



*Nigerian Journal of Business Education (NIGJBED) Volume 9 No.2, October 2022*

---

NIGERIAN JOURNAL  
OF  
**BUSINESS  
EDUCATION**

(The Official Publication of the Association  
of Business Educators of Nigeria)

Volume 9 No.2 October, 2022

Published by the  
Association of Business Educators of Nigeria



**Copyright © ABEN 2022**

**NIGERIA JOURNAL OF BUSINESS EDUCATION**

**All Right Reserved**

No part of this book may be reproduced stored in retrieval system,  
or transmitted in any form or by any means, electronic, mechanical,  
photocopying, recording or otherwise, without the prior written permission of  
the author.

**ISSN: 2408-4816**

Publisher by the:  
Association of Business Educators of Nigeria  
Available on-line at [www.nigjbed.com.ng](http://www.nigjbed.com.ng)





## **ASSOCIATION OF BUSINESS EDUCATORS OF NIGERIA**

### **Editorial Board**

**Prof. T.A. Umoru (Faben)**  
*Kwara State University, Malete*

**Editor-in-Chief**

**Dr. L.F. Ademiluyi**

**Managing Editor**

**Prof. B.O. Nwosu**

**Editor**

**Dr. A.G. Mshelia**

**Editor**

**Prof. J.I. Ezenwafor**

**Editor**

**Dr. Edina Baba**

**Editor**

**Dr. Effiong Asuquo**

**Editor**

**Prof. James Okoro**

**Editor**

**Dr. C.S. Oguejiofor**

**Editor**

**Dr. K.C. Ekwue**

**Editor**

**Dr. Samson Wagbara**

**Editor**

### **Consulting Editors**

**Prof. G.I. Ndinechi**

**Nnamdi Azikiwe University, Awka**

**Prof. Olu Aina**

**Ahmadu Bello University Zaria**

**Prof. W.A. Amachwule**

**River State University of Science &  
Technology, Port Harcourt**



**MEMBERS OF THE NATIONAL EXECUTIVE COUNCIL OF  
ASSOCIATION OF BUSINESS EDUCATORS OF NIGERIA**

<b>Prof. C.M. Ile</b>	<b>National President</b>
<b>Dr. James O. Oborah</b>	<b>1<sup>st</sup> Vice President</b>
<b>Dr. Anna G. Mishelia</b>	<b>2<sup>nd</sup> Vice President</b>
<b>Dr. Pac Ordu</b>	<b>3<sup>rd</sup> Vice President</b>
<b>Dr. Christiana Enang</b>	<b>National Secretary</b>
<b>Dr. Joy Amesi</b>	<b>Asst National Secretary</b>
<b>Dr. Femi F. Ademiluyi</b>	<b>PRO</b>
<b>Dr. Jude Daniel Utoware</b>	<b>Financial Secretary</b>
<b>Dr. Fidelis U. Amahi</b>	<b>Asst Financial Secretary</b>
<b>Mr. Levong S. Duktur</b>	<b>Treasurer</b>
<b>Prof. B.O. Nwosu</b>	<b>Ex- Officio Member</b>
<b>Prof. T.A Umoru</b>	<b>Ex- Officio Member</b>
<b>Dr. J.F. Oyedele</b>	<b>Ex- Officio Member</b>
<b>Prof. L.E. Ekpenyong</b>	<b>Ex- Officio Member</b>

**PAST PRESIDENT OF ABEN**

**Mr. M.O. Anyaduba (Late)**  
**Prof. Olu Aina**  
**Dr. F.E. Ulinfun**  
**Dr. J.F. Oyedele**  
**Prof. L.E. Ekpenyong**  
**Prof. B.O. Nwosu**  
**Dr. J.S. Odemuyiwa**  
**Prof. T.A. Umoru**



### **IMPORTANT NOTES**

The **NIGERIAN JOURNAL OF BUSINESS EDUCATION** is an annual office publication of the Association of Business Educators of Nigeria (ABEN). The Editorial Board of the Journal will consider for publication:

- a. Articles that will improve knowledge of teaching/ learning process in business education
- b. Theoretical or philosophical articles
- c. Critical review of business education literature; and
- d. Articles on current issues in business education.

The **NIGERIAN JOURNAL OF BUSINESS EDUCATION** is designed to promote the strengthening of business education in universities, polytechnics, colleges of education and secondary schools through improved business teacher education at the collegiate level.

The Association of Business Educators of Nigeria does not assume responsibility for the points of view or the opinions expressed by the contributors unless such statements have been established by resolution of the Association

All correspondence regarding this issue should be sent to:

*Editor-in-Chief*  
*Prof. T.A. Umoru (Faben)*  
*Kwara State University, Malete*



<b>CONTENT</b>	<b>PAGE</b>
<b>MODERN TECHNOLOGIES FOR EMPLOYABILITY SKILLS OF OFFICE MANAGEMENT AND TECHNOLOGY STUDENTS IN RIVERS STATE UNIVERSITIES</b> Amesi, Joy (PhD) & Babalola, James Olatunde (PhD) .....	1-12
<b>INTEGRATION OF BLENDED LEARNING AS A MEASURE FOR FACILITATING INSTRUCTION IN THE TERTIARY BUSINESS EDUCATION PROGRAMME IN THE NEW NORMAL IN DELTA STATE</b> Enwemasor, Beatrice Chukwunonyelim & Charles-Odili, Veronica Nnamaka.....	13-21
<b>IMPROVING BUSINESS EDUCATORS' USAGE OF SYNCHRONOUS INTERACTIVE RESOURCES FOR TEACHING AND LEARNING BUSINESS EDUCATION PROGRAMMES IN TERTIARY INSTITUTIONS IN EBONYI STATE IN Post COVID-19 ERA</b> Nwagwu, Lazarus N., Ofulue, Justina I. & Dr. (MRS) Acharu F. Tony-Okeme.....	22-29
<b>STUDENTS' PERCEPTIONS OF THE ATTITUDINAL AND CLASSROOM COMPETENCIES NEEDED BY LECTURERS FOR MOTIVATING BEGINNERS IN OFFICE TECHNOLOGY AND MANAGEMENT</b> Prof. Titus A. Umoru & Adakole, Enonche.....	30-37
<b>DIGITAL SKILLS REQUIRED BY BUSINESS EDUCATION LECTURERS FOR TEACHING ACCOUNTING EDUCATION COURSES IN TERTIARY INSTITUTIONS IN RIVERS STATE</b> Joy Amesi , Amaewhule, W.A. & Akoku Alfred Umah.....	38-52
<b>ASSESSMENT OF DIGITAL SKILLS ACQUIRED BY UNIVERSITY BUSINESS EDUCATION STUDENTS FOR EMPLOYABILITY IN RIVERS STATE</b> Amesi, J. PhD & Allison, M. T PhD.....	53-63
<b>EMERGING TECHNOLOGIES IN TEACHING AND LEARNING OF BUSINESS EDUCATION PROGRAMMES IN THE NEW NORMAL IN TERTIARY INSTITUTION IN NIGERIA</b> Enang, Christiana Etong, PhD.....	64-71
<b>LEVEL OF APPLICATION OF VIRTUAL LEARNING PEDAGOGICAL DESIGN BY BUSINESS EDUCATORS IN TERTIARY INSTITUTIONS IN ANAMBRA STATE</b> Okoli, Constance Ifeyinwa Ph.D & Ikpat, Nzube Happiness.....	72-80
<b>SCHOOL-INDUSTRY COLLABORATION AND ACADEMIC RESEARCH AS CURRICULUM CHALLENGES IN PREPARING BUSINESS EDUCATION STUDENTS FOR THE CHANGING BUSINESS WORLD</b> Okeke Bethel, A.....	81-86
<b>OFFICE WORK RELATED MUSCULO-SKELETAL DISORDER (OWRMSD) AMONG SECRETARIAL PROFESSIONALS IN EBONYI STATE GOVERNMENT ESTABLISHMENT</b> Igwe, Kingsley Ogazi & Olannye, Veronica E. ....	87-96



<b>CHALLENGES FACING TECHNICAL AND VOCATIONAL EDUCATORS IN THE EMERGING FIELD OF E-LEARNING IN NIGERIA: THE WAY OUT</b> Polit, Sylvester Danjuma & Duktur, S. Levong .....	97-104
<b>INFLUENCE OF ENTREPRENEURSHIP EDUCATION ON ENTREPRENEURIAL MOTIVATION, SELF EFFICACY AND INTENTION OF NIGERIAN POLYTECHNIC UNDERGRADUATES</b> Lawrence Femi Ademiluyi, PhD.....	105-114
<b>PERCEIVED INFLUENCE OF WORK-BASED LEARNING ON STUDENTS' EMPLOYMENT PROSPECTS</b> Silas Titus Nguwap & Prof. T. A. Umoru.....	115-122
<b>BUSINESS EDUCATION CURRICULUM DEVELOPMENT AND IMPLEMENTATION IN NIGERIA: PROBLEMS AND PROSPECTS</b> Oluwadare, Ayodeji Abraham, Omidiji, Samuel Ajetomobi & Awe, Olawumi Hafsat.....	123-130
<b>BUSINESS EDUCATION AND CLOUD COMPUTING: PROSPECTS AND CHALLENGES</b> Victor-Igwe Juliet N. ....	131-141
<b>GLOBAL REQUIREMENTS OF BUSINESS EDUCATION SKILLS ACQUISITION FOR STUDENTS' WORK PERFORMANCE IN NORTH EAST ZONE, NIGERIA</b> Dr. Anna Gana Mshelia & Mr Jonathan, P. Shua.....	142-151
<b>PEDAGOGICAL SKILLS NEEDED FOR EFFECTIVE ONLINE TEACHING AND LEARNING IN POLYTECHNICS</b> Oyinloye, O. T & Prof Umoru, T. A .....	152-158
<b>SECRETARIAL PROFESSION AND THE TRAINING NEEDS OF SECRETARIES FOR THE FUTURE OFFICE WORK</b> Ocholi, J.M., Aina, M.A. (Ph.D) & Prof. Ezeani, N.S.....	159-165
<b>SECRETARIAL PROFESSION IN THE DIGITAL WORK PLACE</b> Dr. Ezeonwurie Olufunke Abiola.....	166-171
<b>FRAMEWORK FOR DIGITAL SKILLS ACQUISITION FOR GLOBAL COMPETITIVENESS BY BUSINESS EDUCATION STUDENTS OF TERTIARY INSTITUTIONS IN NIGERIA</b> Okute Agnes Lawrence, <i>Ph.D</i> , Enang Christiana Etong, <i>Ph.D</i> & Etoma Moses George.....	172-182
<b>PREPARING BUSINESS EDUCATION STUDENTS IN A CHANGING WORLD IN SOUTH-WEST COLLEGES OF EDUCATION: CHALLENGES AND PROSPECTS.</b> Oluwadare, Ayodeji Abraham, Ajisafe, Olatunbosun Emmanuel, Adebayo, Sunday Fatoba & Ebiniyi, Olufunmilayo. O. (Mrs).....	183-191
<b>EMERGING TECHNOLOGIES AND SUSTAINABILITY OF BUSINESS EDUCATION DELIVERY IN THE WAKE OF PANDEMIC</b> Dr. Edet E. Okon.....	192-201



# MODERN TECHNOLOGIES FOR EMPLOYABILITY SKILLS OF OFFICE MANAGEMENT AND TECHNOLOGY STUDENTS IN RIVERS STATE UNIVERSITIES

<sup>1</sup>AMESI, JOY (PhD),  
<sup>2</sup>BABALOLA, JAMES OLATUNDE (PhD) MABEN  
Department of Business Education  
Faculty of Education, Rivers State University  
Port Harcourt, Nigeria.  
Email: [joyamesi2016@gmail.com](mailto:joyamesi2016@gmail.com)  
[olababalola69@gmail.com](mailto:olababalola69@gmail.com)

## Abstract

*The study examined Modern Technologies for Employability Skills of Office Management and Technology Students in Rivers State Universities. Two (2) specific objectives, two research questions were posed and two corresponding null hypotheses were formulated and tested at 0.05 level of significance. Descriptive Survey research design was adopted for the study. The population of the study was 54 Office Management and Technology final year students in the 2020/2021 academic session and 22 Office Management Technology lecturers from Rivers State University and Ignatius Ajuru University of Education, a total population of 76. This total served as a sample size and was purposively studied. The instrument for data collection was a self-structured 29 items questionnaire on a 4-point rating scale titled: Modern Technologies and Employability Skills of Office Management and Technology student (MTESOMTS). The instrument was face and content validated by three experts: two in the field of Business Education and one in Measurement and Evaluation all in the Faculty of Education, Rivers State University. The reliability was computed using Cronbach Alpha formula which yielded a reliability coefficient of 0.87. The statistical tools used to answer the research question were the Mean and Standard Deviation while, t-test statistics was used to test the hypotheses at 0.05 level of significance. The study found out moderate extent of adequacy and utilization of modern technologies for teaching and learning by Office Management Technology Students for employability skill acquisition in Rivers State Universities. The researchers recommended amongst others that efforts of government and stakeholders in education should be intensified but findings revealed moderate adequacy of modern technologies for effective teaching and instructional delivery of Office management and technology courses in Rivers State Universities. The study also revealed adequate cognitive and practical or professional deliveries of lectures to Office management and*

*technology students in Rivers State Universities to help them acquire employability skills. This could enable students secure employment and sustain it.*

**Keywords:** Modern Technology, Employability Skills, Office Management and Technology Students.



## **Introduction**

The emergence of technological advancement and the migration from analog to digital resulted to an increase in the production and utilization of electronic gadgets, Computers, Information and Communication devices or high-tech equipments such as: high definition television sets, wireless electronic devices, electronic cameras and digital recording devices, unmanned vehicles and carriers (drones), virtual reality gadgets and artificial intelligence (AI) amongst other emerging technologies. The context of this study does not refer to building of rockets, space X, robotics and other sophisticated scientific exploration equipments, modern technology refers to the difference between dependency and independence of individuals or group of persons in a globalized environment of work. Similarly, the uses of modern or simplified technologies, equipments, gadgets or platforms are fast becoming an integral part of daily life. These technologies guaranteed safety, good health, happiness, satisfaction, efficiency and effectiveness of an individual, group or team working in an organization (Adebayo, 2019).

Office Management and Technology is an integral part of Business Education programme in Nigeria. The programme provides skills and competences to graduates of this programme. Umoru (2019) opined that students are educated or guided through carefully planned experiences that offer them the opportunity to master the knowledge, skills, competences and attitudes needed; not only to succeed in academics but also to have equal opportunity in life. Nevertheless, provision, availability and utilization of modern technologies noted for high speed, easy to use, efficient, fast connectivity for communications, receiving responses from people remotely and real time visuals among other usefulness. These empowered users to have control and unhindered access to global audience. Modern technologies also refers to innovations that could ensure that users receives faster, better, efficient, effective social changes built for specific functions and premised upon benefits such as: improved level of safety, choice of options or platforms, connectivity, data management, information sharing, smart office, real time virtual, entertainment, job satisfaction amongst many others. Therefore it is safe to infer that the future holds wonderful opportunities for students and graduates who are not technologically allergic and are willing to learn or use modern technologies; like smart phones, tablets, computers, automated office work space, consoles, electronic reclining equipments, artificial intelligence, 3D printers, office robotics amongst many others.

Hence, offices or work spaces were categorized based on the skills required and various fields of expertise in life. Examples are: educational, entrepreneurial, production or manufacturing, medical, construction or civil works, communications, transportation, energy, power amongst others. Amesi (2015) posited that innovation mean ‘a new way of doing something’. It may refer to incremental, radical, technological and revolutionary changes in thinking, product, processes or Business organizations. Thus, modern technologies paved way for distinction between invention, idea manifestation and successful application of innovativeness that could lead to efficiency, effectiveness of individuals, group or an organization. Meanwhile, employability is the ability to gain initial employment, maintain employment or obtain new employment (as the case may be). Thus, employability is having a set of skills, knowledge, training, understanding and personal attributes capable of getting and keeping a fulfilling work (Wiki, 2020). Duszynski (2021) viewed employability skills as a term for a set of highly desirable and transferable skills that turns an individual into an attractive candidate or employee. Employability skills remain paramount because the labour market is keenly competitive and employers are looking for graduate students who are flexible; that take initiative and have ability to understand diverse tasks in different environment of work. Employable graduates passed through a system in which they are exposed to problem-based learning approaches and hands-on trainings to acquire the following skills: Communication, problem solving, adaptability, collaboration, time management, organizational, use of technology, information sharing, interpersonal and leadership skills. Graduates who had developed these skills would be employable (Duszynski, 2021).



Similarly, employability skills could be seen as transferable skills needed by an individual to make him or her suitable and employable. The examples are those basic skills that employers expect every employee to possess alongside job specific technical skills. These skills also were said to be prerequisites for self-employment. These skills are developed during schooling years and further enhanced or improved upon when students graduated from the school. Employability skills are transferable skills that are not specific to a particular job or career path but such skill sets are useful across all employment sectors (Amaewhule, 2014). Employers are looking for skills beyond qualifications and experiences. Although, employers are willing to teach employees specific job skills required; such as how to operate particular machinery, use of computer packages that are very specific to the roles of such employees in the organization. Employers usually wanted to see that prospective employees already have other soft skills before being hired. Thus, getting a job is not a key employability skill; it is just an ability to apply and shine in a job interview. It is important to note also that strong curriculum vitae, good cover letter are not soft skills but they are skills required for employability sake. However, it is eminent for the researchers to state that employability depend on employees' knowledge or what he or she knows, ability to apply what you know or application of skills and attitude or approaches to issues at hand using organizational skills, flexibility, professionalism, use new technologies and commercial awareness amongst others. Umoru (2020) posited that the nature of work all over the world is in a state of perpetual change. This change demands a deliberate emphasis on Office Management and Technology students that could embrace technology as a means of equipping them with life-long skills that are continuously required to make changes in order to improve upon service delivery by Office Management and Technology graduates.

Employability skills are those skills acquired by students and also required by employers; knowledge, understanding and personal attitude needed by an individual employee to make him or her employable or gain employment (Amaewhule, 2014). Thus, employability skills like: communications skills such as verbal, non-verbal communication. listening, emotional intelligence, team work, negotiations, persuasion and influencing skills, conflict resolution and mediation skills, problem-solving, decision making, interpersonal, self-assessment and intrapersonal skills, self-motivation, creative thinking, willingness to learn or personal development and being resilient. All these could guarantee ability to look around and see what is needed, having the will power to deliver using abilities to organize, manage time, trust worthiness, intelligence and conscientiousness. These qualities endeared employees to keep deadlines and deliver without being chased around to do so. Meanwhile, individual abilities to use these skills can help employees contributes to the growth and development of an organization (McQuaid, 2020). McQuaid (2020) Also posited that "Open mind and willingness to embrace new ideas; is probably one of the most useful attributes that an employee can bring to any organization". Therefore, employability is the possession of qualities and competences required by an individual employee to meet the changing needs of employers, customers and thereby providing the platform for the realization of employee' aspirations and potentials at work place. Employability could also mean the development of skills and adaptable workforces in which all those capable of work are encouraged to develop skills, knowledge, technology and adaptability by creating utility, customers social, economic reality and true values to enable them to enter and remain in employment throughout their working years.

Office Management and Technology is a structured programme of study in higher institutions of learning in Nigeria domiciled in the Department of Business Education and Vocational Education, usually at Faculties of Education or Colleges of Education and Polytechnics (Wiki, 2021). The programme must be accredited for studies by the National University Commission (NUC), National Board for Colleges of Education (NBCE) and National Board for Technical Education (NBTE). These boards made office management and technology available in the Universities, Colleges of Education, the Polytechnics and even the commercial, craft and technical colleges. These institutions of learning were meant to train students to acquire skills and competences using knowledge-based innovativeness or modern technologies; which are not tentatively utilized but adequate and up dated



to create excitement, strategic positioning of skillful graduates to become Office managers, Executive Secretary, Administrative Assistants, Facility Managers, Front Desk Officers, Data Entry Specialists and Receptionists amongst many others (Adebayo, 2019).

Office Management and Technology students are expected to graduate from various Universities well equipped with basic skills to become gainfully employed, create employment, pursue further studies or become productive citizens meant to function in an organization to ensure the smooth running of day-to-day activities and also manages a team of administrative or support staff; through organizing meetings, data base management, company events, conferences, seminars, workshops (depending on the responsibilities or demand of the office or position which such employee occupied in an organization). Okiridu and Ngerebo (2010) opined that there seems to be a wrong usage or inappropriate name and designation in the Secretarial profession; where students and graduates of Office Management and Technology or professional secretaries demonstrated high level of ignorance of basic skills, knowledge of the profession and the machines used for service delivery.

Umoru (2019) posited that Curricula responses must be tailored to the needs of the society and businesses. Thus, Curriculum development, teaching and learning ought to be competence-based. While creative thinking remain the key to global competitiveness in the external environment that will enable development of employability skills by Office Management and Technology students in various universities. Therefore, flexible and contemporary teaching methods such as problem-based learning, online teaching and life-long learning ought to be the new trend in Office Management and Technology courses and Business Education generally. However, institutions of higher learning in Nigeria ought to act as a driving force for the development of employability skills by updating the curricula of studies to be in accordance with the changes in the modern environment or work place. Also proactively incorporate the latest trends or modern technologies into institutions for employability skills development of Office Management and Technology Students in various institutions of learning in Nigeria.

Universities in Nigeria today were said to be exposed to modern technologies as a result of globalization. However, there is low demand for professional Office Management and Technology graduates as a result of these challenges; many employment opportunities abound but majority of the graduates remained unemployed in spite of their certification and knowledge acquisition from various universities. There seems to be different challenges militating against the influence of modern technology on students' employability skills acquisition. Although, factors such as: favouritism, nepotism and ethnicity, gratification before and after employment, the use of unqualified employees or wrong candidates caused a mismatch in existing positions or employment may militate against graduates' employability. All these factors may lead to reduction in the chances of Office Management and Technology graduates' employment and subsequent professional practice in Nigeria.

### **Statement of the Problem**

Business organizations in this millennium are fast becoming automated and many employment opportunities available for Office Management and Technology graduates requires efficiency and competences in the use of these modern technologies and machines. It was observed that Office Management and Technology Students are ignorant of basic skills, adequate training and competences required for the profession or the machines used. Meanwhile, notable among these challenges are: insufficient and inadequate provision of teaching and learning facilities, lack of modern technologies and machines required for effective skills acquisition and expected productivity of Office Management and Technology graduates to the economy and the nation at large. However, performances and abilities to perform affect the organization or institutional productivity and the economy at large. Hence, the need for this research work was premised upon inadequacy of modern technologies and employability skills of Office Management and Technology students in Rivers State Universities. Also Graduates' abilities, competences and failure to be suitable for the available employment opportunities, become the focus of the study.



### **Research Questions**

The following research questions were posed to guide the study:

1. To what extent are modern technologies adequate for teaching and learning of Office Management and Technology Courses for employability skills in Rivers State Universities?
2. To what extent are lecturers' competent in the use of modern technologies for teaching Office Management and Technology Courses in Rivers State Universities for employability skills?

### **Hypotheses**

The following hypotheses were formulated and tested at 0.05 level of significance:

1. There is no significant difference in the mean responses of Office Management and Technology Lecturers and Students on modern office technologies adequacy for teaching and learning Office Management and Technology courses for employability skills in Rivers State Universities.
2. There is no significant difference in the mean responses of Office Management and Technology Lecturers and Students on the competences of Office Management and Technology Lecturers in the use of modern technologies for teaching Office Management and Technology courses in Rivers State Universities.

### **Method**

The descriptive research method was adopted for the study. The population of the study consists of 76 Lecturers and Students, made up of all Office Management and Technology Lecturers and students drawn from Rivers State Universities (Rivers State University, Port Harcourt -RSU and Ignatius Ajuru University of Education, Port Harcourt -IAUE). Thus, 7 Office Management and Technology (OMT) Lecturers from the Department of Business Education; domiciled in the Faculty of Education in Rivers State University, 15 Office and Information Management Lecturers (OIM) domiciled in the Faculty of Business Studies in Ignatius Ajuru University of Education. 19 (OMT) Students from RSU and 35 Office and Information Management students of 2020/2021 academic session respectively formed the population of the study. Purposive sampling technique was utilized for the study. Thus, a total of 76 respondents (these consist of 22 Lecturers and 54 students from Rivers State Universities) formed the sample size for the study. The instrument for data collection was a self-structured questionnaire titled: "Modern Technologies and Employability Skills of Office Management and Technology Students in Rivers State Universities (MTESOMTSRSU)". The research instrument consist of section A, B, C, D and E respectively. The instrument provided responses to the four research questions raised with 29 questionnaire items on a 4-point rating scale of Very: High Extent (VHE) = 4 points, High Extent (HE) = 3 points, Moderate Extent (ME) = 2 points, Low Extent (LE) = 1 point used for item 1 – 19 and items 20 - 29 respectively.

The instrument was subjected to face and content validity by three experts (two experts in Business Education and one in Measurement and Evaluation) all in the Faculty of Education, Rivers State University. The validated instrument was subjected to Cronbach Alpha statistical test to determine the reliability of the instrument. The test yielded a coefficient of 0.87. The researchers personally administered the research instrument to all the respondents. The data collected were analyzed using Mean and Standard Deviation to answer the research questions. The four null hypotheses were tested using independent t-test statistics at 0.05 level of significance. The mean responses of respondents and the hypotheses tests were analyzed and presented in the respective tables in the result section of this study. Decision rule: Reject the null hypotheses where the t-calculated is greater than the t-critical or table value; while the null hypotheses were accepted where the t-calculated value is less than the t-critical or table value.

### **Table 1: Population Distribution**



S/N	Institutions	Lecturers OMT/OIM	400 Level Students	Academic Session	Total
1.	Rivers State University	7	19	2020/2021	26
2.	Ignatius Ajuru University of Education	15	35	2020/2021	50
	<b>Total</b>	<b>22</b>	<b>54</b>		<b>76</b>

Source: Departmental Examination Offices, 2021

## Results

**Research Question 1:** To what extent are modern technologies adequate for teaching and learning of Office Management Technology Courses for Employability Skills in Rivers State Universities?

**Table 2: Mean and Standard Deviation on the Adequacy of Modern Technologies for Teaching and Learning of Office Management Courses for Employability Skills**

S/N	Item	RSU X <sub>1</sub> :N=26			IAUE X <sub>2</sub> :N=50			RSU & IAUE COMBINED		
		$\bar{x}$	SD	RMKS	$\bar{x}$	SD	RMKS	$\bar{x}$	SD	RMKS
1.	Air-conditioned or well ventilated OMT computer laboratory	2.96	0.23	ME	3.09	0.32	VHE	3.03	0.28	HE
2.	Computer systems and accessories	3.04	0.25	VHE	3.10	0.33	VHE	3.07	0.29	HE
3.	Internet facilities for browsing	1.27	0.10	LE	1.41	0.08	LE	1.34	0.09	LE
4.	Personal computers or laptops	3.00	0.24	VHE	2.80	0.28	ME	2.90	0.26	ME
5.	e-library	3.15	0.27	VHE	2.80	0.28	ME	2.98	0.28	ME
6.	Demonstration stand or electronic boards	2.31	0.10	ME	2.30	0.21	LE	2.31	0.16	LE
7.	Keyboarding software for instructional delivery	2.38	0.12	ME	2.08	0.18	LE	2.23	0.21	LE
8.	Voice recording machines	1.85	0.01	LE	1.66	0.12	LE	1.76	0.07	LE
9.	Electronic typewriters	1.73	0.07	LE	2.00	0.17	LE	1.87	0.12	LE
10.	Shredding machines	2.50	0.14	ME	1.64	0.18	LE	2.07	0.16	LE
11.	Teleconferencing facilities	2.19	0.08	LE	1.82	0.14	LE	2.01	0.11	LE
12.	Computer chairs and tables	3.04	0.25	VHE	1.96	0.16	LE	2.50	0.21	ME
13.	Steel cabinets	1.77	0.04	LE	2.30	0.21	LE	2.04	0.13	LE
14.	Uninterrupted power supply as support for instructional delivery.	2.12	0.07	LE	1.76	0.13	LE	1.94	0.10	LE
15.	Standby power generating set as support for	1.88	0.06	LE	2.12	0.19	LE	2.00	0.13	LE



	instructional delivery.									
16.	Multimedia projectors	2.46	0.13	ME	1.90	0.15	LE	2.18	0.14	LE
17.	Scanners	2.85	0.21	ME	2.20	0.20	LE	2.53	0.21	ME
18.	Printers	2.96	0.23	ME	2.36	0.22	LE	2.66	0.23	ME
19.	Photocopying machines	3.12	0.27	VHE	1.78	0.14	LE	2.45	0.21	LE
	<b>Grand Mean/SD</b>	<b>2.45</b>	<b>0.15</b>		<b>2.16</b>	<b>0.19</b>		<b>2.31</b>	<b>0.17</b>	<b>LE</b>

Source: Survey Data, 2021

The data presented in Table 2 indicates the adequacy of modern technologies for teaching and learning of OTM courses for employability skills. Air condition or well ventilated OMT computer laboratories, computer system and accessories have very high extent of adequacy. Internet facilities on campus has no low adequacy (lecturers and students rely on personal smart phone connectivity or hotspot). Items number 6-11 indicated low extent of adequacy. While item number 12 indicates moderate extent of adequacy. However, items number 13-16 and 19 indicated low extent of adequacies while items number 17 and 18 indicated moderate extent of adequacy in Rivers State University and Ignatius Ajuru University of Education.

**Research Question 2:** To what extent are lecturers' competent in the use of modern technologies for teaching Office Management and Technology Courses in Rivers State Universities for employability skills?

**Table 3: Mean and Standard Deviation on the Extent of Lecturers' Competences in the Use of Modern Technologies for Effective Teaching Office Management and Technology Courses**

S/N	Item	RSU X <sub>1</sub> :N=26			IAUE X <sub>2</sub> :N=50			RSU & IAUE COMBINED		
		$\bar{x}$	SD	RMKS	$\bar{x}$	SD	RMKS	$\bar{x}$	SD	RMKS
20.	Possession of good communication skills.	3.31	0.48	VHE	2.57	0.31	ME	2.94	0.40	ME
21.	Possession of good keyboarding skills.	3.35	0.49	VHE	2.80	0.34	ME	3.08	0.42	HE
22.	Proficiency in the use of computer software packages for training-the-trainers.	1.77	0.18	LE	1.96	0.22	LE	1.87	0.20	LE
23.	Attendance of institution sponsored trainings, conferences, seminars, workshops on use of modern technologies in OMT curriculum contents.	2.12	0.25	ME	1.96	0.22	LE	2.04	0.24	LE
24.	Attendance of self-sponsored conferences, seminars and workshops on use of modern technologies in OMT content deliveries.	2.12	0.25	ME	1.82	0.20	LE	1.97	0.23	LE



25.	Ability to acquire any additional or advance professional training on OMT programme deliveries.	1.73	0.17	LE	1.70	0.18	LE	1.72	0.18	LE
26.	Proficiency in the use and operations of modern technology for instructional delivery.	2.96	0.42	ME	2.20	0.26	ME	2.58	0.34	ME
27.	Lecturers are competent in the use of self-developed instructional software packages online.	1.81	0.19	LE	1.78	0.19	LE	1.80	0.19	LE
28.	Lecturers have good knowledge of web and graphic designs.	1.81	0.19	LE	1.80	0.20	LE	1.81	0.20	LE
29.	Lecturers require regular training and retraining.	1.81	0.19	LE	1.72	0.18	LE	1.77	0.19	LE
<b>Grand Mean/SD</b>		<b>2.28</b>	<b>0.28</b>		<b>2.03</b>	<b>0.23</b>		<b>2.16</b>	<b>0.26</b>	<b>LE</b>

**Source:** Survey Data, 2021

The data presented in Table 3 indicates the extent of lecturers' competencies in use of modern technologies for effective teaching of OTM courses. Lecturers were seen to communicate moderately with high extent of keyboarding skills. While item number 21 indicated the high extent of lecturers' competencies. However, items number 22-25, 27-29 indicated low extent but item number 26 was seen as moderate extent of lecturers' proficiency in the use and operation of modern technology for instructional delivery of OTM courses.

**Hypothesis 1:** There is no significant difference in the mean responses of Office Management and Technology Lecturers and Students on how adequate is the modern technologies for teaching and learning of Office Management and Technology Courses for Employability skills in Rivers State Universities.



**Table 4: Results of t-test Statistics of Significance on the Adequacy of Modern Technologies for Teaching and Learning of Office Management and Technology Courses for Employability Skills in Rivers State Universities**

Institution	N	$\bar{x}$	SD	DF	SE	Level of Sig.	t-cal	t-crit	Decision
Rivers State University	26	2.45	0.15	74	0.04	0.05	0.10	1.98	Accepted
Ignatius Ajuru University of Education	50	2.16	0.19						

**Source:** *Survey Data, 2021*

The analysis in hypothesis one revealed the t-test of difference between lecturers and students on the adequacy of instructional facilities utilized for effective teaching and learning of Office Management and Technology students' employability skills in Rivers State Universities. The calculated value of 0.10 is less than T-table value of 1.98, degree of freedom 74, and 0.05 level of significance. The Null hypothesis was accepted. This means that there is no significant difference in the mean responses of lecturers and students on adequacy of instructional facilities utilized by lecturers for effective teaching of employability skills in Rivers State Universities.

**Hypothesis 2:** There is no significant difference in the mean responses of Office Management and Technology Lecturers and Students on how competent are the Lecturers in the use of modern technologies for teaching Office Management and Technology Courses in Rivers State Universities.

**Table 5: Results of t-test Statistics of Significance on how Competent Lecturers are in the Use of Modern Technologies for Teaching Office Management and Technology Courses in Rivers State Universities**

Institution	N	$\bar{x}$	SD	DF	SE	Level of Sig.	t-cal	t-crit	Decision
Rivers State University	26	2.28	0.28	74	0.02	0.05	0.11	1.98	Accepted
Ignatius Ajuru University of Education	50	2.03	0.23						

**Source:** *Survey Data, 2021*

The analysis in hypothesis two revealed t-test of difference between Office Management and Technology Lecturers and Students on how competent the lecturers are in teaching students using modern technology driven content delivery of instructions in Rivers State University. The t-calculated of 0.11 is less than t-critical or table value of 1.98, degree of freedom is 74 and 0.05 level of significance. The null hypothesis was accepted. This means that there is no significant difference in the mean responses of Office Management and Technology Lecturers and Students on how competent were the lecturers in teaching the students; using modern technology driven contents delivery of instructions for employability skills in Rivers State Universities.

**Discussion of Findings**

Findings from research question one indicates that the respondents considered well air-conditioned or ventilated computer laboratory, computer systems and accessories, internet facilities, e-library, electronic board, dictating machines, electric typewriters, teleconferencing facilities, keyboarding software for instructional delivery, multimedia projectors, uninterrupted power supply and other hardware or machines as adequate instructional facilities to be utilized for effective teaching and learning of Office management and technology courses in Rivers State Universities. This finding is in agreement with the views of Iwuoha and Ebenezer-Nwokeji (2018) both opined that innovative items



are required for teaching and learning of office management and technology courses in Tertiary institutions. They added that computer laboratories and workshops ought to be equipped with all necessary technologies and office machines that could enable office management and technology students upgrade themselves on the use of modern technologies and office innovations. Agreeing with Iwuoha and Ebenezer-Nwokeji, Nnaji and Okoro (2019) posited that office management and technology students were adequate in acquisition of practical skills but deficient in information communication technology and modern technologies application skills.

In agreement with Iwuoha, Ebenezer-Nwokeji, Nnaji, Okoro, Ejeka and Ebenezer-Nwokeji (2019) supported that adequate exposure of students to modern technologies guaranteed ability to: easily create, share and maintain data and files electronically. This could also enhance effective time management for decision making in an organization where such office management and technology students may be required. The researcher in agreement with Iwuoha, Ebenezer-Nwokeji; Nnaji, Okoro and Ejeka deduced that office management and technology students who were taught with modern technologies to acquire employability skills are in high demand and also considered valuable human assets to any organization or company because employability skills are those basic skills set necessary for getting, keeping and doing well on the job.

The result of the hypothesis one proved that there is no significant difference in the mean responses of Lecturers and students on adequacy of instructional facilities and its utilization for effective teaching employability skills by office management and technology lecturers in Rivers State Universities. Although, the students responded that they acquired basic academic and personal literacy skills for advancement but the hypothesis tested proved not significant. This means that the level of employability skills acquisition by office technology students in Rivers State Universities is not adequate. Thus, efforts ought to be intensified on the provision of adequate modern technology facilities for effective instructional delivery. Because employers in today's work place are looking for employees that is reliable, effective and efficient in the use of modern technologies to solve problems and deliver results on time.

Findings from research question two proved that respondents considered possession of good communications skills, keyboarding skills, proficiency in computer applications for teaching sponsored trainings, seminars and workshops on the use of modern technologies in office management and technology curriculum content delivery, lecturers good knowledge of web and graphics competency in the use of instructional softwares were not adequate in this finding.

In agreement with the views of Adeleye and Orheruata (2019) who revealed that some office management and technology lecturers possessed inadequate competencies and skills coupled with obsolete teaching facilities and poor funding of office management and technology programmes. Aninye-Ramor (2019) differ in opinion and revealed that office management and technology graduate employees in some establishments were seen to be adequate in terms of managerial functions or skills in information communication technology (ICT) skills were seen to be impressive as their performance on the job indicated. However, Azih and Ama (2019) also differ from the views of Adeleye, Orheruata and Aninye-Ramor in their assessment of competencies required in modern office; as a result of advancement in technology. Thus, office employees required higher level of competencies; such as adaptive thinking, problem-solving, collaborations, competency, experiences and the use of modern technologies due to technological advancements and new normal in business organizations globally.

In agreement with the views of Aninye-Ramor, Azih and Ama, Fadare (2018) stated that any failure of office management and technology students and graduates to become office managers, administrators, assistants, or facilities managers is disheartening and embarrassing to observe and it is still not yet realized in today's work place. Premised upon this statement, Adeleye and Orheruata agreed that the efforts to improve training of office automations in many government offices have not been successful. Thus, a wide gap exists between present knowledge acquired and the knowledge required of office management and technology students to researcher viewed that office management and technology lecturers are competent in the use of modern technologies for instructional deliveries



of office management and technology courses; students 'learning will be enhanced and they will perform better on the job rather than blaming others when things go wrong; because of their ability to acquire basic employability skills.

The results on hypothesis two tested indicates that there is no significant difference in the mean responses of office management and technology lecturers and students on how competent were the lecturers in teaching; using modern technology driven content delivery of instructions in Rivers State Universities. A random examination of office management and technology students in Rivers State Universities revealed that lecturers need to dedicate their time to re-training efforts to enable them impart knowledge and employability skills that students required to secure a job. Thus, adequate cognitive and practical or professional deliveries of lectures to students could provide solutions to poor job performances and failure to secure employment by office management and technology students after graduation from the Universities.

### **Conclusion**

Based on the findings of this study, the researcher established that modern technologies and employability skills development among office management and technology students is important. The use of modern technologies with the guidance of lecturers can help students acquire employability skills required by employers in work places. Modern technologies adequacy and utilization by office management and technology lecturers in Rivers State Universities has gone below expectations of modern work places or employers.

Conclusively, the study shows that office management and technology students in Rivers State Universities acquire basic cognitive and affective qualities and skills to an extent but these skills acquired cannot be effectively utilized or translated to becoming abilities to secure employment and keep it. This is the premise upon which modern technologies and office management and technology lecturers are indispensable and desirable for teaching employability skills effectively and also to prepare office management and technology students for any possible employment opportunities in the work place.

### **Recommendations**

Based on the findings and conclusion of this study, the researchers recommended the following:

1. Efforts of government and stakeholders in education should be intensified on the provision of adequate modern technologies for effective teaching or instructional delivery of office management and technology courses in Rivers State Universities.
2. Adequate cognitive and practical or professional deliveries of lectures to office management and technology students in Rivers State Universities to help them acquire employability skills. This could enable students secure employment and sustain it.

### **References**

- Adebayo, A.M. (2019). Training of Office Technology and Management Education Students for Job Demands and Self-Employment in Ekiti State. *Journal of Advances in Social Science and Humanities*, JASSH 5(4), 703-713. Doi:10-15520/jassh54428
- Adeleye, E.O. & Orheruate, J.E. (2019). Assessment of Quality of Office Technology and Management (OTM) Programmes in Higher Institutions in Borno and Yobe States.
- Amaewhule, W.A. (2014). *A Guide to Entrepreneurship Development: Through Reflections on the World of Work*. Owerri: Odesaa Educational Books (Nigeria) Publishers.
- Amesi, J. (2015). *Theory and Practice of Entrepreneurship: A Guide for Scholars*. Lagos: Divinestone Publications.
- Aninye-Ranor, C.L. (2019). Evaluation of OTM Graduates' Job Performance in Selected Government Establishments in Delta State. Association of Business Educators (ABEN) Conference Proceeding Vol. 6(1), Oct. 2019: 418-424.
- Azih, N. & Ama, F.N. (2019). Assessment of Higher Level Competences Required in Technology Driven Offices. Association of Business Educators (ABEN) Conference Proceeding Vol. 6(1), Oct. 2019: 720-729.



- Chigbuson, A.J., Timya, N. & Nguwap, S.T. (2018). Information and Communication Technology Skills Needed by Office Technology and Management Students for Self Sustenance and National Development. *Nigerian Journal of Business Education, NJBE*, 5(2) Oct, 2018: 206-213.
- Dambo, B.I. & Wokocha, K. D. (2019). Assessing the Integration of Office Technologies in Rivers State Public Service Administration. *ABEN Conference Proceedings Vol. 6(1) Oct. 2019: 699-707.*
- Duszynski, M. (2021). Employability Skills Defined. Available on [www.zety.com](http://www.zety.com) Retrieved on 30/01/2021.
- Fakorede, D.L. & Oba-Rasak, B. (2019). Influence of the Availability and Usability of New Office Technologies on Office Managers' Productivity (A Case Study of Ibadan Electricity Distribution Company) *ABEN – Proceedings Vol. 6(1) Oct. 2019: 585-597.*
- Iwuoha, C. & Ebenezer-Nwokeji, C. (2018). Impact of Teaching Innovations on the Academic Performance of Office Technology and Management Undergraduates in Tertiary Institutions in Imo State. *Nigerian Journal of Business Education NJBE*, 5(2) Oct. 2018: 150-156.
- McQuaid, R.W. (2020). An Open Mind and a Willingness to Embrace New Ideas: Concept of Employability: Urban Studies. Vol. 42(2) Feb. 2015: 197-219. Available on <https://www.skillsyouneed.com> Retrieved on 19/11/2020.
- Nnaji, F.O. & Okoro, F. (2019). Determination of the Adequacy of Practice Element of Office Technology and Management Programme as Perceived by Graduate Secretaries in Taraba State. *Association of Business Educator (ABEN) Conference Proceedings Vol. 6(1) Oct. 2019: 72-80.*
- Okiridu, S.F. & Ngerebo, T. (2010). Modern Technologies and the Acquisition of Secretarial Skills in Nigerian Tertiary Institutions: A Case Study of Rivers State University of Science and Technology, Port Harcourt. Available on [www.researchgate.net](http://www.researchgate.net). Retrieved on 16/01/2021.
- Oyedele, J.F. & Fadare, G.O. (2018). New Technologies in Teaching and Learning of Office Technology and Management. *Nigerian Journal of Business Education*, 5(2) Oct. 2018: 264-273.
- Umoru, T.A. (2019). *Mandate of Business Education in Nigeria*. Association of Business Educator (ABEN). Ilorin: Integrity Publications.
- Wiki (2020). Employability Skills Development-ASDAN. Available on [www.asdan.org.uk](http://www.asdan.org.uk)>programmes. Retrieved on 26/12/2020.
- Wiki (2021). Employability Skills. Available on [www.m.wikipedia.org](http://www.m.wikipedia.org)>wiki> employability. Retrieved on 14/01/2021.



## INTEGRATION OF BLENDED LEARNING AS A MEASURE FOR FACILITATING INSTRUCTION IN THE TERTIARY BUSINESS EDUCATION PROGRAMME IN THE NEW NORMAL IN DELTA STATE

<sup>1</sup>ENWEMASOR, BEATRICE CHUKWUNONYELIM

[bettykings2019\(S\).gmail.com](mailto:bettykings2019(S).gmail.com) Mobile:  
08032360085,08071503870

<sup>2</sup>CHARLES-ODILI, VERONICA NNAMAKA

Office Technology & Management Education Dept.  
Federal College Of Education (Tech), Asaba  
[veradike2@gmail.com](mailto:veradike2@gmail.com)  
Mobile: 08034750805

### Abstract

*The study investigated the integration of blended learning as a measure for facilitating instruction in the tertiary business education programme in the new normal in Delta State. Two research questions guided the study and two hypotheses were tested at 0.05 level of significance. Descriptive survey research design was adopted for the study. The population of the study comprised 109 business educators from five tertiary institutions in Anambra State. The instrument for data collection was a questionnaire. The instrument was subject to a pilot test on 20 business educators in Anambra State. The application of the Cronbach Alpha reliability test on the returned data yielded coefficient values of 0.85 and 0.83 for clusters B1 and B2 respectively with an overall reliability coefficient value of 0.84. Data collected from the respondents were analyzed using mean, standard deviation and t-test. Findings revealed that the benefits of integrating blended learning as a measure for facilitating instruction in the tertiary business education programme in the new normal in Delta State are that it offers a platform to facilitate greater interactivity between students, helps students achieve higher and more meaningful levels of learning, allows students practice the ability to project themselves socially, makes global networks of information available for learners and creates opportunity for collaboration. Findings revealed that the measures for facilitating instruction in the blended learning environment in the business education programme in the new normal in Delta State include creating a detailed syllabus with documented learning outcomes, creating the right blend of activities for deep and meaningful learning, offering students opportunity to learn together, allowing open communication between business educators and students and promoting inquiry based learning in the business education programme among others. The result of the hypotheses are the years of the experience of the respondents did not significantly influence their mean ratings. It was recommended that Government at all levels in conjunction with the administrators of the business education programme should organize a comprehensive review of the business education curriculum so as to allow for flexibility and the application of the blended learning approach so as to scale the challenges posed by the Covid-19 pandemic.*

**Keywords:** Integration, Blended Learning, Instruction, Business Education



## **Introduction**

The advent of the Covid-19 virus has brought about disruptions in all sectors of the economy globally. The COVID-19 pandemic has affected every aspect of human endeavour and none more so than education. According to the World Bank (2020) report, the Covid-19 pandemic has claimed millions of lives, disrupted schooling and training, and put economies around the world, most especially tertiary education. Naveed (2020) noted that as a result of the pandemic, over 1.725 billion learners were not receiving any education worldwide. As many countries attempt to come out of the lockdown imposed as a necessity by the pandemic, it is clear that "business as usual" will no longer be a tenable proposition (Naveed). This has resulted in many educational institutions advocating for a new system of education that would mitigate the disruptions resulting from the pandemic. Many versions of the "new normal" are being tried, experimented, and disseminated as the world slowly re-emerges, and education is leading the pack in defining the new normal. In the business education programme in public tertiary institutions in Nigeria, there has been lots of discussion surrounding the appropriate teaching and learning system that would best suit the programme.

Business education is the embodiment of vocational experience and skills needed for jobs and development in a wide variety of business professions. Business education programme is a tertiary education program that gives students the training and skills they need to start and run a business. Onokpaunu (2016) defined business education as an aspect of general education that prepares students' for employment and advancement in entrepreneurial venturing, teaching profession and other office occupations. Obiete, Nwazor and Vin-Mbah (2015) stated that business education programme is unique because of its ability to equip its recipients with skills to function independently as self-employed and employers of labour. The objectives of business education include among others, providing opportunity for practice job preparation or vocation studies for students in order to make them render effective and efficient services in office, distributive and service occupations and preparing students based on interests and aptitudes with the skills, knowledge and attitudes needed to enter into a business occupation, advance and profit in it. However, it is a worry that the pandemic has impacted on the ability of the business education programme to provide quality instructions that will facilitate the development of office and entrepreneurial skills among students.

This has influenced the calls by business educators and other education experts to provide educational experiences for students through the application of technology (Naveed, 2020). Adeoye, Adanikin and Adanikin (2020) noted that the application of technology will not only help to facilitate instruction and distance learning, it will make room for individualized learning experiences that will promote skills acquisition among business education students. The use of the Internet has been suggested as the greatest tool for transporting learning contents while the actual delivery has been achieved using all various forms of learning management systems, custom developed platforms and standalone applications (Naveed, 2020). However, in Nigeria, issues related to access to technology and internet as well as the cost of internet have posed a measure challenge to the full integration of technology in the tertiary business education programme. In Delta state just like in other states in Nigeria, problems with electrical supply, online access, insufficient bandwidth, and a lack of network capacity to handle rising data traffic seem to pose a huge challenge to instructional delivery during the pandemic. According to the International Telecommunication Union (ITU) and the United \* Nations Educational, Scientific and Cultural Organization (UNESCO), (2020) students and teachers bore the majority of the higher data use costs incurred for distance learning. These disruptions seem to have informed the calls for the adoption of blended learning as a tool for facilitating instruction in the business education programme.

Blended learning is one of the contemporary trends of education and one of the new trends of the teacher in the twenty first century. Blended learning is described as an educational method in which more than one means is used for transmitting knowledge and experience to learners to achieve the best of the learning outputs. Nisreen (2016) described blended learning as a way of learning aiming to



help the learner achieve the targeted learning outcomes through the blending between the forms of traditional education and e-learning with its patterns inside and outside the classroom. Al-Rimawi (2016) stated that blended learning combines the advantages of e-learning and the benefits of classroom education. It is based on the integration between the traditional learning and e-learning.

Ismail (2009) defined blended learning as the employment of technological innovations in blending the two methods of education face-to-face as well as distance education to bring about an interaction between the teacher or a mentor with learners face-to-face through these innovations, which are not required to have specific electronic tools or specific quality with the availability of learning sources linked with content and learning activities. Hannon and Macken (2014) opined that the benefits of blended learning include: making computers and local and global networks of information available for learners; developing teachers' roles as leaders and mentors to their students in terms of their expertise in computers and networks of local and international information, in addition to being producers rather than importers of knowledge; enabling learning groups to use multimedia, e-mail, virtual libraries, and all internet data collaborative software; having the ability to combine different possibilities for different schools and universities in productive ways and overcoming the problem of lasting change in the content of educational materials. Cleveland-Innes and Wilton (2018) suggested the following measures as ways for facilitating instruction in blended learning environments. These include among others, one-on-one interaction between teacher and student as well as communication to the whole group and between students; availing students the opportunity to reflect during the course; providing opportunity to learn together and even teach each other in a peer-teaching setting. In addition, personality variable relating to years of experience could affect business educators' ability to utilize blended learning. However, these views are hypothetical and have not been empirically proven to be the case among business educators in Delta State. It is against this backdrop that this study investigated the integration of blended learning as a measure for facilitating instruction in the tertiary business education programme in the new normal in Delta State.

### **Statement of the Problem**

The rapid spread of the Covid-19 virus heightened by the huge number of deaths led to the hurried closure of educational institutions. The outbreak of the Covid-19 virus has presented a huge hurdle to the quality of instruction in business education programme in tertiary institutions. The use of technology for instruction has been suggested as a measure for ensuring quality learning whilst minimizing the spread of the virus. However, the use of technology seems to have been poorly implemented in the business education programme. This is because of issues related to lack of access to technology, poor electricity and high cost of technology. These challenges seem to impact on the ability of business education to provide quality instruction in the business education programme. The researcher is worried if the application of technology as a solution to improving instruction in the business education programme in the new normal?

### **Research Questions**

The following research questions guided the study:

1. What are the benefits of adopting blended learning as a measure for facilitating instruction in the tertiary business education programme in the new normal in Delta State?
2. What are the measures for facilitating instruction in the blended learning environment in the business education programme in the new normal in Delta State?

### **Hypotheses**

The following hypotheses were tested at 0.05 level of significance:



1. There is no significant difference in mean ratings of experienced and less experienced business educators on the benefits of integrating blended learning as a measure for facilitating instruction in the tertiary business education programme in the new normal in Delta State.
2. There is no significant difference in mean ratings of experienced and less experienced business educators on the measures for facilitating instruction in the blended learning environment in the business education programme in the new normal in Delta State.

### **Method**

The descriptive survey research design was adopted for the study. The study was carried out in Delta State. The population of the study comprised 108 business educators in tertiary institutions in the State. The instrument was a structured questionnaire developed by the researcher. The instrument was titled "Questionnaire on Blended Learning as A Measure for Facilitating Instruction in The Tertiary Business Education Programme in the New Normal (QBLMFITBEPNN)". The instrument was structured on a 4-point rating scale of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (DS). The instrument was validated by three experts in the School of Business Education, Federal College of Education (Technical), Asaba, Delta State. Further the instrument was subject to a pilot test on 10 business educators in Anambra State. The application of the Cronbach Alpha reliability test on the returned data yielded coefficient values of 0.85 and 0.83 for clusters B1 and B2 respectively with an overall reliability coefficient value of 0.84. Data collected from the respondents were analyzed using mean, standard deviation and t-test. The mean value was used to answer the research questions while the standard deviation was used to ascertain the homogeneity or otherwise of the respondents' ratings. In analyzing the mean, any item with mean score above 2.50 agree below the mean score 2.50 disagree. For the hypotheses, t-test was used to test all the null hypotheses at 0.05 level of significance. Where the calculated t value was less than the critical value of t, it meant that the variable did not significantly affect respondents' mean ratings and the hypothesis was accepted. Conversely, where the calculated t value was equal to or greater than the critical t value, it meant that the variable had a significant effect on the respondents' mean ratings and the hypothesis was rejected.

### **Results**

#### **Research Question 1**

What are the benefits of integrating blended learning as a measure for facilitating instruction in the tertiary business education programme in the new normal in Delta State?

**Table 1: Respondents Mean Ratings on the Benefits of Integrating Blended Learning a Measure for Facilitating Instruction in the Tertiary Business Education Programme in the New Normal**

S/No.	Benefits of adopting blended learning include:	Mean	SD	Remarks
1.	Creates opportunity for collaboration	3.22	0.86	Agree
2.	Offers a platform to facilitate greater interactivity Between students	3.43	0.94	Agree
3.	Offers a platform to facilitate greater interactivity Between students and business educators	3.16	0.78	Agree
4.	Allows for learning anytime and anywhere	3.12	0.74	Agree
5.	Allows Students practice the ability to project themselves socially	3.33	0.85	Agree



6.	Makes global networks of information available for Learners	3.28	0.88	Agree
7.	Develops teachers' roles as leaders and mentors to their students in terms of their expertise in Computers	3.11	0.77	Agree
8.	Offers opportunity to combine different possibilities for business education in different tertiary institutions in productive ways	3.08	0.78	Agree
9.	Helps students achieve higher and more meaningful levels of learning.	3.36	0.89	Agree
10.	It promotes the ease of monitoring of teaching and learning activities	3.20	0.80	Agree
	Cluster Mean	3.22		Agree

Data in Table 1 reveal that all the items, achieved mean ratings ranging between 2.65 3.08 and 3.43 and standard deviations ranging between 0.74 to 0.94. This means that they are all benefits of integrating blended learning as a measure for facilitating instruction in the tertiary business education programme in the new normal. The cluster mean of 3.22 indicates that the benefits of integrating blended learning as a measure for facilitating instruction in the tertiary business education programme in the new normal in Delta State are that it offers a platform to facilitate greater interactivity between students, helps students achieve higher and more meaningful levels of learning, allows students practice the ability to project themselves socially, makes global networks of information available for learners and creates opportunity for collaboration.

### Research Question 2

What are the measures for facilitating instruction in the blended learning environment in the business education programme in the new normal in Delta State?

**Table 2:** Respondents Mean Ratings on the Measures for Facilitating Instruction in the blended learning system in the Tertiary Business Education Programme in the New Normal

S/No	Measures for facilitating instruction in the blended learning include	Mean	SD	Remark
1.	Focus on technology that will promote engagement among students	3.31	0.75	Agree
2.	Carefully selecting the technology to match with learning activities that best suit students needs	3.11	0.88	Agree
3.	Ensure activity monitoring by the business educator through electronic assignment submission	3.08	0.73	Agree
4.	Ensure well-feedback balanced with supported learner independence	3.30	0.79	Agree
5.	Provide opportunities for students adjust to the online learning environment	3.23	0.78	Agree to



6.	Create the rightblend of activities for deep, meaningful learning	3.45	0.81	Agree
7.	Create a detailed syllabus with documented learning outcomes	3.50	0.79	Agree
8.	Allow for open communication between business educators and students	3.38	0.74	Agree
9.	Provide students opportunity to reflect during the course	3.25	0.81	Agree
10.	Offer students opportunity to learn together	3.43	0.72	Agree
11.	Create a community of business educators where peer teaching is promoted	3.28	0.83	Agree
12.	Promoting inquiry based learning in the business education programme	3.34	0.86	Agree
13.	Ensure that inquiry leads to resolution	3.20	0.82	Agree
14.	Ensure assessment is congruent with intended learning outcomes	3.26	0.84	Agree

**Cluster Mean3.28Agree**

Data in Table 2 reveal that all the items, achieved mean ratings ranging between 2.65 3.08 and 3.45 and standard deviations ranging between 0.72 to 0.88.This means that they are all measures for facilitating instruction in the blended learning environment in the business education programme in the new normal. The cluster mean of 3.28 indicates that the measures for facilitating instruction in the blended learning environment in the business education programme in the new normal in Delta State include creating a detailed syllabus with documented learning outcomes,creating the rightblend of activities for deep and meaningfullearning,offeringstudentsOpportunity to learn together, allowing open communication between business educators and students and promoting inquiry based learning in the business education programme among others.

**Hypothesis 1**

There is no significant difference in mean ratings of experienced and less experienced business educators on the benefits of integrating blended learning as a measure for facilitating instruction in the tertiary business education programme in the new normal in Delta State.

