innovative strategies and pedagogical ICT skills for effective instructional delivery in business education programme.



Business education is seen as a unique programme that is meant for total eradication of unemployment and poverty right from the inception for some decades ago. It is recognized as an instrument for change that has capacity to bring about total liberation to this challenging environment and for national development. It is an academic programme intended to inculcate in the students understanding, values, knowledge, skills and ethics required (Oluwalola,Atolagbe, Umaru&Nwabufo 2019). In the view of Atakpa(2018),business education is an aspect of vocational and technical education offered in tertiary institutions that teaches learners the necessary skills, knowledge, attitude and competencies needed for employment, advancement on a job and self-reliance. The acquired skills enhance individuals to contribute meaningfully towards the development of the society rather than being a liability or dependent citizen. If Business education is not meeting up as expected, then the skills have to be restructured.

Skill can be defined as the ability to do something well. Skills are acquired through training or experience (Aiguekegbe&Onaivi, 2021).Some of the skills acquired in business education programme according to Onaivi (2019) are information and communication (ICT) skills, office technology and management(OTM) skills, accounting skills, marketing skills, entrepreneurial skills, distribution management skills, time management skills, leadership skills and so on. When business educators use pedagogical ICT skills in their instructional delivery, it gives their recipients a competitive advantage in the labour market.

Pedagogical ICT skills are skills needed by Business Educators in their instructional delivery to their recipients (Business Education students) to acquire employability skills needed for employment purposes. According to Onaivi (2021), there are eight top ICT skills which teachers can use in their instructional delivery, which includes word processing skills, spreadsheet skills, database management skills, electronic presentation skills, internet navigation skills, electronically management skills, networking skills and Typing skills. In view of Wang 2017, Business Education students will be proficient in employability skills if these Pedagogical ICT skills are used which includes computer assisted learning (CAL), computer based learning(CBI), computer managed instruction (CMI), computer based test (CBT), computer aided design(CAD). Because of the importance of business education, much emphasis has to be placed on pedagogical ICT skills. The custodians who will carry out these tasks ICT skills, accounting skills, marketing skills, entrepreneurial skills, administrative skills and time management skills are business educators.

Business educators are professionally trained personnel who are trained to carry out instructional delivery of business education in tertiary institutions. For business educators to meet up with 21st century workplace requirements through the ICT, there is need to implement the Pedagogical ICT skills for effective delivery of business education programme.

THEORETICAL FRAMEWORK

This paper is hinged on technology acceptance model (TAM). The TAM was propounded by Fred Davis in 1986. This model was developed by Fred Davis in his dissertation which was published in 1989. The TAM is an information system that models how users come to accept and use a technology.TAM is one of the theories that discuss the acceptance of technology in the perspective of human as the user. TAM goal is to explain and predict the users' acceptance of a system of information. TAM provides a theoretical basis to know the factors that influence the acceptance of organization toward a technology. TAM is visualized as a model.

TAM model was developed from the theory of psychology; explain about the attitude of the computer user based on belief, attitude, intention, and user behavior relationship. TAM puts two beliefs, which are the perception of usability and the perception of easiness to use as the main factor



of computer acceptance attitude. Both of those factors show that the perception of technology users determines the attitude in using the technology.

Furthermore, the two components which are the perception of usefulness or perceived usefulness and the perception of ease or perceived ease of use of the system were explained. He defined perceived usefulness (PU) as the degree to which the person believes that using the particular system would enhance her/his job performance, it means whether or not someone perceives that technology to be useful for what they want to do whereas the perceived ease of use (PEOU) was defined as the degree to which the person believes that using the particular system would be free of effort (Davis, 1986). David (1989) states that the definition of usability perception comes from the word "useful" which means can be used and benefitting. The perception of usability focuses on how far someone believes that by using a certain system will improve their productivity in working. If the technology is applied by Business educators in their job performance, so this usability perception believes that ICT skills can improve business educators' skills and results to employability skills of recipients (business education students).

Tarigan (2010) states the perception of users toward the benefit of technology can be measured by some factors such as improving users' productivity and efficiency. Davis (1989) states that the perception of easiness in using the technology focuses on how far someone believes that using a system does not need too much effort. The definition of this perception follows the definition of the word "ease" that means free from difficulties. In the application of the ICT to job performance, it will ease the difficulty in the job and this will influence proficiency and utilization of ICT in the teaching and learning of business education. TAM believes that the perception of usability and easiness of using technology felt by users can predict their attitude toward the technology that can predict the users' acceptance of the technology.