**Table 3: Summary of t-test Analysis of Experienced and Less Experienced Business Educators on the Benefits of Integrating Blended Learning as a Measure for Facilitating Instruction in the Tertiary Business Education Programme in the New Normal**

Status	N	X	SD	df	cal. t	t-crit. *	Decision
Experienced Bus. Edu.	58	3.18	0.84	90	1.96NS		
Less Experienced Bus. Ed.	32	3.24	0.78				
Total	90						



Result in Table 3 show that experienced business educators had a mean rating of 3.18 and standard deviation of 0.84, while the less experienced business educators had a mean rating of 3.24 and standard deviation of 0.78. These yielded a calculated t-value of 0.74 at 98 degrees of freedom. Since the calculated t-value of 0.74 is less than the critical t-value of 1.96, the null hypothesis is accepted. This means that there is no significant difference in mean ratings of experienced and less experienced business educators on the benefits of integrating blended learning as a measure for facilitating instruction in the tertiary business education programme in the new normal in Delta State.

**Hypothesis 2**

There is no significant difference in mean ratings of experienced and less experienced business educators on the measures for facilitating instruction in the blended learning environment in the business education programme in the new normal in Delta State.

**Table 4: Summary of t-test Analysis of Experienced and Less Experienced Business Educators on the Measures for Facilitating Instruction in the Blended Learning Environment in the Tertiary Business Education Programme in the New Normal**

Status	N	XSD	df	cal. t	t-crit.	Decision
Experienced Bus. Edu.	58	3.21	0.76			
Less Experienced Bus. Ed.	32	3.18	0.74	0.36	1.96	NS
Total	90					

Result in Table 34 show that experienced business educators had a mean rating of 3.21 and standard deviation of 0.76, while the less experienced business educators had a mean rating of 3.18 and standard deviation of 0.74. These yielded a calculated t-value of 0.36 at 98 degrees of freedom. Since the calculated t-value of 0.36 is less than the critical t-value of 1.96, the null hypothesis is accepted. This means that there is no significant difference in mean ratings of experienced and less experienced business educators on the measures for facilitating instruction in the blended learning environment in the business education programme in the new normal in Delta State.

**Discussion of Findings**

Findings of the study revealed that the benefits of integrating blended learning as a measure for facilitating instruction in the tertiary business education programme in the new normal in Delta State are that it offers a platform to facilitate greater interactivity between students, helps students achieve higher and more meaningful levels of learning, allows students practice the ability to project Themselves socially, makes global networks of information available for learners and creates opportunity for collaboration. This is in agreement with traditional education and e-learning with its patterns inside and outside the classroom. Al-Rimawi (2016) who stated that blended learning combines the advantages of e-learning and the benefits of classroom education. It is based on the integration between the traditional learning and e-learning. According to Hannon and Macken(2014), blended learning has enormous advantage in that it makes information readily available to students through the internet. Hannon and Macken further averred that blended offer teachers opportunity for mentorship of students as well as provides opportunities for flexibility in learning. Pappas (2015) suggested that distracted or unmotivated Learners benefit from the active collaborative synchronous experience in a blended



learning system. Also, Pappas opined that self-guided learners may be in less need of remediation but canals benefit from the higher level of immediate support and direction offered in synchronous learning experiences. Further findings revealed that no significant difference in mean ratings of experienced and less experienced business educators on the measures for facilitating instruction in the blended learning environment in the business education programme in the new normal in Delta State. This shows that experienced and less experienced business educators agree that the integration of blended learning would facilitate instruction in the tertiary business education programme in the new normal in Delta State. This is in agreement with Nisreen (2016) who held that blended learning would help tertiary education programme to deal with the disruption posed by the Covid-19 pandemic.

Findings of the study revealed that the measures for facilitating instruction in the blended learning environment in the business education programme in the new normal in Delta State include creating a detailed syllabus with documented learning outcomes, creating the right blend of activities for deep and meaningful learning, offering students opportunity to learn together, allowing open communication between business educators and students and promoting inquiry based learning in the business education programme among others. This finding is in agreement with Beatly (2016) who posited that most effective blended learning design offers a learner-centered approach that is personalizable and accessible, with the best designs integrating a range of learning opportunities that allow learners more control over their form a land informal learning actions. According to Cleveland-Innes and Wilton (2018), for educators to successfully integrate blended learning, they need to ensure open communication is allowed, avail students the opportunity to reflect during the course, provide opportunity to learn together and even teach each other in a peer-teaching setting. Furthermore, findings revealed no significant difference in the mean ratings of experienced and less experienced business educators on the measures for facilitating instruction in the blended learning environment in the business education programme in the new normal in Delta State. This shows that experienced and less experienced business educators agree that the measures espoused above would facilitate instruction in the blended learning environment in the business education programme in the new normal. This is in line with Cleveland-Innes and Wilton (2018) who suggested that successful integration of blended learning require the application of certain principles like open communication, promoting enquiry based learning and carefully planning syllabus in the business education programme.

## **Conclusion**

Based on the findings of the study, the researcher concludes that blended learning is a veritable tool for facilitating instruction in the tertiary business education programme in the new normal in Delta State. The researcher is of the view that providing more effective learning experiences increases access and flexibility as well as preventing the surge in the rate of transmission of Covid-19. It is likely that the business education programme should provide a blend of face-to-face and computer mediated experiences.

## **Recommendations**

Based on the findings of the study, the researcher makes the following recommendations:

1. Government in conjunction with the administrators of the business education programme should organize a comprehensive review of the business education curriculum so as to allow for flexibility and the application of the blended learning approach so as to scale the challenges posed by the Covid-19 pandemic.
2. The administrators should organize in-service training programmes like conferences, seminars and workshops that are targeted at improving business educators' skills and competencies in blending their teaching approach.



### References

- Adeoye, I. A., Adanikin, A. F. & Adanikin, A. (2020). COVID-19 and e-Learning: Nigeria tertiary education system experience. *International Journal of Research and Innovation in Applied Science (IJRIAS)*, 5(5), 28-31.
- Al-Rimawi, F. (2014). *The effect of using blended learning in teaching English language on the direct and delayed achievement among the sixth graders*. Unpublished Master Thesis, Faculty of Educational Sciences, Middle East University, Jordan.
- Beatty, B. (2016). *Hybrid flexible course and program design: Models for student-directed hybrids*. <http://www.drbrianbeatty.com/wordpress/>
- Cleaveland-Innes, M. & Wilton, D. (2018). *Guide to blended learning*. Commonwealth of Learning.
- Hannon, J., & Macken, C. (2014). *Blended and online curriculum design toolkit*. La Trobe University. [https://www.latrobe.edu.au/data/assets/pdf\\_file/0006/602178/Blended-learning-Toolkit-v4.pdf](https://www.latrobe.edu.au/data/assets/pdf_file/0006/602178/Blended-learning-Toolkit-v4.pdf).
- International Telecommunication Union (ITU) and United Nations Educational, Scientific and Cultural Organization (2020). *State of broadband report 2020*. License: CC BY-NC-SA3.0 IGO. [https://www.itu.int/dms\\_pub/itu-s/opb/pol/S-POL-BROADBAND.21-2020-PDF-E.pdf](https://www.itu.int/dms_pub/itu-s/opb/pol/S-POL-BROADBAND.21-2020-PDF-E.pdf).
- Ismail, A. (2009). *E-Learning from application to professionalism*. Alam Al-Kutob (the world of books)
- Naveed, M. (2020). *Education in the post-COVID-19 era*. <https://www.col.org/news/col-blog/education-post-covid-19-era>
- Nisreen, S.K.K. (2016). The effectiveness of blended learning in improving students' achievement in third grade's science in Bani Kenana. *Journal of Education and Practice*, 7(35), 109-116.
- Obiete, I. A., Nwazor, J. C. & Vin-Mbah, F. F. (2015). Strategies for teaching business education students in Nigerian tertiary institutions for cooperative governance. *Journal of Education and Practice*, 6(18), 170-175.
- Onokpaunu, M. O. (2016). Analysis of web-based instructional technologies for use by business education lecturers in tertiary institutions in Delta State. (*Unpublished Master's Thesis*, Department of Vocational Education, Nnamdi Azikiwe University, Awka, Anambra State).
- Pappas, C. (2015). *Synchronous vs asynchronous learning: Can you tell the Differences?* <https://e-learningindustry.com/synchronous-vs-asynchronous-learning-can-you-tell-the-differences/>
- World Bank (2020Q). *East Asia and Pacific: Tertiary Education. COVID-19 Coronavirus Response*. World Bank.



## **IMPROVING BUSINESS EDUCATORS' USAGE OF SYNCHRONOUS INTERACTIVE RESOURCES FOR TEACHING AND LEARNING BUSINESS EDUCATION PROGRAMMES IN TERTIARY INSTITUTIONS IN EBONYI STATE IN POST COVID-19 ERA**

<sup>1</sup>NWAGWU, LAZARUS N.  
drlaznwagwu@gmail.com  
Department Of Business Education,  
Ebonyi State University, Abakaliki.

<sup>2</sup>OFULUE, JUSTINA I.  
justinaieofulue@gmail.com  
Department Of Office Technology And Management  
Delta State Polytechnic, Ogwashi-Uku

<sup>3</sup>DR. (MRS) ACHARU F. TONY-OKEME  
acharu4real@gmail.com  
Department Of Office Technology And Management  
Kogi State Polytechnic, Lokoja

### **Abstract**

*This study examined ways of improving business educators' usage of synchronous interactive resources for teaching and learning of business education programmes in tertiary institutions in Ebonyi State in Post COVID-19 era. Two purposes of the study with their corresponding research questions and one hypothesis guided the study. The study adopted descriptive survey design. The population consisted of 47 business educators in all the tertiary institutions in Ebonyi State. There was no sampling since the population was manageable and were all used for the study. A structured questionnaire validated by three experts was used as instrument for data collection. The reliability of the instrument was ensured by using statistical package for social sciences and it yielded a reliability index of 0.78. Responses to the questionnaire items were analyzed using mean and standard deviation while the null hypothesis was tested using t-test statistical tool at 0.05 level of significance. Findings of the study revealed that business educators agreed that digital camera, smart phones, laptop computers, electronic bulletin boards among others are resources required for effective utilization of synchronous interactive instruction. The study also revealed that business educators getting trained on how to make online video conferencing and encouraging students to always send their questions through video are some of the ways business educators can improve their usage of synchronous interactive resources in teaching and learning of business education programmes in tertiary institutions in Ebonyi state in Post COVID-19 era. The study recommended among others that Managers of business education should organize training and retraining of business educators on the usage of synchronous interactive resources.*

### **Introduction**

Sudden outbreak of coronavirus forced global activities to be temporary suspended for some period. Educational system was one of the sectors greatly affected by the suspension caused by the pandemic as all schools were forced to close and most academic activities suspended. Butnaru, Nita, Anichiti and Brinza (2021) observed that schools abruptly stopped their traditional programmes and



migrated to online school system. This migration was eminent among schools in developed countries as most African countries (including Nigeria) seemed not prepared thereby leading to temporal closure of schools. As one of the programmes offered in Nigeria school system, business education programmes were also affected. This closure undoubtedly was caused by envisaged rapid spread of Covid-19 pandemic and death rates within the period. After closure of schools, efforts are been made towards enhancing teaching and learning in line with this new normal hence the need for usage of synchronous interactive instruction.

Synchronous interactive instruction is the use of internet enabled technologies in delivering instructions in real time. Martin and Parker (2014) defined synchronous interactive instruction as the application of technologies that enable teachers to interact with students while delivering their instructions using online channels. Teachers use different internet supported technologies where both teachers and students use technologies and online facilities at the same time for teaching and learning. Nwagwu (2015) explained that participants in synchronous interactive instruction attend to their online academic activities at the same time. Marwa, Mona and Sarah (2021) noted that use of synchronous interactive instructions need availability of different resources. These resources are used in real time by teachers to have contact with all the students from different locations at the same time through the internet. Nwagwu (2015) posited that Synchronous and asynchronous are the two types of electronic learning. The major difference between synchronous and asynchronous learning as identified by Hrastinski (2008) is that in synchronous, students and their teachers are always online at the same time. While in asynchronous learning, participants may not be online at the same time but have access to the instructional resources at self-pace.

According to Rockinson-Szapkin and Walker (2009), synchronous interactive instructions make use of web-conferencing or electronic conferencing enabled technologies. In synchronous interactive instructions, teachers deliver their instructions where the students connect and join the interactions on real time. If the resources in use is audio, the students can dial to participate in the real time classroom by using a pre-established telephone number. Recent technological advancement has made it that whether the teacher is using audio and/or video resources, students can download the instructional content for future references. According to Cook, Annetta, Dickerson and Minogue (2011), availability of different resources and stabled internet access are needed for effective use of synchronous interactive instruction and incase of any difficulty, the affected participant can use other means to get support from the teacher and as well join the class on real time. With the migration to electronic teaching, synchronous interactive instruction has proved to be effective in improving instructional delivery in post-COVID-19 era.

COVID-19 is World Health Organization's nomenclature for coronavirus disease 2019 (Shereen, Suliman, Abeer, Nadia & Rabeca, 2020). Shereen et al described coronavirus as a single stranded ribonucleic Acid (RNA) with minute size of sixty five to one hundred and twenty five nanometers which transmits severe acute respiratory syndrome found mostly in animals. This virus broke out in Wuhan China in late 2019 and led to death of thousands of people before spreading to other parts of the World (Adhikari, Meng, Wu, Mao, Ye, Wang, Sun, Sylvia, Rozelle, Raat and Zhou, 2020). Spread of this virus across the globe led to temporal closure of schools and face-to-face teaching and learning was stopped. According to Hodges, Moore, Lockee, Trust and Bond (2020), the pandemic necessitated that teachers had to plan and deliver their instructions from home. This was sustained throughout the peak period when the pandemic ravaged the world. Though adjudged to have been controlled, the effect is still new in minds of the people and school activities including teaching and learning of business education programme is gradually picking up.

Business education is one of the vocational education programmes aimed at equipping individuals with skills and knowledge required to function effectively in chosen occupation in world of business. According to Onyesom, Egbule and Okwuokenye (2012), business education is vocational instructions provided to students with the aim of preparing them to earn a living in the contemporary



and ever changing business environment. Business education programmes are planned to prepare students with requisite skills for contribution in business world as intelligent consumer and/or producer of business products. Olaniyi and Aina (2014) posited that business education programme is divided into education for business and education about business. Education for business equips learners with skills that makes them to fit into business oriented ventures like establishment of enterprises (Thaanyane, 2019). Students in business education are trained to possess accounting skills, secretarial skills, and entrepreneurial skills among others. Vocational business education programmes prepares students with practical skills needed to function effectively as producers of business products. Students are prepared to be job creators and have necessary competencies required for job adjustment. Education about business on the other hand equips the students with knowledge that will help them to be intelligent consumers of business products. Ubulom and Ogwunte (2017) explained that this aspect of business education prepares would-be teachers with needed pedagogical skills required for teaching business subjects or courses at all levels of education. All these programmes of business education were affected by outbreak of COVID-19 pandemic and as the programmes are gradually picking up, use of synchronous interactive instruction becomes imperative in the face of this new normal.

To effectively teach business programmes in this technological era, it is imperative to identify resources required for effective utilization of synchronous interactive instructions for teaching and learning. Ugwuogo (2012) opined that e-teaching becomes effective where the resources are available and are also put into use. In institutions where resources required for effective utilization of synchronous interactive instructions are available, the teachers are expected to possess needed skills. In this line, identification of ways through which business educators can improve their usage of synchronous interactive resources in teaching and learning becomes pertinent.

#### **Statement of the Problem**

The outbreak of COVID-19 negatively affected academic activities across the globe as schools were temporary closed. Students were sent home as most schools in Nigeria were unable to migrate to online learning. Business education programmes were also affected by this situation as many schools abruptly closed without completing their semester programmes. Inability of schools and lecturers to make use of synchronous interactive instruction suspended teaching and learning till when face-to-face classroom resumed. It is worrisome that business education that prepares students for the usage of information and communication in teaching and learning was unable to migrate its programmes to online in this new normal. The programme suffered setback as the programme lost some sessions and in some schools, after resumption, academic activities were compressed to meet up with semesters lost. It becomes perturbing that business educators seems not to know ways of improving their usage of synchronous interactive instructions in teaching and learning. It becomes imperative in post COVID-19 era to identify resources required for effective utilization of synchronous interactive instructions in teaching and learning of business education programmes and how to use them. Hence, the problem posed by this study is to identify ways of improving business educators' usage of synchronous interactive resources delivery of business education programmes in tertiary institutions in Ebonyi State.

#### **Research Questions**

The following research questions guided the study:

1. What are the resources required for effective utilization of synchronous interactive instructions for teaching and learning business education programmes in tertiary institutions in Ebonyi State in post-covid-19 era?
2. What are the ways business educators can improve their usage of synchronous
3. interactive resources in teaching and learning business education programmes in tertiary institutions in Ebonyi State during post covid-19 era.



**Hypothesis**

The following hypothesis guided the study and was tested at 0.05 level of significance. There is no significant difference between the mean ratings of male and female business educators on ways they can improve their usage of synchronous resources in teaching and learning of business education programmes in tertiary institutions in Ebonyi State in post Covid-19 era.

**Methodology**

The design adopted for this study was a descriptive survey design. Descriptive survey design was appropriate for this study as information were gathered on the subject of investigation and were described in their original setting (Okoro, 2013). Population of this study composed of 47 business educators from all the tertiary institutions that offer business education programmes. Tertiary institutions in Ebonyi State that offer business education programmes are Alex Ekwueme Federal University, Ndufu-Alike Ikwo, Ebonyi State University, Abakaliki, Akanu-biam Federal Polytechnic Unwana and Ebonyi State College of Education Ikwo. All the business educators from these institutions were used as the population was manageable. Instrument for data collection was a structured questionnaire constructed by the researchers. The questionnaire items were patterned thus: Strongly Agree (SA)-4 points, Agreed (A)-3points, Disagree (D)-2points, and Strongly Disagree (SD)-1point. The instrument was validated by three experts from business education department of Ebonyi State University, Abakaliki. Reliability of the instrument was ensured by testing it using Cronbach Alpha and it yielded a reliability index of 0.78; indicating that the instrument was reliable. Copies of the questionnaire were directly administered on the respondents by the researchers and all of them were correctly filled and returned. Data collected were analyzed using mean and standard deviation while t-test was used for hypothesis. Items with mean rating of 2.50 and above were adjudged as agreed to by the respondents. Any item with mean rating of less than 2.5 was adjudged that respondents disagreed with the item. The hypothesis was tested using t-test statistical tool at 0.05 level of significance and any item whose calculated t-value was equal to or greater than critical t-value was rejected while any item whose calculated t-value was less than critical t-value was accepted.

**Results**

**Research Question 1**

What are the resources required for effective utilization of synchronous interactive instructions for teaching and learning business education programmes in tertiary institutions in Ebonyi State in post Covid-19 era?

Table 1: Mean responses on the resources required for effective utilization of synchronous interactive instructions for teaching and learning business education programmes in tertiary institutions in Ebonyi State in post Covid-19 era.

S/N	Resources Required for Usage of Synchronous Interactive Instruction	$\bar{x}$	SD	Decision
1.	Digital Camera	3.15	0.71	Agreed
2.	Smart Phone	2.79	0.53	Agreed
3.	Desktop Computers	2.48	0.76	Agreed
4.	Laptop Computers	3.91	0.82	Agreed
5.	Electronic Mails	2.30	0.69	Disagreed



6.	Electronic Bulletin Boards	3.01	0.55	Agreed
7.	Zoom Application	3.50	0.72	Agreed
8.	Power point	2.88	0.74	Agreed
9.	Internet Connection	3.70	0.80	Agreed
10.	Camera Stand	2.91	0.65	Agreed

Data as presented in Table 1 revealed that business educators agreed that digital camera, smart phones, laptop computers, electronic bulletin boards, Zoom application, power point, internet connection and camera stand are resources required for effective utilization of synchronous interactive instruction in teaching and learning business education programmes. Business educators disagreed that electronic mails are resources required for effective utilization of synchronous interactive instruction in teaching and learning business education programmes.

#### Research question 2

What are the ways business educators can improve their usage of synchronous interactive resources in teaching and learning business education programmes in tertiary institutions in Ebonyi State during post covid-19 era

Table 2: Mean responses on ways business educators can improve their usage of synchronous interactive resources in teaching and learning business education programmes in tertiary institutions in Ebonyi State during post covid-19 era

S/N	Ways of improving business educators' use of synchronous interactive resources in teaching and learning. Business educators	$\bar{x}$	SD	Decision
1.	getting trained on how to make online video conferencing	3.81	0.77	Agreed
2.	encouraging students to always send their questions through videos	2.99	0.52	Agreed
3.	orientating themselves with video conferencing interface	3.01	0.89	Agreed
4.	learning how to use audio conferencing that support real time interaction.	3.22	0.73	Agreed
5.	are to be regularly accessible to students online	2.66	0.91	Agreed
6.	are to always adhere strictly to class schedules	3.41	0.83	Agreed
7.	are to always create sense of community among students using synchronous interactive resources	3.27	0.64	Agreed



Data as presented in Table 2 above shows that respondents agreed to all the items as ways business educators can improve their usage of synchronous interactive instruction in teaching and learning business education programmes in post Covid-19 era. Their agreement is evident as all the items had mean ratings that are above the decision value of 2.50.

**Hypothesis**

There is no significant difference between the mean ratings of male and female business educators on ways business educators can improve their usage of synchronous interactive resources in teaching and learning business education programmes in tertiary institutions in Ebonyi State during post covid-19 era

Table 3: T-test analysis of differences in mean responses of business educators in Ebonyi State on ways business educators can improve their usage of synchronous interactive resources in teaching and learning business education programmes in tertiary institutions in Ebonyi State during post covid-19 era

Variable	N	Mean	SD	DF	T-cal	T-crit	Decision
Male	29	3.41	0.74	45	0.52	2.05	Accept
Female	18	3.28	0.91				

Table 3 above shows that calculated t-value is 0.52, the degree of freedom is 45 and critical t-value is 2.05, since the calculated t-value is less than critical t-value, the null hypothesis is accepted. This means that there is no significant difference in the mean ratings of male and female business educators on ways business educators can improve their usage of synchronous interactive resources in teaching and learning business education programmes in tertiary institutions in Ebonyi State during post covid-19 era.

**Discussion of findings**

Findings from this study as shown in table one revealed that synchronous interactive resources required for teaching and learning of business education programmes in tertiary institutions in Ebonyi State include digital camera, smart phone, laptop computers, Zoom applications among others. This finding is supported by that of Marwa, Mona and Sarah (2021), that unavailability of laptop computers and inadequacy of other resources are major barriers to e-learning. Therefore, for business educators to cope with the new normal and effectively use synchronous interactive instruction in teaching and learning, necessary resources are to be made available and adequate. Some of these resources such as smart phone and laptop computer could be provided by business educators and students. Applications like Zoom could be easily downloaded and installed on a smart phone and/or laptop computer for onward usage in teaching and learning.

From table two, the study revealed that all the items are ways business educators can improve their usage of synchronous interactive instructions in teaching and learning. Some of the ways as found by the study include business educators getting trained on how to make online videos, business educators orientating themselves with video conferencing, interface among others. This finding aligns with the view of Spencer (2012), who observed that for effective utilization of synchronous interactive instruction, teachers need to have necessary skills and get committed to delivering quality real time instructions. Martin and Parker (2014) noted that teachers should be able to



use available synchronous interactive resources to promote interactions and create online community where students could be easily reached. Analysis of the hypothesis showed that no

significant difference exist between the mean responses of male and female business educators on ways business educators can improve their usage of synchronous interactive resources in teaching and learning business education programmes in tertiary institutions in Ebonyi State during post covid-19 era.

### **Conclusion**

The outbreak of Covid-19 accidentally and temporally paused educational activities across the global. Most countries without adequate technologies for online teaching and learning were disadvantaged. It becomes imperative that business educators get acquainted with ways they can improve their usage of synchronous interactive resources for continuity of delivering their programmes during this new normal. Their ability to utilize all the needed resources in creating real time teaching and learning opportunity will isolate the programme from such stoppage in the future.

### **Recommendations**

On the strength of the findings and conclusions of this study, the following recommendations were made:

1. Managers of business education should organize training and retraining of business educators on the usage of synchronous interactive resources.
2. School administrators should provide digital cameras in business education laboratories for effective usage in real time teaching and learning. Also, Business educators should encourage their students to use their smart phones in creating academic online communities where they could be easily reached.
3. Network connectivity in business education programmes should be improved as utilization of synchronous interactive instructions need connectivity of available resources.

### **References**

- Adhikari S. P., Meng S., Wu Y., Mao Y., Ye R., Wang Q., Sun C., Sylvia S., Rozelle S., Reat H. and Zhou (2020). Epidemiology, Cause, Clinical Manifestations and Diagnosis, Prevention and Control of Coronavirus (Covid-19) during the early outbreak period: A Scoping review. Retrieved on March 8th, 2021, from <https://doi.org/10.1186/540249-020-00646-x>.
- Butnaru G. I., Anichiti A. and Brinza G. (2021). The Effectiveness of Online Education during Covid-19 Pandemic. A Comparative Analysis between the Perceptions of Academic Students and High School Students from Romanian. *Sustainability* 13 (5311). Retrieved on 10th September, 2021 form <https://doi.org/10.3390/sw3095311>.
- Cook M., Annetta L.A., Dickerson D. L. and Minogue J. (2011) In-Service Teachers Perception of Online Learning Environment. *Quarterly Review of Distance Education* 12(2) pp73-79.
- Harstinski S. (2008). Asynchronous and Synchronous E-Learning. *Education Quarterly* 31(4). Retrieved on June 18th, 2013 form <https://www.educause.edu/home/articles>.
- Hodges C., Moore S., Lakee B., Trust T. and Bond A. (2020) the difference between emergency remote teaching and online learning. *Educause Review*. Retrieved on 10th September, 2021 from <https://er.educause.edu/articles/2020/3/the.diference-between-emergency-remote-teaching-and-learning>.
- Martin F. and Parker M. A. (2014) use of Synchronous Virtual classrooms: Why, Who and How? *Merlot Journal of Learning and Teaching* 9(2) pp192-210.
- Marwa M. Z., Mona S. H. and Sarah A. B. (2021) the Experiences, Challenges and Acceptance of E-Learning as a Tool for Teaching during the Covid-19 Pandemic among University Medical



- Staff. *Plos one* 16(3). Retrieved on 10th September, 2021 from <https://doi.org/10.1371/journal.pone.0248758>.
- Nwagwu L. N. (2015). Assessment of Readiness for Integration of Electronic Learning into Business Education Programmes in Tertiary Institutions in Ebonyi State, Nigeria. Unpublished Dissertation Submitted to Department of Business Education, faculty of education, Ebonyi State University Abakaliki.
- Okoro O. B. (2013) Assessment of ICT Competences Possessed by Polytechnic OTM Lecturers in South Geopolitical Zone Nigeria. A Thesis Submitted to the Department of Vocational Education, Faculty of Education, Nnamdi Azikiwe University, Awka.
- Olaniyi O. N. and Aina M. A. (2014) Incessant Strikes and its Effects on Business Education Programmes. *Association of Business Educators of Nigeria Conference Proceedings* 1(1) pp58-64.
- Onyesom M., Egbule W. C. and Okwukenye A. E. (2012) Business Education in Nigeria: Changes, Challenges and Chances. *Association of Business Educators of Nigeria Book of Readings* 2(1) 97-104.
- Rockinson – Szapkiw A. J. and Walker V. L. (2009) Web 2.0 Technologies: Facilitating Interaction in an Online Human Services Counseling Skills Course. *Journal of Technologies in Human Services* 27(3)pp175-193. Retrieved on 10th September, 2021 from doi:10.1080/15228830903093031.
- Shereen M. A., Suliman K, Abeer K., Naadia B. and Rabeea S. (2020) Covid-19 Infection: Origin, Transmission and Characteristics of Human Coronaviruses. *Journal of Advanced Research* 24(1)pp91-98.
- Spencer C. N. (2012) Quality Virtual Instruction: the use of Synchronous online Activities to Engage International Students in Meaningful Learning. *Journal of International Education and Leadership* 2(2)1-8.
- Thaanyane M. (2019) Business Education as an Instrument for Poverty and Unemployment Reduction in Lesotho. *International Journal of Scientific and Research Publications* 9(11) 403-407.
- Ubulom W. J. and Ogwunte P. C. (2017) Evaluation of Instructional Resources for Teaching Business Subjects in Public Secondary Schools in Rivers State, Nigeria. *International Journal of Innovative Education Research* 5(4) 67-74.
- Ugwuogo, C.C (2012). Status of e-teaching and e-learning in business education Departments in Nigeria colleges of education. An unpublished Ph.D thesis Submitted to Post Graduate School, Ebonyi State University, Abakaliki.



## **STUDENTS' PERCEPTIONS OF THE ATTITUDINAL AND CLASSROOM COMPETENCIES NEEDED BY LECTURERS FOR MOTIVATING BEGINNERS IN OFFICE TECHNOLOGY AND MANAGEMENT**

**<sup>1</sup>PROF. TITUS A. UMORU**

**<sup>2</sup>ADAKOLE, ENONCHE**

Dept Of Business and Entrepreneurship Education  
College Of Education  
Kwara State University  
Malete

### **Abstract**

*The study was carried out to examine attitudinal and classroom competencies needed by lecturers for motivating beginners in Office Technology and Management (OTM) in selected public polytechnics in North Central Nigeria. Survey design was the method adopted to carry out the study. Two research questions guided the study and two null hypotheses were formulated for the study. The population of the study comprised 570 OTM Students from three polytechnics in the North Central Nigeria. Simple Random Sampling technique was adopted to sample 171 students representing 30% of the population. A four Point Likert Rating Scale questionnaire was the instrument used for data collection. The instrument was validated by three experts in OTM, The Federal Polytechnic, Bida. Mean and Standard Deviation were the statistical tools used to analyze the data while Cronbach Alpha Reliability Test (CART) was used to determine the internal consistency of the instrument. Cronbach Alpha Reliability co-efficient of the instrument calculated gave a coefficient of 0.97 which indicated that the instrument for the study was reliable. t-test statistics was used to test the null hypotheses at 0.05 level of significance. The results of the data indicated amongst others that accessibility of lecturers to students, care for students, ability to interact with students, ability to exert control and good communication skills in the classroom, and good knowledge of the subject area, were the attitudinal and classroom competencies needed by lecturers for motivating beginners in OTM. It was therefore concluded that attitudinal and classroom competencies of lecturers are germane to students' performance and where this is lacking students are likely to perform at a low extent. Based on the findings of the study, it was recommended that lecturers in the polytechnics should make themselves accessible to students, show attitudes of care and encouragement towards the students, possess good communication skills, ability to control the class and good knowledge of the subject area they are meant to teach.*

**Key Words:** Office Technology and Management, Competencies, Attitudinal and Classroom competencies

### **Introduction**

OTM programme is a skill, administrative and management programme of study aimed at preparing the recipient for office jobs and/or to become self-employed. The teaching of this course requires great skills and competencies needed to impart knowledge into the recipients. Some years ago OTM replaced the former secretarial studies as a result of the yearning of the practitioners and technology advancement in modern office. The new curriculum emphasizes more on Information and Communication Technology (ICT), administrative and management courses (NBTE, 2006).



Ojohwoh (2014) described OTM as an effective, efficient, productive and functional educational programme which prepares graduates for self-employment, paid employment, self-reliance and self-realization. The Curriculum and course specification by NBTE (2004) stated that OTM programme is designed to equip students with the competencies required to work in a modern office environment. It went further to outline the objectives of OTM to acquisition of secretarial skills, acquisition of general education and laying foundation for advance studies.

Aminaya (2014) stated that the goal of OTM is to develop skilled manpower for national development. In order to achieve these lofty objectives, practitioners of office technology and management need to possess certain competencies such as attitudinal and classroom competencies to effectively motivate beginners who are studying office technology and management. Buttressing the above statement, Okoro and Ozoemenam (2016) observed that teachers' attitude and behavior are very important for learners and that teachers can do a lot to help beginners develop the motivation for learning in office technology and management. Akiri and Ugborugbo (2009) reported that, lecturer competence is regarded as a multi-dimensional construct of teaching which encompasses numerous interconnected elements towards transformation of knowledge to learners. Lecturers' competencies include subject knowledge, teaching skills, attitude and class attendance. These skills are needed for the future directions of OTM programme and for effective impartation of knowledge and skills into the students in order to prepare them for future directions and challenges in a competitive world of work.

On the other hand, motivation is quite important in learning OTM as it is acknowledged to be one of the most important factors that influences students' behavior towards effective learning. Daskalovka, Gudeva and Ivanovska (2012) asserted that learners with strong motivation can achieve a lot regardless of circumstances. The question is whether lecturers possess attitudinal and classroom competencies that will motivate beginners for future direction of OTM.

Competencies are abilities and skills applied to solving problems. It has to do with lecturers' subject knowledge, attitude, classroom management, communication skills used to impart knowledge and character to the learners. According to Sultan and Shifi (2014), competencies are particular and self-evident qualities that are unavoidable for instructors to make a persuading and student favourable climate. According to them, competencies are concerned with three areas of students' behaviour which are basic for teachers to shoulder as prime obligations. Such competencies include: Helping students to create basis and investigative disposition, assisting students to predict progressions in all circles of life and its effect on the social order and to aid students in moderating and transmitting qualities supported by the social order.

Arikwandu, Okoro and Ozoemenam (2016) opined that competency is the capability of applying or using knowledge, skills, abilities personal characteristics to successfully perform crucial work tasks, specific functions or operate in a given role or position. Ganyanpfu (2013) asserted that the teaching skills of a lecturer can be determined by his/her ability to comprehend and transform knowledge concepts to be imparted to students.

Attitudinal competencies therefore encompass one's behavior, character, honesty and objectiveness in handling matters. It has to do with one's socio-interpersonal relationship with others. Attitude can also be seen as a way of thinking and the way individuals relate with the world. According to Barros and Elia (2014), attitude is the individuals' prevailing tendency to respond favourably or unfavourably to an object (person or group of people), institution or events.

Akinleke (2018) described a lecturer's attitude as a consistent tendency to react in a particular way, whether positively or negatively toward an academic matter. Akinleke emphasized that lecturers' positive attitudes are fundamental to effective teaching and students' academic attainments. According to him, certain elements constitute teachers' attitude that will facilitate a caring and supportive classroom environment. Such elements include caring, enthusiasm, teaching efficacy, democratic practices to promote students' responsibility, effective use of lecture, constructive interaction with students and high expectation to promote students' motivation.



In their views, Arikwandu, Okoro and Ozoemenam (2016) stated that knowledge, attitudes and skills are content areas needed to produce well trained professionals. A competent teacher therefore, is the one who is consistently warm and cheerful; has a clear vision of the set targets; carefully executes whatever is arranged; handles administrative issues inside and outside classroom in a practical manner; and presents academic themes in such a way that even the weak students are motivated. Classroom competencies on the other hand, deals with lecturers' abilities and skills to effectively control, manage and coordinate students in such a manner that the instructions are well delivered to the students while attending the class regularly. According to Falsario, Muyong and Nuevaespana (2014), an effective classroom competence of a teacher is the one in which his authority to organize and manage the learning activities is accepted by the students and his mutual respect and good rapport, as well as the conducive atmosphere which he creates during the teaching and learning process. They further pointed out that a key consideration in effective classroom management is the extent to which the teacher is able to foster favourable perceptions towards learning among students by establishing in students self-respect and self-esteem regarding themselves as learners.

Falsario, Muyong and Nuevaespana (2014) further argued that the classroom climate and competencies of a teacher influence students' achievement, their self-esteem, and participation in class work. In their opinion, the most important aspect of classroom climate is the relationship between teacher and students as there must be elements of caring, trust, and respect in the relationships between teachers and students.

However, Allexande (2013) reported that the overall academic performance of students in academic institution is negatively affected by high teacher absenteeism. He further stated that teachers who posted high level of classroom absenteeism recorded the lowest scores of students' academic performances. The higher the teacher's class absenteeism becomes, the lower the students' academic performances become.

### **Statement of the problem**

Office Technology and Management programme is a course of study which prepares the recipients to gain paid job or become self-employed. The teaching of this course requires high competencies and skills on the part of the lecturers in order to motivate the students to learn effectively and efficiently. This is because, most students get frightened the first time they come in contact with certain courses such as, keyboarding, web design and data management system. This is why lecturers in Office Technology and Management in Public Polytechnics in North Central Nigeria need attitudinal and classroom competencies to motivate beginners for effective performance. Students' performance on the other hand, has been linked to teachers' subject knowledge, teaching competencies, relationship with students, classroom attendance and management. This is why Allexanda (2013) mentioned that lecturers are the most imperative school-based factor that influences students' achievement levels as they can help change students' attitude and help them to accomplish better performance. However, it seems that students' low academic performance could be as a result of teachers' high rate of class absenteeism and low level of subject knowledge. Allexanda further argued that the overall academic performance of students in academic institution is negatively affected by high teacher absenteeism. The higher, the teacher's class absenteeism rate becomes, the lower the students' academic performances become. It was against this background, that the study was carried out to investigate attitudinal and classroom competencies needed by lecturers for motivating beginners in Office Technology and Management in Public Polytechnics in North Central Nigeria.



### **Research Questions**

The following research questions were raised to guide the study:

1. What are the students' perceptions of the attitudinal competencies needed by lecturers for motivating beginners in Office Technology and Management in selected Public Polytechnics in North Central Nigeria?
2. What are students' perceptions of the classroom competencies needed by lecturers for motivating beginners in Office Technology and Management in selected Public Polytechnics in North Central Nigeria?

### **Hypotheses**

Two hypotheses were formulated and tested at 0.05 level of significance:

- H<sub>01</sub> There is no significant difference between male and female students' perceptions on the mean rating of attitudinal competencies needed by lecturers for motivating beginners in Office Technology and Management.
- H<sub>02</sub> No significant difference exists between Male and Female students' perceptions on the mean rating of classroom competencies needed by lecturers for motivating beginners for future in Office Technology and Management.

### **Methods**

The study adopted a descriptive survey design. Two research questions were raised to guide the study and two hypotheses were formulated and tested at 0.05 level of significance. The population of the study comprised 570 HND and ND Students in OTM from three selected public polytechnics in North Central, Nigeria, namely: Federal Polytechnic, Bida – 95; Federal Polytechnic, Nasarawa – 330 and Kogi State Polytechnic – 145. Hat and draw method of simple random sampling technique was adopted to sample 30% of the population which yielded 171 students. Students' Perception of the Attitudinal and Classroom Competencies Needed by Lecturers for Motivating Beginners in Office Technology and Management Questionnaire (SPACCNLMBOTMQ) was the instrument used for data collection. It was structured according to the modified four Point Likert Rating Scale of Strongly Agreed (4), Agreed (3), Disagreed (2) and Strong Disagreed (1). The questionnaire was validated by three experts in Federal Polytechnic, Bida. The researchers with one research assistant distributed 171 copies of the questionnaire and collected 156 copies. Mean and standard deviation were the statistical tools used to analyze the data while t-test statistics was used to test the hypotheses at 0.05 level of significance. Cronbach Alpha Reliability Test (CART) was used to determine the internal consistency of the instrument which yielded a coefficient of 0.97 indicating that the instrument for the study was reliable. The Decision Rule was set at any mean point equal to or greater than 2.50 as agreed and any mean point less than 2.50 as disagreed.

### **Results**

Research Question 1:

What are students' perceptions of the attitudinal competencies needed by lecturers for motivating beginners in Office Technology and Management in Polytechnics in North Central Nigeria?



**Table 1: Analysis of responses on students’ perceptions of attitudinal competencies needed by lecturers for motivating beginners** N=156

S/N	STUDENTS’ PERCEPTIONS OF ATTITUDINAL COMPETENCIES NEEDED BY LECTURERS FOR MOTIVATING BEGINNERS	MEAN	STD	REMARK
1	Accessibility of lecturers by students	2.93	0.50	Agreed
2	Cheerful look of lecturers	2.46	0.75	Disagreed
3	Ability to be patient and tolerant	2.53	0.85	Agreed
4	Care for students	2.53	0.79	Agreed
5	Being humble but firm in dealing with students	2.60	0.72	Agreed
6	Ability to encourage and advise students	2.58	0.77	Agreed
7	Ability to interact with students	2.63	0.73	Agreed
8	Composure of the lecturers	2.56	0.78	Agreed
	<b>Weighted Mean</b>	<b>2.60</b>	<b>0.74</b>	<b>Agreed</b>

(Field data survey 2021)

Table 1 shows that respondents agreed with all the constructs to be the perceptions of students on attitudinal competencies needed by lecturers for motivating beginners in Office Technology and Management with a high Mean Rating of 2.96 and Standard Deviation of 0.50. However, some respondents disagreed with item no. 2 which has a Mean rating of 2.46 and Standard Deviation of 0.75. On the overall, the weighted mean of 2.60 and standard deviation of 0.74 indicated that majority of the respondents confirmed that the constructs in the table were the students perceptions on the attitudinal competencies needed by lecturers for motivating beginners for future direction in Office Technology and Management.

**Research question 2:**

What are the students’ perceptions of the classroom competencies needed by lecturers for motivating beginners for future direction in Office Technology and Management in selected Polytechnics in North Central Nigeria?

**Table 2: Analysis of responses on classroom competencies needed by lecturers for motivating beginners** N=156

S/N	STUDENTS’ PERCEPTIONS OF CLASSROOM COMPETENCIES NEEDED BY LECTURERS FOR MOTIVATING BEGINNERS	MEAN	STD	REMARK
9	Ability to exert control in the classroom	2.67	0.76	Agreed
10	Lecturers’ good communication skills in the classroom	2.72	0.66	Agreed
11	Lecturers’ punctuality to the classroom	2.71	0.60	Agreed
12	Good knowledge of the subject area by the lecturers	2.51	0.74	Agreed
13	Ability to demonstrate accordingly	2.58	0.69	Agreed
14	Ability to entertain and answer questions	2.67	0.78	Agreed
15	Ability to discover students with learning challenges	2.71	0.71	Agreed
16	Ability to captivate students’ attention	2.68	0.72	Agreed
17	Ability to monitor students participation in the class	2.57	0.79	Agreed
	<b>Weighted Mean</b>	<b>2.65</b>	<b>0.72</b>	<b>Agreed</b>

(Field data survey 2021)



Table 2 above reveals that respondents were in agreement with all the constructs to be the perceptions of students on the classroom competencies needed by lecturers for motivating beginners in Office Technology and Management. The items in the table has a high Mean Rating of 2.72 and Standard Deviation of 0.66. Furthermore, a weighted mean of 2.65 with a standard deviation of 0.72 buttress the respondents agreement on the classroom competencies needed by lecturers for motivating beginners for future direction in Office Technology and Management.

**Test of Hypotheses**

H<sub>01</sub> There is no significant difference between Male and Female students’ perceptions on the mean rating of attitudinal competencies needed by lecturers for motivating beginners in Office Technology and Management.

**Table 3: Summary of t-test result of Male and Female students rating of attitudinal competencies needed by lecturers for motivating beginners in Office Technology and Management.**

Respondents	N	Mean	SD	Df	t-cal	P-Value	Alpha	Decision
Male	54	1.76	0.56	154	1.02	0.05	1.96	Accepted
Female	102	3.04	0.24					

Table 3 above reveals that there was no significant difference between Male and Female students perceptions on the rating of attitudinal competencies needed by lecturers for motivating beginners in Office Technology and Management with N=156, df=154, P=0.05, t-calculated was 1.02 and the alpha value of t-test ± 1.96. The Calculated t-test is not statistically significant at 0.05 level as it is less than the alpha value of t-test. Thus, the hypothesis is accepted.

H<sub>02</sub> No significant difference exist between Male and Female students’ perceptions on the mean rating of classroom competencies needed by lecturers for motivating beginners in Office Technology and Management.

**Table 4: Summary of t-test result of Male and Female students rating of classroom competencies needed by lecturers for motivating beginners in Office Technology and Management.**

Respondents	N	Mean	SD	Df	t-cal	P-Value	Alpha	Decision
Male	54	1.86	0.60	154	0.97	0.05	1.96	Accepted
Female	102	3.06	0.29					

Table 4 above reveals that there was no significant difference between male and female students’ perceptions on the rating of classroom competencies needed by lecturers for motivating



beginners in Office Technology and Management with  $N=156$ ,  $df=154$ ,  $P=0.05$ ,  $t$ -calculated was 0.97 and the alpha value of  $t$ -test  $\pm 1.96$ . The Calculated  $t$ -test is not statistically significant at 0.05 level as it is less than the alpha value of  $t$ -test. Thus, the hypothesis is accepted.

### **Discussion of Findings**

The data analysis in Table I revealed amongst others that; accessibility of lecturers to students, ability to be patient and tolerant, care for students, ability to interact with students were the attitudinal competencies perceived to be needed by lecturers according to the responses of respondents. These findings aligned with the study of Arikwandu, Okoro and Ozoemenam (2016) who argued that certain elements constitute teachers' attitudes which facilitate a caring and supportive classroom environment. Such elements include caring, enthusiasm, teaching efficacy, democratic practices to promote students' responsibility, effective use of lecture, constructive interaction with students and high expectation to promote students' motivation.

The result in Table II revealed that, ability to exert control in the classroom, good communication skills in the classroom, good knowledge of the subject area, ability to discover students with learning challenges were the perceived classroom competencies needed by lecturers for motivating beginners in Office Technology and Management for future direction. These findings agreed with the work of Falsario, Muyong and Nuevaespana (2014) when they mentioned that effective classroom competencies of a teacher is the one in which his authority to organize and manage the learning activities is accepted by the students and his mutual respect and good rapport (interaction), as well as the conducive atmosphere which he creates during the teaching and learning process.

### **Conclusion**

The study therefore concludes that attitudinal and classroom competencies of lecturers are germane to students' future direction and performance. They are strong tools that motivate students' desire and achievements in office technology and management; the absence of any might mar students' academic performance and may have some deterring factors on prospective or future students' desire for office technology and management. Low students' interest and academic performance have been attributed to teachers' high level of classroom absenteeism. This feeling can only be reduced by lecturers exhibiting high level of attitudinal and classroom competencies that potent future academic direction for office technology and management.

### **Recommendations**

Based on the findings and conclusion of the study, the following recommendations were suggested.

1. Lecturers in Office Technology and Management in the polytechnics studied should make themselves accessible to students, show attitude of care and encouragement towards the students. These will probably promote students' desire and performance.
2. Lecturers in Office Technology and Management in the polytechnics studied should possess good communication skills, ability to control the class and good knowledge of the subject area they are meant to teach.

### **References**

- Akinleke W. O. (2018). Effects of perceived lecturers' competence and classroom environment on students' academic performance: *Global Journal of Arts, Humanities and Social Sciences* 6(5) 68-77
- Akiri, A. A., & Ugborugbo, N.M. (2009). Teachers' effectiveness and students' performance in public schools in Delta State, Nigeria: *Study Home Communication Science* 3(2) 107-113
- Allexander, M. (2013). Lecturers' competences and students' academic performance. *International Journal of Humanities and Social Science Invention* 3(1) 06-13. [www.ijhssi.org](http://www.ijhssi.org)



- Amianya, A. O. (2014). Integrating new technologies into office tech. & mgt. curriculum: Challenges & Strategies. *Nigeria Journal of Business Education*: 1 (3) 101-113
- Arikwandu, S. O., Okoro, F., & Ozoemenam, N. (2016). Attitudinal competencies required for the motivation of beginners in shorthand as perceived by OTM students of Federal Polytechnic, Bauchi: *Nigerian Journal of Business Education* 3(2) 296-306
- Barroa, S. S. & Elias, M. F. (2014). Physics teacher's attitudes: How do they affect the reality of the classroom and models for change?  
<http://pulsueis.univie.at/Archiv/ICPE/Ds.html.teachers'attitudesandpractice>
- Daskalovska, N., Gudeva, L. K. & Ivanovska, B. (2012). Learner motivation and interest. Science Digest. *Social and Behavioural Sciences*. [www.sciencedirect.com](http://www.sciencedirect.com)
- Falsario H.N., Muyong, R.F., Nuevaespaña, J.S. (2014). Classroom climate and academic performance of education students. Manila: La Salle University.
- Ganyaupfu, E.M. (2013). Factors influencing academic achievement in quantitative courses among business students of Private Higher Education Institutions: *Journal of Education and Practice*, 4(15) 57-65
- National Board for Technical Education. (2006). Office technology and management: curriculum and course specifications. <http://www.unesdoc.unesco.org/images/pdf>
- NBTE (2004). Office Technology and Management curriculum & course specifications. Kaduna, Nigeria
- Ojohwoh, R. (2014). Emerging challenges in the use of new technologies in implementing office technology and management programmeme in Polytechnics: *Nigeria Journal of Business Education* 1 (3) 333-340.
- Sultan, S. & Shafi, M. (2014). Impact of perceived teachers' competence on students' performance: Evidence for mediating/moderating role of Class Environment: *Journal of Educational Psychology*: 8(1) 10 – 18



## **DIGITAL SKILLS REQUIRED BY BUSINESS EDUCATION LECTURERS FOR TEACHING ACCOUNTING EDUCATION COURSES IN TERTIARY INSTITUTIONS IN RIVERS STATE**

**<sup>1</sup>JOY AMESI**

**<sup>2</sup>AMAEWHULE, W.A.**

**<sup>3</sup>AKOKU ALFRED UMAH**

**Department of Business Education  
Faculty of Education  
Rivers State University  
Nkpolu-Oroworukwo, Port Harcourt  
joyamesi2016@gmail.com**

### **Abstract**

*The aim of the study was to identify digital skills required by Business Education lecturers for teaching accounting education courses in tertiary institutions in Rivers State. Three specific objectives, research questions and hypotheses respectively guided the study. The study adopted a descriptive survey research design. The population of the study comprised of Eighty-two (82) Business Education lecturers in Rivers State University (RSU), Ignatius Ajuru University of Education (IAUE) and Federal College of Education (Technical), Omoku FCE (T). The entire population was used as sample and the study adopted census sampling technique. A structured questionnaire titled “Digital Skills Required by Business Education Lecturers for Teaching of Accounting Education Courses Questionnaire (DSRBELTAECQ)” was used as instruments for data collection. The instrument was designed on a 5 point rating scale of agreement (Strongly Agreed to Strongly Disagreed) and used to elicit responses from the respondents. The instrument was face and content validated by two Business Educators and one Measurement and Evaluation expert all in Faculty of Education, Rivers State University, Port Harcourt. Cronbach Alpha was used to establish the reliability coefficient of 0.87. All the copies of the questionnaire were retrieved and used for the analysis. Mean and Standard Deviation were used to answer the research questions, while ANOVA was used to test the hypotheses at 0.05 level of significance. The findings revealed that Business Education lecturers in RSU, IAUE and FCE (T), Omoku require audio-visual content creation skills, software skills and hardware skills for teaching of accounting education courses in tertiary institutions in Rivers State. the researchers therefore recommends that there should be constant training and re-training of lecturers on the use of video in teaching accounting education courses as it will help them to use it maximally when they are available, a modern laboratory should be made available by school authorities for lecturers to enable them access and be equipped with audio-visual skills amongst others.*

### **Introduction**

Digitalization has developed its dominion over all aspects of our life. The world is fast changing from analog to digital and the educational system seems to be the most affected in its pedagogical contest. Teachers and students need to keep abreast of this trend to remain relevant in teaching and learning especially in accounting education. According to Ogbuabor, Gloria and Jesuwunmi (2019), virtually every organization emphasizes on greater importance of accounting education and skills. Organizations use digital skills to enhance efficiency, effectiveness and



improvement of quality in their performance because they believed that the information technology can provide organizations with valuable opportunities to enhance efficiency and performance. Orji, Okanazu and Ali (2015) defined digital skills as the ability to locate, organize, understand, evaluate and create information using digital technology. Orji, Okanazu and Ali further viewed that it is the basic understanding of how to interact with a computer, how to interact with applications on that computer, and how to make it do what you want in real time.

Digital skills have been considered to be vital in teaching and learning as the technology assists the achievement of basic skills, expose students to practical workplace environment, supplement and consolidate what is read in textbooks and journals. According to Usoro and Caleb (2014), digital teaching and learning encompasses many different facets, tools and applications to support and empower teachers and students, including online courses, blended or hybrid learning or digital content and resources.

The role of digital skills in teaching and learning is rapidly becoming one of the most important and widely discussed issues in contemporary education as observed by Thierer in Nimfel, Wetnman and Yongsunghikfu (2017). Therefore, educational professionals seems to accept the fact that digital technologies have the prospects for improving teaching and learning as well as showing workforce opportunities. It is also evident as agreed by Amiaya (2016) that the traditional educational environments are not suitable for preparing students to function or be productive in the workplace in today's society. The effective utilization of digital skills in the teaching of accounting education in our tertiary institutions is very essential as Okoli (2012) observed that no meaningful progress will be made in our educational sector without adjusting to technological innovations and discoveries and noted that tertiary institutions ought to put in place effective Information and Communication Technology facilities to enable both the teachers and students have access to internet, e-mail, collaborative software amongst others.

The use of digital skills in teaching accounting education enhances the quality of education in several ways; it increases learners' motivation and enjoyment by facilitating the acquisition of basic skills and enhancing teacher training (Unw in Ogbuabor, Gloria & Jesunmi, 2019). 21<sup>st</sup> century teaching according to McCoog in Boholano (2017) involves a balance of the objectives of the teacher with the needs and input of the students. to effectively engage and teach students, lecturers will help the educational system meet the requirement of being abreast with digital skills. The school system must be outfitted with a prerequisite of information and communication technology resources and the curriculum must be designed to promote a collaborative learner-centered environment to which students will relate and respond. Education in the 21<sup>st</sup> century highlights globalization and internalization, therefore, any advancement of technology presents theoretical constructs and realistic insights in the development and enhancement of knowledge, skills and attitudes among students and lecturers (Abao, Dayagbil & Boholano, 2015).

With digital skills, lecturers can readily connect their students not just in their own localities, their places of learning and to each other, but also to a huge and ever expanding diversity of social, cultural, political networks and therefore to multiple ways of being knowing and communicating (Eijkman in Abao, Dayagbil & Boholano, 2015). Accounting Education lecturers need to teach concepts and techniques to allow students to work with any digital device or tool, and adapt to new technology quickly using the skills and concepts they have been taught (Orji, Okanazu & Ali, 2015). There is need for Accounting Education lecturers to acquire the right digital skills needed to meet up with instructional delivery and assessment in Accounting Education. There are concepts in Accounting Education that can only be delivered to the students digitally for better understanding. This can only be achieved when Accounting Education lecturers move with the current trends in technological advancement which is reflected in the changing patterns of Accounting Education curriculum. policy makers, researchers, educators and organizations alike are beginning to recognize that closing this digital skill gap is essential to preparing the nation's educational sector especially Accounting Educators for a successful future. Skill is the ability to do something well, usually gained through



training or experience that is needed (Nimfel, Wetnman & Yongsunshikfu, 2019). Effective teaching of accounting education in any learning environment requires the demonstration of various skills which invariably enables students to learn by improving their knowledge, competencies, attitudes and values. Fadere in Inalegwu (2016) viewed skill as expertness, aptitude and competences appropriate for a particular job which has to do with expert knowledge and creative reasoning to a level of mastery. Business education lecturers require digital skills in order to be effective in their profession. In order words, the teaching method adopted by business education lecturers in teaching and learning is very imperative for improving and developing the skills of business education students.

Business education has been recognized as a course of study that equips its students with different skills that are necessary for job placement in business related careers and for self-employment. According to Iwuoha and Peters (2019), business education is a programme basically for skill acquisition, vocational and competency. Obi in Anioke (2019) defined business education as a programme with the primary aim to prepare students for business career, improve those already in the career and also help students achieve all the aims of education. Similarly, Spencer in Amaewhule, Okiridu and Nwoko (2019) emphasized that the effectiveness of a university is directly linked to the quality and vigor of its faculty members. Business education is a skill giving course. The skills acquired by business education lecturers according to Oyewole (2019), allows them to be fitting almost in all facets of life. The mandate of business education according to Ademiluyi, Bello and Akande (2019), is to ensure that students are educated for and about business. Teachers are keys to the success of any educational transformation (Ikeanyionwu & Enwere, 2019). Ikeanyionwu and Enwere further viewed that not only are teachers one of the critical variables that needs to be changed in order to improve the educational system, they are also the most significant change agent in these transformation. Business Education lecturers require exceptional training with respect to modern technologies to enable them possess the ability, power, skill, authority and knowledge required to fit into the digital age. A Business Education lecturer according to Nwokolo and Ekwne in Ikeanyionwu and Enwere (2019) must possess skill such as initiative understanding of hardware, software skills amongst others.

Audio-Visual technology is referred to as a combination of audio technology and visual technology which addresses the sense of sight and the sense of sound to achieve the purpose of a teaching and learning process. The Webster's Encyclopedia Unabridged Dictionary of English Language in Amesi and Ugorji (2019) defined audio-visual as aids for training or educational materials directed at both senses of learning and senses of sight. Examples of audio-visuals according to the Webster's Encyclopedia Unabridged Dictionary of English Language are photographs, films, recordings used in classroom instructions. The uses of this technology plays significant role in instructional delivery as according to Tokentunji in Amesi and Ugorji (2019) audio-visual materials when effectively used have the advantages of overcoming the weaknesses of verbalism, it humanize and vitalize the subject matter, provides interesting approach to new topics and gives initial correct impressions, provides economic time in learning, supply concrete materials needed and stimulates the initiative of the student. There is urgent need to improve the quality of education to bridge the gap between developed and developing nations and audio-visual instruction is considered as a necessary tool for this purpose (Ibrahim, Idris, Adamu & Ibrahim, 2018). However, Hoffman in Ibrahim, Idris, Adamu and Ibrahim (2018) opined that the presence of audio-visual alone will not stimulate significant changes in a school or institution. Teachers are important ingredients in the implementation of audio-visual instruction in education. Without the involvement of teachers, most students may not take advantage of all the available potential benefits of audio-visual on their own. Teachers therefore need to actively participate in the use of audio-visual facilities as they have been trained in the use of audio-visuals and in its integration in the classroom activities to enhance thinking and creativity among students. The teaching model based on digital audio media according to Xin (2020), has the advantage of allowing the students to control their study independently, increasing interaction in learning and improving the psychological superiority which can make up for the insufficiency of the existing skill gap. Factors such as inadequate funding, irregular power supply, lack of skill, non-



provision of professionals to man audio-visual resource centres according to Aina and Ademola (2013), amongst others are responsible for the non-adequacy of audio-visual technology. It is therefore a requirement that Business Education lecturers ought to possess audio-visual skills to enable them effectively and efficiently teach accounting education.

Software tools and techniques are needed for the creation of database, therefore essential for preparing students for the world of business. According to Edet (2019), software tools and techniques includes structured programming that can make software development more visible to management and more controllable. Educational software is computer software and the primary purpose of which is teaching. Some educational software could be designed for use in school classrooms. Such software according to Mishra (2015), may be projected to a large whiteboard at the front of the class and or run simultaneously on a network of desktop computers in a classroom. This type of software according to Mishra is called classroom management software. While lecturers often choose to use educational software from other categories in their information technology suites, a whole category of educational software has grown up specifically intended to assist classroom teaching. Software tools includes word processor, spreadsheets, power-point, desktop publishing, Microsoft excel, Microsoft word, graphics amongst others (Jubril, 2019). Similarly, Akomas, Ekeke and Douglas (2017) stated that software tools includes word processing, spreadsheet, data base management software, project management software, multimedia authorizing system amongst others. Software tools or techniques are digital tools that make collaboration, social interaction and feedback possible for students. According to Yon-Dominguez and Marcelo (2017) software technologies are communication and interactive tools, repositories and social network tools that can be used in enhancing teaching and learning. Beeland (2017) opined that software tools are important in education because they facilitate student's academic learning and achievement when effectively utilized. Beeland further stated that student's motivation which is one of the teacher's concern in the classroom can be improved through effective utilization of software tools. Business Education lecturers could utilize software tools such as WhatsApp, skype and Google talk to exchange academic information, solve self-doubt and carry out online classes with students. Business education lecturers should inculcate the use of computer application software in the teaching of accounting education. This will enable the students the practical use of computer in their various fields of endeavour. Business education lecturers are expected to possess software skills to be able to teach effectively.

Education is a complex business with a long history of practitioners looking for the latest gadget to improve or change learning. The term hardware according to Schofreid (2015) refers to mechanical device that makes up computer. Computer hardware consists of interconnected electronic devices that we can use to control computer's operation, input and output. Computer hardware is a collection of several components working together. Some parts are essential and others are added advantage. According to Kabari (2015), the hardware devices are made of the input devices which accept data and instructions from the user and fed the same into the computer in the form the machine can recognize. Examples of input device according to Kabari, are microphone, scanner, keyboard, mouse, joystick, keyboard amongst others. While the output device make information and other necessary reports to be available to the users (Kabari, 2015). With output devices, results of processed data or instructions are obtained, examples of output devices are printer, monitor, speakers, and plotters amongst others. Hardware is typically directed by the software to execute any command or instruction. A combination of hardware and software forms a usable computing system (Gailo, 2013).

### **Statement of the Problem**

Innovations in new technologies has created a glaring need for teachers to acquire more skills in order to bring up the caliber of graduates that will fit squarely into the modern challenging work trend. Today's students need educators who have the knowledge and skills to facilitate their participation in a collaborative web-based learning culture. Students need teachers who know how to create a learning



culture that looks and functions like the real and virtual workplace of today. However, Business Education lecturers seem lack the ability to cope with the challenges of the digital age due to probably lack of confidence and competence in integrating digitalization into pedagogical practice. In support of this assertion, Nwokocha and Onwuchekwa (2014) observed that despite the enthusiasm towards the use of digital skills and the huge investments on the acquisition of digital tools, the use of digital skills seems to have little impact in the classroom because some Business Education lecturers are showing signs of apathy towards the skill. Similarly, Okoli and Wagbara (2016) observed that most lecturers lack knowledge and skills to use digital tools and in addition are not enthusiastic about the changes due to inadequate training to meet up with technological flux. In view of these, the researchers carried out this study to examine the digital skills required by Business Education lecturers for the teaching of accounting education in tertiary institutions in Rivers State.

### **Purpose of the Study**

The main aim of this study was to identify digital skills required by Business Education lecturers for teaching accounting education courses in tertiary institutions in Rivers State. Specifically, the study sought to:

1. Identify the audio-visual content creation skills required by Business Education lecturers for the teaching of accounting education courses in tertiary institutions in Rivers State.
2. Identify the software mastering skills required by Business Education lecturers for the teaching of accounting education courses in tertiary institutions in Rivers State.
3. Identify the hardware usage skills required by Business Education lecturers for the teaching of accounting education courses in tertiary institutions in Rivers State.

### **Research Questions**

The following research questions were posed for the study.

1. What are the audio-visual content creation skills required by Business Education lecturers for the teaching of accounting education courses in tertiary institutions in Rivers State?
2. What are the software mastery skills required by Business Education lecturers for the teaching of accounting education courses in tertiary institutions in Rivers State?
3. What are the hardware usage skills required by Business Education lecturers for the teaching of accounting education courses in tertiary institutions in Rivers State?

### **Hypotheses**

The following null hypotheses were formulated and tested at 0.05 level of significance.

1. There is no significance difference in the mean ratings of Business Education lecturers in Rivers State University, Ignatius Ajuru University of Education and Federal College of Education (Technical) Omoku on their perception of audio-visual content creation skills required for the teaching of accounting education courses in tertiary institutions in Rivers State.
2. There is no significance difference in the mean ratings of Business Education lecturers in Rivers State University, Ignatius Ajuru University of Education and Federal College of Education (Technical) Omoku on their perception of software mastering skills required for the teaching of accounting education courses in tertiary institutions in Rivers State.
3. There is no significance difference in the mean ratings of Business Education lecturers in Rivers State University, Ignatius Ajuru University of Education and Federal College of Education (Technical) Omoku on their perception of hardware usage skills required for the teaching of accounting education courses in tertiary institutions in Rivers State.



### **Methodology**

The study adopted a descriptive survey design. The population of the study comprised of 82 Business Education lecturers in Rivers State University, Ignatius Ajuru University of Education and Federal College of Education (Technical) Omoku as shown in Table 1 is 19, 33 and 30 totally 82. Census sampling technique was adopted since the population was of manageable size. The instrument used for data collection was a structured questionnaire titled “Digital Skills Required by Business Education Lecturers for Teaching of Accounting Education Courses Questionnaire” (DSRBELTAECQ). The instrument was designed in a five point Likert rating of agreement (Strongly Agreed (5), Agreed (4), Undecided (3), Disagreed (2) and Strongly Disagreed (1), used to elicit responses from the respondents. In order to determine the validity of the instrument, the questionnaire was face and content validated by two (2) Business Educators and one (1) Measurement and Evaluation experts all in Faculty of Education, Rivers State University. To ensure the consistency of the instrument, the Cronbach Alpha reliability method was adopted and a reliability coefficient of 0.87 was established. All copies of the questionnaire administered were retrieved and used for the study. The research questions were answered using mean and standard deviation, while ANOVA was used to test the hypotheses at 0.05 level of significance. The criterion mean score of 3.00 and above was agreed, while the mean score below 3.00 was disagreed. In the same vein, the decision rule for the hypotheses was that any hypotheses with ANOVA value less than the F-critical table value was accepted otherwise rejected.

**Table 1: Population Distribution**

S/n	Institution	Total No. of Lecturers
1.	Rivers State University	19
2.	Ignatius Ajuru University of Education	33
3.	Federal College of Education (Technical) Omoku	30
	<b>Total</b>	<b>82</b>

**Source:** Departmental Offices of RSU, IAUE & FCE (T), Omoku

The Table shows that 19 Business Educators were of Rivers State University, 30 were of Federal College of Education (Technical) Omoku and 33 were of Ignatius Ajuru University of Education with both Business Educators and related Business lecturers.

### **Results**

The result of this study were presented according to each research question posed in the study as thus:

Research Question 1: What are the audio-visual content creation skills required by Business Education lecturers for the teaching of accounting education courses in tertiary institutions in Rivers State?



**Table 2: Mean Ratings and Standard Deviation on the Audio-Visual Content Creation Skills Required by Business Education Lecturers for the Teaching of Accounting Education Courses.**

S/N	Items	RSU (N-19)			IAUE (N-33)			FCE(T) Omoku (N-52)		
		$\bar{X}$	S.D	Remarks	$\bar{X}$	S.D	Remarks	$\bar{X}$	S.D	Remarks
1	Ability to use photographs for the teaching of accounting education courses	4.42	0.32	Agreed	4.31	0.31	Agreed	4.76	0.34	Strongly Agreed
2	Proficiency in the use of films for the teaching of accounting education courses	4.47	0.32	Agreed	4.63	0.33	Strongly Agreed	4.00	0.29	Agreed
3	Ability to use recordings for the teaching of accounting education courses	4.84	0.35	Strongly Agreed	4.17	0.29	Agreed	4.65	0.33	Strongly Agreed
4	Effective utilization of over-head projectors in the teaching of accounting education courses	4.10	0.29	Agreed	4.23	0.30	Agreed	4.00	0.29	Agreed
5	Being able to use opaque projectors in the teaching of accounting education courses	2.32	0.31	Disagreed	2.97	0.28	Undecided	2.62	0.33	Undecided
6	Ability to use videos in the teaching of accounting education courses	4.37	0.31	Agreed	3.97	0.28	Agreed	4.00	0.29	Agreed
7	Ability to use audio tapes in the teaching of accounting education courses	4.26	0.30	Agreed	4.31	0.30	Agreed	4.74	0.34	Strongly Agreed
8	Being able to use stream charts in the teaching of accounting education courses	2.53	0.32	Undecided	2.25	0.30	Disagreed	2.75	0.34	Undecided



9	Ability to effectively use audio CDs in the teaching of accounting education courses	2.37	0.31	Disagreed	2.06	0.29	Disagreed	2.63	0.33	Undecided
<b>Grand Mean/SD</b>		<b>3.74</b>	<b>0.31</b>	<b>Agreed</b>	<b>3.65</b>	<b>0.29</b>	<b>Agreed</b>	<b>3.79</b>	<b>0.32</b>	<b>Agreed</b>

**Source: Field Survey, 2021.**

Table 2 showed the respondents opinion on the audio-visual content creation skills required by Business Education lecturers for the teaching of accounting education courses in tertiary institutions in Rivers State. Using the criterion mean of 3.00 as the bench-mark for acceptance, the data on Table 2 showed the respondents had divergent views that Business Education lecturers require audio-visual content creation skill for the teaching of accounting education courses in tertiary institutions in Rivers State. Some of the respondents strongly agreed, some agreed, some undecided while some disagreed. They agreed that Business Education lecturers require photographic skills for the teaching of accounting education courses, they require filming skills for teaching of accounting education courses, they require recording skill for the teaching of accounting education courses, they require the use of overhead projectors for the teaching of accounting education courses, they require the use of videos for the teaching of accounting education courses, they require the use of audio tapes for the teaching of accounting education courses. The analysis revealed a grand mean of 3.74, 3.65 and 3.79 and a grand standard deviation of 0.31, 0.29 and 0.32 respectively which also indicated that Business Education lecturers require audio-visual content creation skills for the teaching of accounting education courses in tertiary institutions in Rivers State.

Research Question 2: What are the software mastering skills required by Business Education lecturers for the teaching of accounting education courses in tertiary institutions in Rivers State?

**Table 3: Mean Ratings and Standard Deviation on the Software Mastering Skills Required by Business Education Lecturers for the Teaching of Accounting Education Courses**

S/N	Items	RSU (N-19)			IAUE (N-33)			FCE(T) Omoku (N-30)		
		$\bar{X}$	S.D	Remarks	$\bar{X}$	S.D	Remarks	$\bar{X}$	S.D	Remarks
1	Ability to use word processor for the teaching of accounting education courses	4.42	0.32	Agreed	4.31	0.31	Agreed	4.76	0.34	Strongly Agreed
2	Proficiency in the use of spreadsheet for the teaching of accounting education courses	4.23	0.26	Agreed	4.63	0.33	Strongly Agreed	4.00	0.29	Agreed
3	Ability to use power-point for the	4.54	0.35	Strongly	4.34	0.29	Agreed	4.65	0.33	Strongly



	teaching of accounting education courses			Agreed						Agreed
4	Effective utilization of desktop publishing for the teaching of accounting education courses	4.10	0.29	Agreed	4.23	0.39	Agreed	4.31	0.29	Agreed
5	Being able to use Microsoft Excel in the teaching of accounting education courses	4.32	0.24	Agreed	3.27	0.28	Agreed	4.62	0.33	Strongly Agreed
6	Ability to use micro-soft word in the teaching of accounting education courses	4.37	0.31	Agreed	3.97	0.36	Agreed	4.18	0.29	Agreed
7	Ability to use graphics in the teaching of accounting education courses	4.26	0.30	Agreed	4.31	0.61	Agreed	4.14	0.34	Agreed
8	Being able to use Corel draw in the teaching of accounting education courses	2.21	0.41	Disagreed	2.62	0.30	Undecided	2.75	0.34	Undecided
9	Ability to effectively use oracle in the teaching of accounting education courses	2.37	0.50	Disagreed	2.06	0.29	Disagreed	2.63	0.33	Undecided
	<b>Grand Mean/SD</b>	<b>3.86</b>	<b>0.33</b>	<b>Agreed</b>	<b>3.74</b>	<b>0.35</b>	<b>Agreed</b>	<b>4.14</b>	<b>0.32</b>	<b>Agreed</b>

**Source: Field Survey, 2021.**

Table 3 showed the respondents opinion on the software skills required by Business Education lecturers for the teaching of accounting education courses in tertiary institutions in Rivers State. Using the criterion mean of 3.00 as the bench-mark for acceptance, the data on Table 3 showed that the respondents had divergent views that business education lecturers require software skill for the teaching of accounting education courses in tertiary institutions in Rivers State. Some of the



respondents strongly agreed, some agreed, some undecided while some disagreed. They agreed that business education lecturers require word processing skills for the teaching of accounting education courses, they require spreadsheet skills for teaching of accounting education courses, they require power-point skill for the teaching of accounting education courses, they require desktop skill for the teaching of accounting education courses, they require micro-soft excel skill for the teaching of accounting education courses, they require micro-soft word skill for the teaching of accounting education courses, they require graphics skills for the teaching of accounting education courses. The analysis revealed a grand mean of 3.86, 3.74 and 4.14 and a grand standard deviation of 0.33, 0.35 and 0.32 respectively which also indicated that Business Education lecturers require software skills for the teaching of accounting education courses in tertiary institutions in Rivers State.

Research Question 3: What are the hardware usage skills required by Business Education lecturers for the teaching of accounting education courses in tertiary institutions in Rivers State?

**Table 4: Mean Ratings and Standard Deviation on the Hardware Usage Skills Required by Business Education Lecturers for the Teaching of Accounting Education Courses.**

S/N	Items	RSU (N-19)			IAUE (N-33)			FCE(T) Omoku (N-30)		
		$\bar{X}$	S.D	Remarks	$\bar{X}$	S.D	Remarks	$\bar{X}$	S.D	Remarks
1	Ability to use printer for the teaching of accounting education courses	4.42	0.32	Agreed	4.31	0.31	Agreed	4.76	0.34	Strongly Agreed
2	Proficiency in the use of scanner for the teaching of accounting education courses	4.47	0.61	Agreed	4.63	0.33	Strongly Agreed	4.21	0.29	Agreed
3	Ability to use CD for the teaching of accounting education courses	2.54	0.37	Undecided	2.18	0.82	Disagreed	2.65	0.33	Undecided
4	Effective utilization of DVD for the teaching of accounting education courses	2.10	0.29	Disagreed	2.23	0.30	Disagreed	2.87	0.29	Undecided
5	Being able to use modems in the teaching of accounting education courses	4.32	0.31	Agreed	3.27	0.28	Agreed	4.62	0.33	Strongly Agreed
6	Ability to use multi-media projector for the teaching of accounting	4.34	0.31	Agreed	3.97	0.21	Agreed	4.97	0.19	Strongly Agreed



education courses

7	Ability to use interactive whiteboards for the teaching of accounting education courses	4.26	0.30	Agreed	4.75	0.30	Strongly Agreed	4.74	0.34	Strongly Agreed
8	Being able to use photocopier for the teaching of accounting education courses	4.43	0.38	Agreed	4.25	0.51	Agreed	4.15	0.37	Agreed
9	Ability to effectively use central processing unit for the teaching of accounting education courses	4.37	0.32	Agreed	4.06	0.29	Agreed	4.63	0.32	Strongly Agreed
<b>Grand Mean/SD</b>		<b>3.91</b>	<b>0.35</b>	<b>Agreed</b>	<b>3.73</b>	<b>0.37</b>	<b>Agreed</b>	<b>4.24</b>	<b>0.31</b>	<b>Agreed</b>

**Source: Field Survey, 2021.**

Table 4 showed the respondents opinion on the hardware skills required by Business Education lecturers for the teaching of accounting education courses in tertiary institutions in Rivers State. Using the criterion mean of 3.00 as the bench-mark for acceptance, the data on Table 4 showed that the respondents had divergent views that Business Education lecturers require hardware skill for the teaching of accounting education courses in tertiary institutions in Rivers State. Some of the respondents strongly agreed, some agreed, some undecided while some disagreed. They agreed that Business Education lecturers require printing skills for the teaching of accounting education courses, they require scanning skills for teaching of accounting education courses, they require the use of interactive whiteboard skills for the teaching of accounting education courses, they require photocopying skill for the teaching of accounting education courses, they require the use of central processing unit skills for the teaching of accounting education courses. The analysis revealed a grand mean of 3.91, 3.73 and 4.24 and a grand standard deviation of 0.35, 0.37 and 0.31 respectively which also indicated that Business Education lecturers require hardware skills for the teaching of accounting education courses in tertiary institutions in Rivers State.

### **Test of Hypotheses**

Hypotheses for the study were tested as thus:

**Hypothesis 1:** There is no significant difference in the mean ratings of Business Education lecturers in Rivers State University, Ignatius Ajuru University and Federal College of Education (Technical) Omoku on their perception of Audio-Visual content creation skills required for the teaching of accounting education courses in tertiary institutions in Rivers State.

**Table 5: Summary of Analysis of Variance (ANOVA) on the Perception of Business Education Lecturers in Tertiary Institutions in Rivers State on Audio-Visual Content Creation Skills Required for the Teaching of Accounting Education Courses.**



Source of Variance	Sum of Square (SS)	Df	Mean Sum of Square (MSS)	F-ratio	F-critical	Level	Decision
Between Group	0.20	2	0.10				
				1.25	3.55	0.05	Accepted
Within Group	1.39	18	0.08				

**Source:** Field Survey, 2021.

From the analysis in the Table, the result showed that the F-ratio is less than the F-critical ( $F\text{-ratio} < F\text{-crit.}$ ). Hence, the hypotheses was accepted. This is an indication that there is no significant difference in the opinion of respondents in RSU, IAUE and FCE (T), Omoku on their perception of the audio-visual content creation skill required by Business Education lecturers for the teaching of accounting education courses in tertiary institutions in Rivers State.

**Hypothesis 2:** There is no significant difference in the mean ratings of Business Education lecturers in Rivers State University, Ignatius Ajuru University and Federal College of Education (Technical) Omoku on their perception of software mastering skills required for the teaching of accounting education courses in tertiary institutions in Rivers State.

**Table 6: Summary of Analysis of Variance (ANOVA) on the Perception of Business Education Lecturers in Tertiary Institutions in Rivers State on Software Mastering Skills Required for the Teaching of Accounting Education Courses.**

Source of Variance	Sum of Square (SS)	Df	Mean Sum of Square (MSS)	F-ratio	F-critical	Level	Decision
Between Group	3.2	2	1.73				
				4.75	5.61	0.05	Accepted
Within Group	1.03	24	0.04				

**Source:** Field Survey, 2021.

From the analysis in the Table, the result showed that the F-ratio is greater than the F-critical ( $F\text{-ratio} > F\text{-crit.}$ ). Hence, the hypotheses was accepted. This is an indication that there is no significant difference in the opinion of respondents in RSU, IAUE and FCE (T), Omoku on their perception of the software skill required by Business Education lecturers for the teaching of accounting education courses in tertiary institutions in Rivers State.



**Hypothesis 3:** There is no significant difference in the mean ratings of Business Education lecturers in Rivers State University, Ignatius Ajuru University and Federal College of Education (Technical) Omoku on their perception of hardware usage skills required for the teaching of accounting education courses in tertiary institutions in Rivers State.

**Table 9: Summary of Analysis of Variance (ANOVA) on the Perception of Business Education Lecturers in Tertiary Institutions in Rivers State on Hardware Usage Skills Required for the Teaching of Accounting Education Courses.**

Source of Variance	Sum of Square (SS)	Df	Mean Sum of Square (MSS)	F-ratio	F-critical	Level	Decision
Between Group	0.64	2	0.37	5.26	5.34	0.05	Accepted
Within Group	2.70	24	0.07				

**Source:** Field Survey, 2021.

From the analysis in the Table, the result showed that the F-ratio is less than the F-critical ( $F\text{-ratio} < F\text{-crit}$ ). Hence, the hypotheses was accepted. This is an indication that there is no significant difference in the opinion of respondents in RSU, IAUE and FCE (T), Omoku on their perception of the hardware skill required by Business Education lecturers for the teaching of accounting education courses in tertiary institutions in Rivers State.

**Discussion**

Discussions of the study were made according to the research questions posed in the study. The findings in research question one revealed that Business Education lecturers in RSU, IAUE and FCE(T), Omoku require audio-visual content creation skills for the teaching of accounting education courses. In the same vein, the hypothesis testing indicated no significant difference in the opinion of respondents in RSU, IAUE and FCE (T), Omoku on the audio-content creation skills required for the teaching of accounting education courses. The findings is in agreement with the views of Webster's Encyclopedia Unabridged Dictionary of English Language in Amesi and Ugorji (2019) that audio-visuals are used as aids for training or educational materials directed at both senses of learning and sense of sight. Based on the views of Webster's Encyclopedia Unabridged Dictionary of English Language in Amesi and Ugorji, the researchers are of the opinion that Business Education lecturers require audio-visual content creation skills to enable them teach effectively.

The findings from research question two revealed that Business Education lecturers require software skills for the teaching of accounting education courses. Similarly, the hypothesis testing indicated no significant difference in the opinion of respondents in RSU, IAUE and FCE(T), The finding is in agreement with the view of Beeland (2017) who opined that software tools are important in education because they facilitate student's academic learning and achievement when effectively utilized. Based on the views of Beeland, the researchers are of the opinion that Business Education lecturers require software skills for the teaching of accounting education courses.

The findings from research question three showed that Business Education lecturers require hardware skills for the teaching of accounting education courses. In the same vein, the hypothesis testing indicated no significant difference in the opinion of respondents in RSU, IAUE and FCE ((T), Omoku, on the hardware skills for the teaching of accounting education courses. The findings aligns with that



of Murray and Olcese (2011) who pointed out that there are the enthusiasts or early adopters who insist that tablet hardware technology will transform teaching and learning and then there are the skeptics who believe that it will make no difference. Based on the views of Murray and Olcese, the researchers depicts that Business Education lecturers require hardware skills for the teaching of accounting education courses.

## Conclusion

Based on the findings of the study, it was concluded that Business Education lecturers possess audio-visual content creation, software and hardware skills in teaching accounting education courses in tertiary institutions in Rivers State.

## Recommendations

Based on the findings from the study and conclusion made, the following recommendations were made:

1. There should be constant training and re-training of lecturers on the use of video in teaching accounting education courses as it will help them to use it maximally when they are available
2. A modern laboratory should be made available by school authorities for lecturers to enable them access and equip themselves with audio-visual skills
3. Government should endeavour to make electricity available in tertiary institutions to enable lecturers use the software tools for the teaching of accounting education courses
4. Government through the school authorities should provide electricity for lecturers in tertiary institutions to enable them effectively use the hardware tools for the teaching of accounting education courses

## References

- Abao, E, Dayagbil, F. & Boholano, H. (2015). Engagement to Social Networking: Challenges and Opportunities to Educators. *European Scientific Journal*. 11(16), 173-191.
- Ademiluyi, A. B., Bello, G. A. & Akande, R. A. (2019). Strategies for Enhancing the Effectiveness of Business Education as an Instrument for Economic Empowerment Among Female Under-Graduates in the E-World. *Nigerian Journal of Business Education*. 6(2), 325-335.
- Akomas, U. C., Ekeke, C. & Douglas, O. G. (2017). Computer Application in Business Education: An Employable Skill for 21st Century Youth Empowerment in Rivers State University. *Rivers Business Education Journal*. 2(1), 145-151.
- Aina, J. A. & Ademola, A. E. (2013). Audio-Visual Resources Availability and Use of a Library Services among Colleges of Education in Lagos State, Nigeria. *International Journal of Library and Information Sciences*. 5(10), 417-425.
- Amaiya, A. O. (2016). Availability and Utilization of New Technology for Teaching Office Technology and Management in Delta State Polytechnics. *Nigerian Journal of Business Education*. 3(2), 64-72.
- Amaewhule, W. A., Okiridu, O. S. F. & Nwoko, N. L. (2019). E-Mentoring Preparation of Beginning Business Education Teachers in Nigerian Universities. *Nigerian Journal of Business Education*. 6(2), 73-83.
- Amesi, J. & Ugorji, U. (2019). Extent of Utilization of New Technologies for Improving Instruction in Business Education Programme in Rivers State Universities. *Association of Business Educators of Nigeria*. 6(1), 677-685.
- Anioke, B. O. (2019). Adaptation of Virtual Realities in Business Education Delivery in Colleges of Education in Nigeria towards Coping in the E-World. *Nigerian Journal of Business Education*. 6(2), 93-103
- Beeland, W. (2017). Student Engagement, Visual Learning and Technology: Can Interactive Whiteboard Help? Retrieved on 3ed July 2021 from <http://downloads01smarttech.com/media/research/internationalresearch/usa/beelandam.pdf>.
- Boholano, H.B. (2017). Smart Social Networking: 21<sup>st</sup> Century Teaching and Learning Skills. *Journal of Research in Pedagogy*. 7(1), 21-29.
- Edet, E. O. (2019). Electronic-based Learning Resources Required in Business Education and Skill Acquisition for Global Business Environment. *Nigerian Journal of Business Education*. 6(2), 163-172.
- Gallo, T. D. (2013). "Broad Overview of E-Waste Management Policies in the U. S. Retrieved On 27<sup>th</sup> June 2021 from [www.epa.gov](http://www.epa.gov).
- Ikeanyionwu, C. L. & Enwere, J. O. (2019). Refocusing of the Training of Business Education Teachers on the Core Competencies that will Serve as Catalyst for Building the 21<sup>st</sup> Century Skills. *Association of Business Educators of Nigeria*. 6(1), 265-271.
- Inalegwu, M. O. (2016). Influence of Word Processing and Shorthand Skills on Professional Secretaries Functions in Modern Offices in North-West Geo-Political Zone, Nigeria. *Masters Degree Thesis, Ahmadu Bello University, Zaria*.



- Iwuoha, C. U & Peters, C. B. (2019). Improving Business Education Programme through School-Industry Collaboration for Capacity Building in Imo State, Nigeria. *Journal of Business Education*. 6(2), 34-40.
- Jubril, A. M. (2019). ICT Facilities: A Panacea to Effective Teaching and Learning Business Education. *Association of Business Educators of Nigeria*. 6(1), 558-564.
- Kabari, L.G. (2015). *Introduction to Computers*. Ano Publications Company, Port Harcourt, Rivers State.
- Mishra, P. (2015). How are Computer-Based Assessments Better than Paper-Based Assessment? Retrieved on 16<sup>th</sup> June 2021 from <http://www.proprots.com/c/ims/what-is-computerbasedAssessment/>.
- Murray, O. T. & Olcese, N. R. (2011). Teaching and Learning with I.Pads: Ready or Not? *Journal of Technology Trends*. 55(6), 42-48.
- Nimfel, T. Wetnmen, M. P. & Yongsunshikfu, B. (2019). Identification of New Technology Skills Required by Teachers of Office Technology and Management for Teaching In Polytechnics in North Central Nigeria. *Nigerian Journal of Business Education*. 6(2), 382-31.
- Nwachukwu, C. L. (2014). Challenges in the Use of Multimedia Projectors in Business Education Institutions in Nigerian Colleges of Education. *Nigerian Journal of Business Education*. 2(1), 174-18.
- Nwangwu, E. C. (2013). Video Editing and Production Skills Possessed by Computer Education Lecturers for Effective Instructional Delivery in Colleges of Education in South-East Zone of Nigeria. *Computer Education Research Journal*. 1(1), 10-118.
- Nwokocha, E. & Onwuchekwa, C. A. (2014). A Survey on Interactive Whiteboard Usage and Perception of Business Education Lecturers and Students. *Nigerian Journal of Business Education*. 4(2), 138-148.
- Ofili, G. O. (2012). Instructional Television Utilization for the Enhancement of Cognitive Learning Skills: Implication for the Challenges in Science Education. *Association Newsletter* 13(5), 1-7.
- Ogbuabor, P. E., Gloria, O. O. & Jesuwunmi, C. D. A. (2019). Assessment of ICT Utilization in Accounting Education in Enugu and Anambra States Tertiary Institutions. *Canadian Contemporary Research Journal*. 1(1), 1-92.
- Okoli, B. E. & Wagbara, S. O. (2016). Use of New Technologies in the Instructional Delivery of Business Education: The Perception of Business Educators in Tertiary Institutions in Rivers State. *Nigerian Journal of Business Education*. 1(3), 99-110.
- Okoro, J. (2015). Strategies for Enhancing Quality Assurance in Business Teacher Education in Nigeria University. *Journal of Education and Practice*. 6(12), 202-208
- Orji, C. T., Okanazu, O. O. & Ali, C. C. (2015). Digital Skills Required by Technical Vocational Education and Training Lecturers for Instructional Delivery in Universities. *Journal of Home Economics Research*. 23(1), 128-141.
- Oyewola, S. O. (2019). Business Education in the E-World: Essential Tools for Students Preparation for the Global Employment in Ogun State, Nigeria, *Nigerian Journal of Business Education*. 6(2), 283-293.
- Usoro, A. D. & Calab, E. E. (2014). Digital Education and Technical Student Teacher Preparation for Sustainable Classroom Development. *Journal of Nigeria Vocational Association*. 19(2), 75-83.



## **ASSESSMENT OF DIGITAL SKILLS ACQUIRED BY UNIVERSITY BUSINESS EDUCATION STUDENTS FOR EMPLOYABILITY IN RIVERS STATE**

<sup>1</sup>AMESI, J. PhD

<sup>2</sup>ALLISON, M. T PhD

Department of Business Education,  
Rivers State University,  
Port-Harcourt.

All correspondence to [joyamesi2016@gmail.com](mailto:joyamesi2016@gmail.com)

### **Abstract**

*The aim of the study was to assess digital skills acquired by university Business Education student for employability in Rivers State. Two specific objectives, research questions and hypotheses were posed and formulated for the study. The study adopted a descriptive survey research design. The population of the study comprised of four hundred and fifty nine (459) third year university Business Education students in Rivers State University (RSU) and Ignatius Ajuru University of Education (IAUE). 100 percent of the total population was used as sample and census sampling technique was adopted. A structured questionnaire titled "Assessment of Digital Skills Acquired by University Business Education Students for Employability Questionnaire (ADSAUBESEQ) was used as instruments for data collection. The instrument was designed on a 4 point rating scale of (SA-4, A-3, DA-2 and SD-1) and used to elicit responses from the respondents. The instrument was face and content validated by three experts in the Faculty of Education, Rivers State University, Port Harcourt. Cronbach Alpha was used to establish the reliability coefficient of 0.87. 450 copies of the questionnaire were retrieved and used for the analysis. Mean and standard deviation was used to answer the research questions while t-test was used to test the hypotheses at 0.05 level of significance. The findings revealed that university Business Education students in RSU and IAUE acquired audio-visual content creation skills and software skills for employability in Rivers State. The researcher therefore recommends that students upon graduation should be giving opportunity of real life experiences through exposure to various audio-visual tools to enable them perform efficiently in business and as employees and that university Business Education students should be exposed to further learning through workshops and seminars to enable them acquire more software skills.*

### **Introduction**

The term assessment refers a variety of methods or tools that educators use to evaluate students' academic performance. Chukwugbo (2014) defined assessment as the systematic collection, review and use of information about educational programmes to improve student's learning. In the same vein, Marzano in Ezenwafor and Achugamonye (2019) defined assessment as the process of collecting information which is conducted in order to improve educational programmes and demonstrate their effectiveness. It is therefore necessary to assess the digital skills acquired by university Business Education students which eventually lead to their employability upon graduation.

Digital skills have been considered to be vital in teaching and learning as the technology assists the achievement of basic skills, expose students to practical workplace environment,



supplement and consolidate what is read in textbooks and journals. According to Usoro and Caleb (2014), digital teaching and learning encompasses many different facets, tools and applications to support and empower teachers and students, including online courses, blended or hybrid learning or digital content and resources. Digital skill is very useful in the area of teaching for lecturers, business management practices and accounting (Sanusi, 2011). Currently, it seems inevitable that the usage and reliance on digital technologies will continue to grow unprecedentedly. While reading books and paper resources and manual writing remain fundamentally important, this current period in time may well represent a pivotal point in the march towards digital domination ([www.e-safetysupport.com](http://www.e-safetysupport.com)). Therefore, it is important to provide accounting education students with the necessary tools, understanding and practice in using digital technologies and skills to ensure they are not disenfranchised from what is probable, if not highly likely, shift towards technology based literacy.

The role of digital skills in teaching and learning is rapidly becoming one of the most important and widely discussed issues in contemporary education as observed by Thierer in Nimfel, Wetnman and Yongsunghikfu (2017). Therefore, educational professionals agreed that digital technologies have the prospects for improving teaching and learning as well as showing workforce opportunities. It is also evident as agreed by Amiaya (2016) that the traditional educational environments are not suitable for preparing students to function or be productive in the workplace in today's society. Boholano (2013) opined that ability to establish a blog or wiki, ability to create engaging visuals, ability to use and create video content, ability to create digital audio content, ability to use social media for professional development opportunities and ability to use social bookmarking sites to collate resources are the digital skills required by Business Education lecturers for teaching accounting education courses. Therefore, if Business Education lecturers fail to incorporate digital skills in course of teaching, preparing students for life in the 21<sup>st</sup> century knowledge-driven economy will not be achieved.

The concepts of Business Education is based on a vision and a set of competencies designed to prepare students to become knowledgeable and ethical decision makers as they fulfill their roles as consumers, workers, good citizens and also contribute to the development of the society. In the academic arena, Business Educators play a prominent role in preparing students to become responsible citizens capable of making the astute economic decisions that will benefit their personal and professional lives (Ogungboyega, 2019). Business Education students need to acquire skills in order to be effective and efficient in their chosen field of work. In order words, the teaching method adopted by a business educator in teaching and learning is very imperative for improving and developing the skills of Business Education students. In view of the afore mentioned, Iufunwa, Waziri and Olorunmolu (2013) stated that if institutions that have Business Education programme must achieve their goals, they must put in place quality graduates for national development. The placement of quality graduates is predicated on the acquisition of the required skills more importantly digital skills, this can be achieved by the combination of both theoretical and practical ways of teaching and learning. The placement of quality graduates is predicated on the acquisition of the required skills more importantly digital skills, this can be achieved by the combination of both theoretical and practical ways of teaching and learning. In line with the above assertion, Chan and Murphy (2010) opined that key skills cannot be developed or learned by reading books alone as knowledge of key skills ought to be strengthened through instruction and demonstration and by providing opportunities for students to practice. The acquisition of skill is important because when efficient and skillful hands are employed in any field of human endeavour, high productivity is usually achieved. Economically, maximum skills acquisition by Business Education students and others will help to enrich the Nigerian society and in this way, make possible sustainable development. Nigeria as a nation will enjoy sustainable development if Business Education students in particular and all other students in general acquire maximum skills and competencies in their specialties which will enable them to be gainfully employed or become employers of labour.



Employability is seen as an aspect of the school curricula that has attracted many contextual definitions and contributions from different schools. Samson (2013) described employability as highly human skills that included basic thinking skills and imagination, subjective decision making, social skills and responsibility. According to Blackmore, Bulaitis and Tan (2016), employability has assumed a global recognition and popularity therefore increasing attention is being given to the role of higher education in developing employability. Blackmore et al further stated that employability is generally knowledge-based and skill-based curriculum that prepares students for world of work, enterprise development, self-employment and social adjustment in society. Employability fosters multiple means of engagement for students and facilitates their transition to the workplace, therefore employability is the combination of knowledge, personal attributes and competencies that ensures that students upon graduation are more likely to secure employment and continue to progress during their career. It is therefore the responsibility of Business Educators to improve the employability levels of Business Education students which will in turn ensure that their skills and knowledge are fit-for-purpose for the labour market upon graduation. This can be effectively done with the use of audio-visual content creation skills or software skills by Business Educators.

Audio-Visual technology is referred to as a combination of audio technology and visual technology which addresses the sense of sight and the sense of sound to achieve the purpose of a teaching and learning process. The Webster's Encyclopedia Unabridged Dictionary of English Language in Amesi and Ugorji (2019) defined audio-visual as aids for training or educational materials directed at both senses of learning and senses of sight. Examples of audio-visuals according to the Webster's Encyclopedia Unabridged Dictionary of English Language are photographs, films, recordings used in classroom instructions. The uses of this technology plays significant role in instructional delivery as according to Tokentunji in Amesi and Ugorji (2019) audio-visual materials when effectively used have the advantages of overcoming the weaknesses of verbalism, it humanize and vitalize the subject matter, provides interesting approach to new topics and gives initial correct impressions, provides economic time in learning, supply concrete materials needed and stimulates the initiative of the student. Anazaku (2011) viewed audio-visual as those instructional materials that can convey meaning without complete dependence upon verbal symbols or language.

There is urgent need to improve the quality of education to bridge the gap between developed and developing nations and audio-visual instruction is considered as a necessary tool for this purpose (Adamu, Ibrahim, Adamu & Ibrahim, 2018). However, Hoffman in Adamu, Ibrahim, Adamu and Ibrahim (2018) opined that the presence of audio-visual alone will not stimulate significant changes in a school or institution. Teachers are important ingredients in the implementation of audio-visual instruction in education. Without the involvement of teachers, most students may not take advantage of all the available potential benefits of audio-visual on their own. Teachers therefore need to actively participate in the use of audio-visual facilities as they have been trained in the use of audio-visuals and in its integration in the classroom activities to enhance thinking and creativity among students.

The teaching model based on digital audio media according to Xin (2020), has the advantage of allowing the students to control their study independently, increasing interaction in learning and improving the psychological superiority which can make up for the insufficiency of the existing skill gap. Factors such as inadequate funding, irregular power supply, lack of skill, non-provision of professionals to man audio-visual resources centers according to Aina and Ademola (2013), amongst others are responsible for the non-adequacy of audio-visual technology. It is therefore a requirement that Business Education students **possess audio-visual skill for employability upon graduation.**

Software tools and techniques are needed for the creation of database, therefore essential for preparing students for the world of business. According to Edet (2019), software tools and techniques



include structured programming that can make software development more visible to management and more controllable. Educational software is computer software and the primary purpose of which is teaching. Some educational software could be designed for use in school classrooms. Such software according to Mishra (2015), may be projected to a large whiteboard at the front of the class and or run simultaneously on a network of desktop computers in a classroom. This type of software according to Mishra is called classroom management software. While lecturers often choose to use educational software from other categories in their information technology suites, a whole category of educational software has grown up specifically intended to assist classroom learning.

Software tools includes word processor, spreadsheets, power-point, desktop publishing, Microsoft excel, Microsoft word, graphics amongst others (Jubril, 2019). Similarly, Akomas, Ekeke and Douglas (2017) stated that software tools includes word processing, spreadsheet, data base management software, project management software, multimedia authorizing system amongst others. Software tools or techniques are digital tools that make collaboration, social interaction and feedback possible for students. According to Yot-Dominguez and Marcelo (2017) software technologies are communication and interactive tools, repositories and social network tools that can be used in enhancing teaching and learning. Beeland (2017) opined that software tools are important in education because they facilitate student's academic learning and achievement when effectively utilized. Beeland further stated that student's motivation which is one of the teacher's concerns in the classroom can be improved through effective utilization of software tools. Business Education lecturers could utilize software tools such as WhatsApp, skype and Google talk to exchange academic information, solve self-doubt and carry out online classes with students.

Business Education lecturers ought to inculcate the use of computer application software in the teaching. This will enable the students the practical use of computer in their various fields of endeavour. Business Education students are expected to acquire software skills to be able to successfully gain employment upon graduation.

### **Statement of the Problem**

The relationship between quality of skills possessed by Business Education students upon graduation and the labour market has been the focus of growing theoretical and empirical investigations in the education literature. The Employers views of how well Business Education graduates are prepared for the workplace have received widespread attention in the education sector. The concept of Business Education are based on a vision and a set of competencies designed to prepare students to become knowledgeable and ethical decision makers as they fulfill their roles as consumers, workers, good citizens and also contribute to the development of the nation. however, Oliver in Umeano and Ifi (2019) observed that digital technologies which is among the skills acquired for gainful employment has not been extensively integrated in the education system in Nigeria, reasons been epileptic power supply, limited skills of teachers amongst others. The question then is, what are the digital skills acquired by Business Education university students for employability? To answer this question amongst others prompted a study of this nature.

### **Purpose of the Study**

The main aim of the study was to assess digital skills acquired by university Business Education students for employability in universities in Rivers State. Specifically, the study sought to:

1. Assess audio-visual content creation skills acquired by Business Education university students for employability in Rivers State
2. Assess software skills acquired by Business Education university students for employability in Rivers State



### **Research Questions.**

The following research questions were posed for the study.

1. What are the audio-visual content creation skills acquired by university Business Education students for employability in Rivers State?
2. What are the software skills acquired by university Business Education students for employability in Rivers State?

### **Hypotheses**

The following null hypotheses were formulated and tested at 0.05 level of significance.

1. There is no significant difference in the mean ratings of University Business Education students in Rivers State University and Ignatius Ajuru University of Education on their perception of audio-visual content creation skills acquired by them for employability in Rivers State
2. There is no significant difference in the mean ratings of University Business Education students in Rivers State University and Ignatius Ajuru University of Education on their perception of software skills acquired by them for employability in Rivers State

### **Methodology**

The study adopted a descriptive survey design. The population of the study comprised 459 third year Business Education students in Rivers State University and Ignatius Ajuru University of Education for 2020/2021 academic session which according to RSU and IAUE Departments of Business Education 2021 as shown in Table 1 is 213 and 246, totaling 459. Census sampling techniques was adopted since the population was of manageable size. The instrument used for data collection was a structured questionnaire titled "Assessment of Digital Skills Acquired by University Business Education Students for Employability Questionnaire (ADSAUBESEQ). The instrument was designed in a four point rating of agreement (Strongly Agreed (4), Agreed (3), Disagreed (2), and Strongly Disagreed (1). used to elicit responses from the respondents. In order to determine the validity of the instrument, the questionnaire was face and content validated by experts in the Faculty of Education, Rivers State University. To ensure the consistency of the instrument, the Cronbach Alpha reliability method was adopted and a reliability coefficient of 0.86 was established. A total of 450 copies of the questionnaire administered were retrieved and used for the study. The research questions were answered using mean and standard deviation, while t-test was used to test the hypotheses at 0.05 level of significance. The criterion mean score of 2.50 and above was agreed, while the mean score below 2.50 was disagreed. In the same vein, the decision rule for the hypotheses was that any hypothesis with t-calculated value less than the t-critical table value of 1.96 was agreed otherwise disagreed



**Table 1: Population Distribution.**

S/N	Institution	Total No of Third Year Business Education Students
1.	RSU	213
2.	IAUE	246
<b>Total</b>		<b>459</b>

**Source:** Departmental Examination Officers of RSU and IAUE

**Results**

The results for the study were presented according to each research question posed in the study as thus:

**Research question 1:** What are the audio-visual content creation skills acquired by university Business Education students for employability in Rivers State?

**Table 2: Mean Ratings and Standard Deviation on the Audio-Visual Content Creation Skills Acquired by University Business Education Students for Employability.**

S/n	Items	RSU (N=213)			IAUE (N= 246)			RSU & IAUE Combined		
		X	SD	Rmks	X	SD	Rmks	X	SD	Rmks
1	Ability to use photographs for employability	2.52	0.32	Agreed	3.11	0.31	Strongly Agreed	2.81	0.31	Agreed
2	Proficiency in the use of films	2.67	0.32	Agreed	2.62	0.33	Agreed	2.64	0.32	Agreed
3	Ability to use recordings for employability	2.84	0.35	Agreed	2.84	0.29	Agreed	2.84	0.32	Agreed
4	Effective utilization of overhead projectors for employability	2.50	0.29	Agreed	2.59	0.30	Agreed	2.54	0.29	Agreed
5	Being able to use opaque projectors for employability	2.32	0.31	Disagreed	2.17	0.28	Disagreed	2.24	0.29	Disagreed
6	Ability to use videos for employability	2.77	0.31	Agreed	2.97	0.48	Agreed	2.87	0.39	Agreed
7	Ability to use audio tapes for employability	3.01	0.30	Strongly Agreed	2.96	0.47	Agreed	2.98	0.38	Agreed
8	Being able to use stream charts for employability	2.53	0.32	Agreed	2.25	0.32	Disagreed	2.39	0.32	Disagreed
9	Ability to effectively use audio CDs for employability	2.37	0.31	Disagreed	2.06	0.31	Disagreed	2.21	0.31	Disagreed
<b>Grand Mean/S.D</b>		<b>2.61</b>	<b>0.31</b>	<b>Agreed</b>	<b>2.61</b>	<b>0.34</b>	<b>Agreed</b>	<b>2.61</b>	<b>0.32</b>	<b>Agreed</b>

**Source:** Field Survey, 2021



Table 2 showed the respondents opinion on the audio-visual content creation skills acquired by university Business Education students for employability in Rivers State. Using the criterion mean of 2.50 as the bench-mark for acceptance, the data on Table 2 showed the respondents had divergent views that university Business Education students require audio-visual content creation skill for employability in Rivers State. Some of the respondents agreed while some disagreed. They agreed that university Business Education students acquire photographic skills for employability, they acquire filming skills for employability, they acquire recording skill for employability, they acquire the use of overhead projectors for employability, they acquire the use of videos for employability, they acquire the use of audio tapes for employability, while they disagreed that being able to use opaque projectors and ability to effectively use audio CDs are audio-visual content creation skills. The analysis revealed a combined mean of 2.61 and a combined standard deviation of 0.32 respectively which also indicated that university Business Education students acquire audio-visual content creation skills for employability in Rivers State.

**Research Question 2:** What are the software skills acquired by university Business Education students for employability in Rivers State?

**Table 3: Mean Ratings and Standard Deviation on the Software Skills Acquired by University Business Education Students for Employability**

S/n	Items	RSU (N=213)			IAUE (N= 246)			RSU & IAUE Combined		
		X	SD	Rmks	X	SD	Rmks	X	SD	Rmks
10	Ability to use word processor for employability	2.82	0.32	Agreed	2.61	0.31	Agreed	2.71	0.31	Agreed
11	Being able to use spreadsheet for employability	3.03	0.26	Strongly Agreed	2.63	0.35	Agreed	2.83	0.30	Agreed
12	Ability to use power-point for employability	2.54	0.35	Agreed	2.94	0.19	Agreed	2.74	0.27	Agreed
13	Proficiency in the use of desktop publishing for employability	2.60	0.29	Agreed	2.73	0.39	Agreed	2.66	0.34	Agreed
14	Being able to use Microsoft Excel for employability	2.52	0.27	Agreed	3.27	0.28	Strongly Agreed	2.89	0.27	Agreed
15	Ability to use Micro-soft word for employability	2.77	0.31	Agreed	3.97	0.36	Strongly Agreed	3.37	0.33	Strongly Agreed
16	Ability to use graphics for employability	2.91	0.30	Agreed	2.51	0.61	Agreed	2.71	0.45	Agreed
17	Being able to use Corel draw for employability	2.21	0.41	Disagreed	2.12	0.38	Disagreed	2.16	0.39	Disagreed
18	Ability to effectively use oracle for employability	2.57	0.50	Agreed	2.06	0.29	Disagreed	2.31	0.39	Disagreed
<b>Grand Mean/S.D</b>		<b>2.66</b>	<b>0.33</b>	<b>Agreed</b>	<b>2.76</b>	<b>0.35</b>	<b>Agreed</b>	<b>2.71</b>	<b>0.34</b>	<b>Agreed</b>

Source: Field Survey, 2021



Table 3 showed the respondents opinion on the software skills acquired by university Business Education students for employability in Rivers State. Using the criterion mean of 2.50 as the benchmark for acceptance, the data on Table 3 showed that the respondents had divergent views that university Business Education students acquire software skill for employability in Rivers State. Some of the respondents agreed while some disagreed. Some agreed that university Business Education students acquire word processing skills for employability, they acquire spreadsheet skills for employability, they acquire power-point skill for employability, they acquire desktop publishing skill for employability, they acquire micro-soft excel skill for employability, they acquire micro-soft word skill for employability, they acquire graphics skills for employability, they acquire oracle skill for employability, while some disagreed that being able to use Corel draw is a software skill acquired by university Business Education students for employability in Rivers State. The analysis revealed a combine mean of 2.71 and a grand standard deviation of 0.34 respectively which also indicated that university Business Education students acquired software skills for employability in Rivers State.

**Hypothesis 1**

There is no significant difference in the mean ratings of university Business Education students of Rivers State University and Ignatius Ajuru University of Education on their perception of the audio-visual content creation skills acquired by them for employability in Rivers State.

**Table 4: z-test Result on Audio-Visual Content Creation Skills Acquired by University Business Education Students of Rivers State University and Ignatius Ajuru University of Education.**

Respondents	N	Mean	SD Dev.	Std error	t-Cal	t-Crit	L/Sig.	Decision
RSU	213	2.61	0.31	0.15	1.16	1.96	0.05	Accepted
IAUE	246	2.62	0.29					

**Source:** Field Work, 2021.

Table 4 above revealed a t-calculated value of 1.16 which is less than the standard t-critical value of 1.96; hence, the null hypothesis was accepted. The result therefore is that there is no significant difference in audio-visual content creation skills acquired by university Business Education students of RSU and IAUE for employability in Rivers State

**Hypothesis 2**

There is no significant difference in the mean ratings of university Business Education students of Rivers State University and Ignatius Ajuru University of Education on their perception of the software skills acquired by them for employability in Rivers State.

**Table 5: z-test Result on Software Skills Acquired by University Business Education Students of Rivers State University and Ignatius Ajuru University of Education.**

Respondents	N	Mean	SD Dev.	Std error	t-Cal	t-Crit	L/Sig.	Decision
RSU	213	2.64	0.33	0.17	1.24	1.96	0.05	Accepted
IAUE	246	2.76	0.35					

**Source:** Field Work, 2021.

Table 5 above revealed a t-calculated value of 1.24 which is less than the standard t-critical value of 1.96; hence, the null hypothesis was accepted. The result therefore is that there is no significant



difference in software skills acquired by university Business Education students of RSU and IAUE for employability in Rivers State

## **Discussion**

Discussions of the study were made according to the research questions posed in the study.

### **Audio-Visual Content Creation Skills Acquired by University Business Education Students for Employability.**

The Findings in research question one revealed that university Business Education students in RSU and IAUE acquired audio-visual content creation skills for employability. Similarly, the hypothesis testing indicated no significant difference in the opinion of respondents in RSU and IAUE on the acquisition of audio-visual content creation skills for employability. The findings corroborates with the views of Tokentunji in Amesi and Ugorji (2019) who stated that audio-visual materials when effectively used stimulates the initiative of the students. In agreement with the views of Tokentunji, Xin (2020) opined that audio-visual materials allows the students to control their study independently. Based on the views of Tokentunji in Amesi and Ugorji (2019) and Xin (2020), the researchers are of the views that the acquisition of audio-visual content creation skills by university Business Education students in Rivers State will lead to employment. It will also lead to their being self-employed as well as employers of labour making them independent of themselves as it will help to reduce the unemployment in the State and Nigeria at large. The students by acquisition of audio-visual content creation skills for employability can create their own photography business, content management system and public content creation that can help them to be employable.

### **Software Skills Acquired by University Business Education Students for Employability.**

The Findings in research question two revealed that university Business Education students in RSU and IAUE acquired software skills for employability. Similarly, the hypothesis testing indicated no significant difference in the opinion of respondents in RSU and IAUE on the acquisition of software skills for employability. The findings aligns with Beeland (2017) who asserted that software tools facilitates students' academic learning and achievement when effectively utilized. Based on the view of Beeland (2017), the researchers are of the views that acquisition of software skills by university Business Education students in Rivers State will lead to employment. It will also enable the students to be self-reliant. Hence, it will enable them have knowledge of social media, spreadsheet, communication tools, word-processing and desktop publishing tools, presentation tools, graphic design, databases and computer programming amongst others.

## **Conclusion**

Based on the findings of the study, it was concluded that university Business Education students acquired audio-visual content creation skills and software skills for employability in Rivers State.

## **Recommendations**

Based on the findings of the study and the conclusion made, the following recommendations were made:

1. Students upon graduation should be giving opportunity of real life experiences through exposure to various audio-visual tools to enable them perform efficiently in business and as employees.
2. University Business Education students should be exposed to further learning through workshops and seminars to enable them to acquire more software skills.
3. The acquisition of audio-visual and software skills by University Business Education students will enable them to be self-reliant, therefore Government should provide them with the necessary support such as provision of equipped laboratories to enable them acquire the skills.



### References

- Adamu, T. I, Ibrahim, M. S., Adamu, T. A. & Ibrahim, A. (2018). Use of Audio-Visual Materials in Teaching and Learning of Classification of Living Things Among Secondary School Students in Sabon Gari L.G.A of Kaduna State. *Journal of Plant*. 6(2), 33-37.
- Aina, J. A. & Ademola, A. E. (2013). Audio-Visual Resources Availability and Use of a Library Services among Colleges of Education in Lagos State, Nigeria. *International Journal of Library and Information Services*. 5(10), 417-425.
- Akomas, U. C., Ekeke, C. & Douglas, O. G. (2017). Computer Application in Business Education: An Employable Skill for 21<sup>st</sup> Century Youth Empowerment in Rivers State University. *Rivers State Business Educators Journal*. 2(1), 145-157.
- Amesi, J. & Ugorgi, U. (2019). Extent of Utilization of New Technologies for Improving Instruction in Business Education Programme in Rivers State Universities. *Association of Business Educators of Nigeria*. 6(1), 677-685.
- Amiaya, A. O. (2016). Availability and Utilization of New Technology for Teaching Office Technology and Management in Delta State Polytechnics. *Nigerian Journal of Business Education*. 3(2), 64-72.
- Anazaku, F. (2011). Library Experts Speaks on Audio-Visual Materials. A Paper Presented at the United Nations Educational Scientific and Cultural Organizations (UNESCO). *World for Audio-Visual Heritage*. 7(2), 6-13.
- Beeland, W. (2017). Student Engagement: Visual Learning and Technology: Can Interactive Whiteboard Help? Retrieved on 3<sup>rd</sup> August 2021 from [http://downloads01.smarttech.com/Media/research/international\\_research/usa/beelandam.pdf/](http://downloads01.smarttech.com/Media/research/international_research/usa/beelandam.pdf/).
- Blackmore, P, Bulaitis, Z. H. & Tan, E. (2016). Employability in Higher Education: A Review of Practice and Strategies around the World. *Exerter: University of Exerter*
- Boholano, H. (2013). ICT Based Instruction in a Constructivist Classroom. *International Journal of Contemporary Education and Development*. 15(2), 124-136.
- Chan, C. K. Y. & Murphy, M. (2010). Active-Based Key Skills Learning in Engineering Curriculum to Improve Student Engagement. Retrieved on 24<sup>th</sup> July 2021 from [http:// dx.doi-org/10.1007/978-0-481-3656-8-16](http://dx.doi.org/10.1007/978-0-481-3656-8-16).
- Chukwugbo, G. C. (2014). Assessment of the Performance of Business Education Graduates' Working in Registered Business Education Establishments in Anambra State. *Unpublished M.Sc Thesis. Nnamdi Azikiwe University*.
- Edet, E. O. (2019). Electronic-Based Learning Resources Required in Business Education and Skill Acquisition for Global Business Environment. *Nigerian Journal of Business Educators*. 6(2), 163-172.
- Ezenwafor, J. I. & Achugamonye, B. N. (2019). Assessment of Entry Level Employability Skills of Final Year Secondary Schools Students of Business Subjects in Anambra State, Nigeria. *Nigerian Journal of Business Education*. 6(1), 17-25.
- Jubril, A. M. (2019). ICT Facilities: A Panacea to Effective Teaching and Learning Business Education. *Association of Business Educators of Nigeria*. 6(1), 558-564.
- Mishra, P. (2015). How are Computer-Based Assessments Better than Paper-Based Assessment? Retrieved on 16<sup>th</sup> August from [http://www.proports.com/c/ims/what-is-computerbased assessment/](http://www.proports.com/c/ims/what-is-computerbased-assessment/).
- Nimfel, T., Wetenmen, M. P. & Yongsunshikfu, B. (2019). Identification of New Technology Skills Required by Teachers of Office and Management for Teaching in Polytechnics in North Central Nigeria. *Nigerian Journal of Business Education*. 6(2), 382-394
- Ogungboye, S. A. (2019). The Perceptions of Employers towards Employability of Business Education Graduates in Nigeria. *Nigerian Journal of Business Education*. 6(1), 35-42.



- Olufunwa, A. S., Waziri, A. A. & Olorunmolu, O. T. (2013). Funding of Business Education Programme for Quality Assurance in Colleges of Education in Kaduna State. *Nigerian Journal of Business Education*. 1(2), 107-115.
- Samson, R. (2013). Highly Human Jobs. *The Futurist*. May-June Edition. 29-35.
- Sanusi, M. (2011). Issues of Information Management in Nigeria Educational System. *Journal of Business*. 2(1), 7-15.
- Umeano, N. E. & Ifi, C. C. (2017). Extent of Integration of Challenges of New Technologies in Teaching Business Education Courses in Tertiary Institutions. *Nigerian Journal of Business Education*. 6(1), 235-245.
- Usoro, A. D. & Caleb, E. E. (2014). Digital Education and Technical Student Teacher Preparation for Sustainable Classroom Development. *Journal of Nigeria Vocational Association*. 19(2), 75-83.
- Xin, Y. C. (2020). Application of Digital Audio Media in English Teaching. Retrieved on 21<sup>st</sup> August 2021 from [researchgate.net](https://www.researchgate.net).
- Yot-Dominguez, C. & Marcelo, C. (2017). University Students Self-Regulated Learning Using Digital Technologies. *International Journal of Educational Technology in Higher Education*. 14(38), 1-18.