Technology Acceptance Model is relevant to the independent and the dependent variables of this study. It is believed that the independent variable, pedagogical ICT skills will bring efficiency to the dependent variable, business educators' instructional delivery and better productivity to their recipients (business education graduates). Business educators are convinced that utilizing ICT in their pedagogy (teaching and learning) of Business Education will bring innovation therefore ICT is useful. Therefore, adaptation of ICT skills into business educators' instructional delivery is perceived to ease their instructional delivery and this will be free of effort. By this, it implies that the conventional method of business educators will become ICT based which will be stress free. Hence, TAM was used as a guide in this paper.

Concept of Pedagogy and Pedagogical ICT Skills

The term "pedagogy" also refers to a systematic instructional method employed by an instructor to convey core subject matters to students. IGI (2021) affirmed that **pedagogy can be defined as** the strategies, techniques, and approaches that teachers can use to facilitate learning. Pedagogy can also be defined as the function and/or work of a teacher, which involves the art and science of teaching, and often refers to instructional methods (Shah, 2021). **Pedagogy** can also be viewed as a term that refers to the method of how teachers teach, in theory and in practice (Edwin, 2020). In order to help students to build on prior learning, meaningful classroom relationships must exist. **Pedagogy further** refers to the study of teaching approaches and how they affect learners. A careful understanding of the term "pedagogy" is that it enables students to learn more effectively and can help them develop high-order thinking skills. Pedagogical has great impact in the teaching and learning of business education. The relevance of pedagogy to business education cannot be over-emphasized. Mastersoft (2021) noted that pedagogy improves students' participation in the learning of business education; helps in the development of higher cognitive skills in carrying out



business education tasks; improves quality learning in the instructional delivery by business educators; helps business education students to be more receptive in the pedagogical ICT skills training; and makes the relationship between business educators and learners much closer, as they work together to determine the best learning experience.

Pedagogical ICT skills to Business Education

Charles (2019) observed that there are pedagogical ICT skills that are technologically driven which will modify the methods of teaching and learning business education through ICT. Some of the pedagogical ICT methods include:

1. Computer Aided Learning (CAL)/Computer Assisted Instruction (CAI): Lyin(2020) stated that CAI is the direct use of computer for the facilitation and certification of learning. The general mode of most CAI applications is that they present the learner with options and procedures to follow. The learner communicates with the computer using the keyboard, mouse or pad. In another assertion, Igberaharha (2020) says CAL is an interactive technology, which describes an educational environment where a computer programme is used to the user in learning a particular subject. It refers to an overall integrated approach of instructional methods. Computer aided learning is a device/ learning strategy which makes teaching more interesting, joyful and sustainable. From here, the essence of the Computer in education shifts the focus away from the teacher to the students themselves who learn through experimentation on the computer with the teacher acting as guide. This kind of learning application can be useful for Business Education programme.

2. Computer Managed Instruction (CMI): John and Harrison (2018) re-emphasized that CMI is an instructional strategy that uses a computer to deliver learning objectives, learning resources, and assessment of learner performance. Significantly, they added that computer managed instruction engages the learners to learn at their own pace and relieves the physical stress of teachers who would not actively involved in the teaching.

Furthermore, in view of Salako and Garba (2020), CML is an electronic management information system of a student learning. That added that it is a significant application of computer technology for accountability and documentation of student progress by electronic filing, sorting, and reporting of his learning outcomes. As compared to conventional classroom instruction, the CMI developed by Daniel Davies (2018) appears to have many superior features. In conventional instruction, the teacher must make the decision instead of the computer. He must decide what to teach (objectives) to whom (entering behaviour) and how (procedures). CMI is relevant to business education students as it provides instructional functions: (1) Assesses the learner's present level of knowledge. (2) Diagnoses weakness or gaps in the student's learning.(3) Prescribes learning activities to remediate the identified weaknesses, and (4) It helps to continuously monitors progress of the business education learners among others

3.Computer-based instruction: Michael and Igenewari (2022) stated that CBI techniques refers to virtually any kind of computer usage in educational settings, including drill and practice, tutorials, simulations, games, instructional management, instructional programme and other areas of applications. Serin (2011) emphasized that CBI is the use of computers in the teaching and learning activities. CBI enables the students to learn by self-evaluating and reflecting on their learning process. CBI motivates students to learn better by providing them with the immediate feedback and reinforcement and by creating an exciting and interesting game-like atmosphere.CBI is a teaching approach that integrates computer software programs with other teaching materials in the classroom.