## **EMERGING TECHNOLOGIES IN TEACHING AND LEARNING OF BUSINESS EDUCATION PROGRAMMES IN THE NEW NORMAL IN TERTIARY INSTITUTION IN NIGERIA**

**ENANG, CHRISTIANA ETONG, PhD**

Learning And Development Department  
Office Of The Head Of Civil Service Of The Federation  
Federal Secretariat, Phase II, Abuja – Nigeria  
[christianaenang@yahoo.co.uk](mailto:christianaenang@yahoo.co.uk)  
[christianaenang@gmail.com](mailto:christianaenang@gmail.com)

### **Abstract**

*Business education is a programme of study that prepares students to acquire practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of the economy and social life. In the face of COVID 19 pandemic, a lot of transformation has taken place in the delivery of general education programmes including business education, which is a new normal in teaching and learning. This study was carried out to ascertain emerging technologies in teaching and learning of business education in the new normal in tertiary institution in Nigeria. Specifically, the paper examined Ubiquitous Computing (UC); Collaboration Technologies (CT); Extended Reality (ER), Artificial Intelligence (AI) and BlockChain (BC). All the literatures reviewed proved that emerging technologies used in teaching and learning has more advantages compared to other means of learning, including flexibility, mobility, convenience, low cost, and user friendliness. The paper concluded that there is need to integrate emerging technologies in the curriculum of business education programmes. It was recommended among others that business educators and students need to develop new range of digital competence such as information processing, computational thinking and digital learning to cope with the emerging technologies in teaching and learning. Above all, there is need for professional development of business educators in the emerging technologies used in teaching in the new normal.*

**Keywords:** Emerging technologies, business education, new normal

### **Introduction**

All over the world, COVID-19 pandemic has brought new ways of doing virtually everything including teaching and learning and business education programme is not an exception. The year 2020 specifically was a challenging year globally due to COVID-19 which led to changes in teaching and learning with lockdowns of schools and switching from face-to-face teaching and learning to online instructions. This triggered a lot of action research by various stakeholders and educational experts on new knowledge to inform instructional design, assessment, evaluation and educational policies on emerging technologies in teaching and learning in higher education institutions.

New trends in teaching and learning depend on emerging technologies in the new normal brought about by COVID 19 pandemic. Education generally and indeed business education programme is perceived in most countries as a means of preparing students to acquire practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of the economy and social life. According to ILO, UNESCO and World Bank Group, (2020), emphases are now on future skills and deskilling particularly learning-to-learn skills. This would allow people to adapt to future



changes in the labour market through continued and lifelong learning and improving the responsiveness of educational systems to emerging trends. It also requires close cooperation between education, research and industry to allow institutions of higher learning to provide skills training in emerging areas. Furthermore, there is need for a strong emphasis on technologies in teaching and learning to facilitate adaptation to workplaces where manual tasks are being taken over by digital tasks. It is based on these facts that this paper explored the use five emerging technologies driving teaching and learning of Technology, Vocational Education and Training (TVET) with particular emphasis on business education.

Business education is that aspect of Technical and Vocational Education and Training (TVET) involving, in addition to general education, the study of technologies and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of the economy and social life (FGN, 2013). Business education is also an educational programme offered in tertiary institutions in Nigeria. The programme inculcates into the students the understanding, values, knowledge, and skills required for the world of work. The need to prepare business education students to fit into the world of work in the 21st century and beyond requires the acquisition of emerging Technologies in teaching and learning of business education programmes. The emerging technologies focused in this paper include Ubiquitous Computing (UC) which enables computing power anytime, anywhere; Collaboration Technologies (CT) that facilitates the ability to collaborate with anyone in real time; Extended Reality (ER) that drives the ability to digitally simulate reality and to integrate digital and physical worlds into teaching and learning; Artificial Intelligence (AI) enables machines to learn on their own, and interact in a human-like manner in the teaching and learning environment and BlockChain (BC) that use computers with guarantees as to privacy and security. Grech and Camilleri (2017) explained that the use of technology in every facet of life is also being advanced as an emerging means of teaching and learning especially in the new normal. The next section illustrates the use of UC, CT, ER, AI and B in teaching and learning.

### **Ubiquitous Computing (UC) and Teaching and Learning**

Ubiquitous is defined as something existing or being everywhere at the same time, which implies that it is constantly encountered, and widespread. Ubiquitous computing according to ILO (2020) refers to the technologies that give people access to information and computing power through the worldwide web from any place in the world. In teaching and learning, ubiquitous computing infrastructure is an important application that enables digital learning. It is used to deliver *any* educational or training opportunities especially in places with little or no educational infrastructure. Ubiquitous technology is often mobile, wireless, and networked, making its users more connected to the world around them and the people in it.

The concept of ubiquitous computing is also related to mobile and wireless technologies which paved the way to the concept of ubiquitous learning or u-learning. U-learning is the use of portability and immediate communication properties of mobile devices on the learning processes in interacting with peers, accessing resources and transferring data (Huang, et al., 2010). Hsieh, et al., (2011) added that mobile devices and wireless Internet technology enable learners to learn by a variety of digital resources from anywhere in the world at any time which makes learning accessible, easy and more interesting. In a U-learning environment, students are self-directed which facilitates a student centred learning environment.

Further explanations by Chiou, et al., (2010) posited that when students are situated in a u-learning environment, they can utilize information provided both by the real world and the Internet to solve problems in a timely manner. Interaction with experts, instructors, or learning peers and all students' learning activities is made possible through recorded facilities for later review and evaluation. Hwang, et al., (2010) stated that u-learning environment can host learning activities which are student-centered, knowledge-centered, assessment-centered, and community-centered. In ubiquitous learning, ubiquitous computing occurs all around the learner, whether or not they are aware of it. Liu and Chu,



(2010) listed the characteristics of u-learning as permanency, accessibility, immediacy, interactivity, situation, calmness, adaptability, seamlessness, and immersion.

### **Collaboration Technologies (CT) and Teaching and Learning**

Collaborative learning includes student-to-student collaboration, teacher-to-student collaboration, student-to-teacher collaboration, and student-to-machine interaction. If collaborative learning is associated with the halo effect, students can be projected in time to when the event happened and be immersed in another time and place which is very easy to understand. Collaborative learning brings about innovation in teaching and learning methods, facilitating the presentation of learning content among students and teachers. Group or collaborative learning has been recognized as an alternative way of overcoming individual working memory limitations (Paas and Sweller, 2012). People may feel more confident regarding highly complex tasks when working in groups compared to working alone because they can use the processing capacity, expertise, and knowledge of others and because the high cognitive load can be distributed among group members. Collaborative technology that is used as an emerging technology in the new normal include computer-mediated social interaction such as Facebook, Skype, mobile phones, adhoc networks, etc.

ILO (2020) stated that ubiquitous computing and computer-mediated social interaction are playing a role in the education sector today by modernizing the learning environments. Social networks such as Facebook and Google Groups can facilitate collaboration as well as Dropbox, Google Drive, WhatsApp and Skype. Slack is also a smart platform that works on mobile and desktop devices, and allows sending direct messages and files to a single person or a group of employees. Slack also has the ability to organize conversations into different channels (specific projects, general chat, among others) The app supports video calling, and drag, drop and sharing of files with colleagues directly within Slack. It is also compatible with services such as Google Drive, Dropbox and Box.

### **Extended Reality Technologies and Teaching and Learning**

Extended reality (XR) is an effective way to augment traditional forms of pedagogy. Brown et al., (2020) explained that XR education evolves widely in higher education as a field that provides unique hands-on experiential learning and helps motivate students to achieve the desired skills and knowledge. According to Pomerantz, (2019) XR technologies provide the learning tools of the most active fields of innovation and research among the various higher education institutions. It offers learners a unique learning experience that may be unattainable in a traditional educational format.

Among XR are sub-technologies like Virtual Reality (VR), Augmented Reality (AR) and Mixed Reality (MR). VR is the most widely known of these technologies. It is fully immersive; tricking the senses into thinking one is in a different environment or world outside of the real world. Using a head mounted display or headset allows the user to experience a computer-generated world of imagery and sounds, manipulating objects and moving around using haptic controllers while tethered to a console or PC. For example, VR allows 'visits' to 3D-simulated workplaces. AR transfers digital information on real-world elements, either through a headset or a mobile device such as a phone. AR keeps the real world as a central construct, but enhances it with other digital details, layering new strata of perception and supplementing an individual's reality or environment. An example include shared remote control of equipment with a single model of an expensive piece of equipment located within a lab or work context, and students from different locations can log on and use it for specific periods of time which can enhance teaching and learning especially in the new normal. Extended reality (XR) immersive technologies have massive potentials to enrich teaching and learning in Higher education through their abilities to offer a unique hands-on experience that might be unattainable previously with other educational technologies.

### **Artificial Intelligence and Teaching and Learning**



Artificial intelligence (AI) is the simulation of human intelligence processes by machines, especially computer systems, and therefore it is a set of computational techniques inspired by the way humans use their nervous system and their body to feel, learn and act. (Harkut & Kasat, 2019). AI applications are important in the fields of human endeavours. But of recent it is more important in the field of educational institutions and universities. The mandate of tertiary institutions transcends the traditional function of preserving heritage, identity and education. It is rather required to keep pace with emerging technological development through the creation of new methods of education and teaching.

There are many studies that discussed the topic of artificial intelligence and its impact on higher education. Fernández, Fernández, and Aburto, (2019) reviewed the impact of artificial intelligence on higher education and the study concluded that the coming period will witness the transition from the traditional roles of universities to new ones such as replacing the traditional language with the digital language, and the development of teaching methods in a new way which will enhance students' skills to adapt to social intelligence applications. The effects of AI on education in general and tertiary education in particular cannot be viewed in isolation. Khare, Stewart and Khare, (2018) stated that there is a positive impact of AI applications on student success. The study of Tuomi, (2018) highlighted the importance of AI in providing rich educational environments and the possibilities of solving traditional problems of education using its applications. Also, Fryer, (2019) viewed the role of robots in developing students' interests in learning and the study of Ma and Siau, (2018) emphasized the importance of AI in developing higher education and changing traditional methods of education. According to Chaudhary, (2017), artificial intelligence is beneficial for both students and teachers because it is used to create an educational environment and provide collaborative learning. The use of AI and modern technologies can help teachers and students gain more educational experience and provide information for teachers in the management of educational practices (Fernández, Fernández, & Aburto, 2019)

### **Block chain and Teaching and Learning**

Block chain (BC) more formally known as distributed ledger technologies, is predicted to offer significant opportunities to disrupt traditional products and services such as the permanence of the BC record, and the ability to run smart contracts. These features significantly distinguish BC technology-based products or services from previous internet-based commercial developments and are also particular interest to the education sector.

Block chain technology is forecast to disrupt any field of activity that is founded on time-stamped ledgers. Within education, activities that could be impacted by BC technology include certification, management of student records, intellectual property management, issuing of payments and student information system architecture. Grech and Camilleri, (2017) stated that BC allows self-sovereignty whereby users can maintain direct control over the storage and management of their personal data; trust, as the technical infrastructure gives people enough confidence in its operations to carry through with transactions such as payments or the issuance of certificates. Transparency and provenance that enables users conduct transactions with the knowledge that each party has the capacity to enter into that transaction and immutability records that can be written and stored permanently, without the possibility of modification. Also in disintermediation there is no more need for a central controlling authority to manage transactions or keep records as parties have the ability to transact directly with each other, without the need for third parties through collaboration.

### **Implications of the Use of Emerging Technologies in Teaching and Learning of Business Education Programme**

Leveraging on new technologies for skills acquisition of business educators in tertiary institutions in Nigeria has some implications in the teaching and learning (Enang & Okute, 2019). In the aspect of Ubiquitous computing (UC) and its application to u-learning, mobile computing



technologies can enhance learning when blended together to engage and motivate learners anytime, anywhere. This type of learning using UC technologies when properly integrated into the teaching and learning of business education would be more advantageous compared to other means of learning in terms of flexibility, mobility, convenience, low cost, and user friendliness. Collaborative technologies such as Facebook and Google Groups can facilitate collaboration as well as Dropbox, Google Drive, WhatsApp and Skype. Slack is also a smart platform that works on mobile and desktop devices, and allows sending direct messages and files to a single person or a group of employees. Slack also has the ability to organize conversations into different channels like specific projects, general chat, among others. The app supports video calling, and drag, drop and sharing of files with colleagues directly within Slack. It is also compatible with services such as Google Drive, Dropbox and Box. These emerging technologies can facilitate effective teaching and learning of business education programme.

When applied in teaching and learning of business education programme, AR and MR brings together real-world and digital elements in the teaching and learning process. It allows interacting and manipulating both physical and virtual items and environments, using next-generation sensing and imaging technologies. MR also allows people to see and immerse themselves in the world around them even as they interact with a virtual environment using their own hands.

AI can furthermore, automate basic activities in business education, such as classification and grading, extra support tailored to students need. It enables students and teachers have the opportunity to provide useful comments for others to benefit and share experiences in personal and professions lives. AI systems specify the areas that need improvement in the study courses, as it helps to improve and fill gaps that can occur in educational courses. It helps to ensure that all students build the same conceptual foundations; instead of waiting for the teacher to listen, students get instant feedback that helps them understand the concept and remind them how to use it in the future. AI can also provide students with a way to learn in a relatively rule-free environment. When properly integrated into business education programme, AI can allow students and teachers to grasp the opportunity to choose the proper places for learning and enhance their educational abilities whether at home, school or other places.

Above all, the application of emerging technologies into teaching and learning of business education programme can enhance tutoring in academic lecture halls, classrooms, laboratories and interactive study places in colleges, institutes or other educational institutions. There will be no need for the teacher to repeat the explanation of a certain topic or a part of it and spend more time with students to understand that part; the student can now achieve that easily with AI without embarrassment or waste of time. It can facilitate student's grade such that teachers can quit grading to spend more time with students. It will eliminate the classrooms' walls to allow students to share knowledge and participate in different learning global environments

(Boulay, 2016). In a TVET system built out of hundreds of distinct units, AI could be used to recommend educational/training resources; learning opportunities; and personalized career pathways, based on aptitude, educational goals and past performance.

### **Nigeria's Technological, Economic and Curricular Readiness to Adopt Emerging Technologies in Teaching and Learning**

The emerging technologies highlighted in this paper are capable of influencing the process and outcome of teaching and learning process in Nigerian tertiary institutions, especially in business education if properly deployed and applied. This assertion is in line with the work of Oliveira et al., (2019), that technologies have increasingly shaped students' experiences as well as influenced their relationships with natural and physical world. It is also in tandem with assertion of Corinne (2018) that emerging technologies have spawned the exponential development of software and AI-aided, cloud-based technology that aim to adapt learning methods and customize curricula to fit each student's ability to move forward at his or her own pace.



Despite the importance of emerging technology in teaching and learning, Nigeria's adoption of emerging technology is still far from it. There are several challenges that impede the successful integration of emerging technologies in the teaching and learning process. Some of the major challenges identified are epileptic power supply, insufficient skills or expertise, availability and accessibility issues, funding, poor professional development, resistance to change, poor internet connections, and affordability issues. However, these challenges can be surmountable through combination of efforts by actors and stakeholders in education including educators, policy makers, curriculum planners, and students just to mention but a few. This conforms to the finding of Spector (2013), that the challenges of emerging educational technologies are interrelated, and it is not possible to address just one without taking into consideration the others. The provision of appropriate infrastructures/facilities, trainings, funding, enabling environment, and attitudinal change are significant towards the smooth integration of emerging technologies in the teaching and learning process. Also there is need for educators to make deliberate effort towards the acquisition of digital media literacy to enhance their ability and skills to develop, and integrate relevant emerging technologies across content areas, and to fit into the modern and emerging classrooms of the 21st century, which are highly driven by technology. According to Teachthought (2016), countless educators are making move towards the assimilation of emerging educational technologies. Many educators and students are enthusiastic to integrate emerging technologies in the teaching and learning process despite the obvious limitations if given the enabling environment.

### **Conclusion**

New knowledge in teaching and learning on emerging technologies is paramount in tertiary institutions due to the challenges caused by COVID 19 pandemic resulting to a new normal in teaching and learning globally. This paper ascertained emerging technologies in teaching and learning of business education in the new normal in tertiary institution in Nigeria with special interest on Ubiquitous Computing (UC); Collaboration Technologies (CT); Extended Reality (ER), Artificial Intelligence (AI) and BlockChain (BC). Literatures reviewed so far, revealed that emerging technologies used in teaching and learning have more advantages compared to other means of learning, including flexibility, mobility, convenience, low cost, and user friendliness. Therefore, there is need to integrate emerging technologies in the curriculum of business education programmes so that business educators and students would develop new range of digital competences such as information processing, computational thinking and digital learning to cope with the emerging technologies in teaching and learning in the new normal.

### **Recommendations**

The following recommendations were drawn from the study.

1. There is need to develop new range of competencies like Ubiquitous Computing (UC); Collaboration Technologies (CT); Extended Reality (ER), Artificial Intelligence (AI) and BlockChain (BC) on business educators and students to meet up with the realities of the new normal
2. Tertiary institutions should provide avenues for professional development of business educators in the emerging technologies used in teaching in the new normal.
3. There is need for tertiary institutions in Nigeria to update and integrate emerging technologies into the curriculum of business education programme in order to be at abreast with new development in teaching and learning in the new normal globally.



4. Government should provide emerging technology systems in all tertiary institutions so as not to be left out in teaching and learning in the new normal.

## References

- Brown, M., McCormack, M., Reeves, J., Brooks, C., & Grajek, S. (2020). EDUCAUSE Horizon Report. *Teaching and Learning Edition*. Louisville, CO: EDUCAUSE
- Chaudhary, S (2017). Artificial Intelligence in Education. *International Journal of Social Science & Interdisciplinary Research*, 6(4), APRIL (2017), 16-28
- Chiou, C. K., Tseng Judy, C. R., Hwang, G. J., & Heller, S. (2010). An adaptive navigation support system for conducting context-aware ubiquitous learning in museums. *Computers & Education*, 55(2), 834–845.
- Corinne, M. (2018). Emerging Technologies in Higher Education and the Workplace: An Assessment. Published by International Federation of Catholic Universities Higher Education Foresight Unit. Retrieved from Online via [www.nap.edu](http://www.nap.edu)
- Enang C. E. & Okute, A. L. (2019). Leveraging on new technologies for skills acquisition of business educators in tertiary institutions in Nigeria for the e-world. *Nigerian Journal of Business Education*, 6(1), 331-330. Retrieved from [www.nigjbed.com.ng](http://www.nigjbed.com.ng)
- FGN (2013). National policy on education. 6<sup>th</sup> edition, Yaba, Lagos, NERDC Press.
- Fryer, L. K, Nakao, K & Thompson, A (2019). Chatbot learning partners: connecting learning experiences, interests and competence. *Computers in human behaviors*, (93), 279- 289.
- Grech, A. and Camilleri, A. F. (2017). *Blockchain in Education*. <https://ec.europa.eu/jrc/en/publication/eurscientific-and-technical-research-reports/blockchain-education>
- Hsieh, S.-W., Jang, Y.-R., Hwang, G.-J., & Chen, N.-S. (2011). Effects of teaching and learning styles on students' reflection levels for ubiquitous learning. *Computers & Education*, 57(1), 1194-1201
- Huang, R. H., Liu, D. J., Tlili, A., Yang, J. F., & Wang, H. H. (2020). Handbook on facilitating flexible learning during educational disruption: The Chinese experience in maintaining uninterrupted learning in COVID-19 Outbreak. Smart Learning Institute of Beijing Normal University UNESCO, 1–54. Retrieved from: <https://iite.unesco.org/news/handbook-on-facilitating-flexible-learning-during-educational-disruption/>
- Hwang, G. J., Shi, Y. R., & Chu, H. C. (2010). A concept map approach to developing collaborative mindtools for context-aware ubiquitous learning. *British Journal of Educational Technology* 42 (5), 778–789
- ILO (2020). The Digitization of TVET and Skills Systems. Geneva: ILO.
- ILO, UNESCO and the World Bank Group (2020). Joint Survey on Technical and Vocational Education and Training (TVET) and Skills Development during the time of COVID-19. [https://www.ilo.org/wcmsp5/groups/public/---ed\\_emp/---emp\\_ent/documents/genericdocument/wcms\\_742817.pdf](https://www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/documents/genericdocument/wcms_742817.pdf).
- Khare, K., Stewart, B. & Khare, A. (2018). *Artificial intelligence and the student experience: An institutional perspective*. The International Academic Forum (IAFOR).
- Liu, T., Y., Tan, T., H. & Chu, Y., L. (2009). Outdoor Natural Science Learning with an RFID-Supported Immersive Ubiquitous Learning Environment. *Educational Technology & Society*, 12 (4), 161–175
- Ma, Yizhi & Siau, Keng L. (2018). *Artificial Intelligence Impacts on Higher Education*. *MWAIS 2018 Proceedings*. 42. Proceedings of the Thirteenth Midwest Association for Information Systems Conference, Saint Louis, Missouri May 17-18



- Oliveira, A; Behnagh, R. F; Ni, L; Mohsinah, A. A; Burgess, K.J; and Guo, L. (2019). Emerging technologies as pedagogical tools for teaching and learning science: A literature review. *Human Behaviour & Emerging Technology*, (1) 149–160.
- Paas, F.; Sweller, J. (2012). An evolutionary upgrade of cognitive load theory: Using the human motor system and collaboration to support the learning of complex cognitive tasks. *Educ. Psychol. Rev* (24), 27–45.
- Pomerantz, J. (2019). Teaching and Learning with Extended Reality Technology. *Information and technology transforming lives: connection, interaction, innovation*.
- Spector, J. M. (2013). Emerging Educational Technologies and Research Directions. *Educational Technology & Society*, 16 (2) 21–30.
- Teachthought (2016). Specific examples of emerging Educational technologies. Retrieved from Online via [www.teachthought.com](http://www.teachthought.com).
- Tuomi, I. (2018). *The impact of artificial intelligence on learning, teaching, and education. Policies for the future.* Retrieved from: [http://publications.jrc.ec.europa.eu/repository/bitstream/JRC113226/jrc113226\\_jrcb4\\_the\\_impact\\_of\\_artificial\\_intelligence\\_on\\_learning\\_final\\_2.pdf](http://publications.jrc.ec.europa.eu/repository/bitstream/JRC113226/jrc113226_jrcb4_the_impact_of_artificial_intelligence_on_learning_final_2.pdf).
- UNESCO (2021). Education 2030. Retrieved from: (<http://www.unesco.org/open-access/terms-use-ccbysa-en>).



## **LEVEL OF APPLICATION OF VIRTUAL LEARNING PEDAGOGICAL DESIGN BY BUSINESS EDUCATORS IN TERTIARY INSTITUTIONS IN ANAMBRA STATE**

**<sup>1</sup>OKOLI, CONSTANCE IFEYINWA Ph.D**

Department of Technology and Vocational Education  
Nnamdi Azikiwe University, Awka  
[ci.okoli@unizik.edu.ng](mailto:ci.okoli@unizik.edu.ng)

**<sup>2</sup>IKPAT, NZUBE HAPPINESS**

Department of Technology and Vocational Education  
Nnamdi Azikiwe University, Awka  
[nh.ikpat@unizik.edu.ng](mailto:nh.ikpat@unizik.edu.ng)

### **Abstract**

*This study ascertained the level of application of virtual learning pedagogical design by business educators in tertiary institutions in Anambra State. One research question guided the study and two null hypotheses were tested. Descriptive survey research design was adopted for the study. The population of the study comprised 99 business educators from public tertiary institution in Anambra State. No sampling was done due to the relatively small size of the population. The instrument for data collection was a structured questionnaire titled “Level of application of Virtual-learning Pedagogical Design Questionnaire” (LAVPDQ) which was validated by three experts. Cronbach alpha was used to determine the reliability of the instrument and it yielded reliability coefficient of 0.88. The researchers together with two research assistants collected data for the study using direct approach method and 91% return rate was recorded. Mean and standard deviation were used to answer the research question while t-test was used in testing the hypotheses at 0.05 level of significance. The findings of the study revealed among others that business educators apply virtual learning pedagogical design at a moderate level in tertiary institutions in Anambra State. Based on the findings, it was recommended among others that business educators should reduce their over reliance on traditional teaching method so as to re-align students with market need. Lecturers should from time to time avail themselves the opportunity to get acquainted with the state-of-the-art technology by attending the training programmes, workshops and seminars.*

**Keywords:** Virtual learning, pedagogical designs, business education, business educators

### **Introduction**

Business education is an academic program offered in tertiary educational institutions geared towards the acquisition of knowledge and skills needed in the place of work (Oladunjoye, 2016). The recent developments, globalization and changing demands for new skill sets in the job market have necessitated the need for a new teaching and learning paradigm. Interestingly, the 21<sup>st</sup> century is characterized by technological innovations that are applicable in education. The adoption of technology and its application to education has paved way for constructive teaching and learning with considerable and convenient evaluative process. The choice of Virtual learning over the long known traditional teaching has shaped the learning outcome by improving teaching and learning within higher education (Holley, 2013).

Virtual learning is a system constructed through internet which incorporates a number of same virtual models for tests, homework, classes, classrooms and academic fields. Akudolu (2012) opined that virtual learning is an e-learning process in which a learner stays in one place and explores as well



as interacts with knowledge anywhere and anytime through electronic means. This pre-supposes the implementation of study activities online where tutors and learners are physically separated (in terms of place, time or both). Virtual learning offers a possibility to the attendees to share different resources at once and work with them as if they were at the same place where (real) resources are. According to Skhephe, Mantlana and Gobingea (2020) virtual classroom is a learning environment which is created (and subsequently sustained) within a computer-generated space. Virtual learning environment allows communications and information sharing with other participants and instructors' and provides access to a wide range of assets and resources.

The principal mechanisms of a VLE package contain curriculum planning (breaking curriculum into sections that can be assigned and assessed), students tracking, online care for both teacher and learner, electronic communication (e-mail, threaded discussions, chat, web publishing) and internet links to external curriculum resources (Kinley, 2010). VLE hardware necessities consists of a basic computer system with the regular input devices, CD-ROMs or DVDs, sound boards or cards, speakers, video boards, high-speed central processors, extensive secondary storage or hard disk (Fu, 2013). VLE basic technologies contain text, maps, graphics images, video-conferencing, digital audio and video, web learning environment, videoconferencing systems. (Buabeng-Andoh, 2012)

Application of virtual learning allows teachers to track if learners are engaging with the internet-based communication and related materials by submitting evaluations online and providing quick feedback (Kinley, 2015). In the study conducted by Barker and Gossman (2013) it has found that virtual learning could maximize student reflection and encourage progressive thought and independent thinking. Virtual classroom represents the interface between the students and a virtual professor and provides personalized learning materials to the users. Personalized learning materials can be created only if the system adapts to the student needs shown in the student's interaction process. On the other hand, virtual laboratory offers a possibility to the attendees to share different resources at once and work with them as if they were at the same place where (real) resources are.

Virtual learning environments are designed for supporting and improving the individual study process by offering a repository for course documents, discussion forums, chat boxes, mass communication option, among others. The significance of a VLE is to entirely bring out the characteristics of both learning anywhere and anytime i.e. learning in an asynchronous manner. The application of VLEs in instructional delivery provide a lot of advantages over traditional education. For instance, it provides teachers the opportunity to interact with students via web-technology from all over the world, as long as they find internet (Arslan & Kaysi, 2013; Van Beek 2017). Therefore students should be exposed to virtual learning approach in order to improve their learning outcomes. Proper adoption and application of virtual learning as an important factor in this information age, holds a great promise for improving teaching and learning in educational institutions.

In educational institutions, the application of virtual learning entails the use of a whole range of technologies involved in information processing and electronic communication such as computers, internet, e-mail, computer software, satellite, mobile communication gadgets and other allied electronic devices for dissemination of knowledge and information. According to Eze, Okoli and Ehushie (2017), the gains derivable from the utilization of these facilities and technologies in teaching and learning are innumerable. It focuses on the use of ICT in teaching and learning and requires that instructors or teachers must have a clear understanding of the tools used in creating the content and developing components of online courses. This includes knowledge of pedagogical design, process analysis design as well as development and implementation of these designs in the classroom. Pedagogical Design (PD) is the process of analyzing learning goals, specifying the expected learning outcomes and organizing both the learning content and resources in a manner to ensure the achievement of the stated goals (Akudolu, 2012). Pedagogical design simply means the interactive process between teachers and learners through the planning or working out of ICT resources. This implies that virtual learning pedagogical design aims at bridging the gap between the learning content and technology to



ensure effective learning. It is the platform through which learning occurs as the learner comes in contact with both the content and the technologies.

In Nigeria, the awareness to advance online learning started gaining momentum two decades ago (Ahmad 2012). Today, many tertiary institutions have set up their ICT centers having Local Area Network (LAN) in their libraries, finance departments, MIS units, and some faculties/departments, among others (Ilechukwu and Njoku 2014). With these developments, it has become imperative to holistically look at applying virtual learning pedagogical design in tertiary institutions particularly where today's learners are surrounded with digital media and are used to the digital world. Recent developments brought about by globalization and changing demands for new skill sets in the job market have necessitated the adoption of a new teaching and learning paradigm. Obidile, Obi and Ikpat (2019) opined that varying modes of delivery options should be accessible to every Nigerian so as to equip them with the necessary skills needed for self-reliance. However, since the field of ICT continues to evolve, new and sophisticated technologies are emerging and this makes associated activities of online learning complex to delve into (Odoi, Ussiph & Panford 2019). It is therefore recommended that the application of virtual learning pedagogical design in tertiary institutions should be done gradually because it involves several groups of interest like students, lecturers, technicians and policy makers among others.

In addition, other several challenges are facing tertiary institutions in developing countries including Nigeria as they seek to apply e-learning in instructional delivery. Some of these challenges are associated with the demographic variables of the individuals involved in the application of e-learning pedagogical designs in instructional delivery. Some of these demographic factors includes; age, gender, teaching experience, e-learning experience among others. However, in this study, two demographic factors are considered, namely; gender and age.

Gender is a factor that could come to focus in the context of an e-learning application. Business educators used in the study are males and females of different age brackets which may influence their application of e-learning pedagogical designs. For instance, Mcknight-Tutein and Thackaberry (2011) asserted that there was a strong body of evidence which suggested that females learn differently from males, which make females inherently more successful in the e-learning environment. Mcknight-Tutein and Thackaberry believed that females are uniquely positioned to be effective learners because they use affective learning methods which includes learning with music, laughter, progressive relaxation, among others, that allow them to learn in relational ways by drawing on connections. On the contrary, Chiaha, Eze and Ezeudu (2013) discovered that gender does not affect the utilization of e-learning facilities in tertiary institutions in south-east Nigeria because male and female lecturers were exposed to the same environmental learning conditions when they were students. However, this study sought to examine the level at which male and female lecturers applied e-learning pedagogical designs in instructional delivery and to discover if gender differences observed by other researchers are similar to that of this study. Therefore, considering gender in this study could yield useful practical information to the study. In addition, these lecturers are of different age brackets which may influence their application of e-learning pedagogical designs.

In respect of age, literature is replete with suggestions that age is a factor that might moderate teachers' use of technology. The age of the business educators captures the digital divides (the digital natives and the digital migrants). According to Zur and Zur (2011), digital native is a term for people born in the digital era while digital migrants refer to those born before about 1964 and who grew up in a pre-computer world. In this study, business educators between the ages of 35 and below are referred to as digital natives (those born in the present digital era) while business educators above 35 are termed digital immigrants (those born in the analogue era). Tarhini, Hone and Liu (2014) found that age plays an important role in the acceptance of technology because age moderates the relationship between perceived ease of usefulness, perceived usefulness, social norm, self-efficacy and behavioural intention. In contrast, Fleming, Becker and Newton (2017) found no moderating effect of age on imparting either future use intentions or satisfaction with e-learning. Aldowah, Umar, Ghazal



(2019) also failed to find a moderating effect of age on e-learning technology related experience. Therefore, age is one of the predictors for applying e-learning pedagogical designs in instructional delivery, thus the need to consider age in this study. Among the factors critical to successful implementation of VLEs is teachers' competence in utilizing ICT infrastructures to impart the required knowledge to the students. VLE users are assigned either a teacher ID or a learner ID generally. The teacher sees what a learner sees, however the teacher has extra user privileges to produce or revise curriculum and watch students. However, teachers' competence and acceptance of the package are very important. This agrees with Technology Acceptance Model (TAM).

Technology Acceptance Model (TAM) was postulated by Fred Davis and Richard Bagozzi in 1989. The theory is an information system theory that models how users come to accept and use ICT in the classroom. The model proposes that when users are presented with a novel technology, a number of factors influence their choice of using it. Such factors as Perceived Usefulness (PU) which is all about the degree to which a person believes that using a particular system would enhance his or her job performance as well as Perceived Ease-of-Use (PEOU) refers to the degree to which a person believes that using a particular system would be easy and effortless. This means that the more the person thinks of a technology as being easy to use, the greater probabilities he or she will be willing to adopt and use such technology.

Consequently, Davis and Bagozzi reasoned that the key to the use of any new technology was to first understand and accept the usefulness of the technology in question, which could be assessed by asking individuals about their future intentions to use the new technology. The more positive the responses to the factors of perceived usefulness and perceived ease of use, then the more positive attitudes of teachers will be to the use of ICT and the more likely they will be to use ICT in their teaching.

The positive attitudes of business educators towards the usefulness and ease of use of virtual learning pedagogical design, will interest and motivate them to apply it in instructional delivery. Furthermore, this model will enable business educators to understand the usefulness and the ease of application of virtual learning pedagogical design and that it is a new pedagogy that facilitates teaching and learning which can help minimize the burden of teaching which was previously teacher-centered, non-interactive and all-demanding on the part of the lecturers. They will see the need to apply virtual learning pedagogical design which is usually student-centered, interactive and less demanding on their part for instructional delivery. Unfortunately, most business educators are not trained with modern office equipment and technologies and thus still depend only on traditional methods for delivering their lessons to students even when learning topics are suitable for e-learning approach.

Overtime, business educators have predominantly delivered instructions using only the conventional/face to face teaching method. This teaching method subjects students to passive learners rather than active learners where they contribute to knowledge. This unsatisfactory state of affairs has far-reaching consequences for business education programme and its graduates as they might lack technological competencies required to perform effectively in the current era. Consequently, students might lack the requisite digital skills needed for jobs in the 21<sup>st</sup> century labour market because they were not exposed to modern technologies in the teaching/learning process. This ugly situation seems to put doubt on the level of business educators' application of virtual learning pedagogical design for instructional delivery which in most cases seems to be non-existence. Hence, the need for the study.

### **Research Question**

1. What is the level of application of virtual learning for instructional delivery by business educators in tertiary institutions in Anambra State?



### **Hypotheses**

The following null hypotheses were tested at 0.05 level of significance:

1. Male and female business educators in tertiary institutions in Anambra State will not differ significantly on their level of application of virtual learning for instructional delivery.
2. Business educators in tertiary institutions in Anambra State will not differ significantly on their level of application of virtual learning for instructional delivery as a result of age (35yrs and below, and above 35yrs).

### **Method**

Descriptive survey research design was utilized for the study. According to Nworgu (2015), a survey design is one in which a group of people or items are studied by collecting and analyzing data from only a few people or items considered to be representative of the entire group. The design was deemed appropriate, since the researchers collected data from the population of the study and draw inferences on business educators' level of application of virtual-learning pedagogical designs for instructional delivery in tertiary institutions in Anambra State. The study was carried out in public tertiary institutions in Anambra State. The population of the study comprised all the 99 business educators in all four public tertiary institutions in Anambra State. This is according to data collected from Academic Planning Unit of each institution. There was no sampling due to the relatively small size of the population of the study. A 16-items researcher developed questionnaire titled "Level of Application of Virtual learning Pedagogical Design Questionnaire (LAVPDQ)" was used for data collection. The questionnaire is divided into two sections of A and B. Section A sought to elicit respondents' personal data such as gender and age while section B consisted of 8 items on virtual learning. Respondents were required to indicate their opinions on a five point rating scale of Very High Level (VHL); High Level (HL); Moderate Level (ML), Low Level (LL) and Very Low Level (VLL) weighed 5, 4, 3, 2 and 1 respectively.

Three experts face validated the instrument. Cronbach alpha coefficient measure of internal consistency was used to determine the reliability of the instrument and a coefficient of 0.88 was obtained. 99 copies of the questionnaire were administered to the respondents by the researcher and two research assistants and 90 copies were retrieved on completion which gave a retrieval rate of 91%. The data generated was analyzed through descriptive statistics of Mean and Standard deviation to answer the research question. Inferential statistics (t-test) was employed to test the hypotheses at 0.05 level of significance.

### **Results**

What is the level of application of virtual learning in instructional delivery by business educators in tertiary institutions in Anambra State?

Analysis of data relating to this research question is presented in Table 1



**Table 1. Legend**

<b>Mean responses of Business Educators on level of application of virtual learning N = 90</b>				
<b>S/No</b>	<b>Items on Virtual Learning</b>	<b>Mean</b>	<b>SD</b>	<b>Decision</b>
9.	Engaging students in synchronous communication activities using virtual chat	2.82	1.37	Moderate level
10.	Engaging students in asynchronous communication activities using CD-ROM or DVD.	2.77	1.29	Moderate level
11.	Providing instructions to students through online forums.	2.95	1.38	Moderate level
12.	Providing instructions to students through instant messaging.	3.08	1.25	Moderate level
13.	Providing instructions to students through digital videos.	2.65	1.33	Moderate level
14.	Using web authoring tools to develop instructional modules that engage students.	2.60	1.37	Moderate level
15.	Providing instructions by video conferencing through Skype.	2.44	1.38	Low level
16.	Providing instruction by a software installed on a local computer through the web or online.	2.62	1.43	Moderate level
<b>Cluster Mean</b>		<b>2.74</b>		<b>Moderate level</b>

Data in Table 1 show a cluster mean of 2.74 which reveals that business educators in tertiary institutions in Anambra State apply virtual learning in instructional delivery at a moderate level. Item by item analysis in Table 2 shows that business educators applied items 9, 10, 11, 12, 13, 14, and 16 with mean scores ranging from 2.60 – 3.08 at a moderate level while business educators apply item 15 with mean score 2.44 at a low level. The standard deviations of 1.25 to 1.43 are within the same range showing homogeneity in business educators’ responses.

**Table 2. Legend**

**Summary of t-test result on the level of application of virtual learning by male and female business educators in tertiary institutions in Anambra State. N = 90**

<b>Virtual learning</b>	<b>N</b>	<b>X</b>	<b>SD</b>	<b>df</b>	<b>P-value</b>	<b>Decision</b>
Male	33	2.69	1.14	88	.922	Not significant
Female	57	2.78	1.21			

Data in Table 2 shows that male and female business educators in tertiary institutions in Anambra State do not differ significantly on their level of application of virtual learning in instructional delivery. This is shown by the p-value of .922 which is greater than the significant level of 0.05. This shows that there is no significance difference in the mean responses of business educators. Therefore, the null hypothesis of no significant difference between two groups is accepted.



**Table 3. Legend**

**Summary of t-test result on the level of application of virtual learning by business educators in tertiary institutions in Anambra State as a result of age.**

Virtual learning	N	X	SD	df	P-value	Decision
35 years and Below	33	2.60	1.29	88	.207	Not significant
Above 35 years	57	2.82	1.12			

Data in Table 3 shows that business educators in tertiary institutions in Anambra State do not differ significantly on their level of application of virtual learning in instructional delivery as a result of age. This is shown by the p-value of .207 which is greater than the significant level of 0.05. This shows that there is no significance difference in the mean responses of business educators. Therefore, the null hypothesis of no significant difference between two groups is accepted.

### Discussion of findings

The results of the study revealed that business educators in tertiary institutions in Anambra State applied virtual learning in instructional delivery at a moderate level. This corroborates with that of Choeda, Dorji and Par-Ola (2016) who reported that the status of ICT integrated pedagogy especially virtual learning in higher education is at early stage and is affected by low-speed internet connectivity and a lack of adequate resources as well as training. In support, Rashid, Shukor, Tasir and Na (2021) found that teachers were moderately ready to use virtual learning environment and they moderately accepted the implementation of virtual learning. Educators have realized the usefulness and the ease of use of virtual learning which in turn have influenced their acceptance of virtual learning as a mode of instructional delivery in the 21<sup>st</sup> century.

The result of the third hypothesis indicated that male and female business educators in tertiary institutions in Anambra State do not differ significantly on their level of application of virtual learning in instructional delivery. This disagrees with Park, Kim and Han (2019) who reported a moderating effect of gender difference between perceived usefulness on intention to use in Technology Acceptance Model (TAM). Park, Kim and Han further noted that the effect of perceived usefulness on intentions to use is greater for male who tend to be highly task-oriented. Also the fourth hypothesis revealed that age has significant effect on the mean responses of business educators in tertiary institutions in Anambra State on their level of application of virtual learning in instructional delivery. This also disagrees with Wang, Wu and Wang (2009) who found that age differences moderate the effect of effort expectancy and social influence on virtual learning use intention.

### Conclusion

Based on the findings of the study, it is clear that virtual learning pedagogical design discussed in the study is still at its early stage of adoption and application among business educators. This is a sad development bearing in mind that ICT is not a new topic in Nigeria. The popularity of ICT technologies among business education students has increased their expectations to see these technologies used in the teaching learning process. Unfortunately, business educators are still lagging behind in the application of these pedagogical designs for instructional delivery. Also the new normal as a result of Covid-19 pandemic requires the full adoption and application of these pedagogical designs for instructional delivery in tertiary institutions.

### Recommendations

1. Business educators should increase their level of application of virtual learning in instructional delivery in the tertiary institutions to equip students with the requisite digital skills needed for jobs in the 21<sup>st</sup> century labour market.



2. Business educators should reduce their over reliance on traditional teaching method and integrate modern technologies in instructional delivery so as to re-align students with the market need.
3. Business educators should from time to time avail themselves the opportunity to get acquainted with the state-of-the-art technology (especially those born in the pre-computer world) by attending the training programmes, workshops and seminars.

### References

- Ahmad, S. A. (2012). E-learning in the Nigerian Education System. *Journal of Education in Africa Maiden Issue*, 1(1), 239-252.
- Akudolu, L. R. (2012). Exploring appropriate pedagogical designs for optimizing e-learning in higher education in Nigeria. *Unizik Orient Journal of Education*, 6(1), 105-119.
- [Aldowah, H., Umar, I. and Ghazal, S. \(2019\). The effects of demographic characteristics of lecturers on individual and course challenges of e-learning implementation in a public university in Yemen. \*Recent Trends in Data Science and Soft Computing\*, Springer. Doi: 10.1007/978-3-319-99007-1\\_97. 12 April 2021](#)
- Arslan, F. & Kaysi, F. (2013). Virtual learning environment. *Journal of Teaching and Education*, 2(4), 57-65.
- Barker, J. & Gossman, P. (2013). The learning impact of a virtual learning environment: Students views. *Teacher Education Advancement Network Journal*, 5(2), 19-38.
- Buabeng-Andoh, C. (2012). Factors influencing teachers' adoption and integration of information and communication technology into teaching. A review of the literature. *International Journal of Education and development using Information and Communication Technology (IJEDICT)*, 8(1), 136-155
- Chiaha, G. U., Eze, J. U. and Ezeudu, F. O. (2013). Education students' Access to E-learning Facilities in Universities South-East of Nigeria. *Information and Knowledge Management*, 3(10), 1 – 11. [www.iiste.org](http://www.iiste.org). 30 July 2018
- Choeda, T. P., Dorji, D. & Par-Ola, Z. (2016). The state of integration of the virtual learning environment and ICT into the pedagogy of the Royal University of Bhutan: A descriptive study. *International Journal of Education and Development using Information and Communication Technology (IJEDICT)*, 12(1), 71-88.
- Davis, F. D. & Bagozzi, R. P. (1989). User acceptance of Computer Technology: A comparison of two theoretical models. *Management Sciences*, 35(8), 982 – 1003.
- Eze, T. I., Okoli, C. I. & Ehushie, O. M. (2017). Extent of utilization of Information and Communication Technology facilities by business educators in tertiary institutions in Imo State. *NAU Journal of Technology and Vocational Education*, 2(1), 29-41.
- Fadare, G. O. (2015). Assessment of instructional facilities and equipment available for implementation of Office Technology and Management programme in Nigeria Polytechnics. *Nigeria Journal of Business Education*, 2(3), 200 – 212.
- [Fleming, J., Becker, K. and Newton, J. C. \(2017\). Factors for successful e-learning: does age matter? \*Education and Training\*, 59\(1\), 76-89.](#)
- Fu, J. S. (2013). ICT in education. A critical literature review and its implication. *International Journal of Education and development using Information and Communication Technology (IJEDICT)*, 9, 112-125.
- Holley, D. (2013). Which room is the virtual seminar in please? *Education and Training*, 44(3), 112-121.
- Ilechukwu, C. L. & Njoku, C. C. (2014). Optimizing e-learning in Nigerian universities for sustainable development. *Journal of Information Engineering and Applications*, 4(10), 16-22.



- Kinley, K. (2010). Faculty and students' awareness and challenges of e-learning in a college of education. *Journal of the International Society for Teacher Education*, 14, 27-33.
- Kinley, K. (2015). *Professional development through participatory design: An attempt to enhance ICT use for teaching at the Royal University of Bhutan*. Unpublished Doctoral Dissertation, Aalborg University.
- Mcknight-Tutein, G. & Thackaberry, A. S. (2011). Having it all: The hybrid solution for the both worlds in womenn's postsecondary education. *Distance Learning*, 8(3), 17-22.
- Nworgu, B. G. (2015). *Educational Research: Basic issues and methodology*. Nsukka: University Trust Publishers.
- Obidile, J. I., Obi, O. C & Ikpat, N. H. (2019). Technical, vocational education and training (TVET): Tool for combating insecurity in Nigeria. *International Journal of Vocational and Technical Education Research*, 6(3), 21-28.
- Odoi, G., Ussiph, N. & Panford, K. J. (2019). Application of blended learning at the SHS level – Impact on students' performance. *International Journal of Computer Science and Information Security*, 17(7). 80-88.
- Oladunjoye, T. G. (2016). Optimizing business education for national development. *Nigerian Journal of Business Education*, 3(1), 1-16.
- Park, C-W., Kim, D., Cho, S. & Han, H-J. (2019). Adoption of multimedia technology for learning and gender difference. *Computers in Human Behaviour*, 92, 288-296.
- Rashid, A. A., Shukor, N. A., Tasir, Z. & Na, K. S. (2021). Teachers' perception and readiness towards the implementation of virtual learning environment. *International Journal of Evaluation and Research in Education*, 10(1), 209-214.
- Skhephe, M., Mantlana, D. C. & Gobingea Z. B. (2020). Accounting learners' readiness for virtual classroom learning in the Eastern Cape, South Africa: Lessons learnt from the literature. *2<sup>nd</sup> World conference on future of Education*, 11-13 September.
- Tarhini, A., Hone, K. and Liu, X. (2014). Measuring the moderating effect of gender and age on e-learning acceptance in England: A structural equation modeling approach for an extended technology acceptance model. *Journal of Educational Computing Research*, 51(2), 163-184.
- Van Beek, M. (2011). Virtual learning in Michigan's schools. *Mackinac Center for Public Policy*, Midland Michigan.
- Wang, Y. S., Wu, M. C. & Wang, H. Y. (2009). Investigating the determinants and age and gender differences in the acceptance of mobile learning. *British Journal of Educational Technology*, 40(1), 92-118.
- Zur, O. and Zur, A. (2011). On digital immigrants and digital natives: How the digital divide affects families, educational institutions, and the workplace. *Zur Institute - Online Publication*. [http://www.zurinstitute.com/digital\\_divide.html](http://www.zurinstitute.com/digital_divide.html). 18 August 2018.



## **SCHOOL-INDUSTRY COLLABORATION AND ACADEMIC RESEARCH AS CURRICULUM CHALLENGES IN PREPARING BUSINESS EDUCATION STUDENTS FOR THE CHANGING BUSINESS WORLD**

**OKEKE BETHEL, A.**

School of Business Education, OTM Department,  
Federal College of Education (Technical), Umunze,

Email: [okekebethel2020@gmail.com](mailto:okekebethel2020@gmail.com)

Phone: 07061824677

### **Abstract**

*The study investigated school-industry collaboration and academic research as curriculum challenges of preparing business education students for the changing business world. Two research questions guided the study. The descriptive survey research design was used in the study. The population of the study comprised 109 business educators in tertiary institutions in Anambra State. The instrument for data collection was a structured questionnaire which was validated by three experts in the faculty of education, Nnamdi Azikiwe University, Awka. The test of reliability on the instrument yielded coefficient values of 0.82 and 0.84 for Sections A and B respectively with an average reliability coefficient of 0.83. The mean value was used to answer the research questions while the standard deviation was used to ascertain the homogeneity or otherwise of the respondents' ratings. Findings of the study revealed that school-industry collaboration is a curriculum challenge of preparing business education students for the changing business world to a high extent. Furthermore, findings of the study revealed that academic research is a curriculum challenge of preparing business education students for the changing business world to a high extent. Based on these findings, the researcher recommended that administrators of the business education programme should regularly interface and collaborate with local, national and international business and corporate leaders in terms of curriculum reviews, funding, training, and professional support. It was also recommended that administrators of business education programmes should institute a research management teams that will assess the quality and relevance of research in the business education programme*

**Keywords:** School-Industry Collaboration, Academic Research, Curriculum, Challenges, Business World

### **Introduction**

The business environment is experiencing rapid changes in its processes and procedures. These changes have led to the competitiveness of the global business environment. This is because advancement in technology has aided the removal of barriers witnessed in the traditional business environment. As a result of the above, the global business environment has become highly competitive. According to Avolio, Benzaquen and Pretell (2019), the business education programme has been internationalized because of the changes occurring in the global business environment.

Business education is an academic programme that equips its recipients with business, vocational and technical skills for paid and self employment. Obiete, Nwazor and Vin-Mbah (2015) saw business education as a unique academic programme that equip its recipients with skills to



function independently as self-employed and employers of labour. Ezeani and Ogundola (2017) defined business education as a dynamic course of study that equips its students with the knowledge and skills for and about business. Internationally, Roobeek and Ritter (2016) divided business education into several subtypes, namely regular undergraduate (Bachelor) and graduate (Master) education, Master in Business Administration (education) in different varieties (modular, executive, international, part-time, fulltime), and customized executive education for companies, in-house or taking place at business school premises. The customized executive courses for companies have the purpose to make immediate change in the company (through its leaders or employees), whereas undergraduate business education is about preparing the future workforce for the job to be done. Summarily, Iñiguez (2011) defined business education as an academic programme that put students through the transformation process that turn them into managers who can be recognized as “citizens of the world”. In order for business education to meet up with the demands of the ever changing business world it requires a review that is all encompassing with the needs of the global business community. This requires a major realignment of the curriculum of business education programme to meet with these changes in the global business environment (Avolio, et al., 2019).

According to Efanimjor and Okolocha (2020), curriculum includes the aims and objectives of a specific course of study, the structuring of the topic area, and the assessment of students' academic progress in that specific course of study. Curriculum is the educational programme of experience given to the learner under the direction of a school in order to effect specific changes in the learner's behavior (Akpan, Nwokocha & Naboth, 2018). Curriculum is the vehicle via which a country's established educational ideology is transformed into tangible reality. It specifies the courses of study that students must complete in order to achieve a specific degree of education. Okoro (2013) opined that business education curriculum entails educational training which an individual receives in order to acquire adequate attitudes, concepts, knowledge, understanding and skills in business activities for vocational usage in careers as an administrator, manager, teacher or wherever he may find himself in the business world. It is believed that the curriculum of business education will expose students to educational and business related experiences. As a result, the business education curriculum should provide students with learning opportunities that will enable them to develop into managers who can be recognized as global citizens since they are capable of efficiently managing businesses in multicultural settings (Iñiguez, 2011). The curriculum of business education programme seem to be limited in its provision of educational experiences that prepares students for the changing business world. Avolio, et al (2019) noted that lack of school-industry collaboration and academic research are some of the challenges of preparing business education for the changing business environment.

School industry collaboration is key to positioning business education for global dominance. For business education to remain relevant they cannot exist in isolation or disconnected from students, businesses, the government, faculty and the local community. This new viewpoint on business education represents a fundamental challenge for all stakeholders in the educational process, including firms, government, employees, students, local communities, accrediting bodies, and partner educational institutions, among others ((Avolio, et al). Similarly, investment in academic research is another curriculum challenge facing business education in the changing business world.

Although current arguments imply that there is a gap between management research and management teaching, academic research must be linked with the demands of stakeholders. Academic research frequently fails to address the practical significance, real-world application, and consequences. In recent years, business education has been chastised for putting too much emphasis on teaching-focused research and for undertaking limited, irrelevant, and impracticable research projects (Obiete, Nwazor & Vin-Mbah, 2015). These views however are theoretical and have not been empirically ascertained. This study therefore empirically determined if school industry collaboration and academic research are curriculum challenges in preparing business education students for the changing business world.



### **Statement of the Problem**

The changes happening in the global business environment has exposed the need for resetting the business education programme to accommodate new skills and knowledge. This is necessary because the astronomical rise in the rate of unemployment among graduate of business education programme indicate the gap in the skills learnt in school and the expectation of the global business environment. There appear to be a skill mismatch between societal expectation and what is taught in business education institutions. This is indicative of a poor attitude towards school industry collaboration and investment in research that is targeted at improving skills and knowledge. It is saddening to note that business education programmes in Nigeria are still debating on the removal of typewriting from the business education curriculum when the global business world is discussing technologies like artificial intelligence and crypto currency among others. If this situation is left to continue, the business education programme in Nigeria would find itself displaced in the scheme of things in the global business world.

### **Research Questions**

The following research questions guided the study:

1. To what extent is school-industry collaboration a curriculum challenge in preparing business education students for the changing business world?
2. To what extent is investment in academic research a curriculum challenge in preparing business education for the changing business world?

### **Method**

The descriptive survey research design was adopted for the study. The study was carried out in Anambra State. The population of the study comprised 109 business educators in tertiary institutions (Nnamdi Azikiwe University, Awka (16), Chukwuemeka Odumegwu Ojukwu University, Igbaria Campus (5), Federal College of Education (Technical), Umunze (71), Nwafor Orizu College of Education, Nsugbe (10) and Madonna University, Okija (7) in the State. The instrument data collection was a structured questionnaire developed by the researcher which is titled "Questionnaire on School-Industry Collaboration and Academic Research as Curriculum Challenges of Preparing Business Education for the Changing Business World (QSIARPBEBCBW)". The instrument was structured on a 4- point rating scale of Very High Extent (VHE), High Extent (HE), Low Extent (LE) and Very Low Extent (VLE). The instrument was validated by three experts in the Department of Technology and Vocational Education, Nnamdi Azikiwe University, Awka. Further the instrument was subject to a pilot test on 10 business educators in Asaba Metropolis of Delta State. The application of the Cronbach Alpha reliability test on the returned data yielded coefficient values of 0.82 and 0.84 for clusters A and B with an average reliability co-efficient of 0.83. Out of the 109 copies of questionnaire administered 88 copies were returned in good condition and used for analysis of data for the study. The mean value was used to answer the research questions while the standard deviation was used to ascertain the homogeneity or otherwise of the respondents' ratings. In analyzing the mean value, any item with mean value equal to 2.50 and above was High Extent while any item below 2.50 was Low Extent.

### **Results**

#### **Research Question 1**

To what extent is school-industry collaboration a curriculum challenge in preparing business education students for the changing business world?

**Table 1: Respondents Mean Ratings on School-Industry Collaboration as a Curriculum Challenge in Preparing Business Education Students for the Changing Business World**

S/No.	Item Statements	$\bar{x}$	SD	Decision
-------	-----------------	-----------	----	----------



1.	Disagreements between school and industry on what should be taught	3.45	0.88	HE
2.	Disagreement on structures related to coordination of business education programme	3.30	0.83	HE
3.	Disagreements on types of internships to be adopted	3.42	0.85	HE
4.	Disagreements on funding contributions of each party	3.24	0.81	HE
5.	Lack of commitments towards improving skills capacity of students	3.26	0.80	HE
6.	Corruptions among leadership of the school or industry	3.48	0.88	HE
7.	Lack of enabling government policies to strength school-industry collaboration	3.10	0.79	HE
<b>Cluster Mean</b>		<b>3.32</b>		<b>High Extent</b>

Data in Table 1 reveal that the respondents all rated all items (1-7) on school-industry collaboration as a curriculum challenge in preparing business education students for the changing business world to a high extent with mean ratings ranging between 3.10 to 3.45 and standard deviations ranging between 0.79 to 0.88. The cluster mean of 3.32 indicate that school-industry collaboration is a curriculum challenge in preparing business education students for the changing business world to a high extent. The standard deviation scores show that the respondents' opinions were close.

### Research Question 2

To what extent is academic research a curriculum challenge in preparing business education for the changing business world?

**Table 2: Respondents Mean Ratings on Academic Research as a Curriculum Challenge in Preparing Business Education Students for the Changing Business World**

S/No.	Item statements	$\bar{x}$	SD	Decision
8.	Lack of funds for research	3.67	0.92	HE
9.	Failure to link research to needs of industries	3.12	0.80	HE
10.	Lack of corporation from industries in the release of data for research	3.20	0.83	HE
11.	Poor library system	3.08	0.78	HE
12.	Lack of data analyst for quality research	2.98	0.77	HE
13.	Duplicity of research studies	3.35	0.83	HE
14.	Inability to link research in business education to global expectations	3.40	0.87	HE
<b>Cluster Mean</b>		<b>3.25</b>		<b>High Extent</b>

Data in Table 2 reveal that the respondent rated all items (8-14) on academic research as a curriculum challenge in preparing business education students for the changing business world to a high extent with mean ratings ranging between 2.98 to 3.67 and standard deviations ranging between 0.77 to 0.92. The standard deviation scores show that the respondents' opinion is close. The cluster mean of 3.25 indicate that academic research is a curriculum challenge of preparing business education students for the changing business world to a high extent.