4. Computer-Based Test/Training (CBT): It involves the use of a personal or networked computer for the delivery and access of training programs. CBT is particularly useful when training learners on a specific computer application, but can also be built to train learners on general knowledge or



skills. Sofiyatul and Nujmatul (2017) commented on CBT as a test using a computer as the media. The computer-based test is conducted in a computer laboratory connected with the internet connection. According to Mercer and Mettle (2021) stated that CBT refers to delivering assessments with computers as an alternative using the pen and paper method.

5. Computer Aided Design: Eghosa, Patrick, George, Chinedu and Oluwatimilehin (2017) defined CAD as a creativity tool that can be used in Business education and training for demonstration, exercises, diplomat projects and laboratory as well as demonstration for a large group of students during lectures. They added that it can be used to teach small groups. CAD can be used in Business education to design ICT tools for teaching and learning. It aids to design instructional materials for teaching and learning of business education. Wesley (2020) affirmed that CAD is the use of computer-based software to aid in design processes.

The Need for Pedagogical ICT skills

Information and Communication Technology is the digital processing and utilization of information by the use of electronic computers. It comprises the storage, retrieval, conversion and transmission of information (Omoghenemuko&Okurumeh, 2018). Worldwide research has shown that ICT can lead to an improved student learning and better teaching methods. The need for Pedagogical ICT skills to Business educations cannot be over-emphasized according to Omoghenemuko and Okurumeh (2018) which includes:

1) ICT enhances subject learning: It is well known these days that the use of ICT in education adds a lot of value to key learning. It helps business education students to be proficient in their areas of specialization.

2) ICT use develops ICT literacy and ICT Capability: Both are 21st-century skills that are best developed whilst ICT remains transparent in the background of subject learning. The best way to develop ICT capability is to provide them with meaningful activities, embedded in purposeful subject-related contexts.

3) E-learning or On-line Learning: The presence of ICT in education allows for new ways of learning for students and teachers. E-learning or online learning helps business education students to carry out electronic commerce.

4.) ICT use encourages collaboration: You just have to put a laptop, iPad or computer in the classroom to understand how this works. ICT naturally brings students together where they can talk and discuss what they are doing for their work and this in turn, opens up avenues for communication thus leading to language development.

5.) ICT use motivates learning: Society's demands for new technology to be learnt It motivates business education students to learn much with ICT skills.

Concept of Teaching and Learning

Afzal and Abdul (2021) viewed teaching and learning as a transformation process of knowledge from teachers to students. It is referred as the combination of various elements within the process where an educator identifies and establishes the learning objectives and develops teaching resources and implements the teaching and learning strategy. Balogun (2014) defined teaching as the passing of ideas, knowledge, skills, attitudes, beliefs and feelings to someone, with the aim of bringing about particular changes in that person. Teaching takes place with the help of a teacher, lecturer or tutor. Learning according to Oladosu (2018) is a relatively permanent change in the behaviour of a learner due to experience and effort. Learning in view of Okoye and Ughamadu (2017) is the acquisition of new knowledge, ideas, skills, values and experiences which enables the individual to modify or alter his action or to realize his goals



Concept of Business Education

Akwara and Baba (2019) sees business education as an aspect of vocational and technical education offered as a course in tertiary institutions designed to provide learning situations for skill acquisition among students who could apply such skills in their occupation, managing personal business for personal living in the society and for nation building. Iwuoha and Peters (2019) projected that business education as the type of education that assists individuals to acquire skills and knowledge which can be applied in solving problems in business and office occupations and in creating self-employment. Business education programme is taught by business educators.

Ezeani (2012) emphasized that business educators are custodians in business education programme who are proficient in skill acquisition needed by recipients. Ezenwafor and Hafsat (2017) supported that business educators are professionally trained teachers of business courses who are competent and engaged to all business related subjects in universities and colleges of education. Business educators are called different names which include Business education lecturers, business education instructors, and business education teachers and so on. Aliu (2016) commented that business education provides knowledge and understanding of the economic, financial, marketing, accounting, management system and other branches of business endeavor.

Some of the objectives of business education according to Aliu include: provision of specialized instruction to prepare students for career in business, developing in students' fundamental instruction to help them assume their economic roles as consumers, workers and citizens and equipping learners with background instruction to assist them in preparing for professional careers interest for advanced study. Edokpolor and Egbri (2017) and Edokpolor and Oduma (2018) opined that an effective and a well implemented business education aims at achieving three broad goals, namely: (1) to prepare the recipients for career in office occupations; (2) to equip recipients with the requisite attributes for job creation and entrepreneurship; and (3) to expose recipients with knowledge about business including a good blend of computer technology, which incorporates the Information and Communication Technology (ICT). According to Aiguekegbe&Onaivi (2021) emphasized some of the roles of business educators' which include academic and administrative aspects: teaching, examination, administration and supervision, admission and counseling evaluation, compilation of results, teaching practice supervision, research and consultancy. Others are students' industrial work experience scheme (SIWES) supervision, acting as external examiners, project supervision, entrepreneurial facilitation and others.

Innovative Strategies For instructional Delivery to Business Education

Innovative teaching strategies are instructional approaches that involve the use of technology, hands-on-activities and other materials (Kylliainen, 2019). There are innovative teaching strategies which can be used in Business Education to bring effective instructional delivery by Business Educators to bring employability skills to their recipients. Some of the methods include:

E-Learning: E-learning is an abbreviation for Electronic Learning. Nwague and Azil (2016) defined electronic learning as an aspect of ICT which connotes driving knowledge through the use of computer aided resources and programmes such as e-mail, text messages, online chats, web pages, audio and video conferencing etc. They added that it is a tool for improving teaching and learning, it is good accessible tool for learning and research material. Oduma, Nkem and Ndidi (2019) categorically stated that E-learning can be effectively integrated into any programme through the adoption of computer equipped classroom used for teaching and learning. Integrating E-learning into business education programmes will no doubt boost curriculum planning, development and



implementation through the development and use of multimedia and course ware and other computer equipment relevant to teaching-learning situations.

Blended Learning

Snedaker (2021) defined blended learning as a system that combines face-to-face learning with online resources and opportunities. Lane (2022) supported that blended learning combines physical and online learning experiences that give students more control over the time, place, path, and pace of instruction. He added that blended learning is educational strategy that combines conventional education with online learning. It is a combination of two instructional delivery methods to create an effective learning environment. The objective of blended learning is that it provides students with the best of both worlds: the personalization and flexibility of online learning, with the engagement and social interaction of face-to-face instruction (Snedaker, 2021).

According to Talal (2016), some of the innovative methodologies to drive in skills in business education include:

- 1. Mobile Learning (m-learning):** This is a method of instructional delivery of educational training through the use of handheld mobile electronics irrespective of the location and time. Nwalado and Ezoem(2019) described m- learning as the use of technological devices such as mobile phones, androids, smart phones and ipad to extend the reach of teaching and learning across multiple locations. In the opinion of Ugwu (2012), mobile learning technologies could be seen as any sort of learning that happens when the learner is not fixed, predetermined location, or learning that happens when the learner takes advantage of the learning opportunities offered by mobile technologies. Amiaya andRanor (2015), noted that the application of m-learning technologies creates, fosters, delivers and facilitate learning anytime and anywhere.
- 2. Project-Based Learning (PBL):**Kim (2022) stated that Project-based learning is an effective method that helps students drive their own learning journey. In a PBL exercise, students identify a real-world problem then develop a solution. Project-based learning relies on developing key skill sets such as research, critical thinking, problem-solving, and collaboration. Project-based learning is an active method of learning where students gain mastery through the application of their knowledge rather than rote memorization.

Challenges in the Implementation of ICT to Pedagogy

Despite the fact that ICT has the capability of transforming the pedagogy of Business education; there are challenges hindering the smooth implementation of ICT to business education according to Adeyemi and Esere (2013). These challenges include:

- 1. Resistance to change:** Business educators resist change from traditional pedagogical methods to more innovative, technology-based teaching and learning methods.
- 2. Inadequate ICT infrastructures:** There are no enough ICT workshops including Computer hardware and software.
- 3. Lack of qualified ICT personnel:** Most institutions lack computer literate teachers and ICT experts that would support and manage the Internet connectivity and application of computing in the teaching-learning process.
- 4. Epileptic power supply:** The internet, telefax, e-mail, depends on network which needs constant power supply for the computer to be used to carry out work. Assignments, messages and other works become difficult to carry out.



The Need for Innovative Strategies for Business Education Programme

Kylliainen (2019) observed that the need for innovative strategies includes:

- To help students learn in a meaningful way.
- To engage students and encourage them to take an active role in their learning.
- To come up with new ideas and technologies that increase productivity and generate greater output. Eze (2015) identified imperatives of innovative teaching technology include:
- New ICT facilities allow students and teachers to control manipulate and contribute information to learning and teaching.
- As a social process, it will facilitate interaction and collaboration not only among learners but among teachers as well both local / or global level.