### **Discussion of Findings**

Findings of the study revealed that school-industry collaboration is a curriculum challenge in preparing business education students for the changing business world to a high extent. Findings further revealed that disagreements between school and industry on what should be taught, disagreement on structures related to coordination of business education programme, disagreements on types of internships to be adopted, disagreements on funding contributions of each party, lack of commitments towards improving skills capacity of students, corruptions among leadership of the school or industry and lack of enabling government policies to strength school-industry collaboration are curriculum challenges of preparing business education students for the changing business world. This finding is in agreement with Onajite and Oyerinde (2017) who stated that the business education programme is hampered by its inability to effectively collaborate with industry leadership in terms of funding, training and curriculum development. Onajite and Oyerinde noted that the impact of constant and rapid access to technology and innovation on business education students has transformed their learning requirements. This is exacerbated by multiple demands from education stakeholders demanding excellence in education. According to Bryan and Henry (2012), the interaction between business and the local school system comprises numerous stakeholders working together to achieve mutual goals. Business leaders, on the other hand, desire to work with schools in ways that are more substantial than surface-level sponsorship (Gross, Haines, Hill, Francis, Blue-Banning & Turnbull, 2015). It is therefore pertinent that both parties work together in facilitating measures that would promote skills acquisition and competencies for global leadership among business education students.

Findings revealed that academic research is a curriculum challenge of preparing business education students for the changing business world to a high extent. Findings further revealed that Lack of funds for research, inability to link research in business education to global expectations, duplicity of research studies, Lack of corporation from industries in the release of data for research and Failure to link research to needs of industries among others were some of the academic research challenges facing the business education in its preparation of students for the changing business world. This finding is in agreement with Avolio, et al (2019) who stated that academic research in business education often fails to consider the practical relevance or the real world application and the impacts. They further observed that business education has been criticized for emphasizing too much on research focused on teaching and for conducting narrow, irrelevant, and impractical research studies. Thomas (2010) held that the business education programme needs a renewed focus and engagement with the needs of practitioners. Thomas further opined that business education research needs to be relevant to the needs of the society. Emerald's Wheel of Impact in Avolio, et al (2019) aptly summarizes the six conditions of research relevance: it improves teaching and learning; it aids in the management of businesses; it influences public bodies and policymakers; it contributes to economic development; it benefits society or the environment; and it adds to the body of knowledge.

### **Conclusion**

Based on the findings of the study, the researcher concludes that school-industry collaboration and academic research are curriculum challenges of preparing students for the changing business world. It is therefore pertinent that all stakeholders of business education programme are committed to adopting strategies and measures that will improve the levels of school-industry collaborations and relevance of academic research in business education to the needs of the society.

### **Recommendations**

The researcher makes the following recommendations based on findings of the study:

1. Administrators of the business education programme should regularly interface and collaborate with local, national and international business and corporate leaders in terms of curriculum reviews, funding, training, and professional support.



2. Administrators of business education programmes should institute a research management teams that will assess the quality and relevance of research in the business education programme.

## References

- Akpan, U.I., Nwokocha, O.A. & Naboth, E.G. (2018). Curriculum challenges and the preparation of business education students for global competitiveness and trade liberalization. *Nigerian Journal of Business Education (NIGJBED)*, 6 (2), 131-141.
- Avolio, B.E, Benzaquen, J.B. & Pretell, C. (2019). Global challenges for business education and the new educational agenda: Graduate attributes and teaching methods. *e-Journal of Business Education & Scholarship of Teaching*, 13 (2), 80-99.
- Bryan, J., & Henry, L. (2012). A model for building school–family–community partnerships: Principles and process. *Journal of Counseling & Development*, 90(4), 408–420.
- Efanimjor, I. & Okolocha, C.C. (2020). Assessment of the adequacy of curriculum content of business education for skills acquisition in colleges of education in Edo and Delta States. *IOSR Journal of Research & Method in Education (IOSR-JRME)*, 10(1), 01-12.
- Gross, J. M., Haines, S. J., Hill, C., Francis, G. L., Blue-Banning, M., & Turnbull, A. P. (2015). Strong school–community partnerships in inclusive schools are part of the fabric of the school....we count on them. *School Community Journal*, 25(2), 9–34. Retrieved from <http://www.schoolcommunitynetwork.org/SCJ.aspx>
- Iñiguez, S. (2011). The learning curve: How business schools are re-inventing education. *Journal of Management Education*, 29(5), 672-695.
- Obiete, I. A., Nwazor, J. C. & Vin-Mbah, F. F. (2015). Strategies for teaching business education students in Nigerian tertiary institutions for cooperate governance. *Journal of Education and Practice*, 6(18), 170-175.
- Okoro, J. (2013). Strategies for enhancing the functionality of business studies in the universal basic education programme in South South Nigeria. *Journal of Education and Practice*, 4 (17), 131-136.
- Onajite & Oyerinde (2017). Promoting institutional collaborations for capacity improvement of business educators in tertiary institutions in Delta State of Nigeria. *Journal of Education and Practice*, 8 (14), 1-9.
- Roobeek, A. & Ritter, M. (2016). *Rethinking business education for relevance in business and society in times of disruptive change*. Retrieved from <https://www.researchgate.net/publication/308076039>
- Thomas, H. (2010). Impactful management research: The importance of finding the voice of practice in management research. In *From challenge to change: Business Schools in the wake of financial crisis* (pp. 4-6). Cambridge, MA: Emerald).



## OFFICE WORK RELATED MUSCULO-SKELETAL DISORDER (OWRMSD) AMONG SECRETARIAL PROFESSIONALS IN EBONYI STATE GOVERNMENT ESTABLISHMENT

**IGWE, KINGSLEY OGAZI**  
Department of Business Education  
Faculty of Education  
Ebonyi State University, Abakaliki  
[igwekingsleyogazi@gmail.com](mailto:igwekingsleyogazi@gmail.com)  
Tele: +2348126746890

**OLANNYE, VERONICA E.**  
Department of Office Technology and Management  
Delta State Polytechnic, Ugwashi-Uku, Delta State, Nigeria

### Abstract

*The study examined that office work related musculo-skeletal discomfort (WRMSD) among secretarial professionals in government establishment in Ebonyi State. Three research questions guided the study. The study adopted descriptive research design. The population of the study was 250 secretaries involving 107 males and 133 females' secretaries who worked in various offices in Government in Ebonyi State. There was no sample since the population is manageable. The instrument for data collection was structured question titled: "office work related musculo-skeletal disorder among secretarial professionals questionnaire (OWRMSDASPQ). Data collected were analyzed using mean and standard deviation. The findings revealed that lower and central back pain after work; knees and leg swelling while working; fingers, thumb, wrist, and arm pain; neck pain; eye and chest pain; body fatigue or tiredness after work; headaches during or after working at the computer; burning eyes; stress and depression; blurred vision when looking up from computer; stiffness in the hands; eyestrain; redness of eyes; double vision; numbness and coldness in the hands; driving/night vision after computer use; need to massage hands; shoulder pain and forearm pain are nature of office work related musculo-skeletal disorder among secretarial staff. The also revealed that the causes of office work related musculo-skeletal disorder among secretarial staff include: awkward posture; forceful exertion; strain contact pressure; exposure to vibration; exposure to intense heat or cold; repetitive movements; poor office layout; noise within office environment and lack of ergonomic chairs in office. The study further showed that providing good workstation for all office civil servants; providing break period while working in office; training office workers on good sitting and work posture in the office can help reduce office work related musculo-skeletal disorder among secretarial staff. Hypotheses tested shows that there is no significance difference in the mean responses of male and female male and female Male and female secretaries on office work related musculo-skeletal disorder among secretarial professionals, there is no significant difference in the mean responses of Male and female secretaries on the causes of office work-related musculoskeletal disorders among secretarial professionals and there is significant difference in the mean responses of Male and female secretaries on the strategies for reducing the office work-related musculoskeletal disorders. Based on the findings it was recommended among others that Government should adopt ergonomic guideline to create a suitable working environment that fit employee's physical capability in all government offices in Ebonyi state.*

**Keyword:** Office, Work Related Musculo-skeletal Disorder (MSDs), Secretarial staff



## **Introduction**

The modernization in different offices including government establishments has led to the introduction of information technology tools in the workplace. Office work is rapidly changing, as new developments in computer technology which make jobs easier are emerging. This emergence presents occupational health and safety problems for both management and employees who work in an office environment. Rapid technological developments in business organizations, especially in the use of electronic data, have affected both workers and the workplace. Electronic data are mainly displayed on visual display terminals. Briggs, Woolf and Karsten (2018) noted that improper body posture and long hours in front of these terminals can result in many health hazards, including eye strain and fatigue and musculoskeletal disorders (MSDs). [Fariborz, Mohammad, Sasan and Forouzan](#) (2018) noted that work-related musculoskeletal disorders (discomforts) are particularly common among office based civil servant who spend much of their time in the office, and secretarial staff are no exception.

Abdu, Ta, Sulzakimin (2017) describe office work related musculo-skeletal disorders/injuries in the context of office safety and health as the injuries and pains which occur to the office workers when exposed to various ergonomic risk factors in the office environment. Work related musculo-skeletal disorders are injuries and pains as a result of damage to soft tissues such as tendinitis or tenosynovitis or a situation of nerve compression leading to the development of Carpal Tunnel or Cubital Tunnel injuries. Okezue, Anamezie, John and John (2020) defined office musculoskeletal disorders (MSDs) as a wide range of inflammatory and degenerative conditions that affect the muscles, tendons, ligaments, joints, peripheral nerves, and supporting blood vessels. These include clinical syndromes such as tendon inflammations and related conditions (tenosynovitis, epicondylitis, bursitis), nerve compression disorders (carpal tunnel syndrome, sciatica), and osteoarthritis. Okezue et al (2020) revealed that MSDs are usually characterized by symptoms of body pain, paraesthesia, hand stiffness, leg swelling, eye redness, body weakness, tingling, and numbness. Fariborz et al (2018) stated that office work related musculo-skeletal disorders affect the neck, shoulders, arms, elbows, wrists, hands, back, legs, and feet. According to Bernard and Putz (2020), musculoskeletal disorders are named according to the body parts affected. The body regions commonly affected is the low back, neck, shoulder, forearm, and hand. According to Centre for Disease Control and Prevention USA (2017) Musculoskeletal disorders (MSDs) can affect the body's muscles, joints, tendons, ligaments, bones and nerves. Rajinder, Lakhwinder, and Neelam Moom (2015) also affirm that Work-related (MSDs) can affect shoulders, arms, elbows, wrists, hands, back, legs and feet. They are caused by forceful or repetitive movements or a poor working posture. Symptoms include tender-ness, aches and pains, tingling, stiffness and swelling. Lower and upper back pain and muscle spasm could be due to incorrect seating, which also affects the cervical spine and neck muscles leading to pain (Deepak, 2019). They are caused by forceful or repetitive movements or a poor working posture. Okezue, et al (2020) observed that body pain, muscle tightness, joint stiffness and swelling alongside other symptoms are work-related musculoskeletal disorders (WMSDs) among office based civil servant which secretarial staff is included and these could ultimately elicit a disability or career ending injury. Ify ThankGod & Adaravmola, (2016) also opined that proper placement of document, writing materials, monitor and key board for easy reach may be a guide for putting in place adequate control measures that could eliminate the prevalence of musculoskeletal disorders experienced by office based civil servants which secretaries is included.

According to National Secretaries' Association (NSA) cited in Ejeka (2017) secretary is defined as an individual who is employed as an office assistant that possess a mastery of office skills and abilities and has the ability to take responsibilities without much supervision; can exercises judgment and takes decisions within the limit of her authority. In this study secretary is also a person employed to handle correspondences, keep files, and do clerical work for another person or an organization. Secretarial staff is an individual who is employed in an organization for providing secretarial, clerical, and administrative support in order to ensure that services are provided in an



effective and efficient manner. He/she is expected to have a proficient knowledge in the following areas: office administration, an understanding of relevant legislation, policies and procedures. Bernard and Putz (2020) noted that the secretarial staff are prone to developing MSDs because of their job often involves prolonged sitting, awkward postures, physically demanding and stressful, long working hours, a repetitive task in front of computers without having adequate rest and recovery time. These injuries develop over time as a result of awkward or un-neutral posture, forceful exertion or strain contact pressure, exposure to vibration, exposure to intense heat or cold. Abdu, Ta, Sulzakimin (2017) opined that work related musculo-skeletal injuries among secretarial staff are being called by various names such as Musculoskeletal Disorders, Repetitive Stress Injuries (RSIs), Repetitive Motion Injuries (RMIs), (MSDs), Exertion Injuries, Cumulative Trauma Disorders (CTDs), or Cumulative Trauma Injuries (CTIs), Occupational overuse injuries. Work-related musculoskeletal injuries and pains are not fatal in nature but cause serious discomfort, disability and loss of productivity of secretaries.

Metgud (2018) studied musculo-skeletal as well as respiratory problems amongst women workers in commercial banks. The study showed that 91% of work related musculo-skeletal disorder pain among women working in commercial banks, but did not specify the nature of the condition, the causes and strategies to avoid this office health issues. Office Work-related musculoskeletal disorders have been investigated and reported to effect on office based civil servant from various sectors. These office based civil servant include secretarial staff, and computer operators/keyboard users. Das, Kumar and Sharma (2020) study also reported that office based civil servant are highly vulnerable to WMSDs with prevalence rates of 38.5% – 100%, and identified the neck, back, knees and upper limbs as the most affected body areas. Similarly, Pronk in Abdu (2017) stated that continuous looking at a computer screen by computer user has been proved to cause vision syndrome and upper back musculo-skeletal disorders. In the same vein, Sethi (2019) noted that improper designs of work furniture, office layout, lighting, office facilities, and poor sitting posture have been connected with various cases of musculo-skeletal disorders. This means the problem of WMSDs among office workers extends to Nigeria, as some studies have shown significant prevalence rates among those in the civil service. In Ebonyi state, office workers who play invaluable roles in various organizations including government establishment, have also been reported to be affected by WMSDs in several offices. A study conducted by Abdu, Seow, and Sulzakimin (2017) revealed that complaints of arms neck and shoulders (CANS) pains are common issues among the typists, secretaries, personal assistants, computer users and other related clerical activities in the governmental offices. This issue of work related musculo-skeletal complaints or disorders has a devastating, negative impacts on the overall workers' output and the organization productivity as a result of incessant absenteeism and loss of workers' productivity. However, there is limited information on WMSDs primarily regarding the diverse risk factors peculiar to local office staff in Ebonyi state. Although many studies have dealt with MSDs among office workers in other countries, the exact nature and prevalence of this important health problem has not been studied before in Ebonyi state. This study was formulated to fill the gap of knowledge in this area. The aims of the study were to assess the office work related musculo-skeletal disorder among secretarial staff in government establishment in Ebonyi State Nigeria.

### **Statement of the Problem**

Office work related musculo-skeletal disorder (WRMSD) is one of the office health problems facing the working population today, especially among the office based civil servants throughout the world. Secretaries who play invaluable roles in various organizations have been reported to be affected by this WRMSD. This is because, their job often involves prolonged sitting, awkward postures, physically demanding and stressful, long working hours, a repetitive task in front of computers without having adequate rest and recovery time. According to Abdu (2017) the issue of office work related musculo-skeletal discomfort among secretarial staff has devastating and negative impacts on the overall workers output and the organization in general as a result of incessant absenteeism and loss of secretarial productivity. However, information about work related musculo-skeletal disorder among



secretarial staff in government establishment is infinitesimal in Ebonyi state, Nigeria. It is also clear that there is a huge literature gap in the magnitude of work related musculo-skeletal disorder and associated factors among secretarial staff in Ebonyi state government establishment. Considering the above deficit with the stated high work related disorder among secretarial staff and current proliferation of government establishment in Ebonyi state, the need to obtain detailed data on this issue of work related disorder in order to understand the predicaments facing secretarial staff in the use of office technologies and help in the successful development of interventions or strategies to check these disorder. Identification of risk factors and magnitude of WRMSDs can help the government and non-governmental organizations working on occupational health and safety to modify the workplace design and adjust the working environment. Hence, this study sought to investigate the office work related musculo-skeletal disorder among secretarial staff in government establishment in Ebonyi State Nigeria.

### **Research Questions**

1. What is the nature office work related musculo-skeletal Disorders perceived by secretarial staff in government offices in Ebonyi state?
2. What are the causes of office work-related musculoskeletal disorders among secretarial professionals in Ebonyi State?
3. What are the strategies for reducing the office work-related musculoskeletal disorders among secretarial professionals in Ebonyi State?

### **Hypotheses**

The following null hypotheses was tested at 0.05 level of significance.

1. There is no significant mean differences between Male and female secretarial professionals on office work related musculo-skeletal disorder among secretarial staff in government establishment in Ebonyi State Nigeria
2. There is no significant mean differences between Male and female secretarial professionals on the causes of office work-related musculoskeletal disorders among secretarial staff in Ebonyi State
3. There is no significant mean differences between Male and female secretarial professionals on the strategies for reducing the office work-related musculoskeletal disorders among secretarial staff in Ebonyi State

### **Methods**

A descriptive design was utilized for this study. The study was conducted in Ebonyi State. Ebonyi State is a state in South Eastern part of Nigeria. The population for this study is two hundred and fifty (250) involving 107 males and 133 females' secretaries who worked in various offices in Government establishment in Ebonyi State. The entire population was used for the study; therefore, no sample size was drawn. A structured questionnaire "titled office work related musculo-skeletal disorder among secretarial staff questionnaire (OWRMSDASSQ)" was designed and used for data collection. The questionnaire was structured on 4 – point Rating scale. The instrument was validated by two experts in Business Education Department and 2 health professionals who corrected typographical errors and subsequently, agreed that it was properly constructed to achieve the objectives of the study. The questionnaire was made up of two parts, A and B. Part "A" was designed to elicit information on the background of the respondents while part B has three sections. In order to establish the reliability of the instrument, a pilot study involving 20 eligible office workers was conducted outside the studied area, and this yielded some positive feedback as the participants revealed that the instrument was clear, easy to understand and complete. These participants were later interviewed and their verbal responses matched those they had filled in the questionnaire, revealing its reliability. Their responses were correlated using Cronbach Alpha, a reliability co-efficient of 0.65 was established. Two hundred and fifty (250) copies of the questionnaire were distributed to



the respondents with the help of 4 trained research assistants only two hundred and seventeen (217) questionnaires were returned to the researchers, thus depicting a response rate of 83.5%. Mean and standard deviation were used to answer the research questions while t-test was used to test the hypothesis at 0.05 level of significance. Any item with a mean rating of 2.50 or above was regarded as accepted while mean rating less than 2.50 was regarded as not accepted. For the hypotheses, any item with t-calculated value greater than critical value was rejected; otherwise the hypothesis of no significant difference was accepted.

### Results

**Research Question One:** What is the nature of Office Work Related musculo-skeletal Disorders perceived by secretarial professionals in government offices in Ebonyi State?

**Table 1:** Mean and standard deviation scores of secretarial staff on the nature Office Work Related musculo-skeletal Disorders

S/N	Office Work Related Musculo-skeletal Disorders	Mean	SD	Decision
1	Lower and central back pain after work	3.40	1.08	Agree
2	Knees and leg swelling while working	2.70	1.00	Agree
3	Fingers, thumb and arm pain	3.30	0.90	Agree
4	Neck pain while working	3.20	0.75	Agree
5	Eye and chest pain after	2.90	0.94	Agree
6	Body fatigue or tiredness after work	3.50	0.54	Strongly agree
7	Hand stiffness	3.29	0.59	Agree
8	Wrist pain	2.93	0.96	Agree
9	Headaches during or after working at the computer	2.70	1.10	Agree
10	Burning eyes	3.29	0.59	Agree
11	Stress and depression	3.00	1.10	Agree
12	Blurred vision when looking up from computer	4.00	0.92	Strongly agree
13	Stiffness in the hands	3.57	0.49	Strongly agree
14	Eyestrain	3.40	0.49	Agree
15	Redness of eyes	3.40	0.49	Agree
16	Double vision	3.60	0.42	Strongly agree
17	Numbness and coldness in the hands	2.50	0.92	Strongly agree
18	Driving/night vision is worse after computer use	3.07	0.82	Agree
19	Need to massage hands, wrists and arms	2.90	0.94	Agree
20	Shoulder pain	3.64	0.61	Strongly agree
21	Forearm pain	4.00	0.01	Strongly agree

The Table 1 shows that the mean scores of respondents range between 2.50 and 4.00 which is above the criterion value of 2.49. This indicates that secretarial staff agreed on the items as the nature of office work related musculo-skeletal disorder experienced by secretarial professionals in government establishment in Ebonyi State

**Research question Two:** What are the causes of office work-related musculoskeletal disorders among secretarial professionals in Ebonyi State?



**Table 2:** Mean and standard deviation scores of secretarial staff on the causes of office work-related musculoskeletal disorders among secretarial staff

S/N	Causes of office work-related musculoskeletal disorders	Mean	SD	Decision
22	Awkward posture	2.59	1.21	Agree
23	Forceful exertion	2.71	1.24	Agree
24	Strain contact pressure	3.01	0.88	Agree
25	Exposure to vibration	3.08	0.99	Agree
26	Exposure to intense heat or cold	2.66	1.08	Agree
27	Repetitive movements	2.86	1.05	Agree
28	Maintaining the same position for long period	2.79	1.06	Agree
29	Working without back support of chair and job stress	2.90	1.13	Agree
30	Lack of ergonomic chairs in office	2.59	1.21	Agree

The Data presented in Table 2 revealed the responses of respondents on causes of office work-related musculoskeletal disorders among secretarial staff. All items have their mean values ranged from 2.59 to 3.08 which is above the criterion value of 2.49. This means that the respondents accepted that all the items are the causes of office work-related musculoskeletal disorders among secretarial staff

**Research Question three:** What are the strategies for reducing the office work-related musculoskeletal disorders among secretarial staff in Ebonyi State?

**Table 3:** Mean and standard deviation scores of secretarial professionals on the strategies for reducing the office work-related musculoskeletal disorders among secretarial staff in Ebonyi State

S/N	Strategy for reducing the office work-related musculoskeletal disorders	Mean	SD	Decision
31	Providing good workstation for all office civil servants	3.53	0.54	Strongly agree
32	Providing break period while working in office	3.59	1.55	Strongly agree
33	Training office workers on good sitting and work posture in the office.	3.55	1.42	Strongly agree
34	Providing swivel chair in office environment	3.63	1.42	Strongly agree
35	Providing precautionary measures aimed at accident prevention in office environment	3.41	1.35	Strongly agree
36	Repositioning yourself while working to release pressure on the nerve	3.60	1.42	Strongly agree
37	Engaging the services of office/medical experts to educate workers on the health implication of incorrect posture of work	3.58	1.39	Strongly agree
38	Organizing seminars and conferences on office ergonomics	3.56	1.42	Strongly agree
39	Putting ergonomic compliant chairs that are rotational and have adjustable height of 38-54cm	3.52	1.44	Strongly agree
40	Avoiding positions that put significant pressure on just one area of the body.	3.40	1.57	Agree
<b>Grand Mean</b>				

Data in table 3 shows that all the items have scores of respondents range between 2.50 and 4.00 which is above the criterion value of 2.49. This indicates that the respondents agreed that all the items



are the strategies office work related musculo-skeletal disorder among secretarial staff in government establishments in Ebonyi state.

**Test of Hypotheses**

**Hypothesis One:** There is no significant mean differences between Male and female secretaries on office work related musculo-skeletal disorder among secretarial professionals in government establishment in Ebonyi State Nigeria.

**Table 4:** Summary of t-test Analysis of the Mean Responses of Male and Female secretaries on office work related musculo-skeletal disorder among secretarial professionals

Gender	N	Mean	SD	DF	T.cal	T. crit.	Remarks
Male	102	2.84	1.08	215	1.46	1.96	NS
Female	113	2.97	1.06				

The data in the Table 4 reveals that the calculated t-value of (1.49) is less than the critical t-value of 1.96 at 215 degree of freedom and 0.05 level of significance. This shows that there is no significance difference in the mean responses of male and female male and female Male and female secretaries on office work related musculo-skeletal disorder among secretarial professionals in government establishment in Ebonyi State Nigeria

**Hypothesis Two:** There is no significant mean differences between Male and female secretaries on the causes of office work-related musculoskeletal disorders among secretarial professionals in Ebonyi State

**Table 5:** Summary of t-test Analysis of the Mean Responses of Male and Female secretaries on the causes of office work-related musculoskeletal disorders among secretarial professionals

Gender	N	Mean	SD	DF	T.cal	T. crit.	Remarks
Male	102	2.53	1.13	215	0.23	1.96	NS
Female	113	3.09	1.14				

The results presented on Table 5 above shows that the t-calculated value 0.23 is less than 1.96 critical value (0.23 < 1.96) at 0.05 level of significance, and 215 degree of freedom. This implied that there is no significant difference in the mean responses of Male and female secretaries on the causes of office work-related musculoskeletal disorders among secretarial professionals in Ebonyi State

**Hypothesis Three:** There is no significant mean differences between Male and female secretaries on the strategies for reducing the office work-related musculoskeletal disorders among secretarial staff in Ebonyi State

**Table 6:** Summary of t-test Analysis of the Mean Responses of Male and Female secretaries on the strategies for reducing the office work-related musculoskeletal disorders among secretarial professionals

Gender	N	Mean	SD	DF	T.cal	T. crit.	Remarks
Male	102	2.63	1.03	215	0.12	1.96	NS
Female	113	2.64	0.90				

The results presented on Table 6 above shows that the t-calculated value 0.12 is less than 1.96 critical value (0.12 < 1.96) at 0.05 level of significance, and 215 degree of freedom. This implied that there is



significant difference in the mean responses of Male and female secretaries on the strategies for reducing the office work-related musculoskeletal disorders

## **Discussion**

The findings of the study regarding the research question one indicated that secretarial staff in government establishment agreed that the nature office work related musculo-skeletal disorder includes: lower and central back pain after work; knees and leg swelling; fingers, thumb, wrist, and arm pain; neck pain while working; headache, eye and chest pain; overall bodily fatigue or tiredness after work; back pain; hand stiffness; wrist pain; headaches during or after working; burning eyes; stress and depression; blurred vision when looking up from computer; stiffness in the hands; eyestrain; redness of eyes; double vision; numbness and coldness in the hands; driving/night vision after computer use; need to massage hands, wrists and arms; shoulder pain and forearm pain. This is in line with the report of Abdu, Seow, and Sulzakimin (2017) who noted that complaints of arms neck and shoulders (CANS) pains are common issues among the typists, secretaries, personal assistants, computer users and other related clerical activities in the governmental offices in Nigeria. Okezue, Anamezie, John and John (2020) observed that body pain, muscle tightness, joint stiffness and swelling alongside other symptoms are work-related musculoskeletal disorders (WMSDs) among office based civil servant which secretarial staff is included and these could ultimately elicit a disability or career ending injury. [Fariborz.Mohammad](#), [Sasan](#) and [Forouzan](#) (2018) noted that work-related musculoskeletal disorders (discomforts) are particularly common among office based civil servant who spend much of their time in the office. Pronk in Abdu (2017) stated that continuous looking at a computer screen by computer user has been proved to cause vision syndrome and upper back musculo-skeletal disorders among office based civil servant.

The findings in respect of the second research question shows that the respondents agreed that the causes of office work related musculo-skeletal disorder among secretarial staff in government establishment in Ebonyi state includes: awkward posture; forceful exertion; strain contact pressure; exposure to vibration; exposure to intense heat or cold; repetitive movements; maintain the same position for long period, working without back support of chair and lack of ergonomic chairs in office. This finding agreed with the view of Bernard and Putz (2020) who reported that the secretarial staff are prone to developing MSDs because of their job often involves prolonged sitting, awkward postures, physically demanding and stressful, long working hours, a repetitive task in front of computers without having adequate rest and recovery time. In the same vein, Sethi (2019) noted that improper designs of work furniture, office layout, lighting, office facilities, and poor sitting posture have been connected with various cases of musculo-skeletal disorders.

The study also show that providing good workstation in all workplace; providing break period while working in office; training office workers on good sitting and work posture in the office; training office workers on good sitting and work posture in the office; providing precautionary measures aimed at accident prevention in office environment; providing ergonomics opportunities within their office environment; engaging the services of office/medical experts to educate workers on the health implication of incorrect posture of work; organizing seminars and conferences on office ergonomics to civil servants learn about work posture and sitting position from time to time; providing ergonomic compliant chairs that are rotational and have adjustable height of 38-54cm and giving out periodicals, manuals or handbooks with guidelines on proper sitting/correct work posture are the strategies for reducing office work related musculo-skeletal disorder. The finding corroborates with the study of Cavalho, (2014) who suggested that all these health related activities in an office environment, the first step towards ensuring safety and health of the office workers and making the office environment sustainable and hazard free is to develop office ergonomics which will reduce hazards and dangers to the health of the office workers within the work environment. Ify ThankGod & Adaravmola, (2016) also opined that proper placement of document, writing materials, monitor and key board for easy reach may be a guide for putting in place adequate control measures that could eliminate the prevalence of



musculoskeletal disorders experienced by office based civil servants which secretaries is included. Briggs et al (2019) who noted that providing good workstation design is the strategy of MSDs in among office workers. The null hypothesis tested shows that there is no significant difference in the mean responses of Male and female secretarial staff on office work related musculo-skeletal disorder among secretarial professionals in government establishment in Ebonyi State.

### **Conclusion**

Occupational Health and Safety are critical health and developmental issues, especially in a growing economy like Nigeria where there is dearth of credible OHS data especially in the public sector. Almost every workplace, including informal small-scale enterprises and business in the formal sector, suffer from one or more hazards. Occupational hazards may have health consequences for both workers and for any other person in the proximity of a production process. This study concludes that secretaries suffered from different types of MSDs due to frequently exposure to certain risk factors, such as use of computers for a long period of time without any rest, using force when striking the keyboard, working with poor postures, remaining in the same position for long period of time with little or no movement, and working without back support of chair and job stress. The most vulnerable sites of pain were neck, finger, lower back muscles and shoulder. Based on this study results, it is imperative to educate secretarial staff on proper ergonomics and physical exercises in preventing occupational injury associated with the use of computer in office environment.

### **Recommendations**

Based on the findings from this study, the following recommendations are made:

1. Government should adopt ergonomic guideline to create a suitable working environment that fit employee's physical capability in all government offices in Ebonyi state;
2. Office-based civil servants including secretarial staff should be trained on ergonomic issues like giving awareness on the effect of bad posture, avoiding prolonged working in the same position, and promoting health and safety practice for secretarial staff may reduce the high prevalence of MSDs.
3. Government should provide adequate control measures to ameliorate or check MSDS disorder by organizing seminars and conferences to office-based civil servants on office ergonomics to learn about work posture and sitting position from time to time

### **References**

- Abdu, G. (2017). Developing an observational technique of assessing and identifying ergonomic and health risk factors associated with office work: A study of selected offices in three State-owned tertiary institutions of Katsina State in Nigeria. *International Journal of Science and Healthcare Research*, 2(2); 1-23
- Abdu, G. Ta, S. W. & Sulzakimin, M. (2017). Creating office ergonomic awareness among the staff of Katsina State Local Government offices in Nigeria: A viable strategy for reducing the prevalence of work related musculo-skeletal disorders. *International Journal of Research and Review*. 4(1) 31 -48
- Bernard, J. & Putz, M. (2020). Potential Interaction between physical and psychological risk factors in the workplace associated with musculoskeletal disorders. *Journal of Occupational and Environmental Medicine*. 59(4),269-270
- Briggs A, Woolf A, & Karsten D, (2018). Reducing the global burden of musculoskeletal conditions. *Bulletin of the World Health Organisation*; 96 (1), 366–68
- Cavalho, M.A., (2014) *Occupational Safety and Hygiene Journal*, Vol. II Taylor and Francis Group, London. *Anthropometric Data Collection for Occupational Ergonomics*
- Das D, Kumar A, & Sharma M (2020) A systematic review of work-related musculoskeletal disorders among handicraft workers. *Int J. Occup Saf. Ergon*. 26(1):55-70.



- Deepak, S., & Prakriti P., (2019). Work style Risk Factors for Work Related Musculoskeletal Symptoms Among Computer Professionals in India”, *Journal of Occupational Rehabilitation*. 21( 4), 520-525
- Ejeka, C. A. (2017). Office management competencies required of office technology and management education graduates in Imo State civil services. *Unpublished M. Ed Thesis presented to the Department of Business Education, Ebonyi State University, Abakaliki*
- Fariborz, M, S.& Forouzan, G. (2018). Prevalence and patterns of work-related musculoskeletal disorders among bankers in Maiduguri, Northeast Nigeria. *Occup Med Health Aff.*;2:3
- Ify L. N, ThankGod C. Omuruka & Adaravmola, S. S. (2016). Work-Related Musculoskeletal Disorders: A Case of Office-Based Civil Servants in Rivers State, Nigeria. *International Journal of Tropical Disease & Health* 18(1), 1-13, 2016
- Metgud, S. (2018). Work-related Musculoskeletal Health Problems among the Information Technology Professionals in India: A Prevalence Study”. *International Journal of Management Research and Business Strategy*. 2(2); 118-127.
- Okezue O. C., Anamezie T. H., John J. N., & John, D. O. (2020). Work-Related Musculoskeletal Disorders among Office Workers in Higher Education Institutions: A Cross-Sectional Study. Ethiopia. *Ethiop J Health Sci*. 30(5),715-719
- Rajinder, L., & Neelam, M. (2015). Prevalence of Musculoskeletal Disorder among Computer Bank Office Employees in Punjab (India): A Case Study. 6th International Conference on Applied Human Factors and Ergonomics (AHFE 2015) and the Affiliated Conferences. *Procedia Manufacturing* 3(1) 6624 – 6631
- Sethi, D. (2019). Computer-related health issues among white-collar employees: *Communicating an Action Plan*
- WISHA Service Division, Washington State Department of Labor and Industries (2002) Office ergonomics, Practical Solutions for a safer work place.



## **CHALLENGES FACING TECHNICAL AND VOCATIONAL EDUCATORS IN THE EMERGING FIELD OF E-LEARNING IN NIGERIA: THE WAY OUT**

<sup>1</sup>POLIT, SYLVESTER DANJUMA  
[sylvesterpolit@gmail.com](mailto:sylvesterpolit@gmail.com)

<sup>2</sup>DUKTUR, S. LEVONG (Maben)  
[duktur@gmail.com](mailto:duktur@gmail.com)  
ZONAL DIRECTORATE OF EDUCATION (NORTHERN)  
PLATEAU STATE MINISTRY OF EDUCATION  
JOS

### **Abstract**

*Continuous changes in communication technology has made e-learning to become very critical in teaching, learning and research in Technical, Vocational Education and Training (TVET). E-learning which is an online delivery of information can also be defined as integrating learning with technology. Education is the foundation of innovation and development. E-learning is one of the most efficient tools for advancing knowledge, skills and development in the nation. It is necessary for quality instructional delivery in TVET. In spite of the various advantages e-learning has over the traditional approach to teaching, learning and research, the diffusion of e-learning is rather slow due to some inherent challenges associated with it. The paper x-rays the challenges facing TVET educators in the emerging field of e-learning. This paper reviews the concept of e-learning, the concept of TVET, benefits of e-learning, the need for e-learning in TVET, challenges facing TVET educators in the face of e-learning and finally, the way out. The paper recommends among others that TVET educators should embark on radical training and re-training on ICT competency programmes with or without sponsorship by their institution managements to be able to fit into this modern technological era of e-world.*

**Keywords:** e- learning, challenges, technical vocational education and training, information and communication technology.

### **Introduction**

The emergence of Information and Communication Technology (ICT) has brought with it changes in the process of imparting and acquiring knowledge. Electronic learning (e-learning) which is one of the by-products of ICT has changed many aspects of life and opened a wide vista of opportunities for people. One challenge that faces the profession and practice of Technical Vocational Education and Training (TVET) and indeed the whole of mankind is the progress and innovation offered by technological developments since the 1990s (Enang & Okute, 2019). Globally, there is a paradigm shift from the traditional approach of teacher-centred learning to modern methods where ICT plays a significant role hence TVET cannot be exempted.

ICT has a great speed of providing flexibility, improvement in quality and quantity of learning instead of total dependence on textbooks and materials in prints as teaching and learning in the technical education has done in the past. The advantages of using the e-learning technology as an educational tool ranges from capacity of students to personally learn needed skills and information almost in any field imaginable. Web-based educational learning system is receiving more and more attention in this era of information and communication technology due to explosive expansion of the



World Wide Web and internet. The internet's magnitude is thousands of times what it was only three decades ago.

With the advancement in information technology in the 21<sup>st</sup> century, e-learning has become an invaluable technology for teaching, learning and research in TVET (Garba, Guga & Yusuf, 2016). E-learning involves the use of technology to enhance learning including digital collaboration, satellite broadcasting, CD-ROMs, amongst others. E-learning has so many advantages over the traditional method of teaching and learning. ICT drives the new economy and human capital is its fuel. In fact, the ICT revolution makes knowledge a competitive resource. In this economic era, economic prosperity depends on brains rather than brawn and value is created by employing knowledge workers and continuous learning. The need for recurrent education and the changing labour market conditions, call for flexible access to TVET. Continuing education models that will meet worker's lifelong learning needs have to be relevant and flexible to provide just-in-time learning without distance.

Chukuedo and Omofonmwan (2013) believe that the acquisition of skills in TVET programmes should be supported with sufficient ICTs in order to widen the skill-horizon of both students and teachers. Ben and Shang (2013) show that the role of ICT in skilled manpower of development through TVET in our technical institutions cannot be overemphasized. In this technology-driven age, everyone needs ICT competence to survive. ICTs can play a crucial role in removing distance from education and develop a lifelong learning culture in TVET. Duru & Ozoji (2011) found that using ICT in teaching- learning process in TVET improves the quality of education. It is therefore concluded that ICTs are pillars of teaching and learning skills in the TVET.

TVET is faced with the challenge of keeping up with the changes taking place in the world of work due to the frequent technological changes. The role of ICT is one that is growing limitlessly. It becomes imperative for TVET students to focus on making technological learning part of their own lives so that it can be integrated into their instructional delivery competencies. They need to think, create, work and collaborate with new ideas and techniques in order to properly integrate the use of ICTs into the teaching and learning process to avoid being left behind.

### **Technical Vocational Education and Training (TVET)**

The term technical vocation education and training is the merger of both technical education and vocational education with the aim of training students in basic technical and scientific knowledge with the skill based vocational programmes. Technical education and vocational education are often used interchangeably but, they are separate and distinct terms. Vocational education refers to skill based programmes which are designed for skill acquisition at lower level of education. Vocational education programmes focus on specific vocations for entry into defined workplace. Technical education, on the other hand is not designed for any particular vocation but provides general technical knowledge. This type of education prepares people for entry into recognized occupation at a higher level but not usually lower than first degree.

The essential role of Technical Vocational Education and Training (TVET) in facilitating skills development for the socio-economic and technological development of countries globally account for the increasing importance that is being attached to this type of education. TVET provides individuals with skills, knowledge and attitudes for effective employment in specific occupation. According to Chukwunwendu (2016), TVET is a comprehensive term referring to those aspects of the educational process in addition to general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupation in various sectors of the economic and social life. Similarly, Okoye, Otuka and Iheonunekwu (2010) define TVET as all forms and aspects of education that are technical and vocational in nature, provided in either in educational institutions or under their authority, either by public authorities, the private sector or through other forms of organized education, formal or non- formal, aiming to ensure that all members of the community have access to the pathways of life -long learning. According to the National policy on education (FRN, 2016), the objectives of TVET are to:



- i. Provide the trained manpower in applied science, technology and commerce particularly at sub-professional level;
- ii. Provide the technical knowledge and vocational skills necessary for agricultural, industrial, commercial and economic development;
- iii. Provide people who can apply scientific knowledge to the improvement and solution of environmental problems for the use and convenience of man;
- iv. Introduce professional studies in engineering and other technologies;
- v. Give training and impart the necessary skills leading to the production of craftsmen, technicians and other skilled personnel who will be enterprising and self-reliant; and
- vi. Enable our young men and women to have an intelligent understanding of the increasing complexity of technology.

TVET contributes so much in courses ranging from electrical/electronics technology, mechanical/automobile technology, woodwork technology, building technology etc., and as it was stated earlier, it is practical oriented education which makes it unique in its content and approach thereby demanding special attention.

Unfortunately, despite all the glaring contributions of TVET, Nigeria is yet to accord this type of education the attention it deserves. Oviawe, Uwameiye and Uddin (2017), described TVET in Nigeria as a 'disaster' due to inadequate funding, chronic dearth of qualified teachers, inadequate facilities, inappropriate curriculum and students' population explosion. With the alarming of advancement in technology and the clarion call by experts for a change in TVET curriculum, there seems to be some attempts to remedy the ugly situation. What is urgently needed now is a replacement of the existing structure and a summit to reposition TVET delivery system. According to Agbo, Onaga and Omeje (2018), the already fast deteriorating state of TVET by unprecedented advances in technology is worrisome. TVET in almost all the institutions in Nigeria is indisputably challenging due to its capital-intensive nature. The need thus arises for a change in the pattern of delivery of instruction in that form of educational programme. The resources and methods chosen for instruction will bring about the intended learning outcomes in students (Polit, 2015). Such instructional resources are ICTs which is currently a driving force economically, scientifically and technologically all over the world. Understanding the concept of TVET and what it entails makes it easier for a TVET educator to design a suitable e-learning material for a particular course in order to face the inherent challenges of e-learning.

### **The Concept of E-learning**

There are many terms used to describe learning that is delivered online, via the internet, ranging from distance education, to computerized electronic learning, online learning, internet learning and many others. E-learning means electronic learning. It is learning utilizing electronic technologies to access educational curriculum outside of the traditional classroom. It is not confined to online learning but it includes computer-based learning, web-based learning, virtual classrooms and digital collaboration. In most cases, it refers to a course, programme or degree delivered completely online.

Okoye, Otuka and Ihoenunekwu (2010) see e-learning as all forms of electronically supported teaching and learning which are procedural in character and aimed to affect the construction of knowledge with reference to individual experience, practice and knowledge to the learner. E-learning which has to do with ICT tools and internet facilities can make teaching, especially in TVET more efficient and productive by engendering a variety of tools to enhance and facilitate teachers' professional activities through the effective use of internet, intranet, video tape, power point, overhead projectors, interactive boards and a host of others. In the same vein Chinwendu (2015) opined that e-learning is all about learning that occurs at the computer. According to him, the convergence of the internet and learning, or internet-enabled learning is called e-learning. The uses of network



technologies to create, foster, deliver and facilitate learning, anytime and anywhere. It is also the delivery of individualized, comprehensive, dynamic learning content in real time, aiding the development of communities of learning, linking learners and practitioners with experts.

Oluwalola and Awodiji, (2019) defines e- learning as an innovative approach for delivery electronically mediated, well designed, learner centred and interactive learning environments to anyone, anyplace, anytime by utilizing the internet and digital technologies in the instructional design principles. It is concerned with learning through any electronic medium that may or may not be connected to the internet. E-learning facilities provide the learners with exciting opportunities to search for more educational facilities. The implementation of e-learning in TVET will help to change the old pedagogical approach of the learning and changes the teachers from a knowledge transmitter to a knowledge facilitator.

Agbamuche (2015) presents e-learning as incorporating “all educational activities that are carried out by individuals or groups working online or offline, synchronously or asynchronously via networked or stand- alone computers and other electronic devices”. This makes them to develop inquiry mind, creativity and good study habits. It provides people with a flexible and personalized way to learn. In other words, e-learning is a computerized and digital type of education in which text, audio or sound, pictures, images, graphics and videos can be simultaneously presented online to students. It can also be seen as individual customized learning that allows learners to choose and review material at their own pace which can be delivered via numerous electronic mediums, including the internet, intranets, extranet, satellite broadcast, audio/video tape, interactive television/board and CD-ROM.

#### **The need for E-learning Skills through ICTs in TVET**

The conventional method of teaching in schools in many nations including Nigeria has failed to prepare recipients to adequately function and participate fully in this era of technologically driven society. The delivery system of implementing technical education programmes in our schools seems not to meet the required standard of today’s work place. To this end, Okafor & Ejiofor (2013) asserted that the inability of TVET to achieve its objectives is due to poor implementation. Collaborating this view, Enang and Okute (2019) posited that many programmes and policies including TVET have fallen short of expectation in meeting the realities of our working environment, in reducing unemployment and moving Nigeria forward. To this end, Okafor & Ejiofor (2013) described the current status of TVET programmes as appalling and disaster. This is as a result of the emergence of advancement in ICTs. In almost every aspect of life information processing is used to increase productivity and improve efficiency.

As new technology emerges, several skills are required to be successfully employed in the labour market for wealth creation. Such skills, according to Babafemi (2017), are technology related skills, interpersonal and communication skills. For instance, computer literacy is yardstick for employment opportunities in both public and private sectors of the economy. Technology related skills include: Keyboarding and document formatting, proofing reading, transcription, mechanical aptitude and computer knowledge. Interpersonal and communication skills include language, critical thinking and decision making, dependability, relating to others, maturity, ability to start and complete project, ability to keep an open mind and go with the flow. Chukwunwendu (2016) lamented that the present age the illiterates are no longer those who cannot read and write but those who cannot use computer and harness tools provided by ICT. In fact, TVET has been unmatched for the required technological breakthrough.

Therefore, there is urgent need for the effective inclusion of ICT related courses in the curriculum. This is important because according to Eze, Olumoko and Obi (2020), the power centres have shifted from land and capital to data, information, judgments and decision making. Therefore there is an urgent need for effective inclusion of ICT related courses in TVET curriculum. Also, there is the need to provide necessary equipment for the teaching and learning of such ICT related courses. The maximum use of ICT can foster the shift to a learner-centred environment. As the application of ICT



continuous to grow limitlessly, it becomes imperative for TVET teachers and students to focus on making this technological learning part of their lives so that it can be integrated into their instructional delivery competencies. They need to think, create, work and collaborate with new ideas and techniques in other to properly integrate the use of ICT into the teaching and learning process to avoid being left behind.

### **Benefits of Integrating E-learning into TVET programmes**

The integration of e-learning into TVET programmes will require a thorough training in the use of modern technology that will add new dimension to the equipment and facilities for TVET programmes. It is sad to note that most of the institutions that offer TVET programmes do not have equipment that could compete with those available in the world of work. For instance, Chuke (2003) posited that the computer remains the most widely used electronic device today. But surprisingly, this vital piece of instrument that has turned the world for better is still a luxury in most schools offering TVET programmes. As such, many TVET educators and their students are not abreast with the technological development of their profession. They are therefore ill-equipped to face the challenges of the world. As large numbers of data are created, processed, stored, retrieved and disseminated daily as a result of technological innovations, there is the need for new methods, new skills and concepts to be learned. Integrating ICT into TVET programmes will provide opportunity for individualized learning and instills confidence in the learners. According to Chuke (2003) the use of ICT in education and TVET particularly could be highly beneficial to students and the nation at large in the following ways:

- i. Records can be managed and accounting functions performed using electronic document. Information is now processed, stored, retrieved and outputted at a far greater speed than the manual method. The students are able to perform engineering drawing activities using AUTOCAD faster than in the usual classroom arrangement.
- ii. ICT creates opportunities for learner to have access to libraries and database of other universities, research institutions or government agencies to consult stored files of TVET papers, studies or reports. For example, users could subscribe to any electronic journals, newsletter and periodicals published on the internet.
- iii. It is used for communication between individuals. For example, through video conferencing, audio conferencing and other social media platforms such as; WhatsApp, Face book, YouTube, Skype, Gmail, Classmates, etc.
- iv. Time is saved running from one classroom to the other or from one institution to the other as distance is totally eliminated as educators and their students can share information and other teaching and learning materials without moving from one place to the other.
- v. It exposes TVET educators to new methodologies of subject delivery so as to improve qualities instruction and reposition the students to the current trends of globalization
- vi. Increases mastery of technical and workforce skills.
- vii. It encourages a network research among technical educators
- viii. Increases the preparation of students for most careers and vocations
- ix. Increases emphasis on individual instruction.
- x. Increases student's problem-solving skills.

### **Challenges of E-learning facing TVET Educators**

The digital divide between advance and developing countries, particularly in Africa, is well established. Like most African countries, Nigeria as a nation came late and is still slow in the use of ICT in almost all sectors of the nation's life (Terande, 2012). Accordingly, there are common problems



associated with the implementation of e-learning in TVET and despite the fact that so many e-learning tools are available for teaching and learning coupled with the numerous advantages associated with them, a careful look at the Nigerian educational system shows that the use of e-learning is still rather slow and in the field of education is not exempted (Adeoye, 2013). Some of these challenges facing TVET educators in using e-learning for teaching and learning are:

- i. Lack of qualified ICT personnel. Most TVET institutions lack computer literate teachers and ICT experts that would support and manage the internet connectivity and/or application of computing in the e-learning process (Garba, Guga & Yusuf, 2016)
- ii. Cost of equipment. The cost of equipment in the country like Nigeria with battered economy and seriously devalued currency is enormous. However, it should be noted that the problem might not be the funds nor the technology but rather the will on the part of government (Ilegboje & Okubote, 2002).
- iii. Management's attitudes. The attitude of various managements in and outside the TVET institutions towards the development of e-learning facilities such as the internet and procurement of computers is rather slow in some instance, and others there are no aids or support by government at all (Albirini, 2006)
- iv. Inconsistent electric power supply in most parts of the country and also inadequate internet connectivity particularly in the rural areas (Duru & Ozoji, 2011)
- v. Non-inclusion of ICT programmes in teacher's training curricular at the basic level of education. There seems to be no clear and definite policy or curriculum for ICT in TVET programmes in all levels (Terande, 2016)
- vi. Resistance to change from traditional pedagogical methods of teaching TVET to more innovative and technology-based teaching and learning methods.

#### **Implications of e-learning for TVET: The way out.**

Despite the challenges facing the introduction of e-learning into TVET through the ICT in Nigeria, there is copious room for improvement, as TVET is the surest way for sustainable economic emancipation and development. The production of employable and skilled human resources for the world of work is essential to sound economic development and growth. The following suggestions if duly implemented will foster the future of TVET programmes through the e-learning in Nigeria:

- i. **Funding:** funding is fundamental if the use of ICTs in all ramifications and in the real sense of it, is to succeed (Adomi & Kpangban, 2010). Thus, there should be adequate and sustainable funding in a holistic manner of TVET programmes.
- ii. **Policies:** The three tiers of government should adopt policies that would avail TVET teachers and students easy and cheap access to ICT tools, packages and equipment. To this end, Thom-Otuya and Ubulom (2007) opined that the curriculum has to be redesigned to incorporate e-learning and e-teaching.
- iii. **Infrastructure and facilities:** ICT tools, facilities, packages and equipment should be provided in sufficient number and quantity. Vin-Mbah (2016) insists that government should ensure that there is regular supply of electricity in schools, offices, and residential buildings to foster teaching, learning, administration and research in TVET.



- iv. TVET teachers should be motivated and encouraged to develop and use multimedia courseware and software relevant to teaching and learning. The government should motivate teachers through provision of adequate funds for courseware development.
- v. The government should provide digital libraries in every TVET institution. The library is the highest reservoir of knowledge and no educational institution can do without it. Ensure that each library has a server for storage, retrieval, uploading and downloading of information
- vii. The accreditation team of National Commission for Colleges of Education (NCCE) and the National Board for Technical Education (NBTE) and other accreditation agents of TVET in Nigeria should revise the curricula of all TVET courses to include virtual courses that will be internet-based

**Training:** The use of ICTs in all spheres of life, TVET inclusive, can only be possible if there are available and sufficient human resources in the right number, quantity and mix, and they have to be trained and retrained to keep them abreast with current trends and technologies in TVET. It is for this reason that Oso (2015) recommended that TVET students and teachers alike should be trained on the use of ICT resources to enable them keep abreast of the new innovation in the field of TVET.

### **Conclusion**

It is evident from the foregoing discussion that ICT is today a force that has changed many aspects of the way we live. It is also clear that a lot of challenges are facing the application of ICT for e-learning in teaching TVET courses in our academic institution today. It is pertinent for all stakeholders and government to work together and to alleviate these challenges.

### **Recommendations**

1. There should be early introduction of ICT through the e-teaching and e-learning to students in the first stages of education to enable them have access to the computer early in life like their counterparts in the developed world.
2. There should be adequate provision of infrastructure that supports ICT e.g. electricity supply should be of top priority. If possible, a standby generator set should be provided to cater for frequent power shortage.
3. The government of Nigeria should embark on a massive computer literacy training programmed nation-wide particularly for teachers and learners at all levels. This should be accomplished through in-service training of teachers, workshops, seminars and conferences. For students, computer education should be a compulsory subject at all levels and the introduction of e-teaching and e-learning be encouraged in TVET institutions.
4. All classrooms, halls and workshops in TVET institutions should be connected to the internet in order to enhance web-based instruction. The government should do this by paying internet connection fees in the schools.
5. Videophone, teleconferencing and multimedia systems e.g. multimedia computers and multimedia projectors should be provided in adequate quantities by the government for effective e-learning in the TVET institutions.

### **References**

- Abdulkadir, M., & Ma'aji, S. A. (2014). Assessment of workshop facilities Management practices in Technical Colleges of Niger State. *International Journal of Scientific Research Publication*, 4(7), 1-7. Retrieved from, <http://www.ijsrp.org>.
- Adomi, E. E. & Kpangban, E. (2010). Application of ICT in Nigerian secondary schools. *E-journal of library philosophy and practice*. University of Nebraska, Lincoln. Retrieved from, <http://www.digitalcommons.unl.edu/liphiprac/345>
- Adeoye, E. (2013). *Introduction to internet fundamentals: An electronic learning approach*. Available at: <http://ideamingle.net>



- Agbamuche, S. C. (2015). The use of instructional media in Nigerian educational system: principles, practice, problems and prescriptions. *Journal of research on Technology in Education*, 1(46), 35-41.
- Agbo, B. C. D., Onaga, P. O. & Omeje, H. O. (2018). Teacher's opinion on availability of e-learning opportunities for effective technical and vocational education and training (TVET) in tertiary institutions in South East Nigeria. *International Journal of Vocational and Technical Education*, 10(1), 1-6. Retrieved from <http://www.academicjournals.org/IJVTE>
- Babafemi, M. A. (2017). Information and communication technology (ICT) in technical education. *SCIREA Journal of Education*, 1(1), 79-87. Retrieved from <http://www.scirea.org/journal/education>
- Ben, C. & Ashang, M. (2013). The role of ICT in the skill manpower development through vocational technical education among higher institutions in Cross Rivers State Nigeria. *International Journal of Vocational and Technical Education*, 5(5), 92-99.
- Chinwendu, A. S. (2015). The use of instructional media in Nigerian Educational system: Principles, practice, problems and prescriptions. *International Journal of Innovative Scientific & Engineering Technologies Research* 42(1), 35-41.
- Chukwuendo, S. & Omofonmwan, G. (2013). Information and communication technology: The pivot of teaching and learning skills in electrical and electronic technology programme in Nigeria. *International Journal of Vocational and Technical Education*, 5(6), 117-123.
- Chukwunwendu, A. F. (2016). New dimensions in sourcing and utilization of resource materials for effective teaching and instruction in technical vocational education and training (TVET) in Nigeria. *Educational Journal*, 4(6-1), 24-30. Retrieved from <http://www.sciencepublishinggroup.com/j/edu>
- Duru, V. N. & Ozoji, B. E. (2011). Investigating the utilization of ICT and its application in the teaching computer studies in secondary schools in Owerri educational zone. *Journal of Educational Review*, 2(1), 133-142.
- Enang, C. E. & Okute, A. L. (2019). Leveraging on new technologies for skill acquisition of business education in tertiary institutions in Nigeria for the E-World. *Nigerian Journal of Business Education*, 1(6), 331-337.
- Eze, T. I., Olumoko, B. O. & Obi, M. N. (2020). Effect of multimedia instructional strategy on student's academic achievement in mechanical trades in technical colleges. *Journal of Educational Development*, 2(4), 38-43.
- Federal Republic of Nigeria (2016). *National Policy on Education*. Abuja: NERDC.
- Garba, A. A., Guga, A. & Yusuf, H. O. (2016). Availability of effective utilization of electronic media for teaching social studies in colleges of education in North- East Nigeria. *International Journal of Research in Science Technology & Mathematics Education*, 4(1), 158-163.
- Okafor, U. P. & Ejiogor, T. (2013). Utilization of e-learning resources by lecturers of vocational technical education departments in tertiary institutions in Enugu State. *International Educational Research*, 12(20), 56-61.
- Okoye, R. Otuka, J. E. O. & Iheonunekwu. (2010). *Vocational and technical education in Nigeria: Trends and prospects*. Onitsha: Global Academic Group Online Academic Resources.
- Oluwalola, F. K. & Awodiji, O. A. (2019). "Availability and utilization of e-learning facilities for management and business courses in universities in Kwara State, Nigeria". *Nigerian Journal of Business Education*, 2 (6), 346-357.
- Oso, S. O. (2010). ICT literacy among vocational and technical education teachers in Kogi State technical and vocational colleges: Skill gaps. *British Journal of Education*, 5(3), 21-30.
- Oviawe, J. I., Uwameiye, R. & Uddin, P. O. S. (2017). Bridging Skill Gap to Meet Technical, Vocational Education and Training School-Workplace Collaboration in the 21st Century. *International Journal of Vocational Education and Training Research*, 3(1) 7-14.
- Polit, S. D. (2015). Utilization of information and communication technology by mechanical trades teachers in North Central Nigeria. *Unpublished MSc theses*, University of Jos.
- Terande, T. J. (2012). Application of e-teaching and e-learning in Nigerian educational system. *Academical Research Internal*, 3(1), 30-36.
- Thom-Otuya, V. C. & Ubulom, W. J. (2007). ICT as a tool for 'catch them young in business education'. Implication for the business education graduates. *African Journal of Education and Development Studies*, 4(1), 91-105.
- UNESCO (2002). *Information and communication technologies in teacher education: A planning guide*. Paris: UNESCO.
- Vin-Mbah, F. I. (2016). Utilization of multimedia and hypermedia technologies in tertiary business education classroom in Anambra State. *Nigerian Journal of Business Education*, 2(3), 14-24.