Conclusion

Pedagogical ICT skills are capable of transforming business educators' traditional method of teaching which denies graduates of business education to acquire 21st century skills for employment and self-dependency. Pedagogy improves students' participation in the learning of business education. It helps business education students to be more receptive in the pedagogical ICT skills training. Relevance of ICT to business education students cannot be over-emphasized. **ICT use encourages collaboration. ICT use motivates learning and ICT in education improves engagement and knowledge retention. Based on the challenges in the implementation of ICT into teaching and learning, recommendations have been made.**

Recommendations

The following recommendations are made:

1. Business educators should adapt to the use of pedagogical skills in the teaching and learning of business education.
2. Business educators should constantly update their professional career by attending seminars, conferences, workshops and other trainings that will bring efficient and effective acquisition of skills to the recipients.
3. Government, philanthropist and stakeholders should support with adequate funds in the skill acquisition of business education programme.
4. Business educators should deviate from traditional lecture methods of skill acquisition to modern ICT skills which entail employability skills.
5. Government should provide enough workshops and facilities for skill acquisition programmes.

References

- Adeyemi, I.I., & Esere, M (2013). ICT and higher educational system in Nigeria, *Academic Journal of Educational Research Reviews*, 8(21), 2021-2025.
- Afzal, S.M., & Abdul, K. (2021). Teaching and learning process to enhance teaching effectiveness: A literature review. *International Journal of Humanities and Innovation*, 4 (1), 1-4.
- Aiguekegbe, O.E., & Onaivi, P.O. (2021). Impediments to the acquisition of business education skills in vocational and technical education in Nigeria, *Delta Business Education Journal*, 9(2), 135-146.



- Aliu, E. (2016). *Foundation of technical and vocational education*, Benin City: Supreme Idea Publishers.
- Amiaya ,A.O.,&Ranor, C.L.(2015). Challenges and benefits of mobile learning adoption. OTM programme in Delta State Polytechnics.*American International Journal of Contemporary Research*, 5(4), 85-91.
- Atakpa, I.(2018). *Enhancing quality E-learning in business educationprogramme in Nigeria: A pragmatic approach*.
- Balogun, D.A.(2014). *Principles and practices of education*, Lagos: Macmillan Nigeria Publishers Limited.
- Charles, B.A.(2019). Factors that influence teachers’ pedagogical use of ICT in secondary Schools inGhana.*Contemporary Educational Technology* 10(3), 272-288.
- Davis, F.(1986).*Original technology acceptance model*. <https://www.researchgate.net>.
- Davis, F.D., Bagozzi, R.P., &Warshaw, P.R. (1989). User acceptance of computer technology: A comparison of two theoretical models, *Journal of Management Science*, 35(8), 982-1003.
- Edokpolor, J. E., &Egbri, J. N. (2017). Business education in Nigeria for value re-orientation: A strategic approach for poverty alleviation and national development. *Journal of Educational Research and Review*, 5 (3), 41-48. Retrieved from <http://sciencewebpublishing.net/jerr/archive/2017/May/Abstract/Edokpolor%20and%20Egbri.htm>
- Edokpolor, J. E.,&Oduma, C. (2018). Repositioning business education programme for post-oil boom economy. *International Journal of Vocational and Technical Education*, 10 (2), 14-23. Retrieved from <https://academicjournals.org/journal/IJVTE/article-full-text-pdf/0AF70FF56069>
- Edwin,A.P.(2020).*What is pedagogy and methodology in education*.<https://www.britannica.Com>.
- Ehosa, et al.,(2017). *The influence of computer aided design (CAD) on students’ creativity in architectural schools*.
- Eze, A. (2015). Experimental methods of teaching business studies: Practical approaches beyond lecturing. *International Journal of Core Engineering & Management*, 7(1), 59-73.
- Ezeani, N.S. (2012). The teacher and skills acquisition at business education: From the perspective of accounting skills, *Arabian Journal of Business and Management*, 2(4), 25-36.
- Ezenwafor, J.I.,&Hafsat, O.A.(2017). Relationship between business educators’ perceived administrative leadership style and their job performance in Tertiary Institutions.*NAU Journal of Technology & Vocational Education*,2(1),54-62.
- Igberaharha,O.C. (2020). Computer assisted instruction (CAI) in learning of final accounts by business education students in Delta State Tertiary Institutions.
- IGI Global(2021).Definitions of Pedagogy in diverse ways.Retrieved from what is pedagogy IGI Global.
- Iwuoha, C.U.,& Peters, C.B. (2019).Improving business education programme through school



- industry collaboration for capacity building. *Journal of Business Educators of Nigeria*, 6(2), 34-40.
- John, N., & Harrison, W. T. (2018). The effects of drill-and-practice computer instruction on learning basic mathematics. *Journal of Computing in Childhood Education*, 6(9), 349–356.
- Kylliainen, J. (2019). *The importance of innovation-what does it mean for Businesses and our Society*.
- Kim, M. (2022). *Innovative teaching strategies: Techniques for success*. Retrieved from <https://innovativeTeachi.educationadvanced.com>.
- Lyin, M. (2020). *Computer assisted instruction (CAI): Pros and cons*. Retrieved from <https://www.bairesdev.com>.
- Mastersoft (2021). What is pedagogy? Importance of pedagogy in teaching and learning process. <https://www.iitms.co.in>.
- Mercer & Mettle (2021). *Definition and benefits of computer based test*. Retrieved from <https://blog.mettl.com/computer-based-test/>
- Michael, J.P., & Igenewari, L.S. (2022). Assessment of computer based instructional (CBI) techniques in the teaching of computer studies in Rivers State Senior Secondary Schools, *International Journal of Scientific and Research Publications*, 12(2), 376-386.
- Nwagwu, L., & Azil, N. (2016). Status of technologies in business education Department of Tertiary Institutions in Ebonyi State for effective integration of electronic learning. *British Journal of Education*, 4(4), 49-59.
- Oduma, C.A., Nkem, O.L., & Ndidi, A. (2019). Electronic learning platforms in business education for Skill acquisition. *Nigerian Journal of Business Education* 6(2), 104-112.
- Okoye, N.S., & Ughamadu, S. (2017). *Principles, methods and strategies for effective teaching*. Onitsha/Agbor : Kmensuo Educational Publishers.
- Oladosu, G.A. (2018). *What are the learning theories? Principles and practice of instruction*, Illorin: Department of curriculum studies and educational technology, University of Illorin. Kwara: University Publishers.
- Oluwalola, F.K., Atolagbe, A.A., Umaru, H.A., & Nwabufu, N.B. (2019). Accreditation of business in Kwara State Tertiary Institutions: Challenges and way forward. *Association of Business Educators of Nigeria Journal*, 6(1), 127-135.
- Omoghenemuko, G.I., & Okurumeh, G.O. (2018). Information and communication technology (ICT): A tool for effective vocational and technical education in Nigeria, *Journal of Vocational and Technical Education*, 3(1), 170-179.
- Onaivi, P.O. (2019). *Availability and utilization of digital teaching and learning resources among business education lecturers*.
- Onaivi, P. O. (2021). *Influence of pedagogical ICT skills on business educators 'perceived job performance in Colleges of Education in South –South Nigeria*.
- Salako, E., & Garba, S. (2020). *Effectiveness of computer-managed instruction on students'*



performance in Tertiary Institutions.

- Shah, R.K. (2021). *Revising concept, definition of pedagogy and forms of pedagogy*, Tribhuvan University, Sanothimi Campus.
- Snedaker, M. (2021). *The impacts and benefits of blended learning in higher education.*
- Serin, O. (2011). The effects of the computer-based instruction on the achievement and problem solving skills of the science and technology students, *The Turkish Online Journal of Educational Technology*, 10(1), 183-201.
- Sofiyatul, F., & Nujmatul, L. (2017). The analysis of computer based test (CBT) implementation: A phenomenological study, *Journal of Accounting and Business Education*, 2(2), 310-319.
- Talal, A. (2016). Effective methods of teaching business education, *International Journal of Scientific & Engineering Research*, 7(1), 1052-1055.
- Tarigan, Z. (2010). Technology Acceptance Model: A Review of the Prior Predators. Retrieved <https://www.researchgate.net>.
- Ugwu, C. I. (2012). Learning enhancement in tertiary institutions using mobile technologies. *West African Journal of Industrial and Academic Research*, 5(1), 10-21.
- Wang, Y. (2017). *Effectiveness of cognitive skills based on computer assisted instruction, computer based test and computer based learning*. Retrieved from <https://www.journals.sagepub.com>>pdf.
- Wesley, C. (2020). *Definition of computer aided design*. Retrieved from <https://www.techtarget.com/whatis/definition/CAD-computer-aided-design>.