## **INFLUENCE OF ENTREPRENEURSHIP EDUCATION ON ENTREPRENEURIAL MOTIVATION, SELF EFFICACY AND INTENTION OF NIGERIAN POLYTECHNIC UNDERGRADUATES**

**LAWRENCE FEMI ADEMILUYI, PhD**

*Department of Business Education, Kwara State University, Malete*

### **Abstract**

*In the wake of the introduction of entrepreneurship education as a compulsory course for all Nigerian polytechnic students irrespective of discipline, the paper sought to determine the influence of entrepreneurship education on polytechnic students' entrepreneurial motivation, self-efficacy and intention. The study employed descriptive survey design; 224 graduating class students constituted the study sample. Three research questions and three null hypotheses guided the study. A 45-item structured questionnaire was the research instrument. The result was analyzed with mean rating and standard deviation while the null hypothesis was tested with regression analysis. The study revealed that entrepreneurship education has exercised great influence on entrepreneurial motivation, self efficacy and entrepreneurial intention, with a large number of respondents expressing preference for entrepreneurial vocation if support facilities are put in place. The paper concluded that entrepreneurship education has had a significant positive impact on entrepreneurial aspirations. It finally recommended that functional support system should be put in place to harness the new enthusiasm for entrepreneurship in Nigerian youths.*

**Keywords:** Entrepreneurship education, self-efficacy, entrepreneurial motivation, entrepreneurship intention.

### **Introduction**

The twin crises of unemployment and endemic poverty among graduates have brought the issues of entrepreneurship and its pedagogy to the front burner of socio-economic discourse in contemporary Nigeria. Entrepreneurship education seeks to provide students with the skills, knowledge, motivation needed to effect attitudinal changes, necessary to encourage self-reliance through involvement in entrepreneurial activities. Through entrepreneurship education, young people learn skills necessary to prepare them for involvement in entrepreneurial activities (Etonyeoku, 2010). Entrepreneurship education seeks to immerse people in real life experiences which encourage and empower them to take risks, manage the results and learn from the outcome (Kuratko, 2003). According to the State of Colorado Board of Educators, cited in Ayediso (2017), the objectives of entrepreneurship education should be: To provide meaningful education for the youth which could make them self-reliant and subsequently encourage them to drive profit and be self-sustaining; to equip graduates with the training and support necessary to help them establish careers in small and medium sized-business; and to provide graduates with training and skills to meet societal manpower needs. Entrepreneurship education also seeks to stimulate industrial and economic growth of rural and less developed areas, to provide graduates with training to make them creative in identifying new business opportunities and to provide graduates with training in risk management to alleviate and minimize uncertainty. For a long time, the Nigeria Government, in spite of the innate entrepreneurial inclination of the Nigerian people, did not give entrepreneurship education the attention it deserved (Otobo, 2017). However, today, it has become one of the topmost priorities of the federal policy. Many kinds of organization now exist to support potential entrepreneurs, including specialized government



agencies and Non Governmental Organisations (NGOs). In 2006, the Nigerian Federal Government directed that entrepreneurship education be incorporated into all programme offered by Nigerian tertiary institutions for all students. It directed higher education supervisory agencies to produce appropriate training document for the effective delivery of the programme. The aim was to produce graduate entrepreneurs with the right attitudes and skills, to spur them on the path of creativity, innovation and enterprise. Higher institutions in Nigeria comprise the universities, supervised by the National Universities Commission; polytechnics, supervised by the National Board for Technical Education; and colleges of education, overseen by the National Commission for Colleges of Education. Nigerian polytechnics offer a 2-year National Diploma (ND) programme and 2-year Higher National Diploma (HND) programme. In 2007, the NBTE developed curricula and training materials for the following three courses in entrepreneurship. These are: Introduction to Entrepreneurship (EED 126), Practice of Entrepreneurship (EED 216) and Entrepreneurship Development (EED 413) The ultimate purpose of entrepreneurship education is to promote entrepreneurial intention by engendering entrepreneurial motivation and self efficacy (Ademiluyi 2007; Ademiluyi, 2020). Entrepreneurship springs from the desire for self-employment and the desire to be a master of one's destiny (Morris & Lewis, 2015). Waston (2016) describes self-efficacy as an individual's confidence in his own ability. A man may have a skill without knowing, much less developing it. A talent can only be developed once its existence is determined. The scourge of the Third World is that many potential world-beaters are wasting away in lowly vocations oblivious of the championship traits in them.

Self-efficacy is a psychological trait and a function of knowledge. The more a person knows about a vocation, the more he is tempted to try his hand on it; Exposure to practical and theoretical functions of the entrepreneur will enhance knowledge and promote self-efficacy. Dabini and Aldrich (2013) opine that the best way to promote entrepreneurial desire is to enhance entrepreneurial knowledge, skills and motivation. Entrepreneurial motivation can be positive and negative. A sacked employee may be driven into entrepreneurial ventures. Many dismissed or terminated workers ultimately found their true vocations in entrepreneurship ventures. Positive motivations include desire to exploit one's talents or skills, desire for independence, autonomy, sense of achievement, self-expression and the drive to be innovative. Also, desire for self-improvement, economic aspirations, and self-actualization often serve as motivational trigger for entrepreneurial risk taking (Ademiluyi, 2019). The concern of this study was to determine the influence of entrepreneurship education on entrepreneurship motivation, self efficacy and intention.

### **Statement of the Problem**

Entrepreneurship education is now universally recognized as being potentially one of the most important panaceas to the twin-crises of youth unemployment and endemic poverty. In response to this reality, the National Board for Technical Education, Nigerian polytechnics' regulatory agency, introduced entrepreneurship education as a compulsory course for all students irrespective of their major discipline. Programme and institutional accreditations are now partly contingent on the virility of the institution's entrepreneurship programme.

While this initiative has been universally acclaimed, the extent of its effectiveness is yet to be empirically determined. This has limited the capacity to offer remedial options for observed lapses. Hence, the study sought to empirically determine the influence entrepreneurship education on polytechnic students' entrepreneurial motivation, self efficacy and entrepreneurship intention.

### **Research questions**

The following research questions were raised to guide the study:



1. How great is the influence of entrepreneurship education on polytechnic students' entrepreneurial motivation?
2. How great is entrepreneurship education's influence on polytechnic students' entrepreneurial self efficacy?
3. How great is entrepreneurship education's influence on polytechnic students' entrepreneurship intention?

### **Hypotheses**

The following null hypotheses were tested at 0.05 level of significance:

1. There is no significant influence of entrepreneurship education on polytechnic students' entrepreneurial motivation
2. There is no significant influence of entrepreneurship education on polytechnic students' entrepreneurial self efficacy
3. There is no significant influence of entrepreneurship education on polytechnic students' entrepreneurship intention

### **Research Methodology**

The study adopted the survey design since it involves the collection of data in order to test hypotheses concerning the status of the study object. Survey design is particularly effective for seeking individual opinions, attitudes and perception (Nwogu, 2005). It is ideal when subjects are to be studied in their natural environments without treatment (Gay, 1996). The study population comprised students in graduating (HND 2) classes in polytechnics in Osun State; Nigeria. Osun State is one of the six states in the South-Western geo-political zone. There are four accredited polytechnics in Osun State. These are: Osun State Polytechnic, Iree; Federal Polytechnic Ede; Osun State College of technology Esa-Oke and The Polytechnic, Ile-Ife. Altogether the institutions run 37 programmes accredited at HND level. At the time of the study, (May 2019), students, in regular, full-time graduating (HND) classes are: Osun State Polytechnic, Iree, 987; Federal Polytechnic, Ede, 1,071; The Polytechnic, Ile-Ife, 322; and Osun State College of Technology Esa-Oke, 855. Out of this population, a sample of 486, representing 15 per cent of the population was drawn using the stratified random sampling technique.

The research instrument used was a 46-item structured questionnaire based on the formulated research questions and hypotheses. The instrument was designed to elicit the ratings of respondents on the 4-point modified Likert-type rating scale as follow: Great influence (GI), 4 points; Moderate influence (MI), 3 points; Small influence (SI), 2 points; and Very Small influence (VSI), 1 point.

The instrument was face- and contact-validated by two experts, one an expert on entrepreneurship education; the other on test and measurement. The first section of the questionnaire sought demographic information on the respondents. This was used in the test of hypothesis. The second section sought the students' ratings on the influence of entrepreneurship education on entrepreneurial motivation, self efficacy and entrepreneurship intentions.



Four hundred and eighty six copies of the questionnaire were produced and distributed by the researcher and his two assistants. Four hundred and twenty forms were returned properly completed, representing 86% return.

The research questions were analyzed using mean rating while the null hypotheses were tested at 0.05 level of significance using regression analysis.

**Results:**

Research Question 1: How great is the influence of entrepreneurship education on polytechnic students' entrepreneurial motivation?

**Table 1: Influence of Entrepreneurship Education on Entrepreneurship Motivation**

S/No	Entrepreneurship Motivation	Mean	SD	Remarks
<i>Entrepreneurship education's influence on desire for:</i>				
1.	Skill exploitation/commercialization	3.87	0.67	GI
2.	Independence	3.82	0.73	GI
3.	Financial autonomy	3.73	0.86	GI
4.	Sense of achievement	3.63	0.88	GI
5.	Self-expression	3.96	0.77	GI
6.	Self-Actualization	3.41	0.96	MI
7.	Risk expression	3.69	0.87	GI
8.	Wealth creation	3.88	0.93	GI
9.	Exploiting opportunities	3.91	0.79	GI
10.	Making money	3.96	0.62	GI
11.	Innovative action	3.37	0.73	MI
12.	Avoiding paid employment	3.38	0.88	MI
13.	Self-employment	3.43	0.91	MI
14.	Getting people to work for me (power) need	3.43	0.86	MI
15.	Being master of my own time	3.26	0.91	MI
16.	Running personal business alongside paid Employment	3.36	0.91	MI
17.	Starting my own business	3.82	0.86	GI
18.	Being answerable to myself	3.03	0.73	MI
19.	Working in my own business	2.89	0.88	MI
20.	Avoiding insecurity of paid job	2.76	0.73	MI
<b>Grand mean</b>		<b>3.41</b>	<b>0.78</b>	<b>MI</b>

Table 1 shows the influence of entrepreneurship education on entrepreneurial motivation of graduating students. Of the 20 items listed, 10 (50%) have enjoyed great influence of entrepreneurship education while all the others have enjoyed moderate influence. Entrepreneurship education influenced a desire for skill exploitation, independence; financial autonomy, wealth creation, exploiting opportunities; making money. However, all the other constructs enjoyed a rating of "moderate influence" only. The grand mean (3.41) confirmed the rating of moderate influence, while the standard deviation scores shows that the responses were relatively homogenous, as they clustered around their means.

Research Question 2: There is no significant influence of entrepreneurship education on polytechnic students' entrepreneurial self efficacy



**Table 2: Influence of Entrepreneurship Education on Entrepreneurial Self Efficacy**

S/No	Entrepreneurship Self Efficacy	Mean	SD	Remarks
<i>Entrepreneurship education has been very effective in boosting my self-efficacy in:</i>				
21.	Starting a business	3.78	0.67	GI
22.	Running a business	3.88	0.73	GI
23.	Managing staff	3.83	0.86	GI
24.	Sourcing for funds	3.71	0.88	GI
25.	Building a team	3.51	0.67	GI
26.	Winning customers	3.79	0.96	GI
27.	Retaining customers	3.66	0.87	GI
28.	Identifying opportunities	3.66	0.93	GI
29.	Optimizing opportunities	3.84	0.79	GI
30.	Generating ideas	3.39	0.62	MI
31.	Developing Creativity	3.38	0.83	MI
32.	Promoting innovation	3.38	0.98	MI
33.	Planning	3.39	0.71	MI
34.	Managing finances	3.43	0.86	MI
35.	Business Communication	3.46	0.81	MI
36.	Negotiation	3.81	0.91	GI
37.	Product development	3.88	0.86	GI
38.	Marketing and salesmanship	3.01	0.83	MI
39.	Human relations	2.96	0.88	MI
40.	Leading	2.61	0.93	MI
<b>Grand mean</b>		<b>4.33</b>	<b>0.83</b>	<b>GI</b>

Table 2 shows the influence of entrepreneurship education on entrepreneurship self-efficacy. Items with great influence include: Starting a business, running a business, managing staff, sourcing for funds, building a team, winning customers, retaining customers, identifying opportunities, optimizing opportunities, generating ideas, negotiation and product development, all with mean scores ranging from 3.51 to 3.88. Among the items, leading was the item with the lowest rating, 2.61 which was ranked as moderate influence. The standard deviation scores which ranged from 0.62 to 0.93 indicated that the respondents' ratings are relatively homogenous, since they clustered around the means.

Research Question 3: How great is entrepreneurship education's influence on polytechnic students' entrepreneurship intention?

**Table 3: Influence of Entrepreneurship Education on Entrepreneurship Intention**

S/No	Entrepreneurship Intention	Mean	SD	Remarks
<i>As a result of Entrepreneurship education, I ...</i>				
41.	want to be self employed right away	2.34	0.67	SI
42.	am ready to be self employed if I can't find a job	3.77	0.81	GI
	want to be self employed sometime in future	3.91	0.78	GI
43.	want to take advantage of my entrepreneurship education to become an entrepreneur	3.91	0.63	GI
44.	want to be a self employed entrepreneur right away if I can garner adequate resources for it	3.44	0.77	GI
45.	will happily become an entrepreneur immediately if the right support structures are put in place	3.85	0.53	GI
46.	would like to combine paid employment with			



paid employment	3.93	0.64	GI
<b>Grand mean</b>	<b>3.59</b>		<b>GI</b>

Table 3 reveals the influence of entrepreneurship education on the entrepreneurial intention of respondents. Entrepreneurship education has had great influence on respondents' desire to seek self-employment if they cannot find a job (Mean: 3.77). Entrepreneurship education has also had great very influence on respondents' desire to become self employed sometime in future (Mean: 3.91). Most respondents (Mean: 3.44) reported that they would prefer to be self-employed if they could garner adequate resources for entrepreneurial ventures, they would opt for entrepreneurship if the relevant support structures are put in place (Mean: 3.91)while almost everyone indicated a preference for combining entrepreneurship engagement with paid employment (3.93).

**Results of test of Hypotheses**

H0<sub>2</sub> There is no significant influence of entrepreneurship education on polytechnic students' entrepreneurial motivation

**Table 4a: Summary of Regression Analysis of the Influence of entrepreneurship education on graduating polytechnic students' entrepreneurship motivation**

Model	N	R	R Square	Adjusted R Square	F-cal.	P-value
1	420	0.12	0.15	0.01	6.91	0.01

Dependent Variable: Entrepreneurship motivation

Table 4a summarizes the regression results of influence of entrepreneurship education on graduating polytechnic students' entrepreneurship motivation The result indicated that there is a positive correlation between entrepreneurship education and motivation (R = 0.12) while R-squared is 0.15 which means that the independent variable (entrepreneurship education) explained 15% variations of the dependent variable (entrepreneurship motivation). Therefore, entrepreneurship education has significant influence on entrepreneurship motivation of polytechnic students (F<sub>1,459</sub> = 6.91, p = 0.01).

**Table 4b: Table of coefficients**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	3.30	.30		10.90	.00
Entrepreneurship education	.25	.09	.12	2.63	.01

Dependent Variable: Entrepreneurship motivation

Table 4b shows that social media usage significantly influence polytechnic students' entrepreneurship motivation (B = 0.12; t<sub>(459)</sub> = 2.63, P = 0.01). It indicates that at 5% level of significance, there is evidence from the regression equation that entrepreneurship education has significant influence on entrepreneurship motivation. Based on this, the null hypothesis was rejected and it was concluded that entrepreneurship education has significant influence on polytechnic students' entrepreneurship motivation.



H0<sub>2</sub>: There is no significant influence of entrepreneurship education on polytechnic students' entrepreneurial self efficacy

**Table 5a: Summary of Regression Analysis of the Influence of entrepreneurship education on graduating polytechnic students' entrepreneurship self efficacy.**

Model	N	R	R Square	Adjusted R Square	F-cal.	P-value
1	461	0.68	0.46	0.46	384.48	0.00

Dependent Variable: Entrepreneurship self efficacy

Table 5a summarizes the regression results of the influence of entrepreneurship education on graduating polytechnic students' entrepreneurship self efficacy.

The result indicates that there is a high positive correlation between entrepreneurship education and self efficacy (R = 0.68) while R-squared is 0.46 which means that the independent variable (entrepreneurship education) explained 46% variations of the dependent variable (entrepreneurship self efficacy). This indicates that entrepreneurship education significantly influences self efficacy of polytechnic students. ( $F_{1,459} = 348.48, p = 0.00$ ).

**Table 5b Table of coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.17	.19		32.81	.00
	Entrepreneurship Education	1.17	.06	.68	19.61	.00

Dependent Variable: Entrepreneurship self efficacy

Table 5b showed that entrepreneurship education significantly influences entrepreneurship self efficacy (B = 0.68;  $t_{(459)} = 19.61, P = 0.00$ ). It indicates that at 5% level of significance the regression equation clearly established that entrepreneurship education significantly influences self efficacy of polytechnic graduating students. Based on this, the null hypothesis was rejected and it was concluded that entrepreneurship education has significant influence on entrepreneurship self efficacy polytechnic students.

H0<sub>3</sub>: There is no significant influence of entrepreneurship education on graduating polytechnic students' entrepreneurship intention..

**1. Table 6a: Summary of Regression Analysis of the Influence of entrepreneurship education on graduating polytechnic students' entrepreneurship intention**

Model	N	R	R Square	Adjusted R Square	F-cal.	P-value
1	461	0.40	0.16	0.16	89.37	0.000

Dependent Variable: Entrepreneurship intention

Table 6a summarizes the regression results of the influence of entrepreneurship education on entrepreneurship intention of polytechnic students. The result indicates that there is a positive



correlation between entrepreneurship education and entrepreneurial intention of polytechnic students (R = 0.40) while R-squared is 0.16 which means that the independent variable (entrepreneurial education) explained 16% variations of the dependent variable (entrepreneurial intention). Thus, this is an indication that entrepreneurial education significantly influences entrepreneurial intention of polytechnic students ( $F_{1,459} = 89.37, p = 0.000$ ).

**Table 6b** Table of coefficients

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	T	
1 (Constant)	6.42	.41		15.49	.000
Social Media Usage	1.35	.14	.40	9.45	.000

Dependent Variable: Entrepreneurial intention

Table 6b showed that entrepreneurship education significantly influences the entrepreneurship intention of polytechnic students ( $B = 1.35; t_{(459)} = 9.45, P = 0.000$ ). This indicates that at 5% level of significance there is enough evidence that entrepreneurship education significantly influences the entrepreneurship intention of polytechnic students. Based on this, the null hypothesis three was rejected and it was concluded that entrepreneurship education has significant influence on the entrepreneurship intention of polytechnic students.

**Discussion of findings**

Results on research question 1 shows the influence of entrepreneurship education on polytechnic graduating students' entrepreneurial motivation. The respondents reported that entrepreneurship education has very great influence on the acquisition of ten of the items; and great influence on the ten others. The grand mean indicates that the respondents are highly motivated to exploit and commercialize their skills and talents, to achieve financial autonomy and become masters of their own lives. Kroom and Moolman cited in Rutashobya (2019) have listed these among the major motivations of entrepreneurs and it is intriguing that entrepreneurship education is already moving students in the direction. The result of the test of the first hypothesis shows that entrepreneurship education has significant influence on entrepreneurship motivation of polytechnic students, which justifies the human and material resources invested in the programme.

The result of research question 2 shows that entrepreneurship education has been effective in promoting entrepreneurship self efficacy. Self efficacy is a major milestone on the road to entrepreneurial engagement and an important predictor of entrepreneurial behavior (Morris & Lewis, 2015; Nair, 2016). This therefore suggests that the graduating students' self efficacy has been bolstered by the education they are receiving. The accuracy of this finding is validated by the result of the test of hypothesis.

Result on the third research question reveals that entrepreneurship are undecided on entrepreneurship education's influence on whether to be 'self employed right away', but it has great influence on "readiness to be self employed if I can't find a job." . Entrepreneurship Education has also ignited the desire to 'become self employed sometime in future,' and 'to become an entrepreneur immediately if I can garner adequate resources.' Almost all respondents indicated a preference for combining entrepreneurship engagement with paid employment. The test of the third hypothesis also confirms that entrepreneurship education has statistically strong influence on entrepreneurship intention.

The major significance of these results is not that entrepreneurship education is achieving optimal results or that all the necessary human and material facilities abound in the studied institutions.



Observation and anecdotal inferences suggest that this is by no means the case. Indeed, in all the institutions studied, the entrepreneurship programmes are still work in progress. The significance lies in the enthusiastic response of the students to the Entrepreneurship Education initiative. It appears that the economic outlook has become so negative, the unemployment menace so dire that youths are willing to try new things, hence the overwhelming positive response to entrepreneurship education.

Students may not be the perfect judge of the adequacy of curriculum or the availability of relevant facilities and equipment, but the study shows that even at this early stage, entrepreneurship education, warts and all, is changing the mindset of Nigerian youths. A society which historically regarded paid employment as the ultimate possibility of a fresh graduate is importantly, learning to look in a creative new direction, "Change the mindset of youths, and a society will move mountain." Mandelson (2017) opines. Enthusiasm alone cannot move entrepreneurship mounds, but if knowledge and enthusiasm are complemented with adequate entrepreneurship support structures, mounds may shift.

### **Conclusion**

The study shows that entrepreneurship education has been very well received by Nigerian students. Almost all the respondents reveal that they are looking forward to becoming self-employed sometime in their career. Many are anxious to run their own businesses alongside paid employment. Many would not mind going into entrepreneurial ventures immediately if they can garner adequate resources of that purpose. If free enterprise is now the wave of the future, then Nigerian youths, with entrepreneurship education, are thankfully now being prepared to participate in that future as confident and equal partakers in the business of wealth creation. This is a promising development and it should be encouraged.

### **Recommendations**

With the study concluded, the following recommendations are proffered:

1. Entrepreneurship education should continue to be actively supported by. Governments, institutions and other stakeholders. They should ensure that entrepreneurship education units and directorates have adequate human resources to impart entrepreneurship knowledge, skills and to motivate the students. Entrepreneurship trainers should build active liaison with practicing entrepreneurs, who can promote entrepreneurship knowledge and motivation.
2. Entrepreneurship education curriculums must continue to promote self efficacy of students. This can be done by encouraging students to engage in micro businesses even while in school. It is often said that the best way to learn to swim is by swimming. Entrepreneurial self efficacy can also be promoted by encouraging interactions with successful entrepreneurs, reading their history and encouraging practical engagement in entrepreneurship.
3. Better structures should be provided to support and encourage youth entrepreneurship. Adequate provision should be made for financial and technical support so that initial enthusiasm will not grow cold. The best way to build and reinforce positive entrepreneurship intention and ultimate engagement is to put in place functional support structures. If society continues to give entrepreneurship development the attention it deserves, it will, in no distant future, become our way of life.



### References

- Ademiluyi, L. F. (2007). Business Competencies needed for successful Entrepreneurship as by fresh Graduates. *Journal of Business Education* 34(3), 278-288
- Ademiluyi, L. F. (2020). Utilization of social media for educational purposes by business education students in Nigerian Colleges of Education. *International Journal of Learning, Education and Development*, 8(3), 83-93.
- Ademiluyi, L. F. (2019). Institutional inhibitions to female entrepreneurship in Nigeria: implications for entrepreneurship education. *Business Education Innovation Journal*, 11(2), 92-99.
- Ayediso, M. A. (2017). Promoting Entrepreneurship in Nigeria. *Journal of Entrepreneurship Education* 1 (1), 276-284.
- Dubini, P. & Aldrich, H. (2019). Personnel and Extended Networks are Central to Entrepreneurial process. *Journal of Business Venturing*, 6. 305 -313.
- Etonyeoku, O. (2010). Developing Entrepreneurial Skills in Undergraduate Students. *Journal of Business Education*, III (5), 77 – 83.
- Federal Government of Nigerian (2010). *The Nigeria Millennium Development Goals*. Abuja: Federal Ministry of information Press.
- Hisrich, J. C. (2002). *The concept of Entrepreneurship*. New York: Vantage Press.
- Kuratko, D. O. & Hodgetts, R. M. (2003). *Entrepreneurship: A Contemporary Approach*. 4<sup>th</sup> ed. New York: The Dryden Press.
- Mandelson, S. (2017). *New Ventures Strategies*. Brighton: Burr Bridge Press.
- Morris, M. H. & Lewis, P.S. (2015). Determination of Entrepreneurial Activities Implication for Marketing. *European and Journal of Marketing* 29(7), 31 – 48.
- Nair, P.G.R. (2016). *The parable of proactivity*. Accessed on May 29<sup>th</sup> 2020 at <http://www.boloj.com/perspective/197.htm>.
- Nieuwehuizen, N. B. (2016). *Small Business Management Series Entrepreneurial Skill*. Kenwyn: Juta Press.
- Nwogu, B .G. (2005). *Educational Research Basic issues and Methodology*, Owerri: Wisdom Publications Ltd.
- Osisioma, B. C. (2010). *Practical Grade to Business Entrepreneurship*. Enugu. Elddermark Publisher.
- Otobo, G. C. (2017). Entrepreneurship preferences and retirement preparations of senior civil servants in Osun State. *Osun Journal of Business Education*, 8, 77-86.
- Rutashobya, L. K. (2019). African Entrepreneurship and Small Business Development: A Conceptual Framework. In Rutashobya, L.K. Olomi, D. D. R., *African Entrepreneurship and Small Business Development*. Dar es Salaam: DUP.
- Stapelberg J. (2016) Time management, In Zeelie J. Stapelberg J, De. Beeer, A. (eds). *Small Business Management Series Entrepreneurial Skill*. Juta: Kenwyn.
- Walter, N & Watson, J. (2013). *International Journal of Development and Sustainability*, 7(10), 2385-2402.
- Watson, C. (2016). *Concepts of Entrepreneurship*. Dublin: Fergiem Publishers.



## PERCEIVED INFLUENCE OF WORK-BASED LEARNING ON STUDENTS' EMPLOYMENT PROSPECTS

<sup>1</sup>SILAS TITUS NGUWAP

<sup>2</sup>PROF. T. A. UMORU

Department of Business and Entrepreneurship Education

Kwara State University, Malete

Email: [snguwap@gmail.com](mailto:snguwap@gmail.com)

### Abstract

*The study assessed the influence of Work-Based Learning (WBL) on Students' employment prospects. The paper sought answers to the research question raised. A mixed-method research design was used for the study. A sample of 81HND I OTM students was used for the study. Work-Based Learning on Students' Employment Prospects Questionnaire (WBLSEPQ) was used to collect data from the respondents. A total of 81 copies were administered and 76 copies were retrieved and used for the study. Mean and standard deviation were used to analyse the data collected to answer the research question. Independent samples t-test statistic was used to test the null hypothesis at 0.05 level of significance. The findings of the study revealed that work-based learning is perceived to have a positive effect on students' employment prospects because it provides students with an opportunity to apply their theoretical knowledge in real work situations. The study recommended among others that there should be collaboration between the school and industries for curriculum creation and implementation and students should be trained on how to properly use tools and equipment. Such an experience will go a long way in improving their confidence and overall readiness to take up a job in future.*

**Keywords:** Work-based Learning, Students, Employment prospects

### Introduction

Work-Based Learning is an instruction-led programme developed by higher education institutions (perhaps in partnership with a specific employer's professional/regulatory body) to develop strong academic and workplace knowledge by employing work experience as source of learning. According to McIlveen, Mcnamara, Kift, Butler, Field, Brown and Gamble (2011), work-based learning is the term given to an activity that integrates academic learning with its application in the workplace. It is widely used to describe situations where students spend time in a workplace setting as part of learning (Schilling & Klamma, 2010). Work-Based Learning gives students the prospect to explore what they have learned in the classroom within a real-world situation. Johnson, and Watts (2013) defined Work-based learning as an educational strategy that helps students with hands-on learning. It also gives learners some much-needed path and allows them to know what to do after graduation. It, therefore, extends the boundaries of the classroom to the work world (National Centre on Secondary Education and Training (NCSET) 2011).

Work-Based Learning affords learner sample opportunities to learn a variety of skills that guarantee synergistic relationships between the school and the world of work. It is an attempt to narrow the gap existing between theory and practice thereby, making meaningful learning possible. It serves as a source of ideas for organizations and develops industry support for institutions.



Gomez, Lush and Clements (2014) stated that students taking work placement exhibit improved academic performance in their final year of study. Dearing (2017) showed that work-based learning enhances academic performance, as it helps students to exhibit a great difference in their academic performance after the exposure. Akinremi (2018) in his finding proved that when students are exposed to WBL programme, they improve in classroom activities due to skills acquired during their Work-based learning. It is widely regarded as a point of difference in developing graduate employability by enhancing skill outcomes such as teamwork, communication, employment prospects, student understanding of the world of work, self-management and problem solving (Chapman et al., 2005).

Burgstahler (2001) stated that work-based learning allows students to apply academic and vocational skills and knowledge to real work situations as they develop the attitudes, values and behaviors that will help them become informed citizens and productive workers. Situated conceptions of learning have revealed how learning in natural settings, such as the workplace, results from participation in socially valued activities within communities of practice (Miao & Hoppe, 2011). Further, it allows students to try various careers on a day-to-day basis to provide exposure which can help identify what career choices they want to make or do not want to make. Work-based learning can introduce students to adults who may act as mentors and positive role models.

A work-based learning programme offers opportunities to students through work experiences where students can apply what they learn in school to the world of work. It links them to the “real world” (Smith, Petty, Oughton & Alexander, 2010). Miao and Hoppe (2011) highlighted that work-based learning is based on a Socio-cultural understanding of learning rooted in “Activity Theory” (Vygotsky, 1962), as well as situated learning and the community of practice approach. Miao and Hoppe (2011) stated that in an ideal work-based learning programme, learning opportunities arise from normal work practices and the curriculum is based on work needs and adapted to each individual and each work environment. Experiencing the work environment not only exposes students to the possibilities of jobs and careers, but the experiences also help students connect classroom studies to practical applications of those studies in the workplace. In addition to learning technical job skills, students can enhance personal and social competencies related to working in general

Work-Based Learning can be seen as instructional activities that bridge the gap between classroom theoretical knowledge with practical knowledge to develop the total educational programme of students. According to Ukwueze, (2011), WBL has a positive impact on students' career success. Chukwuedo (2011) opined that WBL enhances the competency of students in the workshop/laboratory, improves students' classroom learning creates employment opportunities.

Work-based learning is a planned, supervised training and intervention programme based on stated and specific learning and career objectives, leading to the development of occupational competencies of participants. It also exposes and prepares students in institutions of higher learning for the work situations that they are to meet after graduation. It equally helps to familiarize students with work methods and expose them to necessary experiences to handle equipment and machinery that are not available in their institutions. Workplace learning is concerned not only with immediate work competencies but with future competencies. Work-Based Learning is gaining serious pull on an international scale.

The primary concern in work-based learning is that it should provide students with the attributes for employability. Smith and Comyn (2013) confirmed “the importance of the workplace as a site for learning and developing employability skills”. The development of employability skills plays an important part in human resource management and training plans.

Credible work-based learning environment must be seen to be conducive and worker/student friendly. Thus, Okorie in Castillo (2012) contended that workshops, laboratories and the overall building technology environment must be adequately equipped to reflect the actual working environment beyond the classroom. The author stated further that the school environment should expose students to the use of basic building equipment in a way that will lead students to acquire



relevant knowledge and skills. Okorie added that the skills being developed by students in training are necessarily limited by the availability of equipment and tools. In a workshop where there are insufficient tools, the students will be grouped by the teachers during practical work so that each group will be given a set of few tools to practice with. In such a workshop with insufficient tools, mostly in the case of grouping students during practical, it is observed that one person probably the group leader will be doing the practice for others as a result of insufficient tools.

According to Olabiyi et al., in Ramos (2016), many educators are of the view that learning occurs best through participation. The use of training facilities helps teachers to direct the learning of their students instead of talking from a higher platform to passive students, some of who might be asleep. Students, are known to learn by discovery and the teacher cannot have in stock all that the child needs to know. The psychological relevance of individualized instruction also necessitates the use of various approaches to cover the different abilities and perceptions of students. Nothing else can help to achieve better diversification of lessons in the classroom than educationally certified training facilities and techniques. Preparing for the world of work is a major driver of vocational and technical education. Al-Momani and Al- Balqa (2012) stated that it has always been the main priority of vocational and technical education to introduce students to the world of work at the prevocational education level and this is achieved by exposing them to lifelong skills in their chosen careers. A world of work means to be engaged in a profession or occupation which guarantees regular income, satisfaction and the opportunity to improve on current skill sets. Graduates of vocational and technical education need to be guaranteed job opportunities and the security that it offers.

The purpose of Work-Based Learning according to Keavy and Chakron (2015) is to provide career awareness, career exploration opportunities, career planning activities and help students attain competencies such as positive work attitudes and other employable skills, develop interdisciplinary learning experiences for problem-solving, critical-thinking and communication skills for learners to link their classroom learning with the challenges they will face in the workplace of the future, provide a win-win situation where the learners needs and the industry requirements for skilled and talented employees are both met, create a key driver that gives the needs for active policies to secure learning that meets the need of the workplace, and turn entry-level work experiences into career opportunities.

There has been a lot of concern that after graduation, many graduates still roam the streets without necessary knowledge, skills, values and attitudes that will make them readily employable in the world of work (Okebukola, 2006 & Yahaya 2007). Innocent, Joseph and Vin- Mbah (2015) observed that despite the involvement of students in some work experiences, many students cannot display requisite skills in their fields of study which implies that there is a mismatch between tertiary institutions outputs and labour market demands. This must be checked to bridge the variety of gaps involving classroom learning experiences and practical skills acquisition needed by students that will enable them to be gainfully employed or self-employed.

Therefore, input from employers is as critical to preparing work-based learning programmes and course curricula, as input from any group of experts is needed to shape state and local curricula (Tennessee Department of Education, 2016). Having a variety of industries offering work-based learning experiences will enable teachers to guide students and speak to employers to ensure that students have access to the opportunities that will build a broad range of skills, which would improve their academic performance.

#### **Research questions:**

1. What is the perceived influence of Work-Based Learning on students' employment prospects?

#### **Hypothesis**

Ho1: There is no significant difference in the mean perception of the students on the influence of Work-Based Learning on students' employment prospects of OTM students based on gender.



## **Method**

The study adopted explanatory mixed-method research design. Both quantitative and qualitative methods were used. The qualitative aspect was used to support the quantitative aspect. This design helped the researcher to triangulate the data gathered in the course of data analysis. The researcher was able to confirm and explain the information from the two methods. Quantitative data were gathered by employing a structured questionnaire while the qualitative data were gathered through focus group discussion. The population of the study consisted of 81 HND Office Technology and Management Students from Plateau State Polytechnic, Barkin Ladi. The researcher believed that HND students were in a better position to understand and appreciate the work-based performance indices because of their exposure to three months and one-year Students Industrial Work Experience (SIWES) before their admission into the higher programme in a tertiary institution. There was no sampling as the population was manageable and accessible.

A structured questionnaire tagged 'Work-Based Learning Questionnaire' (WBLQ) designed by the Researcher with a split-half reliability coefficient of 0.89 was used to gather data for the study. The questionnaire consisted of 15 carefully designed items after an extensive review of the literature. The items were structured on a 4-point rating scale of Strongly Agreed (SA) SA = 4, Agreed (A) = 3, Disagreed (D) = 2, and Strongly Disagreed (SD) = 1. A total of 81 copies of the questionnaire were administered to the respondents while 76 were retrieved representing 96.2% return rate.

The instrument for gathering the qualitative data was focus group discussion. The focus group discussion guide was designed by the researcher and is made up of two open-ended questions. The questions were meant to solicit responses of the participants on the influence of work-based learning on students' employment prospects. Ethical considerations such as informed consent, voluntary participation and confidentiality were considered. Data from the focus group discussion were audiotaped with the permission of the participants. The discussion lasted for two hours. The quantitative data collected were analysed using mean and standard deviation for the research question while the qualitative data were analysed using content analysis to determine the relevant themes.

## **Results**

**Research Question:** What is the perceived influence of Work-Based Learning on students' employment prospects?



**Table 1: Mean and standard deviation of the responses on the perceived influence of Work-Based Learning on students' employment prospects**

S/N	Items	Mean	SD	Remark
1.	Work-Based Learning (WBL) promotes employers' involvement in the education process and prepares students for future employment	3.40	0.70	Agree
2.	Work-Based Learning enables students to be exposed to job opportunities	3.35	0.57	Agree
3.	WBL makes industries provide job opportunities for outstanding students after the internship programme	3.13	0.76	Agree
4.	Work-based learning promotes employers' involvement in the education process and prepares students for employment	3.40	0.69	Agree
5.	Work-based learning allows students to learn work terminology and industry protocols for employment prospects	3.42	0.64	Agree
6.	WBL helps students understand workplace expectations for employment prospects	3.43	0.66	Agree
7.	Work-based learning provides students with workplace skills using a learning-by-doing method for employment prospects	3.49	0.62	Agree
8.	WBL provides students with the opportunity to apply their theoretical knowledge for employment.	3.73	0.51	Strongly Agree
9.	Work-based learning connects the classroom and the world of work.	3.62	0.58	Strongly Agree
10.	Work-bases learning encourages students in career development	3.49	0.57	Agree
11.	Work-based learning can offer added value learning opportunities which may be particularly appropriate for employment.	3.30	0.61	Agree
12.	Work-based learning helps students understand problem-solving skills for employment prospects	1.57	1.63	Disagree
13.	Work-based learning provides a productive future workforce to the industries.	3.32	0.66	Agree
14.	Work-based learning offers students a curriculum that will provide employment prospects	3.64	0.54	Agree
15.	Work-based learning enables students to acquire necessary skills for employment	3.34	0.69	Agree
Weighted Mean		<b>3.31</b>	<b>0.70</b>	<b>Agree</b>

Analysis of data in Table 1 shows mean and standard deviation of responses on the perceived influence of Work-Based Learning on students' employment prospects. The Table reveals that the respondents agreed that Work-Based Learning (WBL) promotes employers' involvement in the education process and prepares students for future employment (mean = 3.40). Respondents also agreed that WBL exposes students to job opportunities (mean = 3.35), same way the respondents indicate that WBL makes industries provide job opportunities for outstanding students after the



internship programme, Work-based learning promotes employers' involvement in the education process and prepares students for employment, Work-based learning allows students to learn work terminology and industry protocols for employment prospects, Work-based learning enables students to acquire necessary skills for employment. These were supported by mean scores of 3.13, 3.42, 3.43 and 3.49 respectively.

In addition, the respondents agreed that work-based learning provides students with the opportunity to apply their theoretical knowledge for employment and Work-based learning connects the classroom and the world of work, same way Work-based learning is appropriate, it should be included in a programme of study to enable students to achieve specific work-related learning outcomes and Work-based learning outcomes must be linked to appropriate occupational competencies. These are supported by mean scores of 3.30, 3.30, 3.32, 3.64 and 3.34. The respondents also strongly agreed that work-based learning provides students with opportunity to apply their theoretical knowledge in real work situations as it bridged the gap between higher education and actual practice (3.13). The respondents also agreed that Work-based learning connects the classroom, worksite and world of work. The respondents disagreed that Work-based learning guarantees employment prospects for students (mean = 1.57).

Ho1: There is no significant difference in the mean perception of the students on the influence of Work-Based Learning on students' employment prospects based on gender.

**Table 2: Summary of Independent samples t-test of the difference between the mean perception of male and female students on the influence of Work-Based Learning on students' employment prospects**

Group	N	Mean	SD	t-cal	Df	p-value	Decision
Male	29	3.01	0.52	1.527	204	0.128	H <sub>01</sub> Not Rejected
Female	52	3.12	0.47				

Source: Field survey, 2021

P>0.05

The data in Table 2 reveal that there is no significant difference between the mean ratings of male and female students on the perceived influence of work-based learning on employment prospects of students ( $t_{204} = 1.527, P > 0.05$ ). Therefore, the null hypothesis that states that there is no significant difference between the mean ratings of male and female students on the perceived influence of work-based learning on employment prospects of students were not rejected. This implied that male and female students do not differ in their responses regarding the influence of work-based learning on employment prospects.

The result of the qualitative aspect of this study reveals two different themes.

Theme 1: Strengthening of skills

Twenty-two participants representing (27.2%) indicated that work-based learning help to strengthen teamwork skills which will make them easily employable.

Theme 2: Firsthand involvement in a specific occupation.

Twenty-one participants representing (26.1) indicated that work-based learning connects workplace experiences to classroom subject matter through an occupational theme.

### Discussion of Findings



The study was conducted to determine the perceived influence of Work-Based Learning on students' employment prospects. The study found that Work-based learning has a positive effect on students' employment prospects because it provided students with an opportunity to apply their theoretical knowledge in real work situations. This means that with the deployment of work-based learning, students have the opportunity to apply their theoretical knowledge to a real work situation. This finding supports the earlier finding of Ukwueze, (2011), who held that work-based learning has a positive impact on students' career success. Chukwuedo (2011), opined that Work-based Learning enhances the competency of students in the workshop/laboratory, improves students' classroom learning creates employment opportunities. It was also agreed that Work-based learning was appropriate, and should be included in a programme of study to enable students achieve specific work-related learning outcomes. This indicates that work-based learning should be used for study as it is important in work-related learning. This finding supports the earlier finding of Smith and Comyn (2013) confirming the importance of the workplace as a site for learning and developing employability skills. The development of employability skills plays an important part in human resource management and training plans.

The study also revealed that Work-Based Learning promote employers' involvement in the education process and prepares students for future employment. This means that for successful employment prospects, work-based learning prepares students for future employment. This finding is in line with Keavy and Chakron (2015) that it provides career awareness, career exploration opportunities and career planning activities and helps students attain competencies such as positive work attitudes and other employable skills, develop interdisciplinary learning experiences for problem-solving, critical-thinking and communication skills for learners to link their classroom learning with the challenges they will face in the workplace of the future. The study found that there was no significant difference in the responses of students on the perceived influence of Work-Based Learning on students' employment prospects based on their gender. The findings showed that students agreed regardless of their gender that the influence of Work-Based Learning on students' employment prospects is critical. All the participants indicated that the perceived influence of Work-Based Learning is needed for students' employment and career development. The finding is in line with Raimi (2015) who reported that female students are equal, similar and desirous as their male counterparts in employment prospects regarding the use of work-based learning for employment.

## **Conclusion**

This study adds to the body of evidence suggesting that undergraduate work experience, particularly the Work-based Learning programme, has a beneficial impact on a student's career performance. Work-Based Learning is a model of a school-industry partnership which exposes and prepares students for the industry, working methodologies and practical learning exposure with machines and equipment that may not be available at school. Based on this, it is concluded that Work-based Learning is critical to students' learning of the skills and competencies they need to do well in school and in their fields of occupation after school.

## **Recommendations**

Based on the findings of the study, the following recommendations are made;

1. There should be a collaboration between the school and industries for curriculum creation and implementation, so that what is taught in school is needed in the industries.
2. Students research projects must be based on solving particular industry problems as identified during the period of training.



## References

- Alfeld, C. Charner, I. Johnson, L. & Watts, E. (2013). Work-based learning opportunities for high school students. Louisville, KY: National Research centre for Career and Technical Education, University of Louisville, Kentucky.
- Akinyemi, S., Ofem, Igot, B., & Ikuenomore, S.O. (2010). 'Graduate turnout and graduate employment in Nigeria' *International Journal of Humanities and Social Science* (2)14
- Azubike, A. (2013). Challenges of industrial attachment on the performance of business education graduates. <http://www.scholarsworks.com>
- Burgstahler, S. (2001). A collaborative model to promote career success for students with disabilities. *Journal of Vocational Rehabilitation*, 16(2001), 209-215.
- Castillo, R. (2012). "Arts and trade program enhancement in Bauan Technical High School". Unpublished Master's Thesis, Batangas State University, Batangas City.
- Chapman, G. and Northedge, Cloete, N., (2005). *How to teach for transfer*. Palatine: Skylog
- Chukwuedo, S.O (2011). Student's perception of the influence of student's industrial work experience scheme on academic achievement at the University of Benin. *Journal of Education, Health and Technology Research*. 1 (1).
- Dearing, R. (2017), *The National Committee of Inquiry into Higher Education for the 21st Century*. HMSO.
- Ekpenyong, L.E. (2011). *Foundation of technical and vocational education: Evolution and practice for Nigeria students in TVE and adult education*, policymakers and practitioners. Benin City: Ambik press Limited.
- Federal Republic of Nigeria (2013). *National policy on education*, Yaba: NERC Press.
- Gomez, S., Lush D. & Clements, M. (2014), Work placements enhance the academic performance Bioscience Undergraduates. *Journal of Vocational Education and Training*, 56(3), 373-386.
- Innocent, A. O, Joseph, C. N, & Vin-Mbah, F.I. (2015). Strategies for teaching business education students in Nigeria institutions for cooperative governance, *Journal of Education and Practice*, (18) 1-7.
- ITF (2004) *Information and guideline for student industrial work-experience scheme*: Reviewed, ITF, Jos, Nigeria.
- Keevy J. & Chakroun, B. (2015). Level-setting and recognition of learning outcomes: The use of level descriptors in the twenty-first century. Paris, UNESCO. [http:// www.academia.edu](http://www.academia.edu)
- Kendra, C. (2014). *Compliance*. Retrieved from [www.simplypsychology.com](http://www.simplypsychology.com)
- Mcilveen, K., Mcnamara, J., Kift, K., Butler, SD., Field, K., Brown, W., and Gamble, D. (2012). *Training management in South Africa*. Cape Town: Oxford University Press.
- Miao, Y., & Hoppe, H. U. (2011, June). Apply learning design to work-based learning, *Media, and Technology*, 36(2), 189-205.
- Mukherjee, A. (2002). *Educational psychology* Zaria. S. Asekome & Co publishers.
- Olabi, O. S., Adigun, E. O., & Adenle, S. O. (2008). Assessment of the adequacy of training facilities used for vocational and technical education in colleges of education in South West Nigeria. *African Journal for the Study of Educational Issues*: 4 (3), 44-52.
- Raimi, K. K. (2015). Evaluation of students' industrial work experience scheme: a case study of undergraduates students of Faculty of Communication and Information Science, University of Ilorin, Nigeria
- Schilling, J., and Klamma, R. (2010). The difficult bridge between university and industry: A case study in computer science teaching. *Assessment and Evaluation in Higher Education*, 35(4), 367-380.
- Smith, A., Petty, M., Oughton, I., & Alexander, R. T. (2010). Establishing a work-based learning program: Vocational rehabilitation in a forensic learning disability setting. *British Journal of Occupational Therapy*, 73(9), 431-436.
- Smith, E. & Comyn, P (2003). *The development of employability skills in novice workers through employment*, NCVER, Adelaide.
- Tennessee Department of Education. (2016). Work-based learning implementation guide. TN.



## **BUSINESS EDUCATION CURRICULUM DEVELOPMENT AND IMPLEMENTATION IN NIGERIA: PROBLEMS AND PROSPECTS**

**OLUWADARE, AYODEJI ABRAHAM**

[trichkoretimi@gmail.com](mailto:trichkoretimi@gmail.com)

Department of Business Education  
Adeyemi Federal University of Education,  
Ondo, Ondo State, Nigeria.

**OMIDIJI, SAMUEL AJETOMOBI**

[omidjissamuel17@gmail.com](mailto:omidjissamuel17@gmail.com)

Department of Office Technology and Management  
The Federal Polytechnic, Ado-Ekiti,  
Ekiti State, Nigeria.

**AWE, OLAWUMI HAFSAT**

[awe4@gmail.com](mailto:awe4@gmail.com)

Department of Office Technology and Management  
The Federal Polytechnic, Ado-Ekiti,  
Ekiti State, Nigeria.

### **Abstract**

*The Business Education programme in Nigeria requires a proactive and effective assessment that can bridge the gap between theory and practice. This will go a long way in ensuring the correlation between skills and competency displayed by graduates of business education and the certificate they obtain to parade looking for white-collar jobs in the world of competition. This can only be achieved through a well-structured and update of business education curriculum. The curriculum development process include: curriculum content with details of what the teachers are expected to teach and each students expected to learn. Most schools in Nigeria adopt evaluation instruments like test, assignment, term paper, projects, research report, giving practical work and examination methods are common methods used. Therefore, business education graduates should as a matter of urgent importance be able to put to practice the skills professed by their certificates. However, scholars in the area of business education are still in serious need of an acceptable technique, procedure and means of measurement for high quality business education graduates that should turn things around in the world of business education. In view of the foregoing, the paper therefore recommends among others that evaluation should be based on the behavioural outcome or goal of the programme and should be consistent. Also, government and authorities of tertiary institutions should at regular intervals organize workshops, seminars and conferences in order to improve lecturers' instructional competences for effective implementation of Business education curriculum.*

**Keywords:** Business Education, Curriculum Development, Implementation, Problems and Prospects



## **Introduction**

Business education was brought to limelight and given prominence by the new National policy on education in 1977. This policy has been severally reviewed. It is a programme of study which is geared towards equipping the learners with employability skills and knowledge which would enable recipients create, or acquire job and skills for personal growth and development.

Process of curriculum development is essential for successful achieving educational goals for business education students. It demands for systematic approach which should respect several aspects: the needs of the society, the nation, the students and teaching staff. This process should be maximally efficient and effective; it should be built upon previous work. Process itself should be done in specific algorithm starting from the definition of final goals and integration of different elements inside one curriculum. Curriculum should present mosaics of different courses, learning and teaching strategies and integrated into one picture which is specific for one institution. It has to respect all existing materials and human resources of the institution. Involvement of the key subjects in process of curriculum development should be from the first stage of process, and that first stage is creation of mission statement of the institution. The student is the central figure in the process if education and modern educational institutions use 'student centered approach' as their main philosophy in the process of curriculum shaping. Students should be involved in process of design and curriculum development. Representatives of students and their organizations should be involved in work of committees and bodies in charge for curriculum design. The fact that students are involved in shaping of their learning gives special quality to education process. According to Tukur (2016), curriculum development in business education is a process that integrates a content area with educational theory and methodology and evaluates its impact when curriculum development follows a systematic approach, it easily provides high-quality evidence of the impact a school member's efforts in order to improve educational process at the institution. One of the basics of curriculum development is the continual improvement of the outcomes, the analyses of the processes and the decision to change. The business curriculum is a body contested terrain (Cohen, Manton) and Morrison, 2000) not only among the educators but also among the other stakeholders, the business community, the authorities and the students included). Each group of stakeholder brings into the arena a particular dominant perspective about the business curriculum. To illustrate the contrast, the educators aligned themselves with the 'about business' perspective and the business community is all for 'for business' and there is a big gap between the perspectives. The problem is magnified when both groups of stakeholders insist their perspective will lead to the correct direction for the future of business education. Thus, it is timely to study their perspectives and to examine the gaps between these perspectives.

However, recent developments in business education appear to have pulled the gap closer. Two notable events are worth mentioning: the unemployed business graduates (Gradun, 2016) and the need to have strategic thinking managers (Lucas and Milford, 2003). The unemployment phenomenon has created ripples among the educators causing them to rethink the objectives of business education. Generally, the educators are willing to listen to the voice of the employers due to two reasons: research funds and employment provided by business organizations. These two factors have caused the educators to accept the dual purpose of business education: the academic tradition of educating the person and the teaching of vocational skills. Moreover, the dynamic business environment calls for innovative thinking managers. Employers have accepted the fact that managers are developed and require life-long learning. This theme suggests that the employers are ready to shift from the extremely 'for business' perspective to a more moderate perspective. As both stakeholders begin to shift to more moderate positions, an amicable solution to the problem is possible.



### **Conceptual Review**

The business education programme in Nigeria requires a positive and effective evaluation that can bridge the gap between theory and practice. This will go a long way in ensuring the correlation between skills and competency displayed by graduates of business education and the certificate they obtain to parade looking for white-collar jobs in the world of competition.

Business education is one of the occupational areas that are richly provided by vocational and technical education in Nigeria. Business education refers to a programme of instruction that offers various skills in accounting, marketing, office technology and management (OTM) and recently entrepreneurial education. Major topics include: office practice, bookkeeping, business mathematics, business communication, secretarial duties, word processing, advertising (Ajisafe, Bolarinwa and Edeh, 2015). Edokpolor and Egbri (2017) had stipulated that the actual goals of business education shall be to:

1. Prepare students for specific career in office occupations;
2. Equip students with the requisite skills for job creation and entrepreneurship; and
3. Expose students with knowledge about business, including a good blend of computer technology, which incorporates information and communication technology (ICT). They further explained that the first two goals involve education 'for business, which is aimed at equipping recipients with the requisite attributes (knowledge, skills, competencies and attitudes) to become gainfully employed in the world of work, whereas the later address education 'about business' which is aimed at providing a sound basis for further studies at the graduate and postgraduate levels. The concept of development has to do with the identification of basic needs of families, individuals, interest groups, communities and their abilities to meet; these needs, which are channeled or targeted towards sustainable development (Ogunduyile, 2004). :

A curriculum is an embodiment of all knowledge, skills and attitudes which a nation, through her schools, imparts to her citizens by knowledge in the definition, we mean all facts, theories, principles/generalizations and rules needed to be acquired to be certified as competent in a field. Curriculum also involves acquisition of skills needed to perform tasks programme for effective teaching and learning. In actual sense, a curriculum is an educational programme without which education could hardly be organized. Education is said to be formalized because it is organized and goes with a programme of experiences under the guidance of the school. Any education that is not organized does not go with formal curriculum. Thus, informal education has no formal curriculum. According to Onwuka (1981) defined curriculum as a process of learning which takes into account all human activities such as human sensitivity, could be political, economic or professional. According to him curriculum could also be considered as the deliberate systematic and planned attempts made by the school to change the behaviour of the members of the society in which it situates. Mkpa in Nnachi (2009) view curriculum as a vehicle through which the school could strive towards the achievement of educational ends. Such ends could be those of the nation, State and local governments of communities.

Walton et al, in Ben-Yunusa, (2008) defined curriculum as that content and those processes designed to bring about learning of educational value. By this definition, curriculum is considered to include both what is to be taught and by what means it is to be taught. He further defines curriculum as the set or sequence of potential experiences set up in the school for the purpose of disciplining children and youth in group ways of thinking and acting.

However, Knight and Trowler (2001) define curriculum as an account of the content to be studied, its organization, the learning and teaching methods and the arrangements for evaluating student learning. In addition, they remark that there are distinctions between the three types of curriculum: the planned curriculum, the delivered curriculum and the received curriculum. Also they explain the curriculum intentions become changed as they are created in teaching and learning situation and assessment regularly shows that what learners understand is different from what was



planned and created (Ibid). Therefore, the knowledge that there are "slippages" between the three)(Ibid).

Trauth, Farwell and Lee (1993) refer to these "slippages" as curriculum gaps. Preedy, (2002) in describing the curriculum management process identifies three stages of the curriculum: the intended curriculum - what is planned; the offered curriculum - what teachers teach; and the received curriculum - what students actually experienced in the classroom. She remarks that a major task is to ensure the three stages 'are in harmony' and integrated appropriately.

Also, Oluwadare, Adekunle and Ebiniyi (2019) and Owoeye and Yara (2011) submitted that the smooth running of an educational system depends largely on the availability and adequacy of facilities and equipment in place. Once they are lacking students are not exposed to the use of machines and basic hand tools found in the work place.

From all the foregoing discussions on Business Education and curriculum development, we can see clearly that business education prepares individual for initial office or selling jobs and for managing of individually owned control and operate business enterprise. It is a subject that provide general knowledge and understanding for all persons not minding age, occupation, professions, social or economic status. And curriculum offerings of this subject must cater for updated requirements in the 21<sup>st</sup> century skills. And to achieve this, core and elective courses have been studied in the department of business education. In spite of these, graduates from this programmes are found in top.

### **Problems of Curriculum Development and Implementation**

Some contemporary thinkers in education and training conceive of business education as a major contributor to human resource, entrepreneurial and national development. Despite these laudable roles, available indications have shown that Nigeria have been handling business education with levity (Edokpolor & Egbri, 2017). The authors also added that this situation has consequently deprived business education from adequate provision of funds, qualified manpower, modern facilities, quality curriculum and proper attention. Although business education have attracted bulk of research within these areas (Ugwoazo, 2013) leaving a gap in literature pertaining to empirical support. Also, it remain unclear how the possibilities of overcoming the problems and challenges of business education would help in promoting national development.

However, adequate optimization of resources for the effective delivery of business education in Nigeria is receiving a growing attention (Edokpolor & Mafidon, 2017; Edokpolor & Oduma, 2017). This is because vocational education in general has been considered as a viable programme that helps to promote sustainable economic growth and development (Agrawal, 2013). It is believed that for any nation to help in promoting sustainable economic growth or development, efforts shall be made to invest sufficient amount of financial resources on business education programme.

Business education is equally faced with the challenge of the use of outdated curriculum. The curricula of most business education are outdated, as such, needs overhauling. Elaborating on this, Aworanti (2015) states that it is regrettable that most vocational education curricula are outdated having been in use for over fifteen years. Looking at this situation closely, it is clear that current business education may not be able to meet the need of industries or employers of labour genuinely. This situation has consequently created a huge gap between business education and industries in Nigeria. This may be the reason why, Majumda (2011) asserts that the challenges on how to develop curriculum and training programme that would help to respond: to the skills needed by industries seem to be a common concern. He stressed that many authors have mentioned the gap between the skills needed by the industries and those students acquire at the end of training programme.

Also, It should be noted that inadequate provision of financial resources has been identified as greatest challenge facing education in Nigeria (Nwadiani & Omoike, 2006; Asiyai, 2015), especially vocational and technical education sector because of its capital intensive nature (Adeyanju, Adekunle, & Osifila, 2007), of which business education programme is a major component. By virtue of this nature, every item within the business education instructional environment is subjected to adequate



optimization of financial resources. However, in view of the contending demands for financial resources by various sectors of the economy, business education have been finding it difficult to employ manpower in terms of quality and quantity, develop or renew curriculum and offer a wide-range of modern infrastructure and facilities, such as the state-of-the-art lecture halls, workshops, studios, libraries, entrepreneurial research centres and information technology services. The existence of all these identified issues and challenges are mere pointer to the fact that business education programme is currently delivered theoretically and as such not capable of equipping recipients with the requisite attributes (knowledge, skills and attitudes) for gainful employment and further education. Commenting on this ugly situation, Obunadike (2015) argued that the practical courses that are supposed to expose individual students to real-practical training in order to strike a balance with or match the theory learnt in the classroom have become a myriad.

More so, challenge faced the business education curriculum is the low public interest in the programme. It is a general belief that business education is a form of education of the ungifted and underprivileged child. Many of parents and elites in Nigeria society believed that business education is meant for the less academically endowed. Therefore, they clamour for other types of education and only opt for business education as their last resort which resulted to low enrolment in colleges of education and universities in business education courses.

The effect of the above mentioned challenges such as inadequate provision of finance, lack of highly qualified professional teachers, lack of modern facilities, politicized curricula, outdated curriculum and low public interest is that skilled and competent graduates may not be produced which is the output of curriculum implementation. The high rate of unemployment and poverty in Nigeria as a result of poor implementation of business education curriculum has necessitated the need of all stakeholders to collaborate, invest sufficient resources on curriculum implementation of business education. This strategic approach according to Edokpolor, Edokpolor & Olupayimo cited in James & Robinson (2017) can help to serve various purposes, which include financial management, staff development, curriculum renewal, service delivery, students mentoring, equipment donation, raising course awareness, facilities management, among others.

### **Prospects of Curriculum Development and Implementation**

Before discussing the meaning of curriculum development, there is the need for us to be reminded of Alviore (2014) simple definition of curriculum which states that curriculum is the 'heart' of any learning institution, meaning that schools or institutions of whatever level cannot exist without a curriculum. Due to its importance in the lifespan of educational institutions, the curriculum undergoes dynamism due to the dynamic state of our society. What then do we mean by curriculum development?

Alviore (2014) saw curriculum development as planned, purposeful, progressive and systematic process employed to bring about positive renovations in the educational system. Development or changes in the world always call for development or changes in school curricula too, so as to get them updated to meet the societal needs. With formal education, curriculum development has become a systematic, planned, purposeful, progressive improvement given to educational content.

It is pertinent to note that curriculum development broadly covers the school, the learners, the teachers as well as the development of the society generally. Thus, the following are enumerated as the importance of curriculum development as outlined and described by Alviore (2014).

Firstly, curriculum development greatly improves the economy of a country. It provides solutions to the world's pressing conditions and problems, such as environment, politics, socio-economic and any other issues of poverty, climate change and sustainable development.

Curriculum development assists to preserve the country's national identity and to ensure its economic growth and stability. Thus, a country's president must have a clear vision for his people and the country via the curriculum of the country's school system. For instance, the president, Acquire of the Philistines' (a tourism country) must develop his higher educational programme towards curriculum programmes that will boost tourism industry in his country. Thus, curriculum development must be



geared towards the improvements in the needs of a country generally and specifically towards the schools, teachers and planners improvements. activities, or have poor knowledge of research.

### **Conclusion**

In the wake of development/evaluation in business education, the future of business education in Nigeria is considered promising and calls for government and other stakeholders to show commitment to the agenda. The conduct of development process in business education should be based on specific criteria that constitute the major factors which should be considered in conduction with an educational evaluation.

Business educators therefore, should see curriculum development as a continuous process which should be conducted on a regular basis because continuous evaluation provides basis for adjusting programmes to meet the manpower needs of the country. Hence, it provides the best means of quality control for our programmes.

However, I would not be honest to claim that this review/paper has made large and outstanding contribution 'to the knowledge and practice in the field of business education. However, a few new contributions are worthy of mention. First, by identifying the perspectives of stakeholders and curriculum gaps that exist between them, the perceptions of the stakeholders can be understood clearly. By understanding the nature of the perspectives, business curriculum Developers/designers are more informed of the expectations of the stakeholders and the process .Of curriculum development/design to satisfy the needs and requirements of the stakeholders is made easier and more effective. If curriculum development process is properly addressed with positive approach, business educators will be in a better position to critically analyze and determine how effective education changes are to be handled.

### **Recommendations**

The following are recommendations that would help in curriculum development and implementation process in business education:

1. Government and other stakeholders should focus their attention and invest their resources on business education so as to help equip recipients with the requisite attributes for entrepreneurial development, poverty alleviation, and national development.
2. Curriculum development process evaluation should be done with positive intention to ensure critical analysis of the new challenges facing the business teachers,
3. Curriculum development/evaluation should also be based on the behavioural outcome or objectives of the programme.
4. Feedback should follow curriculum development/evaluation and should be made available to the appropriate stakeholders for effective implementation and follow-up,
5. Federal and state ministries of education and other stakeholders should help provide the colleges of education with needed instructional resources for effective implementation of curriculum.
6. Government and colleges of education authorities should at regular intervals organize workshops, seminars and conference in order to improve lecturers' competences for effective implementation of curricula.

### **References**

- Abdulrahman, A., Bamiteko, R.M & Durkwa, H. (2019): Curriculum development in business education in Nigeria. *Association of Business Educators of Nigeria conference proceedings*. 6(1), 858-865
- Adeyanju, J. A., Adekunle, A. A. & Osifila, G. I. (2007). Financing technical and vocational education in Nigeria: The public-private partnership option. In J.B. Babalola, G. O. Akpan & A. O. Ayeni (Eds). *Managing technical and vocational education in the era of globalization*.



- National Association for Educational Administration and Planning (NAEAP). Awemak Industrial Printers, Lagos, 103-106.
- Agrawal, T. (2013). Vocational Education and Training Programmes (VET): An Asian Perspective. *Asian-pacific Journal of Cooperation Education* 14(1), 15 –26,
- Ajisafe, E.O., Bolarinwa, K. O. & Edeh, T. (2015). Issues in business education programme; Challenges to National transformation. *Journal of Education and Practice*.
- Ayanwole, A.A. (2018): Business education curriculum in Nigeria: Issues, challenges and the way forward. *Association of Business Educators of Nigeria conference proceedings*. 5(1), 108-115.
- Asiyai, R. I. (2015). Challenges of quality higher education in Nigeria in the 21<sup>st</sup> century. *International Journal of Education Planning and Administration*. 22(1), 33 ~ 34.
- Aworanti, O. A. (2015). TVET and local technologies for sustainable entrepreneurial skills development. *NABTEB magazine, special edition, March, 2015*.
- Ben-Yunusa, M. (2008). Issues on curriculum. Zaria YAG: Enterprise.
- Cantor, L. (1985). Vocational education and training: The Japanese approach. *Comparative Education Journal* 21(1): 67 - 75.
- Cohen, L., Manion, L. & Morrison, K. (2000). *Research Methods in Education, 5rd Ed. London: Routledge Palmer*.
- Edokpolor, E. J., Edokpolor, H. O. & Olupayimo, E. O. (2016). Actualizing sustainable high standard of quality in Nigeria, TVET programme through multi-stakeholders partnership. *African Journal of Studies in Education (AJOSIE)*, 11(1): 47 - 62,
- Edokpolor, E. J. & Mafidon, A. (2017). Effectiveness of public-private partnership in the management of technical and vocational education and training in 21<sup>st</sup> century. *BIU Journal of education (BIUJE)*, 1(1), 1-9.
- Edokpolor, E. J. & Oduma, C. (2017). Repositioning business education programme from post-oil boom economy. *International Journal of Vocational and Technical Education*, 9(6): 62 -73.
- Edokpolor, E. J, & Egbiri, 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 (JERR)*, 5(3), 41 - 48.
- Ekpenyong, L. E. & Mwabuisi, J. (2003). Business teacher education in Nigeria: Projecting a new direction. *Journal of Vocational Education and Training*, 55(1): 33 - 46.
- Ekpenyong, L. E. & Edokpolor, E. J. (2015). Winning the war against unemployment and poverty in Nigeria; is there a role for TVET-private sector partnership? *The Nigerian Vocational Association Journal (NVAJ)*, 20(1): 125 - 132.
- Graduan, O. (2006). Making graduates more employable, Biz connexion.
- Khan, A., Shah, L M. & Azam, K. (2011). Business education in Pakistan: Growth, problems and prospects. *Greener Journal of Business Management Studies* (1): 1-8. Retrieved from <http://www.journals.org/GJMBS/PDF/2011/September%201issue/Khan%20et%20al.pdf>
- Knight, P. T. & Trowler, P. R. (2001). Departmental leadership in higher education. Buckingham: The Society for Research into Higher Education. Open University press.
- Lucas, U, & Milfore, P. (2003). Key aspects of teaching and learning in accounting, business, and management. In a Handbook for Teaching and Learning in Higher Education: Enhancing Academic Practice, 2<sup>nd</sup> Edition. H. Fry, S. Ketteridge and S. Marshall.
- Majundar, S. (2011). Emerging challenges and trends in TVET in the Asian-Pacific Region. Sense publishers, Retrieved from: [www.sensepublishers.com/media/353/emerging\\_challenges\\_and\\_trends\\_in\\_tv-et-in-the-asian-pacific-region.pdf](http://www.sensepublishers.com/media/353/emerging_challenges_and_trends_in_tv-et-in-the-asian-pacific-region.pdf)
- Mkpa, M. A. (2010). A Keynote Address in Challenges of Unemployment in the School Curriculum in Nigeria. *Nigerian Journal of Curriculum Studies*, 12 (pg 17).
- Nino, L. (2010), Literature Review of Challenges in Business Education. Retrieved from: • <file:///c:/ZINOX/Download5/literaturereview-Busines5%20Education.pdf>



- Nwadiani, M. & Omoike, D, (2006). Financing primary, secondary and tertiary education in Nigeria, In J.A. Aghenta and E.O, Omoregie (Eds). Fundamentals of educational management. Agbor, Delta State, Krishec publication.
- Obunadike, J. C. (2015). Vocational and technical education: A tool for National development in Nigeria. In R. Okoye, J. E. O. Otuka & S. Iheonunekwu (Eds). Vocational and technical education in Nigeria: Trends and Prospects. Onitsha: *Global Academic Group Online Academic Resources*. Ogunduyile, S. R, (2004), Sericulture: Revamping Nigerian economy. *Journal of Design*, 2(5), 34 – 41.
- Ohiwerei, F. O. (2005). Business education in Nigeria: Issues, problems and prospects, *Journal of Curriculum Studies and Instruction (JCSI)*, 2: 40 - 48.
- Ojimba, D. P. (2012), Vocational and technical education in Nigeria: Issues, problems and prospects dimension *Journal of Education and Social Research*, 2(9):22 -30. Retrieved from:<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.1656.3994?rep=rep1?type=pdf>
- Oke, J. S. (2003). Strategies for facing the Challenges of Business Education in the New Millennium. *ABEN Book of Reading*, 1(3): 1-7.
- Oliver, A. I. (1999). Curriculum Improvement, a guide to problems, principles and procedures: New York: Dodd Mead Press.
- Olufunke, O. O. (2003). Training Students for Complete Career Success to Business Education, *ABEN Book of Reading*, 1(3): 82-87.
- Oluwadare, A.A., Adekunle, B.M. & Ebiniyi, O.O. (2019). Availability and utilization of new Technologies Infrastructures for teaching business education courses in Ondo State institutions. *Nigerian Journal of Business Education*. 6(2), 392-404.
- Owoeye, 3. S. & Yara, P. O. (2011). Social facilities and academic Achievements of Secondary School, Agricultural Science in Ekiti State, Nigeria. *Asian Social Science*, 7(7): 64 - 74.
- Preedy, M. (2002). Managing the curriculum of student learning. In T. Bush & L. Bell (Eds). *The Principles and Practice of Educational Management*, London, Pane Chapman Publishing.
- Shalini, G. & Ullash, C. S. (2012). Problems and prospects of management education in India. 65-68. Retrieved from:<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.300.9873?rep=rep1?type=pdf>. *International Journal of Research Review in Engineering Sciences and Technology*. 1(1):
- Tilak, J. B. G. (2002). Vocational educational training in Asia. In P. Keeves & R. Watanabe (Eds). *The handbook on educational research in the Asia Pacific Region*. Berlin, Germany; Kluiver.
- Trauth, E. M., Farwell, D. W. & Lee, D. (1993). The IS expectation gap: Industry expectations versus academic preparations: *MIS Quarterly*, September, 1993, pp 293 - 307.
- Tukur, A. (2016). Assessment of Implementation of Business Education Curriculum in Colleges of Education in North-West Geo-Political Zone, Nigeria, ABU Zaria.
- Ugwuogo, C. C. (2013). Business Education and National Development: Issues and Challenges. *Journal of Educational and Social Research*, 3(4): 129 - 134.
- UI-Haq, M. & Haq, K. (Eds) (1998). *Human Development Report in South Asia*, 1998. Delhi, India: Oxford University Press.



## **BUSINESS EDUCATION AND CLOUD COMPUTING: PROSPECTS AND CHALLENGES**

**VICTOR-IGWE JULIET N. (MABEN)**

Department of Agricultural & Vocational Education  
(Business Education Unit), College of Education  
Michael Okpara University of Agriculture Umudike, Abia State.  
08065584960, [amazing705@gmail.com](mailto:amazing705@gmail.com)

### **Abstract**

*This study investigated Business Education and Cloud Computing: Problems and Challenges in Abia State, Nigeria. A total of 228 respondents; comprising of 203 Business Education final year students (both Degree and NCE) plus 25 Business Educators from four tertiary institutions were used for the study. The study is a descriptive study guided by three research questions and three null hypotheses. Data was collected using a structured questionnaire constructed on a four-point scale. The instrument was face-validated and a reliability coefficient of 0.87 was established. Data collected were analyzed using Mean ( $\bar{X}$ ) and Standard Deviation (SD) to answer the research questions while the t-test statistics was used to test the hypotheses at 0.05 level of significance. The findings revealed that both groups of respondents (Educators and Students) agreed that Cloud Computing can be effectively applied with immense benefits in various aspects of Business Education; though this is presently faced with various challenges. There was no significant difference between the mean ratings of Business Educators and of students in each case, therefore the three null hypotheses were upheld. Recommendations include that government, institutions as well as Educators and students should intensify efforts towards upgraded ICT skills, competencies and versatility for a sustainable and re-branded Business Education.*

**Key Words:** Cloud Computing, Pandemic, Prospects, Challenges

### **Introduction**

Education remains the spring board of progress in any given society in the world. It is a light that shows mankind the right direction to follow. In view of this, the Nigeria Blue-Print on Education – National Policy on Education (NPE) duly stipulated that Education is an instrument per excellence for achieving national objectives (Federal Republic of Nigeria, (FRN), 2014). Supporting this assertion by FRN, Ogedi and Okoro, (2017) averred that Education is an essential tool for national and global development in terms of industrial expansion and sustainability, manpower production, technological advancement and quality standard of living. It is therefore evident that Education serves as the pivot for meaningful and sustainable developments in any society or nation.

Business Education, which is a multi-disciplinary, trans-organizational, skill-based type of education has proved to be a tactical measure for societal development. This is because Business Education is a comprehensive discipline whose instructional programme encompasses the knowledge, attitudes, competencies and skills needed by all persons in order to effectively manage their personal, business and economic lives. Ekoh (2016) opined that Business Education covers a wide range of spectrum of economic activities in any society as well as the desirable business competencies appropriate for self-employment which is particularly pertinent in the present global economic situation, by equipping individuals with lifelong skills for self – reliance. Business Education provides students with the needed competencies, skills, knowledge, understanding and attitudes to perform as workers in industries, civil service and also as entrepreneurs and successful owners/managers of successful



businesses (Utoware&Aniya, 2014). Therefore, it is work-focused, skills-based, results-oriented and technology-based, (Ugwoke, 2011). Supportively, OnyesomandOkolocha in Victor-Igwe, Baba and Iwuoha (2015) posit that Business Education is the intellectual and vocational preparation of students for earning a living in the contemporary industrial and business environment.

Consequently, Osuala (2002) stipulated that the objectives of Business Education are to: enable students explore and learn about the world of work and the relevant interest and career areas of their choice; provide students with the necessary occupational information found in the world of work; enable students acquire skills in fields of their choice and to enable students prepare for choose, enter into and progress in occupations of their choice.

A cursory look at the objectives shows that a great deal of resources is required by Business Educators to impart the necessary skills and knowledge that the curriculum demands for achieving the stated objectives. There is an avalanche of literature suggesting that Business Education Curriculum contents have been communicated to students basically through traditional pedagogy. Traditional pedagogy simply refers to a pre-technology education context in which the teacher is the sender of the source, the educational material is the information or message and the student is the receiver of the information. Krishna, (2013) opined that traditional pedagogy involves just a book, a piece of chalk and a blackboard. He further added that traditional pedagogy is generally dull, inefficient, prone to weary students and inevitably yields little, slow and poor results; and that such teaching methods are not suitable for science, technology and management, Business Education inclusive.

In a similar view, Nazzal (2014) stated that traditional pedagogy involves teacher-centric classroom/lecture methods. Here, teachers basically fit into the mode of knowledge dispensers rather than facilitators, chalk and talk methods, regimented classrooms, little or no collaboration and group learning, more emphasis on examinations and results rather than understanding of concepts as well as misalignment between objective activities and assessment. Traditional pedagogy is saddled with various limitations which include that it demands the physical presence of both the teachers and learners in a designated classroom setting which seems not to encourage collaborative learning; thereby making students learn by memorizing rather than understanding, with emphasis placed on theory with little or no practical, hands on and real life situations (Demodharan & Rengarajan, 2013). Unfortunately, this method of instructional delivery has been the prevalent pedagogy for imparting knowledge even in skill-based courses such as Business Education.

The issue of demanding physical presence of both teachers and students as characterizes the traditional pedagogy, poses an increasingly alarming threat to instructional delivery in cases where the teachers and students cannot meet physically. This limitation was made profound with the outbreak of the Covid-19 Pandemic, insecurity challenges, incessant industrial actions, and so on that have bedeviled the nation recently. The pandemic particularly truncated educational processes thereby creating one of the biggest disruptions of educational systems in history, affecting nearly 1.6 billion learners in more than 190 countries and all continents in the globe. Closure of schools and other learning spaces have affected 94 percent of the world's student population, up to 99 percent in low and middle income countries (United Nations, 2020). The outbreak of the pandemic which led to closure of schools and other learning spaces as highlighted by United Nations, created a large rift between teachers and students which cannot be remedied by the traditional pedagogy as led to instant and sudden cessation of instructional delivery of knowledge and skills in classroom settings. This has very grave implications, particularly for skill-based courses such as Business Education which should be sequential, cumulative and time-bound.

As a result, a paradigm shift from traditional pedagogy to more innovative and virtual pedagogies has become critical. The need for a resolute departure from traditional pedagogy to e-learning is more glaring than ever because the era of perceiving Business Education as mere "Shorthand typing and book keeping" is gone for good (Victor-Igwe, 2015). E-Learning basically involves the use and application of more innovative modes of service delivery such as internet, websites, personal computers, tablets, PCs, laptops, android cell phones, Learning Management Systems and other



emerging technologies to improve the teaching and learning process. One of such innovative modes of instructional delivery is Cloud Computing.

Cloud computing is a new paradigm which provides applications and services that can be accessed through the internet with the ability to share, manage and store data, which is physically hosted on remote servers instead of using in house resources or personal machines (Foster, Zhao, Raicu & Lu, 2008). Sultan(2013), opined that through the use of Cloud Computing, the common problems of limited computational power and limited physical data storage can be ameliorated. It is considered a highly effective, convenient and centralized sharing pool through which computer resources can be deployed and accessed with minimum overhead as this synthesis integrates hardware, software, networks and storage options to deliver shared computing solutions in which applications and other services would be provided over the internet.

Cloud computing provides values that are dissimilar to the traditional IT environment. It offers economies of scale through aggregating computing resources and virtualization, ensures a global reach of information and services using computing environment which allows on demand scalability and minimal initial investment. It also provides pre-built services and solutions together with the required skills for running and maintaining them, hence, reducing the risk and need for the institution to maintain a group of staff that are highly skilled and scarce to find. With the use of cloud computing, the end users do not have to purchase new equipment, maintain hardware, update existing software, obtain license for the software or data synchronization. This is because the cloud service package encompasses them all unlike the IT environment. Consequently, (Anshari et al, 2016) added that cloud computing is a model for enabling convenient, on-demand network access to a shared pool of configurable computing resources (such as networks, servers, storage, applications and services) that can be rapidly provisioned and released with minimal management efforts or service provider interactions.

According to Mell and Grance, (2009), cloud computing is a model for convenient and rapid network access to a shared pool of computing resources that can be provisioned with minimal management efforts or service provider interactions. It comprises of five (5) essential characteristics which are:

- i. **On demand self-service:** Using Cloud Computing, a consumer can unilaterally access provision to computing capabilities as needed automatically without requiring human interaction from each services provider.
- ii. **Broad network access:** Cloud computing makes capabilities available over the network which is accessed through standard mechanisms thus promoting the use of heterogeneous thick or thin client platforms such as mobile phones, laptops and PDAs.
- iii. **Multi tenancy:** It allows the computing resources of the provider to be pooled to serve multiple consumers using a multi-tenant model with different physical and virtual resources dynamically assigned and reassigned according to the demands of the consumers.
- iv. **Rapid elasticity:** Here, the capabilities can be rapidly and elastically provisioned, in most cases automatically, to quickly scale out and rapidly released to quickly scale in.



- v. **Measured service:** The cloud service providers automatically control and optimize resource use by leveraging a metering capability at some level of abstraction appropriate to the type of service.

According to Harsimran and Kamayani (2015), three major types of cloud computing service delivery models are: Infrastructure as a service (IaaS), Platform as a service (PaaS) and Software as a service (SaaS). Moreover, cloud computing comes in different deployment models viz: Private or Internal cloud, Community cloud, Public or External Cloud and Hybrid cloud. In addition, Chentan, Basavaray and Sankalp (2016) opined that cloud computing can positively influence academic fields such as: interaction sessions, teamwork and flexibility. Furthermore, the importance of cloud computing in the field of Education include: enhanced productivity and more efficient educational practices, reduced expenditures, increase in collaborative work, enhanced backup information, support in financial and HR Management, facilitating institutional accreditation and promoting lecturer's flexibility. On the flip side, Khali et al (2017) averred that cloud computing also imply taking of 'cloud risks' such as: data insecurity, privacy issues, internet connection, reliability and so on. Such cloud risks can be guarded against through effective application of security principles. It seems obvious that with cloud computing, Business Educators and students can do a lot such as file sharing, service computing, collaboration systems and online education. However, the Educational sector in developing countries such as Nigeria are buffeted with some hurdles that make migration to cloud computing relatively slow. Some of these include retrieving the maximum resource in minimum time, technical communications like system performance, bandwidth, complex technology and lack of finance.

### **Statement of the Problem**

Business Education is the intellectual and vocational preparation of students for earning a living in ever-changing contemporary industrial and business environments. It is expected that capital intensive, skill-based courses such as Business Education should be proactive and responsive to the dynamics of change in order to continually render value returns to all stakeholders. It goes without saying that the traditional pedagogy of content delivery is abysmally ineffective for this highly needed field of study. This became more evident in the face of the ravaging Covid 19 Pandemic and its aftermath, volatile security situations around the globe, volatile business trends, etc. Therefore, it is expected that Business Educators and students should take the lead technologically by continuously "pushing the bar" and "blazing the trail" with regards to embracing and driving positive changes in the area of new technologies in order to remain relevant, formidable and vibrant. This is because education cannot afford to wait neither should Business Education accept the 'docile' mode of being put on hold for whatever reasons. This is because most skills are cumulative and time-bound.

It therefore appears pertinent that Business Education should embrace more innovative pedagogies such as Cloud Computing for more effective, virtual and seamless content delivery hence the study investigated the prospects and challenges of cloud computing in Business Education.

### **Research Questions**

This study sought answers to the following questions:

1. What are the areas in which Cloud Computing can be applied in Business Education?
2. What are the benefits of using Cloud Computing in Business Education?
3. What are the challenges of adopting Computing in Business Education?



## **Research Hypotheses**

The following null hypotheses were formulated to be tested at 0.05 level of significance to further guide the study:

**Ho1:** There is no significant difference between the mean ratings of Business Educators and students on the areas in which cloud computing can be applied in Business Education.

**Ho2:** There is no significant difference between the mean ratings of Business Educators and students on the benefits of using Cloud Computing in Business Education.

**Ho3:** There is no significant difference between the mean ratings of Business Educators and students on the challenges of using Cloud Computing in Business Education.

## **Method**

Descriptive survey research design was adopted for this study. The population of the study comprised of 808 Business Education Students and 25 Business Educators in the four (4) higher institutions that offer Business Education in Abia State i.e. Abia State University Uturu, Gregory University Uturu, Diamond College of Education Aba and College of Education (Technical), Arochukwu.

The final year students comprising of 203 students in NCE year III and Degree year IV in the institutions and the 25 lecturers were purposively selected for the study, giving a sample size of 228. A structured questionnaire which comprised of two section (A & B) was the instrument for data collection. Section 'A' sought to elicit the demographic profile of the respondents while section 'B' comprised of 30 items on a four-point scale. Numerical values were assigned to the scale on the extent of agreement ranging from strongly Agree (SA) – 4 points, Agree (A) – 3 points, Disagree (D) – 2 points and Strongly Disagree (SD) – 1 point. Two hundred and twenty eight (228) copies of the questionnaire were personally administered, duly completed, retrieved and utilized for the study. The instrument was validated by three experts. Cronbach Alpha Reliability test was used to determine the reliability of the items and this yielded a co-efficient of 0.87 which is considered adequate. Data generated were analyzed using the Arithmetic Mean ( $\bar{X}$ ) to answer the three research questions that guided the study while the t-test statistical tool was used to test the three null hypotheses at 0.05 level of significance. A mean cut- off point of 2.50 was established. Therefore, any item that generates a mean score of 2.50 and above i.e.  $\bar{X} \geq 2.50$  was regarded as accepted or agreed, whereas, a mean score of less than 2.5 i.e.  $\bar{X} < 2.50$  was considered as rejected or disagreed. On the flipside, if the calculated value is less than the table value, then the null hypothesis is upheld and vice versa.

## **Results**

**Research Question 1:** What are the areas in which Cloud Computing can be applied in Business Education?



**Table 1: Mean and Standard Deviation of the Respondents on the areas in which Cloud Computing can be applied in Business Education**

S/N	Item Statements	$\bar{X}_T$	$SD_T$	$\bar{X}_S$	$SD_S$	Remarks
1.	Cloud computing provides web-based messaging tools such as Google mail, Google talk to students and lecturers free.	2.84	0.50	2.97	0.52	<b>Agree</b>
2.	It can be used for Educational administration of student's information, teachers' information, courses' arrangement and other daily management.	2.57	0.55	2.78	0.61	<b>Agree</b>
3.	4A (Anyone, Anytime, Anyplace & Anything) support service in distance Education.	2.83	0.55	2.84	0.59	<b>Agree</b>
4.	It can host institutional learning management systems (LMS) such as Moodle and Blackboard in the cloud.	2.80	0.80	2.79	0.82	<b>Agree</b>
5.	It offers resource library where students can learn from	2.82	0.67	2.95	0.73	<b>Agree</b>
6.	It allows for team collaboration, real time analysis, student records management and student tracking.	2.83	0.65	3.00	0.72	<b>Agree</b>
7.	It allows collaborative learning distance Education.	2.78	0.62	2.89	0.66	<b>Agree</b>
8.	Virtual computing lab (VCL)	2.59	0.49	3.41	0.31	<b>Agree</b>
<b>Cluster Mean</b>		<b>2.87</b>	<b>0.62</b>	<b>3.04</b>	<b>0.57</b>	<b>Agree</b>

The result on table 1 shows the mean ratings of business educators and students with regards to the areas in which Cloud Computing can be applied in Business Education. The table showed that the respondents jointly agreed to all the items because their mean scores for each of the items were above 2.50. Cluster mean for Business educators had mean rating of 2.87 while the Cluster mean for students had a mean rating of 3.04. These overall mean indicate that all the items were accepted by the respondents as areas in which cloud computing can be applied in Business Education.

**Research Question 2:** What are the benefits of using Cloud Computing in Business Education?



**Table 2: Mean and Standard Deviation of the Respondents on the benefits of using Cloud Computing in Business Education?**

S/N	Item Statements	$\bar{X}_T$	$SD_T$	$\bar{X}_S$	$SD_S$	Remarks
9.	Cloud computing enables teachers to quickly arrange Educational services to suit each student's uniquely learning style.	2.77	0.72	2.94	0.80	<b>Agree</b>
10.	Through resource pooling, cloud computing averts the cost of installing I T infrastructure.	2.73	0.61	2.79	0.63	<b>Agree</b>
11.	It is easy to deploy and develop	2.83	0.69	2.80	0.75	<b>Agree</b>
12.	It improves physical and digital access to resources.	2.77	0.58	2.80	0.69	<b>Agree</b>
13.	It allows for easy access to information by students and teachers from their computers without the installation of a specific program.	2.71	0.70	2.75	0.66	<b>Agree</b>
14.	It facilitates a collaborative learning.	2.85	0.67	2.75	0.68	<b>Agree</b>
15.	With the use of cloud computing, the cost of purchasing institutional software licenses for a limited number of computers.	2.88	0.66	2.51	0.70	<b>Agree</b>
16.	It provides powerful data processing and computing capacity for instructional delivery processes	2.75	0.56	2.51	0.61	<b>Agree</b>
17.	It offers one of the easiest way to create an environment where business educators, students and parents can stay on the same page.	2.63	0.65	2.87	0.65	<b>Agree</b>
18.	It backs up data in case of any physical or digital fault or failure.	2.65	0.85	2.58	0.64	<b>Agree</b>
<b>Cluster Mean</b>		<b>2.79</b>	<b>0.66</b>	<b>2.76</b>	<b>0.70</b>	<b>Agree</b>

The result on table 2 shows the mean ratings of business educators and students with regards to the benefits of using Cloud Computing in Business Education. The table shows that the respondents jointly agreed to all the items because their respective mean scores were above 2.50. Cluster mean for business educators had mean rating of 2.79 while cluster mean for students had mean rating of 2.76. These overall mean indicate that all the items were accepted as benefits of applying cloud computing in Business Education.

**Research Question 3:** What are the challenges of adopting Cloud Computing in Business Education?



**Table 3: Mean and Standard Deviation of the Respondents on the challenges of adopting Cloud Computing in Business Education?**

S/N	Item Statements	$\bar{X}_T$	$SD_T$	$\bar{X}_S$	$SD_S$	Remarks
19	Cloud computing adoption is faced with severe privacy and data security threat.	2.92	0.77	2.83	0.75	<b>Agree</b>
20	Improperly secured cloud systems may be vulnerable to cyber-attacks.	2.96	0.69	2.90	0.79	<b>Agree</b>
21	Business Educators and students are ignorant of the benefits of Cloud computing to instructional delivery.	2.89	0.65	2.96	0.72	<b>Agree</b>
22	Migration of user data and service from one service provider to another is nearly impossible.	2.76	0.72	2.96	0.77	<b>Agree</b>
23	Service outages or poor bandwidth experience by internet service provider can distract online instructional delivery.	2.76	0.62	2.95	0.75	<b>Agree</b>
24	Lack of human resources technical knowhow.	2.83	0.60	2.86	0.56	<b>Agree</b>
25	Existing cloud infrastructures leverages commodity hardware can fail unexpectedly	2.62	0.96	3.05	1.07	<b>Agree</b>
26	Lack of well-defined service level agreement.	2.62	0.96	2.90	0.72	<b>Agree</b>
27	Scaling the storage systems as required is not possible in a cloud computing architecture.	2.50	0.88	2.59	0.68	<b>Agree</b>
28	Cloud Computing observes severe performance instability during high load	2.85	1.34	2.90	0.97	<b>Agree</b>
29	A single user's illegal behaviour can affect the reputation of other users of the same cloud network.	2.63	0.89	2.81	0.91	<b>Agree</b>
30	Cloud computing is not suitable for sending volume of data.	2.69	0.78	2.76	0.85	<b>Agree</b>
<b>Cluster Mean</b>		<b>2.77</b>	<b>0.82</b>	<b>2.89</b>	<b>0.78</b>	<b>Agree</b>

The result on table 3 shows the mean ratings of business educators and students with regard to the limitations of adopting Computing in Business Education. The table shows that the respondents jointly agreed to all the items because their mean scores were above 2.50. The cluster mean for Business educators was 2.77 while that of students was 2.89. These overall mean indicate that all the items were agreed upon by the respondents as challenges of adopting cloud computing in Business Education.



**Testing of the Null Hypotheses:**

**Ho<sub>1</sub>:** There is no significant difference between the mean ratings of Business educators and that of students on the areas in which Cloud Computing can be applied in Business Education.

**Table 4: Result of t-test Analysis of the Responses of Business educators and students on the areas in which Cloud Computing can be applied in Business Education**

SN	Groups	$\bar{X}$	SD	N	Df	t- cal	t-tab	Level of Sig	Rmk
1.	Business Educators	2.87	0.62	25					
2.	Students	3.04	0.57	203	226	1.65	1.972	0.05	NS

The t-test analysis presented in table 4 revealed that the t-calculated (t-cal) value of 1.65 is less than the t-table (t-tab) value of 1.972 at  $P \leq 0.05$  levels of significance and at 226 degree of freedom (df). This showed that, there is no significant difference in the mean responses of Business educators and students on the areas in which Cloud Computing can be applied in Business Education. Therefore, the null hypothesis of no significant difference is accepted and upheld.

**Null Hypothesis 2**

**Ho<sub>2</sub>:** There is no significant difference between the mean ratings of Business educators and that of students on the benefits of using Cloud Computing in Business Education.

**Table 5: Result of t-test Analysis of the Responses of Business educators and students on the benefits of using Cloud Computing in Business Education.**

SN	Groups	$\bar{X}$	SD	N	Df	t- cal	t-tab	Level of Sig	Rmk
1.	Business Educators	2.79	0.66	25					
2.	Students	2.76	0.70	203	226	1.122	1.972	0.05	NS

The t-test analysis presented in table 5 revealed that the t-calculated (t-cal) value of 1.122 is less than the t-table (t-tab) value of 1.972 at  $P \leq 0.05$  levels of significance and at 316 degree of freedom (df). This showed that, there is no significant difference in the mean ratings Business educators and students on the benefits of using Cloud Computing in Business Education. Therefore, the null hypothesis of no significant difference is accepted and upheld.

**Null Hypothesis 3**

**Ho<sub>3</sub>:** There is no significant difference between the mean ratings of Business educators and that of students on the limitations of adopting Cloud Computing in Business Education.

**Table 6: Result of t-test Analysis of the Responses of Business educators and education students on the limitations of adopting Computing in Business Education.**

SN	Groups	$\bar{X}$	SD	N	Df	t- cal	t-tab	Level of Sig	Rmk
1.	Business Educators	2.77	0.82	25					
2.	Students	2.89	0.78	203	226	1.281	1.972	0.05	NS

The t-test analysis presented in Table 7 revealed that the t-calculated (t-cal) value of 1.281 is less than the t-table (t-tab) value of 1.972 at  $P \leq 0.05$  levels of significance and at 226 degree of



freedom (df). This showed that, there is no significant difference in the mean ratings of Business educators and students on the limitations of adopting Cloud Computing in Business Education. Therefore, the null hypothesis of no significant difference is accepted and upheld.

### **Discussion of Findings**

The findings on the areas in which Cloud Computing can be applied in Business Education revealed that business educators and students jointly agreed to all the items identified. With a grand mean 2.87 and 3.04 and standard deviation of 0.62 and 0.57 respectively, it was therefore, indicated that Cloud Computing can be applied in Business Education. This finding is in line with Mehta (2016) who stated that in the forthcoming years education would be made easy, that anyone will be able to access education, using any kind of device, while being anywhere in the world.

The findings on the benefits of using Cloud Computing in Business Education revealed that business educators and students also jointly agreed to all the items identified. With a grand mean 2.79 and 2.76 and standard deviation of 0.66 and 0.70 respectively, it was therefore indicated that adoption of Cloud Computing in Business Education is beneficial. This is in line with Kurelovi, Rako and Tomljanovi (2013) who stated that Cloud computing ensures that trainers, staff, as well as students can access any form of information from anywhere, using any type of device. Thus, both private as well as public learning institutions can adopt this type of technology as a way of providing improved services using the few resources at their disposal.

The findings on the challenges of adopting Cloud Computing in Business Education revealed that business educators and students jointly agreed to all the items identified. With a grand mean of 2.77 and 2.89 and standard deviation of 0.82 and 0.78, it was therefore discovered that various challenges exist in adopting Cloud Computing in Business Education. This aligns with Mehta (2016) who stated that Cloud computing has some limitations which call for the introduction of a third party who is the platform provider hence the privacy and security of data is hard to maintain. Moreover, results of the three null hypotheses tested show that there was no significant difference between the mean ratings of Business Educators and that of the students in each case.

### **Conclusion**

Based on the findings of the study, it was concluded that Cloud computing be adopted in Business Education in the areas of content delivery and assessment, data management and administration, the principle of 4As, hosting Learning Management Systems (LMS), e-library facilities, collaboration and distance education as well as hosting virtual computing/accounting/word processing laboratories. This is because it creates a universal platform with simplified scalability and versatility. The benefits of cloud computing in Business Education include customized arrangement of educational services, cost-effectiveness, easy development and deployment, enhanced physical and digital access to diverse resources, enhanced collaboration, etc. However, the challenges include severe privacy and data security threats and cyber attacks/fraud, ignorance on the part of faculty and students, migration difficulties, service and power outages, inadequate technical skills, etc. Such challenges must be considered and adequately checkmated for effective use of Cloud Computing in Business Education.

### **Recommendations**

On the basis of the findings, discussions and conclusions of the study, the following recommendations are made:

1. Business educators and students should lend themselves more to enhanced media literacy and diverse digital skills through various training and re-training programmes and the use of reverse mentoring in order to benefit maximally from the various areas in which cloud computing can be applied such as online lectures, webmessaging, Database formation, Google Classroom, and so on.



2. The Government, Management of tertiary institutions, accreditation and supervisory bodies and other stakeholders should collaboratively enhance their commitment in ensuring that instructional delivery becomes more practical and less theoretical (a functional hybrid at least); as a replacement to the predominant use of traditional pedagogy with a view to enjoying the benefits of applying cloud computing in Business Education.
3. The Government at various levels and other stakeholders should endeavour to provide the much needed funds, facilities, power and alternative sources as well as top-notch digital resources and equipment to facilitate hands on practice of cloud computing by Business Educators and students, thereby ameliorating the inherent challenges.

### References

- Chentan, B., Basavaraj, H. & Sankalp, M. (2016). Adoption of cloud computing in Education System: A Survey. *International Journal of Engineering Science and Computing (IJESC)*. 6(6), 6377-6380.
- Ekoh, A.C. (2016). Traditional Pedagogy to innovative pedagogy in Business Education: A challenge to business educators. *Nigeria Journal in Business Education*. 3(2), 126-136.
- Federal Republic of Nigeria (FRN), (2014). National Policy on Education (revised). Abuja: NERDC Press.
- Foster L., Zhao Y; Raicu I. & Lu S. (2008). Cloud Computing and Grid Computing 360-Degrees Compared - Grid Computing Environments Workshop.
- Hairsimran, S. & Kamayani, A. (2015). Scope of Cloud Computing in Education Sector: A review *International Journal of Recent Research Aspects* 2(2).
- Khali H.A., Al-Shqaerat, F., Al-Shrouf, M.A., Mohammed R. H. & Hassen, F.(2017). Cloud Computing Security Challenges in Higher Education Institutes - A survey *International Journal of Computer Applications*. 161(), 22-29.
- Krishna, K.T. (2013). Innovative Teaching Methods in Management. Retrieved on 4<sup>th</sup> June 2015 from [www.ijmbs.com/0014/krishnakumar](http://www.ijmbs.com/0014/krishnakumar).
- Kurelovi, k., Rako, S. & Tomljanovi, J. (2013). Cloud Computing in Education and Students' Needs, *MIPRO/CE*, 856-861.
- Mehta, S. (2016). Adoption of Cloud Computing in Education System: A Survey, *IJESC*, 6(6), 6372-6376.
- Microsoft (2011) Cloud Computing in Education: [http://www.microsoft.com/education/en-us/solutions/pages/cloud\\_computing.aspx](http://www.microsoft.com/education/en-us/solutions/pages/cloud_computing.aspx).
- Ogedi P.O; & Okoro C. (2017). Cross-Cultural Perspective of Education Systems - Salient Means for Management and Standardization of Nigeria Education System. *Academic Scholarship Journal* 14(1): 239-253
- Osuala, E.C. (2002). Principle and Practice of business education. Onitsha: Urowwu Obosi Pacific Publisher.
- Oye, N.D., Salleh M. & Lahad, N.A. (2010). Holistic E-learning in Nigerian Higher Education Institutions. *Computing and Education Journal*, 2(11), 20-26.
- Sultan N. (2013) Cloud Computing: A Democratizing Force? *International Journal of Information Management*. 33(5), 810-815.
- Ugwoke, E.O. (2011). Effective Utilization of ICT for Repositioning Business Education Programme in Tertiary Institutions in Nigeria for National Development. *International Journal of Educational Research* 11(1), 20-214.
- United Nations (2020). "Policy Brief: Education during COVID-19 and beyond", available at [https://unsdg.un.org/sites/default/files/2020-04/160420\\_Education\\_during\\_COVID-19\\_and\\_beyond.pdf](https://unsdg.un.org/sites/default/files/2020-04/160420_Education_during_COVID-19_and_beyond.pdf)
- Utoware J.D.A & Amiaya, A.O. (2014). Impact of new technologies on tertiary business education curriculum. *Educational research International* 3(1), 40-47.
- Voas J. & Zhang J. (2009). Cloud Computing: New Wine or Just a New Bottle? *IT Professionals*, 11(2), 15-17. Doi: 10.1109/mitp.
- Victor-Igwe, J N., Baba, E. I. & Iwuoha, C. U. (2016). Attitudes of Business Education Students Towards the Use of Libraries in Colleges of Education in Anambra State. *Nigerian Journal of Business Education* 3(1) 39 - 368



## **GLOBAL REQUIREMENTS OF BUSINESS EDUCATION SKILLS ACQUISITION FOR STUDENTS' WORK PERFORMANCE IN NORTH EAST ZONE, NIGERIA**

**<sup>1</sup>DR. ANNA GANA MSHELIA**

Department of Education, University of Maiduguri, Maiduguri, Borno State.  
*annaganamshelia@gmail.com*

**<sup>2</sup>MR JONATHAN, P. SHUA.**

Department of Business Education, Ramat Polytechnic, Maiduguri, Borno State.  
*Joepsh62@gmail.com*

### **Abstract**

*The purpose of the study was to determine the global requirements of Business Education digital skills acquisition for students' work performance in North East Zone, Nigeria. A descriptive survey research design was adopted for the study. The study was guided by two objectives, two research questions, and two null hypotheses were tested at 0.05 level of significance. The population for the study was 263, drawn from two Federal Universities in North East Zone (Borno State and Bauchi State). The entire population of 263 was used as sample since it was relatively sizeable for the study. The instrument used for data collection was 40 items questionnaire grouped into two sections based on objectives. The instrument was validated by two experts. Cronbach Alpha method was used to determine the reliability of the instrument which yielded a coefficient reliability of 0.82%. Out of 263 copies of the questionnaires distributed, 243 were properly filled and returned representing 92.40% returned rate. Data collected were analyzed using descriptive statistics such as tables, mean and standard deviation. T-test statistics was used for testing the Null hypotheses at 0.05 level of significance. The mean average score analysis revealed that skill acquisition in business education were highly relevant in meeting the global requirement for work performance of students after graduation from Universities in North East Zone, Nigeria, except shorthand writing and transcription was marked irrelevant. The t-test compared mean result indicated no significant difference in the responses of University of Maiduguri and Abubakar Tafawa Balewa University Bauchi respondent's on both the relevance of skills requirement in business education and ways of improving on them to meet the global work performance in North East Zone, Nigeria. It was therefore, recommended that, though the entire skills in business education were seen as highly relevant only shorthand writing and transcription and typewriting skills, they require improvement.*

**Keywords:** Skills, Skills Acquisition, Business Education, Global Work performance

### **Introduction**

Today higher institutions in Nigeria are facing different challenging to equip students with correct skills, competencies and attitudes required by corporate world. The world of work has changed dramatically; technology is impacting practices and experiences while societies are becoming more global and multicultural. With the rise of globalization, work performance is becoming one of the main goals of education systems. This is due to dual challenge of competing in a world market and rapid technological advancements which necessitates re-design of the work place and requires a behavior and orientation toward work that go beyond step-by-step task performance (Sa'ad and Majid,



2014). In this challenging environment, the role of higher institutions in Nigeria is not only to produce graduates with specific areas of specialization, but more importantly, to develop graduates with skills that match the demand of industries. Higher institutions are under tense pressure from stakeholders, especially industries to equip students with more than just academic theories but adequate skills. Skills have become increasingly important in the globalized world. The shifting demand for skills has necessitated the availability of highly skilled labour (Sa'ad and Majid, 2014).

Skill acquisition is essential for increasing the productivity and sustainability of enterprise and improving working condition and performance of workers. Business education skills are essential, but employers are seeking applicants with more skills. Employers want workers who can continue to learn, adopt, read, and write and computer competency, listen and communicate effectively, think creatively, solve problems independently, manage themselves at work, interact with co-workers, work in terms or groups, handle themselves at work effectively as well as follow supervision. Researchers like Manzo (2009) and Kozma (2009) affirmed that the 21<sup>st</sup> century skills are instrumental to economic development. According to Suther (n.d.) the 21<sup>st</sup> century youths will defiantly sell, buy and work for international companies, compete with and manage employees from other countries, collaborate with other people and solve global problems. Therefore, business education students should be prepared to face the challenges that are having ability to compete with people from other countries. Today's highly competitive job market has dramatically changed the rules for career success. Glenn (2007) explained that business education is essential for the preparation of students as knowledge workers in terms of what the students should know and what they should be able to do once they finish their academic programme. Keeping up with the constantly changing work environment means students will have to keep learning new skills and maintain a high level of flexibility in order to adapt to new ideas such as: skills for office machines and equipment, skills in physical marketing, teamwork and leadership skills, entrepreneurship skills, basic business mathematics, manual practical accounting skills amongst many from the classroom environment.

Work performance assesses whether a person perform a job well. It is the assessment of whether an employee has done their work well. It's an individual evaluation one measured based on a single person's effort. Greenberg and Baron (2008) described work performance as an individual level of variables, or something a single person does. This differentiates it from more encompassing constructs such as organizational performance or national performance which are higher variables. Work performance is simply the measurement of an employee's behavior which will impact on organizational performance. Heart Research Association (2015) iterated that, employers want employees who can think on their feet (problem solving) and who can come up with innovative solutions when needed (creative thinking). Employers want employees who have pride on themselves and who have potentials to successful (self-esteem); who have some sense of the skills needed to convince customers, suppliers and co-workers in order to create perfect relationship (interpersonal and negotiation skills); who can work with others to achieve a goal (team work). Employers want employees who knows when and how to get things done, where the organization is heading to and headed for, what they must do to make meaningful contribution towards achieving it (goal setting and attainment); and employees who can assume responsibilities and motivate co-workers when necessary (leadership). According to Knight and York (2002), the identified graduates' skills and attitudes valued by the present-day employers include team working, problem solving, self-management, interpersonal and communication skills, ability to use own initiative to follow instructions and leadership skills. In the same vein as stated above, Carnevals, Anthony and Meltzer (2011) in their study found out that the skills the present-day employers considered necessary for the workplace include communication skills, adaptability skills, interpersonal skills, creative thinking, teamwork, organizational and leadership skills problem solving skills and practical computer application skills.

The accelerating forces of globalization and interdependence have produced a whole new world that makes it imperative that our students receive a world-class education includes global knowledge and skills. One of the global economic factors driving the rise of global worker is skills. A global worker is one who has ability, skill and competence to compete in the international/global



market. Global workforce means preparing students with the knowledge, skills and attitudes necessary to be successful when working with people from different cultures, regardless of location, British Council (2013) defined global worker as a person who can operate in different countries, cultures and languages. To be a global worker therefore demands the ability and skills to be fluent in at least one other language, such as French, Arabic and or the language of the environment, fluency with e-commerce and the internet and most importantly possess well-versed knowledge on the skills as a business educator. Offili (2017) stated that an employee that want an effective global work performance in the office, should have the skills to use computer, desktop and laptop computers and other electronic devices to complete office tasks. Bhat (2013) has observed that organizations need employees who have the necessary skills to fit in the global work arena and value those individuals who are flexible, adventurous and ready to explore the world and take challenges head on. He listed the following skills that make a professional globally employable as adoptability, ability to learn, language skills, networking skills, creativity skills, functional skills, strong inter-personal skills, willingness to take risk, initiative and curiosity.

It is the statutory duty of the Nigerian higher education to groom the required human capital through relevant manpower training, abilities, attitudes, skills and knowledge. that on graduation young people could have developed additional skills through training and experience that could further enhance their opportunities, capabilities and successes in their life endeavor (Abanyam, 2014). The overall goal of business education is to prepare individual who are well skilled to contribute to the economic development of a nation, thrive in chosen career to perform more effectively in the labour market. The National Policy of Education (NPE, 2016) states that business education is to equip the recipient with skills that will enable them to become better employee/employer, but unfortunately this has not been materialized.

The challenges associated with business education curriculum development in Nigeria, is that the present curriculum in use at all levels in most of our higher institutions are obsolete and not dynamic with the present realities of the changing world of work. Ajisafe, Bolarinwa and Edeh (2015) who posited that inadequacies in the curriculum content of business education, nonrelevance of the course content, poor implementation of the curriculum, time allocation, selection of subjects, current issues and debates and qualification and quality of teachers are issues in skill acquisition in business education. While many developed nations update their curriculum to rhyme with technological changes and acquisition of basic skills, as well as go in line with the global changes which goes with the 21st century trend Nigeria does not respond to such changes.

The above limitations are an indicator that there is less emphasis on skill acquisition in business education programme which resulted in lack of work performance skills as graduate of higher institutions are still roaming the street for white collar jobs, sometimes join kidnapping, Boko-Haram and militancy and all sort of social vices as business. Therefore, if Nigeria wants to compete globally, its business education students need to have competencies and basic skills which should be included into the curriculum such as, communication skill, adaptability skills, inter-personal skills, creative thinking, team work, organization and leadership skills, problem-solving skills and personal computer application skills. As well as the capabilities to be able to work across the national borders manage complex international relationships and understand global aspects of the world of work. Thus, this study is therefore sought to determine the global requirements of business education skills acquisition of students' work performance in North East Zone, Nigeria.

#### **Statement of the Problem**

Business education students in tertiary institutions upon graduation are expected to be job creators, but contrary to these expectations, most of them roam the streets for years searching for scarce white-collar jobs. This is because they are inadequately equipped with relevant skills properly due to the fact that business education programmes is not up-to-date with required resources (human and physical) as found in the programme in other part of developed countries. According to the report of National Bureau of Statistics (BNS) (2020), the unemployment rate in Nigeria has increased



from 23.1% in 2019 to 27.1% in the 2<sup>nd</sup> quarter of 2020 and it was confirmed that it hits 40.1% by the end of 2020. Considering the high unemployment rates among graduates (business education inclusive), it is assumed that the skill acquisition in business education programme in higher tertiary institutions in Nigeria has not been achieved.

A recent development in which Nigerian business education graduates roam the streets looking for scarce white-collar jobs instead of creating their job seems to indicate that all is not well as expected with the standard of the programme. The situation appears more worrisome when viewed against the background that business education was incorporated into the educational systems to equip students with vocational skills for self-employment. It could be deduced from the present scenario that the programme is not meeting its expectations in terms of skill acquisition programme. The need to equip business education students with relevant quality skills acquisition to enable them become self-sufficient and remain globally relevant cannot be overemphasized. Therefore, it is pertinent for this study to determine the global requirements of business education skills acquisition for students' work performance in North East, Nigeria.

### **Research Questions**

- 1 to what extent are the digital skills acquired in business education relevant for global work performance in North East Zone, Nigeria?
- 2 what are the ways of improving on the digital skills acquired for global work performance in North East Zone, Nigeria?

### **Null hypotheses**

The following two hypotheses were formulated and tested at 0.05 level of significance.

- 1 There is no significant difference between the mean responses of ATBU and UNIMAID business education students on the relevance of skills acquired in business education in meeting the needs for global work performance in North East Zone, Nigeria
- 2 There is no significant difference between the mean responses of ATBU and UNIMAID business education students on the ways of improving the skills acquired for global work performance in North East Zone, Nigeria

### **Methodology**

The descriptive survey design was adopted for the conduct of the study. According to Mboho, (2010), descriptive survey design deals with the collection and analysis of data for the purpose of describing and interpreting existing conditions, and on-going process of current practice and attitudes. The population of the study consisted of all the 400 level (Part 4) business education students drawn from two Universities in North-East Zone, Nigeria. (University of Maiduguri (UNIMAID) and Abubakar Tafawa Balewa University Bauchi (ATBU)). The population for the study was 263 400 level students of business education from the two Universities. The entire population was used for the study because the population was manageable. Questionnaire was the instrument used for data collection. The research instrument was validated by two experts from the department of Vocational and Technical Education ATBU and from measurement and evaluation unit in the department of Education UNIMAID. The instrument used for data collection was 40 items questionnaire grouped into two sections based on the research questions. Data for the study was collected via questionnaire tagged or titled: Business Education Skills Acquisition questionnaire (BESAQ). Equally, 263 questionnaires copies were distributed to the students in the two Universities and 243 were properly filled and returned. The research instrument contained two sections, each section was assigned four



response options of very highly relevant/strongly agree (VHR 4 points), highly relevant/agree (HR 3 points), moderately relevant/disagree (MR 2 points) and not relevant/strongly disagree (NR 1 points). The two research questions were analyzed using mean and standard deviation and frequency table. The Null hypotheses were tested using t-test at 0.05 level of significance.

A weighted mean of 2.50 and above was considered highly relevant which weighted mean of 2.49 and below was considered irrelevant: for the test of null hypotheses, if (when) the t-cal was less than or equal to the t-crit or table value, the null hypotheses was retained, if the t-cal is greater than the t-crit, the null hypotheses were rejected.

**Results**

The results of the study were presented according to the research questions and hypotheses that guided the study.

**Research questions 1**

To what extent are the skills acquired in business education relevant global requirement for students' work performance in North East Zone, Nigeria?

*Summary of respondents mean and standard deviation scores on the relevance of skills acquisition in Business Education for global work performance in North East Zone, Nigeria.*

S/NO	ITEMS	RESPONSE		
		$\bar{x}$	SD	REMARK
1	Manual typewriting skills	2.27	1.17	Not Relevant
2	Typesetting skills	3.30	0.68	Highly Relevant
3	Skills in computer application and appreciation	3.54	1.00	Highly Relevant
4	Skills for office machines and equipment operators	3.46	0.68	Highly Relevant
5	Skills in physical marketing operation	2.89	0.86	Highly Relevant
6	Skills in physical marketing advertising	2.69	0.72	Highly Relevant
7	Team work and leadership skills	2.85	0.84	Highly Relevant
8	Entrepreneurship skills	3.13	0.69	Highly Relevant
9	Basic business mathematics	2.74	1.01	Highly Relevant
10	Manual accounting practice skills	2.94	0.85	Highly Relevant
11	Computerized accounting skills	3.14	0.74	Highly Relevant
12	Interpersonal and human relationship skills	3.28	0.62	Highly Relevant
13	Office management skills	3.20	0.74	Highly Relevant
14	Shorthand writing and transaction skills	2.35	1.07	Not Relevant
15	Theoretical skills in buying and selling	2.82	0.86	Highly Relevant
16	Business letter writing skills	2.99	0.46	Highly Relevant
17	Physical delivery of business letter skills	3.55	0.35	Highly Relevant
18	Skills in manual recording of business	3.57	0.47	Highly Relevant
19	Business/commercial laws interpretation skills	2.91	1.01	Highly Relevant
20	Budget preparation skills	2.90	0.54	Highly Relevant
21	Income and expenditure forecasts skills	2.92	0.47	Highly Relevant
22	Cash flow statement preparation and monitoring skills	2.72	0.76	Highly Relevant
23	Financial recording and document skills	2.68	0.86	Highly Relevant
24	Debt tracing and recovery collection techniques skills	2.47	1.06	Not Relevant
25	Business information interpretation skills	2.88	0.76	Highly Relevant
26	Decision making skills	2.93	0.39	Highly Relevant
<b>Weighted Average</b>		<b>2.94</b>	<b>0.75</b>	<b>Highly Relevant</b>

*X = Mean; SD = Standard Deviation; N = Number of Respondents; HR = Highly Relevant*

The results of data analysis presented in table 1 show that, the average mean rating of the respondents for the twenty-six items was 2.94 with standard deviation 0.75 which is highly relevant with item 4 had the highest average mean of 3.46 while the least average mean was items 1 and 14



having 2.27 and 2.35 respectively. These indicate that skills for office machine and equipment operators were highly relevant for global work performance of students after graduation from the university, while items 1 and 14 were irrelevant in global work performance. The overall standard deviation of 0.75 shows that, the respondents have similar opinions with all the items. This signifies that most of the skills investigated are highly relevant which were well taught in the universities, it will meet the global work performance of students after graduation.

**Research Question 2:**

what are the ways of improving on the skills acquired in business education meet the demand of their work performance in North East Zone, Nigeria?

*Summary of respondents mean and standard deviation scores on ways of improving skills acquisition in Business Education for global work performance in North East Zone, Nigeria.*

S/NO	ITEMS	RESPONSE		
		$\bar{x}$	SD	REMARK
27	Replacement of manual typewriter to digital computer skills	3.17	0.93	Highly Relevant
29	Teaching accounting skills and technology application in today organization	3.16	0.89	Highly Relevant
30	Teaching marketing with digital technology beyond physical environment	2.85	0.93	Highly Relevant
31	Teaching entrepreneurship skills and development in real life environment	3.00	0.29	Highly Relevant
32	Teaching advance mathematics/statistical application in business	3.04	0.94	Highly Relevant
33	Teaching accounting courses with accounting application packages (software)	2.87	0.76	Highly Relevant
34	Teaching advertisement with online digital technology	2.97	0.80	Highly Relevant
35	Teaching both manual and online skills in office management and technology	2.77	0.1s3	Highly Relevant
36	Replacement of pitman shorthand with ICT audio-visual devices	2.76	0.81	Highly Relevant
37	Compulsory teaching and application of online marketing in classroom situation	2.83	0.76	Highly Relevant
38	Teaching the use of business emails and websites to receive or deliver business correspondences	2.80	0.75	Highly Relevant
39	Teaching recording of business transactions using computer software and application	2.89	0.48	Highly Relevant
40	Teaching the use of debt recovering software to track debtors	2.97	0.30	Highly Relevant
<b>Weighted Average</b>		<b>2.75</b>	<b>0.74</b>	<b>Highly Relevant</b>

*X = Mean; SD = Standard Deviation; N = Number of Respondents; HR = Highly Relevant*

The result presented in table 2 depicts that the average mean rating of the respondents was 2.75 with standard deviation of 0.74 for the 14 items which is highly relevant. Showing that item 28 had the highest mean score with 3.18 followed by item 35 having average mean score of 3.17 closely to each other. The least mean score was items 27 and 36, having average means of 2.77 and 2.76 closely to each other. However, items 27 and 36 had the least average mean indicating that manual typewriting skills should be replace with digital computer typing skills to improve student dexterity. This indicated that all the respondents agreed on all the fourteen item statements as ways of improving on the skills



acquire in business education to meet global work performance of students after graduation in North East Zone, Nigeria.

**Ho<sub>1</sub>: Summary of independent sample t-test of the differences between mean ratings of ATBU and UNIMAID students of Business education on the extent of relevance of skills acquired for global work performance in North East Zone Nigeria.**

Group	N	$\bar{x}$	SD	Df	t-cal	t-critq	Decision
ATBU	107	2.94	0.78	241	2.319	1.972	Ho <sub>1</sub> Rejected
UNIMAID	136	2.71	0.75				

Table 3 shows that t-cal is 2.319 and t-critq value is 1.972 at 0.05 level of significance and the degree of freedom is 241. Since the t-cal is greater than the t-critq, the null hypothesis that stated thus: There is no significant difference between responses of students of ATBU and UNIMAID on the relevance of skills acquired in business education for global work performance is rejected.

**Ho<sub>2</sub>: Summary of independent sample t-test of the differences between mean ratings of ATBU and UNIMAID students of Business education on the ways of improving the skills acquired for work performance in North East Zone, Nigeria.**

Group	N	$\bar{x}$	SD	Df	t-cal	t-critq	Decision
ATBU	107	2.75	0.74	241	2.0702	1.972	Ho <sub>2</sub> Rejected
UNIMAID	136	2.97	0.75				

Table 4 showed that t-cal value is 2.0702 and t-critq value is 1.972 at 0.05 level of significance. Since the t-cal is greater than t-critq, the null hypothesis that stated thus: There is no significant difference in the mean rating of business education students in ATBU and UNIMAID on the ways of improving the skills acquired for work performance in North East Zone, Nigeria is hereby rejected.

**Discussion of Findings**

The research was carried out to determine the global requirements of business education skills acquisition for students' global work performance in north east zone, Nigeria. The findings from table 1 showed that business education skills are highly relevant for successful global work performance in North East Zone, Nigeria. This revealed from the table that items which had average mean of less than 2.50 require improvement, in order to meet the global work performance of students. Items 36 had the least average mean scores of 2.76 indicating that, the skills of ICT is highly relevant to replace it with the skills of shorthand in meeting global work performance of students after graduation. The result of the study agreed with the findings of Offili (2017) who stated that an employee that want an effective global work performance in the office, should have the skills to use computer, desktop and laptop computers and other electronic devices to complete office tasks.



The grand standard deviation is 0.75 which implies that the opinions of the respondents were closely to each other. This finding revealed that there is need to improve on the training of business education students in skills acquisition to be able to compete with the changing of career success. This finding is in consonance with the findings and recommendations of Bhat (2013) who state that organizations need employees who have the necessary skills to fit in the global work arena and value those individuals who are flexible, adventurous and ready to explore the world and take challenges head on. He listed the following skills that make a professional globally employable as adoptability, ability to learn, language skills, networking skills, creativity skills, functional skills, strong inter-personal skills, willingness to take risk, initiative and curiosity.

The result of hypothesis 1 indicated that there is no significance difference in the average mean of business education students in ATBU and UNIMAID. However, the response of the students showed that many problems hinder business education students from equipping with relevant skills. The implication lays on the fact that the two universities vary in their format of learning and in their curriculum of instruction. It is either one of the universities is well guided by the minimum standard curriculum of business education and followed the format according to NUC and acquired more relevant skills than the other. This finding is in agreement with the work of Ajisafe, Bolarinwa and Edeh (2015) who posited that inadequacies in the curriculum content of business education, non-relevance of the course content, poor implementation of the curriculum, time allocation, selection of subjects, current issues and debates and qualification and quality of teachers are issues in skill acquisition in business education. The challenges associated with business education curriculum development in Nigeria, is that the present curriculum in use at all levels in most of our higher institutions are obsolete and not dynamic with the present realities of the changing world of work. While many developed nations update their curriculum to rhyme with technological changes and acquisition of basic skills, as well as go in line with the global changes which goes with the 21st century trend Nigeria does not respond to such changes.

The result from table 2 revealed the ways of improving skills acquired in Business education to meet the global work performance of students in North East Zone, Nigeria. It was found that teaching computer application/technology skills in business had the highest average mean of 3.18 and standard deviation of 0.86 closely followed to replacement of manual typewriter to digital computer skills to improve the standard of student typing dexterity, as well as teaching accounting skills and technology application in today organization with average mean of 3.17, and 3.16 each. It was revealed that the respondents agreed that all the items are helpful in improving the skills acquired in business education to meet the global work performance in North East Zone. This is in agreement with the findings of Sa'ad and Majid (2014) and Manzo (2019) who stated that, the world of work has change dramatically; technology is impacting practices and experiences while societies are becoming more global and multicultural. With the rise of globalization, work performance is becoming one of the main goals of education systems. This is due to dual challenge of competing in a world market and rapid technological advancements which necessitates red-design of the work place and requires a behavior and orientation toward work that go beyond step-by-step task performance. Also, a number of developing nations have planned programmes to help teachers and students become proficient in using computers and other information and communication technology (ICT).



### **Conclusion**

The study determines the relevant skills required of business education students for work performance in global market in North-east zone, Nigeria for work performance in the office, as the skills to use computer, desktop and laptop computers and other electronic devices to complete office tasks. Others are ability to learn, language skills, networking skills, creativity skills, functional skills, strong inter-personal skills, willingness to take risk, initiative and curiosity. This were identified that business education skills was highly relevant for preparing students for global work performance in North east zone, Nigeria. Therefore, this implies that for students to perform credibly in global work performance, their skills acquisition should not be taken lightly. In order words student who will seek for employment in global world need to acquire among other things the enumerated skills as found by the study.

### **Recommendations**

Based on the finding of the study, the following recommendations were made:

- 1 Though the entire skills in business education were seen as highly relevant, except shorthand writing and transcription skills and manual typewriting skills that had the least average mean performances that require improvement or rather the NUC minimum curriculum standard of business education should replace manual typewriting skills with digital computer skills in the universities and shorthand skills and transcription should be replace with ICT audio visual devices.
- 2 Training in business education programme should be more on skills in computer application and appreciation and should be practically oriented rather than theoretically based. These will enable them to effectively perform well on practical in working environment which meet with the 21<sup>st</sup> century global work requirement especially in North East Zone Nigeria. Training in the use of office machines and equipment operation should b intensify by giving attention in training and retraining of students to improve their work performance in various organizations that they might find themselves.
- 3 Business education programme should have a harmonized minimum standard curriculum to be redesign by NUC in order for the students to have the same skill acquisition format of learning in all Nigerian Universities where the course is being taught. The curriculum must be upgraded constantly to reflect the current realities of an automated working environment. In order words, business education programme should constantly evaluate the curriculum so that the programme can successfully respond to the changes of the 21<sup>st</sup> century and emerging global issues.



### References

- Abanyam, F. E. (2014). Self – employment skills possessed by business education students of colleges of education for sustainable development in Cross River State, Nigeria. Unpublished M.ed thesis University of Nigeria, Nsukka.
- Ajisafe, O. E., Bolarinwa, L. O. & Edeh, T. (2015). Issues in business education programme. Challenges to national transformation. *Journal of Educational Practice*, 6(21), 209 – 212.
- Carnevale, A. P. & Meltzer, A. S. (2011). Workplace basic: The skills employers want. Employment and training administration (DOL). Alexander Va.
- Federal Republic of Nigeria (2016). *National policy on education*: Lagos: National Educational Research and Development Council
- Greenberg, R. U. & Baron I. F. (2008). Pay enough of don't pay at all Q. J. Econ, 810. High education academy (2012). Pedagogy for employability <https://www.hencadmy.ac.uk/knowledge.hub/pedagogyemployabilityandmathematicnetwork.org>. Retrieved 15<sup>th</sup> August, 2021.
- Heart Research Association (2015). ``It takes more than a major:’’ Employee employers’ perspectives on the performance of higher education institutions priorities for colleges learning. Retrieved from [https://www.aacu.org/ates/default/files/LEAP/2015employer\\_studentsurvey.pdf](https://www.aacu.org/ates/default/files/LEAP/2015employer_studentsurvey.pdf) on 12<sup>th</sup> August, 2021.
- Kozma, R. B. (2009). Global competition: Technology and learning, 2(4), 16 -19 <https://ww.iste.org/AM/Template.cfm>. Assessed 17<sup>th</sup> July, 2021.
- Manzo, K. K. (2009), Global competition: U. S. students Vs. international peer. Are U.S. students technology skills keeping up with their international peers? <https://www.educationnation.com/index.cfm/> Assessed 17<sup>th</sup> July, 2021.
- Offili, D. N. (2017). Digital literacy for librarians. A paper presented in workshop on innovation in libraries by Nigerian Library Association, Delta State Chapter of Federal University of Petroleum Resources, Effurun/Delta State.



## **PEDAGOGICAL SKILLS NEEDED FOR EFFECTIVE ONLINE TEACHING AND LEARNING IN POLYTECHNICS**

**<sup>1</sup>OYINLOYE, O. T**

**<sup>1</sup>Department of Office Technology and Management,  
Institute of Information and Communication Technology,  
Kwara State Polytechnic, Ilorin.  
[oyinloyeolayinka@gmail.com](mailto:oyinloyeolayinka@gmail.com)**

**<sup>2</sup>PROF UMORU, T. A (FABEN0008)**

**<sup>2</sup>Department of Business and Entrepreneurship Education  
Faculty of Education,  
Kwara State University, Malete.**

### **Abstract**

*Online teaching and learning has come to stay as a result of advances in technology in the 21<sup>st</sup> century. This study examined pedagogical skills needed for effective online teaching and learning in polytechnics. One research question were raised and one hypothesis was tested in the study. The study used a descriptive survey design. The population of the study comprised all polytechnics lecturers in the department of Office Technology and Management in North Central, Nigeria. Three hundred and twenty three copies of the questionnaire were administered. Only two hundred and seventy were retrieved and used for the study. The instrument for data collection was a structured questionnaire tagged Pedagogical Skills needed for effective Online Teaching and Learning Questionnaire (PSEOTLQ) designed by the researcher with 4 points rating scale. The instruments went through face and content validation by three experts. The reliability of the instrument was ensured using the Split-half method and the result yielded a reliability coefficient of 0.87. Mean and standard deviation were used to analyze the data collected to answer the research question. The hypothesis was tested using independent sample t-test at 0.05 level of significance. The study found among others that pedagogical skills are highly needed for effective online teaching and learning. Based on the findings of the study, it was recommended that polytechnic management should provide training for their lecturers, this may be inform of seminars, workshops and conferences. Also lecturers should also find a means of developing themselves without necessarily waiting for the polytechnic managements for acquisition of pedagogical skills.*

**Keywords:** Pedagogical skill, Online, Teaching and Learning

### **Introduction**

Technology innovation has influenced all facets of human endeavour including education. The Internet has moved education beyond the four walls of classrooms (Ezeabii, Ile, and Ezugwu, 2019). Technology has launched the world into a knowledge-based economy in which ideas and technological principles are used for better output (Mbah, 2016). Thus, advancement in technology, according to Muhammed, Sue, and Munnaza (2015) has compelled teachers and educators to utilize its benefits for the delivery of instruction and hence promote knowledge through online learning. This means that, the world is changing more rapidly in the 21st century when it comes to the dissemination of information and its uses. This movement is caused by the advancement in technology which also affects the education sector.



The comprehensive integration of information technology into teaching and learning in the 21st century has begun to revolutionize the education system. Mostly, this change is due to online/distance education. Online education has now become a major part of the higher education system (McFarlane, 2011) and has changed the way we teach higher institution students now and in the future. The online teacher in higher education also needs a change in skills and focus, including using a student-centered approach (Fish & Wickersham, 2009). The rapid growth of online programs raises many new educational, psychological and social challenges.

Improving the effectiveness of online education and understanding how students learn and how well teachers teach in an online environment requires a holistic view based on sound, continuous teaching research and pedagogy. Pedagogy refers to the interaction between teachers, students, the learning environment, and learning activities. This broad term includes how teachers and students relate to the teaching methods used in the classroom or online environment. Teach online. CA (2012) noted that pedagogy concerns about how technology changes the way we teach and most importantly how students learn. What is clear is that the major changes in the way high school students are taught are caused by online learning and new technologies that increase flexibility, and access to post-secondary education. Abdous (2011), argue that pedagogy is a learning process that focuses on building new skills, which explains how knowledge is assimilated, produced and used in a way that can create new things. Mamman and Oyinloye (2016) explained that to improve the quality of teaching and learning in the classroom, non-traditional methods such as active learning, cooperative, collaborative, and problem-based learning can be used.

Pedagogy informs teaching strategies, teacher actions, and teacher choices and decisions based on learning theories, students' understanding and their needs, and the backgrounds and interests of individual students. Pedagogy is the tools, activities, strategies, and decisions of a learning environment that are highly interactive, inclusive, collaborative, and inspiring. Pedagogy is about teaching skills and techniques used by teachers to facilitate learning. Enyekit, Ubulom, and Enyekit, (2015) have revealed that pedagogical is in-depth knowledge about the processes and methods of teaching and learning and how it integrates (among other things) general educational goals, values and objectives. This is a general form of knowledge that is involved in all aspects of student learning, classroom management, curriculum development and implementation, and student assessment. Includes information on strategies or methods to be used in class; the nature of the intended audience; and strategies for assessing students' comprehension. Teachers with in-depth pedagogical experience understand how students build knowledge and acquire skills; develop mental habits and a good will to learn. In a related view, Enyekit and Enyekit (2014), have also agreed that such pedagogical knowledge needs to understand the concepts of learning, social, and developmental theories of learning and how it works for the students in their class.

Mamman and TswanaSaba (2021) noted that online instructors should understand the fundamentals of online teaching and pedagogy. They must demonstrate this understanding by applying a large number of principles and strategies. These principles and strategies include learning theories, such as learning styles, the adult learning theory, the learner-centred approach, and collaborative learning; designing and implementation appropriate instructional strategies, as well as classroom assessment and student engagement techniques; organizing and facilitating students' participation and providing guidance and support as needed; using criterion-based assessment to evaluate individual and group performance; motivating students and showing enthusiasm and interest; encouraging knowledge construction based upon learners' prior knowledge and life experience; fostering learners' self-assessment and reflection; and promoting group interaction, collaboration, and teamwork (Abdous, 2011). Pedagogical skills are about the teachers' competencies to determine what, where, when, how and the method that will best adopted to enhance effective teaching that will result in better results. According to Jeral and Elizabeth (2015), online pedagogical skills include well developed and careful design of learning activities that promote interaction and prompt feedback in online environment. Therefore, online educators always establish and project their pedagogical



presence into the online learning environment. One of the pedagogical roles of online educators include pedagogical knowledge, facilitating active learning, designing instruction, coordinating social interaction, managing the course, and troubleshooting technical issues (Mamman and TswanyaSaba 2021) .

Pedagogical approaches are often used in many forms ranging from teacher-centered to learner-centered teaching methods. While the two approaches may seem contradictory, they are often connected to achieving educational goals - for example, a teacher-centered approach can help introduce a new theme, and a student-centered approach may be needed to allow students to explore these ideas and develop deeper insights.

Instructors are anticipated to be resourceful and able to provide education to meet the desires of learners. To be able to achieve this, teachers are expected to fashion out new methods and strategies to deliver knowledge in online learning. Classic pedagogy has helped many generations of teachers and students with bricks and mortar education well, however, it cannot satisfy teachers and students online, as "rapid changes in knowledge and technology drive the need for new ways to disseminate and integrate new information in the work place and work practices and new adult learning methods" (Haythornthwate & Andrews, 2011). Therefore, the need for an innovative pedagogy for online education is necessary. Based on the above assertion the researcher was of the view that for successful online teaching and learning, teachers cannot do without pedagogical skills. Therefore the study intends to look at pedagogical skills needed for effective online teaching and learning in polytechnics.

### **Statement of the Problem**

Online teaching and learning demands that teachers possess pedagogical skills that will enable them to effectively teach in online environment. As important as this pedagogical skill is in online education, the researcher's observed that many lecturers did not possess it. As a result, Polytechnic lecturers in this era of information revolution made possible by Information and Communication Technology (ICT) are still relying on the massively adopted orthodox method of talk and chalk instructional delivery without realizing that the online learning and computer is fast becoming the chalkboard of tomorrow (Ima-Obong & Imoh-Obong, 2016). This reveals that students in polytechnics continue to rely solely on their teachers and the available texts, and the instructional strategies continue to be teacher-centered, while students remain passive learners. Mamman and TswanyaSaba (2021) noted that despite the fact that many educators see the importance of online education at this era of 21<sup>st</sup> century many still lack the pedagogical skills, knowledge and experiences to teach online. Hence, the study centers on the pedagogical skills needed for effective online teaching and learning in polytechnics.

### **Research Questions**

In line with the study, one research question was raised to guide the study:

1. What are the pedagogical skills needed for effective online teaching and learning in Polytechnics?

### **Research Hypothesis**

One null hypothesis was formulated and tested at 0.05 level of significance.

1. here is no significant difference between the mean ratings of male and female lecturers respondents on the pedagogical skills needed for effective online teaching and learning OTM courses in Polytechnics.

T



**Methodology**

The study adopted descriptive survey research design for the study. The study sought the opinion of the respondents on pedagogical skills needed for effective online teaching and learning in polytechnics. The population of the study comprised all lecturers in North Central, Nigeria Polytechnics in the department of Office Technology and Management. A sample population of 323 lecturers was selected for the study. The lecturers were selected because the researcher believed that they are in a better position to assess the pedagogical skills needed for effective online teaching and learning. The instrument for data collection was a structured questionnaire designed by the researcher which is tagged “Pedagogical Skills needed for effective Online Teaching and Learning Questionnaire (PSEOTLQ)”. The questionnaire was made up of 22 items. The items were placed on 4-point rating scale of Strongly Agreed (3.50-4.00), agreed (2.50-3.49), Disagreed (1.50-2.49), and Strongly Disagreed (0.0-1.49). The instrument was face validated by three experts. Split-half method was used where the instrument was divided into two halves of odd and even numbers. The reliability of one half (odd) was determined using spearman Rank Correlation Coefficient. The reliability coefficient of the whole instrument was determined using Spearman Brown Prophecy formula. The reliability coefficient calculated was 0.87. The researcher, with the aid of research assistants, administer 323 copies of the questionnaire. Out of these 270 copies of the questionnaires administered were collected and used. Mean and standard deviation were used to analyze the data collected to answer the research question. Independent t-test was used to test the hypothesis.

**Results**

**Research Question One:**What are the pedagogical skills needed for effective online teaching and learning in Polytechnics?

**Table 1:Mean and standard deviation of responses on pedagogical skills needed for effective online teaching and learning in Polytechnics**

S/N	ITEMS	Mean	Std	Remark
1	Time management skills.	3.77	0.59	Highly Needed
2	Ability or willingness to respond to students' needs immediately.	3.77	2.54	Highly Needed
3	Ability to provide prompt feedback on students' assignments.	3.66	0.64	Highly Needed
4	Ability to provide a solution to students' challenges.	3.69	0.64	Highly Needed
5	Ability to guide students to discover knowledge and fact.	3.67	0.71	Highly Needed
6	Subject matter expert skills.	3.42	0.76	Moderators Needed
7	Skills to monitor and follow up with the academic progress of the students.	3.55	0.70	Highly Needed
8	Ability to support learning through effective interaction.	3.63	0.64	Highly Needed
9	Establishing and sustaining an online presence.	3.51	2.52	Highly Needed
10	Ability to provide clear guidelines for interaction with students.	3.60	0.68	Highly Needed
11	Ability to encourage cooperation among students.	3.59	0.72	Highly Needed
12	Ability to motivate critical thinking discussion among students.	3.51	0.73	Highly Needed
13	Ability to encourage active learning among students.	3.58	0.73	Highly Needed
14	Ability to encourage learning anywhere and anytime.	3.59	0.70	Highly Needed
15	Ability to emphasize time on online tasks and courses that need deadlines	3.41	0.75	Moderators Needed
16	Ability to communicate high expectations.	3.48	0.75	Moderators Needed
17	Ability to incorporate and respect students' diverse views.	3.39	0.89	Moderators Needed
18	Knowledge of preparation of online teaching materials.	3.63	2.52	Highly Needed
19	Ability to manage students through learner-centered approaches.	3.49	0.74	Moderators Needed
20	Ability to encourage students' collaborative knowledge creation in interaction with the teacher and among students.	3.48	0.76	Moderators Needed
21	Ability to use multimedia and open educational resources.	3.55	0.70	Highly Needed
22	Ability to plan and design online courses.	3.48	0.76	Moderators Needed
	<b>Weighted Mean and Std</b>	<b>3.57</b>	<b>0.96</b>	<b>Highly Needed</b>

Source: Field Survey, 2021



Table 1 reveals that the following online pedagogical skills are highly needed for effective online teaching and learning in Polytechnics: time management skills (mean = 3.77), ability or willingness to respond to students' needs immediately (mean = 3.77), ability to provide prompt feedback on students' assignments (mean = 3.66), ability to provide solution to students challenges (mean = 3.69), ability to guide students' to discover knowledge and fact (mean = 3.67), skills to monitor and follow-up with academic progress of the students' (mean = 3.55), ability to support learning through effective interaction (mean = 3.63), establishing and sustaining online presence (3.51), ability to provide clear guidelines for interaction with students (3.60), ability to encourage cooperation among students (mean = 3.59), ability to motivate critical thinking discussion among students (mean = 3.51), ability to encourage active learning among students' (mean = 3.58), ability to encourage learning anywhere and anytime (mean = 3.59), knowledge of preparation of online teaching materials (mean = 3.63) and ability to use multimedia and open educational resources (mean = 3.55).

Also, Table 1 reveals that the following online pedagogical skills are moderately needed for effective online teaching and learning; subject matter expert skills (mean = 3.42), ability to emphasize time on online tasks, and courses that need deadlines (mean = 3.41), ability to communicate high expectations (mean = 3.48), ability to incorporate and respect students' diverse views (mean = 3.39), ability to manage students through learner-centered approaches (mean = 3.49), ability to encourage students' collaborative knowledge creation in interaction with the teacher and among students (mean = 3.48) and ability to plan and design online course (mean = 3.48). The table showed that all 22 items have their standard deviations from 0.59 to 2.54 which are below the fixed value of 1.96. This means that respondents' responses were not too widespread from the mean, the responses were slightly clustered to the mean. The data analyzed in Table 1 reveals that online pedagogical skills are highly needed for effective online teaching and learning in Polytechnics (mean = 3.57, SD = 0.96).

**Test of Hypothesis**

- 1. There is no significant difference between the mean ratings of male and female lecturers respondents on the pedagogical skills needed for effective online teaching and learning OTM courses in Polytechnics.

**Table 2: Summary of t-test of the difference between the mean ratings of male and female lecturer's respondents on the pedagogical skills needed for effective online teaching and learning OTM courses**

Group	N	Mean	SD	t-cal	Df	p-value	Decision
Male lecturers	133	3.58	0.46				
Female lecturers	137	3.56	0.58	0.39	268	0.138	NS

Source: Field survey, 2021

P>0.05



Table 2 reveals that there are 133 and 137 male and female lecturers respondents respectively. Male respondents had a higher mean ( $\bar{X} = 3.58$ ; SD = 0.46) than female ( $\bar{X} = 3.56$ ; SD = 0.58). Table 2 reveals that there was no significant difference between the mean responses of male and female lecturers respondents on the pedagogical skills needed for effective online teaching and learning of OTM courses ( $t_{268} = 0.39$ ,  $P=0.138$ ). Therefore, the hypothesis that stated that there is no significant difference between the mean rating of male and female lecturers respondents on the online pedagogical skills needed for effective online teaching and learning of OTM courses was not rejected. This indicated that male and female respondents did not differ significantly in their responses on online pedagogical skills needed for effective online teaching and learning of OTM courses. Though a slight difference can be observed with the males lecturers having a higher mean (mean = 3.58) than their females lecturers having lower (mean = 3.56), the difference was not statistically significant.

### **Discussion of findings**

The study examined the pedagogical skills needed for effective online teaching and learning in polytechnics. The study found that time management; ability or willingness to respond to students' needs immediately; ability to provide prompt feedback on students' assignments; ability to provide a solution to students' challenges; ability to guide students to discover knowledge and fact; skills to monitor and follow up with the academic progress of the students; ability to support learning through effective interaction; establishing and sustaining an online presence; ability to encourage cooperation among students; ability to motivate critical thinking discussion among students; ability to encourage learning anywhere and anytime; knowledge of preparation of online teaching materials and ability to plan and design online courses are highly pedagogical skills needed for effective online teaching and learning. This means that for one to be an effective teacher in an online environment, pedagogical skills must be possessed. This finding supports the earlier finding of Abdous (2011) who stated that effective online instructors should understand the fundamentals of online teaching and possess pedagogical skills. It is therefore clear that pedagogical skills is essential for effective online teaching and learning.

The study also found that these pedagogical skills are moderately needed for effective online teaching and learning. These are subject matter expert skills; ability to emphasize time on online tasks and courses that need deadlines; ability to communicate high expectations; ability to incorporate and respect students' diverse views; ability to manage students through learner-centered approaches; ability to encourage students' collaborative knowledge creation in interaction with the teacher and among students and ability to plan and design online courses were moderately needed skills. These findings agreed with Teach online.CA (2012) who stated that pedagogy concerns with how technology is changing the way to teach and more importantly the way students learn. The author further noted that major changes in the way to teach post-secondary students are being triggered by online learning and the new technologies that increase flexibility in, and access to, post-secondary education. This was also in line with Abdous (2011) who stated that pedagogy is a learning approach focused on the development of innovation competencies, defining how knowledge is assimilated, produced, and used in a manner that can create innovations. That is why (Fish & Wickersham, 2009) pointed out that the online instructor in higher education needs a change in skills and focus, including using a student-centered approach.

### **Conclusion**

Based on the findings of the study, it was concluded that pedagogical skills are highly needed for effective online teaching and learning. Pedagogical skills such as ability to manage students through learner-centered approaches, collaboration and interaction among students and lecturers, ability to encourage learning anywhere and anytime, knowledge of preparation of online teaching



materials, mastery of subject matter, ability to encourage active learning among students are essential for effective online teaching and learning. This means that for teachers to perform effectively in online environment they have to possess pedagogical skills if not teacher may find it difficult to teach online courses in the online environment.

### **Recommendations**

Based on the findings of the study, the following recommendations are made:

1. Different training on online pedagogical skills should be provided by the polytechnic management for their lecturers. This can be informed of workshops, conferences, and seminars.
2. Lecturers should ensure that they engage themselves in self-development. This will enable them to acquire necessary pedagogical skills needed for effective online teaching and learning without waiting for polytechnic management.

### **References**

- Abdous, M. H. (2011). A process-oriented framework for acquiring online teaching competencies. *Journal of Computing in Higher Education*, 23(1), 60-77
- Enyekit, E. O. & Enyekit, K.E.O. (2014). Assessment of input resources for entrepreneurial skills delivery for human capital development in Nigeria. *Rivers Business Education Journal*, 1(2), 54-63.
- Enyekit, E. O., Ubulom, W, J., & Enyekit, K. E. O. (2015). Pedagogical Incidences of School Mapping in Teaching Business Education Programme as perceived by Business Education Students in Tertiary Institutions in Rivers State. *Conference Proceedings. Association of Business Educators of Nigeria*. 2(1), 1-9.
- Ezeabii, I.C., Ile, C.M., & Ezugwu, S.K. (2019). Improving E-learning among Business Students in Public Universities in South-East Nigeria. *Nigerian Journal of Business Education*. 6(1) 207-216.
- Fish, W. W., & Wickersham, L. E. (2009). Best Practices for Online Instructors: Reminders. *The Quarterly Review of Distance Education*, 10(3). 279-284.
- Haythornthwaite, C. & Andrews, R. (2011). *E-learning Theory and Practice*. London: Sage.
- Ima-Obong, M. A. & Imoh-Obong, I. (2016). Information and Communication Technology: A tool for Social Studies delivery in open educational resources development and expansion in Nigeria. *International Journal of Academia*. 1(1). 95-107.
- Jeral, R. K. & Elizabeth, A. R, (2015). Building a Conceptual Framework for Online Educator Dispositions. *Journal of Educators Online* 30-61.
- Mamman, J. S. & TswanaSaba, M. (2021). University Lecturers' Perception of the Essential Skills and Tasks for successful Online Teaching in the Post Covid-19 Era. *Faculty of Education Conference Proceedings Kwara State University, Malete* 1(1), 281-295.
- Mamman, J.S & Oyinloye, O. T (2016). Perceived influence of cuttingedge teaching/learning methodologies on the acquisition of 21st century business education skills in Nigerian Universities. *Nigerian Journal of business education* 3(2), 137-150
- Mbah, C.N (2016). Utilizing ICT in the teaching and learning programme of colleges of education in Kaduna: The learners' perception. *Journal of Research and Development* 2(1), 78-87.
- McFarlane, D. A. (2011). The leadership roles of distance learning administrators (SLAs) in increasing educational value and quality perceptions. *Online Journal of Distance Learning Administration*, 4(1).
- Muhammed, T.A. Sua, S. & Munnaza, A. (2015). Teachers perception and needs towards the use of E-learning in teaching of Physics in secondary level of Pakistan. *American Journal of Educational Research* 3(5), 1045-1051.
- Teachonline.ca (2012). A New Pedagogy is Emerging... and Online Learning is a Key Contributing Factor. <https://teachonline.ca/tools-trends/how-teach-online-student-success/new-pedagogy-emerging-and-online-learning-key-contributing-factor> Retrieved on 23/8/2021



## **SECRETARIAL PROFESSION AND THE TRAINING NEEDS OF SECRETARIES FOR THE FUTURE OFFICE WORK**

<sup>1</sup>OCHOLI, J.M.

Abubakar Tatari Ali Polytechnic,  
Department of Office Technology and Management  
Bauchi, Bauchi State, Nigeria.  
[mondayochohli24@gmail.com](mailto:mondayochohli24@gmail.com)

<sup>2</sup>Aina, M.A. (Ph.D)

Ekiti State University,  
Faculty of Education,  
Department of Vocational and Technical Education, Ado Ekiti, Nigeria  
[mathew.aina@eksu.edu.ng](mailto:mathew.aina@eksu.edu.ng)

<sup>3</sup>Prof.Ezeani, N.S.

Ekiti State University,  
Faculty of Education,  
Department of Vocational and Technical Education, Ado Ekiti, Nigeria  
[nnekachuka2@gmail.com](mailto:nnekachuka2@gmail.com)

### **Abstract**

*The study examined secretarial profession and the training needs of secretaries for the future office work. In this study, the concepts of digital skills and future office, the importance of digital skills for secretaries and the nature of future office, the digital skills training that the secretaries need and how secretaries can develop these skills were examined. It was concluded that technological revolution is creating new opportunities for secretaries with digital skills who are prepared to work in the future office. The study therefore, recommended that institutions offering OTM programme should expose office technology and management students to the manipulative aspect of the office automation so that the would-be secretaries will fit into the 'dreamt' paperless office of tomorrow.*

**Key Words:** Secretarial Profession, Secretaries, Training, Digital Skills and Future Office

### **Introduction**

Secretarial education is known as Office Technology and Management (OTM). It is one of the specialized programmes offered in the Department of Vocational and Technical, Business Education or School of Business Studies in Nigerian tertiary institutions that lays emphasis on the possession of practical skills necessary to operate office machines and serves as supporting staff to the management in an organisation. Aina (2018) asserted that vocational skills are empirical skills that individuals acquire in a specific area of interest which are more practical than theoretical skills. Individuals learn vocational skills from hands-on experience. The training takes place outside the traditional classroom setting where students are exposed to hands-on activities through first-hand experience and as well acquire classroom knowledge. One of the objectives of Office Technology and Management education programme according to Oyinloye and Asonibare (2019), is to equip students with the appropriate skills to engage in a life of work in the office as well as self-employment. The implication of the objectives and components of the OTM curriculum in the views of Nnaji and Okoro



(2019), is that its recipients are expected to be equipped with skills to use computer and its application software. This explains why a secretary should possess basic office technology skills, have business acumen and versatile in office ICT skills with sufficient knowledge of the operations of all departments within the institution or organization where he/she works.

A secretary is an important office staff in an organisation whose roles are pivotal to the growth and increased performance of an organization. Many higher echelons of management have a secretary who acts as a gatekeeper as well as a care-taker of complex but time-consuming tasks, that freeing the boss up. The International Association of Administrative Professional (IAAP) in Nnaji and Okoro (2019) described a secretary as an executive assistant who has mastery of office skills, demonstrates the ability to assume responsibility without direct supervision, exercises initiative, judgement and makes decisions within the scope of assigned authority. This definition has explained in detail, the type of skill, knowledge and ability that could be required of the secretary in the future office. The secretary's possession of mastery of office skills, knowledge and personal qualities require continual retraining in technology to keep abreast of new emerging and fast-growing office technologies and responsibilities. Umoru (2020) asserted that secretaries are marked from other staff because of ICT and office skills such as digital skill which they possess.

Digital skills refer to the skills related to the use of technology. UK Study Centre (2021) citing UNESCO defined digital skills as those needed to "use digital devices, communication applications, and networks to access and manage information". Possessing digital skills is so essential to personal life, and in the workplace. With the remote work continuously on the rise and technology constantly changing, it is crucial to ensure that secretaries are effectively trained on the tools, technology, and digital skills to help them become successful in the office and at home. Therefore, training secretaries on digital skills is a key component in keeping up with this growth in remote working and the rapidly changing technology field.

Training helps a secretary to acquire requisite technical skill and attitude to adequately perform multi-tasks in office of the future. Hornby (2000) described training as a process of learning the needed skills to do a job. It is a process or set of activities aimed at assisting individuals to acquire knowledge, skills and attitudes necessary for the effective performance of a specific task or job. Training relates to immediate, short-term upgrades and improvements. Thus, training secretaries will affect their behavior positively and drive their pathway upward thereby, resulting to performance gain in an office.

An office is the central nerve that coordinates the activities of an organisation. The office is the physical heart and soul of a business, reflecting its brand and culture. The COVID-19 pandemic has altered the nature of work, workforce, and workplace of today. In fact, the outbreak of corona virus in 2019 (COVID 19) has popularised the use of virtual office across the globe as office workers were directed to work from their respective homes. Matić (2018) observed that the development of new technologies dictates the adjustment of traditional jobs and skills to the digital environment, requiring digital skills, collaboration and social hub where people come together to deliberate on ideas and come up with solutions to problems. Deloitte leaders (2020) believed that in a digital world, machines and humans will be enabled to do what they do best independently and in concert with each other but will mostly identify, attract and engage people with the right skills and experience to achieve its mission and purpose. Even though the future workplace will blend the physical and virtual environments, it is time to improve the nature of work, workplaces, leadership and cultural approaches no matter where people are working.

Rae (2021) stated that the nature of work continues to change, with such things as distance working and automation increasingly a commonplace. The manpower needs of many businesses as well as the functions are also affected as machines now perform complex tasks with greater speed and accuracy than human beings. Future secretaries are expected to demonstrate technological competencies in their use of laptops, and smart devices to perform secretarial or word processing tasks on daily basis. Their ability to use modern office equipment in the course of receiving and sending out information in the most appropriate, fastest and reliable form is germane in the future



office. The use of these technologies is expected to improve the job performance of OTM graduates in areas of record keeping, memo writing, collaboration, image making, data sourcing, information dissemination, timely decision making process, e-mailing, data-gathering and so on.

The 21<sup>st</sup> century skills are a set of abilities that students need to develop in order to succeed in the information age as office administrators. Like a force of nature, the digital age cannot be denied or stopped. According to Olaopa (2015), digital era has four very powerful qualities that will result in its ultimate triumph: decentralizing, globalizing, harmonizing, and empowering. The new and powerful tools that digitisation is giving rise to is trending towards greater freedom, and a diminishing attachment to fixed structures which increasingly calls for ability to think entrepreneurially, combine things well and, in particular, manage oneself.

The first step in developing skills is for secretaries to understand the digital skills that are most applicable to them and their business because this skill will give secretaries' career staying power the moment they get a job; it reduces risk of automation. As the reliance on digital communication grows, secretaries must keep up with the skill demand. It is also imperative to note that with the ever-evolving digital landscape, the skills requirements will only continue to change. It is significantly relevant for secretaries to arm themselves with the basic digital skills and continuously upskill themselves to keep pace with the latest developments.

### **Office Technology and Management in Tertiary Institutions**

The Office Technology and Management (OTM) Programme in Nigeria tertiary institutions was designed to impart the youths with practical and employable skills. Office Technology and Management is an integral component of business education programme that is offered in Colleges of Education, Polytechnics, and the Universities primarily to educate and train students to become competent office managers as well as business educators (Okoli, 2019). **The business and administrative components of OTM programme according to National Board for Technical Education (NBTE) (2004) is designed for students whose goals include business management, human resource management, self-employment, entrepreneurial ventures, or a variety of different careers. This implies that a qualified secretary should possess basic office technology skills, have sufficient business acumen, be versatile in office information and communication technology and have sufficient knowledge of the operations of all departments within the organization where he/she works. This portends that OTM education is work-focused, skill-based, result-oriented, and technology-based.**

Office Technology and Management programme is a practical oriented programme designed to equip students with professional foundation, general education courses, vocational and interpersonal skills in OTM for effective work competencies in various organisations. OTM Education is a specialized phase of technical and vocational education (TVE) that prepares learners to enter into teaching and office occupation as capable and intelligent member of the work-force, making recipients to acquire skills to understand the ability of participating actively in business transactions/activities whether as producers or users of goods and services.

### **Concepts of Digital Skills and Future Office**

Digital skills according to Quarto (2020), include the knowledge and ability to decide information needs from digital technology sources, and to properly use digital tools and facilities to input, access, organize, integrate and assess digital resources as well as to construct new knowledge. TechBoomers (2018) defined digital skills as the abilities necessary to understand, utilize, find, evaluate, navigate, share, create content and making use of digital technologies and the Internet, with little or no assistance. Possessing digital skills is so important in today's modern business environment and the future workplace. Iberdrola (2021) claimed that digital skills are not just about learning and developing technological skills but they also involve the acquisition of knowledge, values, attitudes,



regulations and ethics about ICT so as to get the most out of technology. In addition, they involve thinking and the valuable use of the data obtained through the use of technology.

Digital skills are characterized as tasks or communications performed on digital devices where information is accessed and managed. Digital skills according to the World Bank in Umoru (2020), are separated into three, namely: basic, intermediate and advanced. UNESCO divided digital skills into basic, generic and higher levels based on a digital skills framework. He explained that basic digital skills are entry-level practical skills needed to make elementary use of digital devices and applications, while intermediate digital skills are skills which assist a person to make essential and valuable use of online applications and services. Similarly, advanced digital skills are the group of skills that form the bases of specialist (ICT) occupations and professions.

In the future office, paper may be a thing of the past, mobile devices and laptops may become a popular choice for many employees. According to Theron (2016), the concept of the office of the future is more than just the space in which employees work - it includes the culture and vibe of the office as well as the cognizance of the health and well-being of all employees. This means, offices of tomorrow will consist of multifunctional spaces that can be utilised together for different purposes. The future work will be influenced by technological, generational and social shifts. Thus, the office of the future would encourage learning through unusual methods, appealing to all ages and adjusting to the changing times. This will allow for creativity, increased performance and encourage innovation. The future of employment will be a hybrid mix of office and home-working. Workers will spend less time commuting and more time collaborating (Samuels, 2021). This means people in the future will split their time between working from home and going into the office.

#### **Importance of Digital Skills for Secretarial Profession and the Nature of Future Office**

**Technology should not be a reason for exclusion of secretarial professionals, rather a tool that empowers and** helps to overcome adversities and discover new opportunities and education in digital skills is, without doubt, the best way to overcome this challenge. Iberdrola (2021) noted that digitisation is not adverse to social and economic progress but it brings prosperity, social equality and, ultimately, a more competitive economy.

With digital revolution altering conventional workplace functions and designing new jobs, there is a pressing need for secretaries to develop and deepen their technical skills to advance work quality, drive creativity and stay employable. A secretary with a growth mindset will be able to plug the skills gap and creates more exciting employment opportunities for himself or herself in the future office. Osborn (2021) outlined the importance of digital skills to include increasing revenue; businesses building stronger customer relationships; having a competitive edge over competitors; providing new strategies and approaches to working; improving productivity and effectiveness, and better communication, while FutureLearn (2020) stated that it boosts the career of those who want to embrace the flexibility of freelance work, enhances personal and professional skills that gives more options for getting a job.

#### **Digital Skills Training Needs of the 21<sup>st</sup> Century Secretaries**

There are a huge variety of skills that can be considered as digital skills. UK Study Centre (2021) stated the skills to include: skills to send emails securely, use email attachments, and post on social media; handle information and content, use search engines, understand that not all online content is reliable, access content across devices and on the cloud; set up accounts online, fill in online forms; find solutions to problems using tutorials/chat and improve productivity; and keep passwords secure, take precautions against viruses among others.

In their contributions, the Digital Marketing Institute (2017), TechBoomers (2018), Doyle (2019), FutureLearn (2020), Iberdrola (2021), Digital Skill Global (2021) and Randstad (2021) discussed the digital skills needs of the 21<sup>st</sup> century secretaries under the following subheads: Emailing Skill, Social Media Management Skill, Blogging Skill, Digital Marketing and Social Marketing Skill, Mobile Skill, Business Data Analytical Skill, Coding Skill, Cloud Skill, Artificial Intelligence Skill, Content



Management System (CMS) like WordPress Skill, Showcasing a Portfolio of Work Skill, Search Engine Marketing Skill and Content Marketing Skill.

### **Developing Digital Skills among Secretaries**

One of the several ways to close skills gap according to New Jersey Institute of Technology (2021), is by reskilling or upskilling to compete in the marketplace. For those already engaged, the onus remains on companies to upskill them for relevance, while some ambitious employees may take the initiatives of self-sponsorship training to improve themselves. Secretaries need to invest in themselves, because when they do, they take that with them for the rest of their lives.

The following are some of the various ways by which the 21<sup>st</sup> century secretaries can adopt to develop their digital skills as observed by different scholars: Take free Online Courses: TechBoomers (2018) claimed that some websites have interactive tools such as The Skills Toolkit, FutureLearn, Google Digital Garage, BT Skills for Tomorrow, TechBoomers, to help one learn. **Certificate Programs:** Gross in UK Study Centre (2021) noted that the key to preparing students for the digital industry is early exposure inside and outside the classroom. Make an Effort to Use Technology for your Job: UK Study Centre (2021) viewed that a person can make it a point of browsing the World Wide Web daily in order to improve efficiency, integrate digital technologies into his or her job or personal endeavours. Little actions of these nature go a long way to increasing the level of digital abilities over time. The more a person makes an effort to imbibe digital technologies and the Internet into his/her life, the faster his/her skills improve.

### **Conclusion**

Secretarial profession has more room for improvement in the future if secretaries can acquire digital skills. It is therefore, concluded that technological revolution is creating new opportunities for secretaries with digital skills who are prepared to work in the future office.

### **Recommendations**

1. It is recommended that today's secretaries should always update their digital skills to fit into the future office.
2. Institutions offering OTM should expose their students to the manipulative aspect of the office automation so that the would-be secretaries will fit into the 'dreamt' paperless office of tomorrow.
3. Secretarial education teachers should endeavour to attend seminars and conferences in order to be kept abreast of the latest development in the world of work and technology. This will help them to adequately impart the knowledge, skills and competencies into the students.



### References

- Aina, M.A. (2018). Towards effective skill acquisition in Business Education programmes. Ekiti State University TVET – *International Journal of Research and Design in Technical, Vocational Education and Training (IJORAD)*, 2(1), 183-189.
- Deloitte leaders (2020). Addressing the impact of COVID-19 Elevating the human experience during crises. Retrieved 8 September, 2021 from: [www.deloitte.com/COVID-19-leaders](http://www.deloitte.com/COVID-19-leaders).
- Digital Marketing Institute (2017). 10 digital skills that can make students instantly employable. Retrieved 25 August 2021 from: <https://digitalmarketinginstitute.com/blog/10-digital-skills-that-can-make-students-instantly-employable>.
- Digital Skills Global (2021). The top 10 digital skills tech companies are looking for today. Retrieved 25 August 2021 from: <https://digitalskillsglobal.com/blog/the-top-10-digital-skills-tech-companies-are-looking-for-today>
- Doyle, A. (2019). Computer skills that will help you get hired. Retrieved August, 20 2019 from: <https://www.careertoolbelt.com/computer-skills-that-will-help-you-get-hired/>
- FutureLearn (2020). The complete guide to digital skills. Retrieved 25 August 2021 from: <https://www.futurelearn.com/info/blog/the-complete-guide-to-digital-skills>
- Hornby, A.S. (2000). *Oxford Advanced Learner's Dictionary of current English* (6<sup>th</sup> Ed.), New York: Oxford University Press.
- Iberdrola (2021). Digital skills: are we ready for digitization of employment? Retrieved 8 September 2021 from: <https://www.iberdrola.com/innovation/digital-skills>
- Matić, T. (2018). Proposal of Strategy of Digital Skills Development in the preparation phase. Retrieved 25 August 2021 from: <https://mtt.gov.rs/en/releases-and-announcements/proposal-of-strategy-of-digital-skills-development-in-the-preparation-phase/>
- New Jersey Institute of Technology (NJIT) (2021). How to develop digital skills. Retrieved 25 August 2021 from: <https://digitalskills.njit.edu/article/how-to-develop-digital-skills/>
- Nnaji, F.O & Okoro, F. (2019). Determination of the adequacy of practical elements Office Technology and Management programme as perceived by graduate secretaries in Taraba State. *Association of Business Educators of Nigeria Conference Proceedings*, 6(1), 72-80
- Okoli, C.E. (2019). Office technology and management curriculum contents and the use of modern information communication and technology facilities among students of Polytechnics in Nassarawa State, Nigeria. *Association of Business Educators of Nigeria Conference Proceedings* 6(1), 624-631.
- Olaopa, T. (2015). Rethinking the nexus between technology and education in Nigeria. <https://guardian.ng/features/rethinking-the-nexus-between-technology-and-education-in-nigeria/>
- Osborn, C. (2021). Digital skills training is more important than ever. Retrieved 8 September, 2021 from: <https://thetrainingassociates.com/digital-skills-training-is-more-important-than-ever/>
- Oyinloye, O.T. & Asonibare, E.M. (2019). Synergy and collaboration of institution-industry: a panacea to development of quality Office Technology and Management curriculum in Polytechnics. *Association of Business Educators of Nigeria Conference Proceedings*, 6(1), 491-500.
- Quarto, L. (2020). What is the meaning of digital skills? Retrieved 25 August 2021 from: <https://askinglot.com/what-is-the-meaning-of-digital-skills>
- Rae, L. (2021). The future company secretary: upskilling, automation or coexistence? Retrieved 25 August 2021 from: <https://www.cgi.org.uk/blog/future-company-secretary>.



- Randstad (2021). Top 5 digital skills you need in 2021. Retrieved 25 August 2021 from: <https://www.randstad.com.sg/career-advice/career-development/top-5-digital-skills-you-need-in-2021/>
- Samuels, M. (2021). The office of the future is about people not places. Retrieved 8<sup>th</sup> September 2021 from: <https://www.zdnet.com/article/the-office-of-the-future-is-about-people-not-places/>
- TechBoomers (2018). 17 great ways you can work to enhance your digital skills. Retrieved 25 August 2021 from: <https://techboomers.com/ways-to-enhance-your-digital-skills>
- Theron, G. (2016). 5 factors that will define the office of the future. Retrieved 8 September, 2021 from: <https://www.felix.net/project-news/5-factors-defining-the-office-of-the-future>
- UK Study Centre (2021). How to boost your digital skills. Retrieved 25 August 2021 from: <https://www.ukstudycentre.co.uk/blog/how-to-boost-your-digital-skills/>
- Umoru, T. A. (2020). Plotting pathways across transformational changes in business education: a desideratum for empowering learners to engage the world. *Nigerian Journal of Business Education (NIGJBED)*. 7(1), 1-20. Available at: <http://www.nigjbed.com.ng>. Accessed July 2022.



## SECRETARIAL PROFESSION IN THE DIGITAL WORK PLACE

**DR. EZEONWURIE OLUFUNKE ABIOLA**

Department of Office Technology And Management Education,  
School of Secondary Education (Business)  
Federal College of Education (Technical) Bichi, Kano State.  
*funkeezeonwurie@gmail.com*

### Abstract

*The main aim of this research was to ascertain the secretarial profession in the digital work place. The study was carried out in the North West States of Nigeria. A survey research design was used for the study. The population comprised 60 secretaries across ministries, department and agencies in Kano States Nigeria. A self structured questionnaire developed by the researchers and carefully validated by two experts. From Faculty of Vocational Technical education, department of Business Education, University of Nigeria Nsukka. Was used to solicit information from the respondents. The instrument consists of 35 questionnaire items. Mean and standard deviation were used to answer the research questions. The result of the study showed that for the secretarial profession to remain relevant in the work place, there is need for the secretaries across ministries, department and agencies to acquire requisite skills and competencies in digital work skill needs. The study was concluded that the secretaries need to be adequately equipped with relevant knowledge, attitude and competencies in digital work place skill needs to be relevant and also to be able to effectively and efficiently execute tasks. It was recommended amongst others that: Secretaries across ministries, department and agencies should attend periodic training and retraining on professional competencies in order to acquire current digital work place skills and competencies needed to utilize and manage a digital work places. Also, that there should be an orientation programme organised by the head of service for newly employed secretaries where they will be taken through skills and competencies needed in digital work place as identified in this study.*

**Keywords:** Secretarial, profession, Digital work place,

### Introduction

The office today is dynamic and challenging. The advances in office technology and information systems have greatly transformed the role and functions of the secretarial profession in both public and private organizations in the 21<sup>st</sup> century. The system of office information generation, acquisition, processing, storage, dissemination and even the business environment all over the world have witnessed tremendous changes in its traditional methods and practices thus making the secretarial profession to fall among office personnel who have come face-to-face with the challenges of the new technology (Ezeonwurie, 2017). For decades now, fast changes have been taken place in all facet of human life including the office environment as a result of technology. Buttressing this fact, Okolocha and Baba (2017), opined that it is an indisputable fact that presently, there is a wide spread of technological advancement in ways and means of rendering office services. The function of the office remains the same but its responsibilities and expectations changes as a result of changes in technology. in the word of Adu (2014), the secretarial profession in the world are witnessing a lot of technical and practical changes on daily basis. This ever changing technology has come with new roles and responsibilities for the secretary in the modern office called: 'Digital Work Place'.



A secretary as we all know plays a very vital role in an office. That is to say a secretary is an indispensable office personnel. Supporting this assertion, Adebayo and Akinyele (2012), expressed the view that a secretary is an executive assistant who has mastery of office skills, demonstrates the ability to assume responsibility with or without supervision, exercises initiatives and judgment and makes decision within the scope of assigned authority. A professional secretary according to Oguejiofor (2015), is not only needed to have theoretical and practical knowledge of the new technologies but to be competent in the usage of those computer packages that are needed and necessary for her secretarial work performance in the digital work place. The roles of secretarial professionals have been turned around by technology. It has provided the tools that shift the role of secretaries from that of information recorders to business strategists (Adedoyin, 2010; Appah and Emeh, 2011 and Jaiyeola, 2007). Several other authors in the secretarial profession are of the view that the secretary has to be well equipped with requisite digital work place skill needs to meet the present challenges. It was concluded the changes will reshape both the office and the secretarial profession (Boladele, 2012; Onifade, 2009; Igbinedion, 2010).

A secretary in the view of Adozoga and Massnawain Ezeonwurie (2017) is expected to be computer literate and proficient in a number of word processing, spreadsheet and desktop publishing software including sending and receiving electronic mail (e-mail) and browsing the World Wide Web (www) (that is the internet). In the same vein, Boladele (2012), opined that the secretary's value to the organization is often measured by response to these challenges. That She is no longer confined to taking notes, typing and making tea. Buttressing the above assertion, Nwaokwa and Okoli (2012) assert that the efficiency and effectiveness of the secretary depends on her ability to operate electronic equipment-computer and this requires the acquisition of new skills, new knowledge and new techniques of managing information.

### **Statement of the Problem**

The advancements in information communication technologies has led to the need for secretaries to reposition themselves in other to continue to be relevant in their performance of office functions as well as cope with the trend of technological changes in digital work place. The secretarial profession has been affected in one way or the other due to the introduction of digital work place. At this junction, one may pause and ask, If the demand in digital work place will make additional demands on the analogue secretaries in terms of skill training. It is to this question that the research work was carried out to ascertain the place of the secretarial profession in the digital work place.

### **Purpose of the Study**

The main purpose of the study is the secretarial profession in the digital work place. Specifically, the study sort to ascertain:

1. The digital work place skill needs of the secretarial profession

### **Research Question**

1. What are the digital work place skill needs of the secretarial profession?

### **Method**

A descriptive survey research design was used to carry out this study. The design is appropriate for this study because it makes use of questionnaire to elicit respondents opinion on the subject matter. The population of the study is made up of 60 secretaries drawn from ministries department and agencies in Kano State Nigeria. There was not sample used as the entire population was reached and managed. The instrument used to elicit information for the study was a structured



questionnaire containing a 35 items. The instrument was validated by two experts. From Faculty of Vocational Technical education, department of Business Education, University of Nigeria Nsukka. The internal consistency of the questionnaire was ascertained using Cronbach Alpha reliability formula which yielded 0.74 were used for data analysis. The descriptive statistical design was used for the analysis. Mean score of 2.50 and above was used for the acceptance of items on digital work place skills. The decision rule with respect to hypotheses was not to accept the null hypotheses when the calculated value is greater than the critical value, while, the hypotheses be accepted when the calculated value is less than the critical value

**Presentation of Data**

**Research Question 1**

1. What are the digital work place skill needs of the secretarial profession.

**Table 1:** Digital work place skill needs of the secretarial profession. (N = 60)

S/N	Digital Work Place Skill Needs	X	SD	Remark
1.	Mastery of word processing packages/Software	4.06	0.51	Needed
2.	Ability to create and organize computer files and folders	4.08	0.50	Needed
3.	Ability to use storage devices (hard disk, diskette, CD, flash etc.) for storing and sharing files	3.85	0.82	Needed
4.	Generate MS office document using integrated application	3.76	0.85	Needed
5.	Manipulate hardware devices like printer, scanner, digital camera and projector to create electronic records.	3.88	0.58	Needed
6.	Inserting pictures and symbols into a document	4.07	0.60	Needed
7.	Using computer aided design such as digital camera, touch screen, trackballs etc for records creation	3.92	0.96	Needed
8.	Opening and working with more than one application at a time (multi –tasking) for records creation	3.91	0.70	Needed
9.	Using Word Art to create and shape text in a Document	3.95	0.61	Needed
10.	Use of electronic document imaging for the storage and retrieval of bitmapped documents	4.00	0.62	Needed
11.	Use of Microsoft Access to generate management reports	3.41	0.73	Needed
12.	Use of Microsoft Access to generate management reports	3.82	0.84	Needed



13. Knowledge to access the Internet application software or web browser	3.88	0.61	Needed
14. Creating an e-mail account	3.85	0.79	Needed
15. Opening and composing mail online	3.86	0.80	Needed
16. Sending and receiving mails with attachment	3.89	0.62	Needed
17. Uploading information into the internet	3.82	0.76	Needed
18. Ability to communicate with colleagues and clients online	3.42	0.90	Needed
19. Ability to use shared devices with a network	3.89	0.71	Needed
20. Refreshing and saving a web page	4.06	0.48	Needed
21. Downloading information from the internet	3.88	0.72	Needed
22. Ability to print a web page document	4.06	0.48	Needed
23. Generate and use electronic mail	4.05	0.49	Needed
24. Placing and confirming orders online (electronic marketing)	3.92	0.68	Needed
25. Use the internet to store specifically formatted documents in multimedia and graphics	3.92	0.68	Needed
26. Opening a PowerPoint work area	4.08	0.36	Needed
27. Ability to create slides using different layout	4.07	0.38	Needed
28. Adding titles and subtitles to a slide	4.11	0.57	Needed
29. Changing font and sizes of text in a slide	4.17	0.53	Needed
30. Applying the slide show effects	4.02	0.34	Needed
31. Adding sounds and videos to presentation	4.09	0.64	Needed
32. Applying transition effects	4.10	0.42	Needed
33. Running slide show in a power point	4.11	0.40	Needed
34. Create PowerPoint graphics/slides of business products to be sent online (Electronic marketing)	4.08	0.42	Needed
35. Ability to make presentation using slides and projectors	4.11	0.57	Needed

*Source: field trip 2021*

The data shown in Table 1 reveals that all thirty-five items listed to answer Research Question One, were accepted by the respondents as the digital work place skill needs of the secretarial profession. This implies that secretaries across ministries, department and agencies unanimously accepted all the items listed as digital skill needs of secretaries profession.

#### **Discussion of findings**

The findings of this study are discussed based on research questions as follows:



The findings of this study regarding digital work place skill needs of professional secretary shows that the respondents agreed that the secretarial profession needed the thirty-five identified digital work place skill needs. The identified skill needs include: mastery of word processing packages/software, ability to create and organize computer files and folders, Use the internet to store specifically formatted. documents in multimedia and graphics for storing and sharing files, Ability to make presentation using slides and projectors among others.

The findings of this study on digital work skill needs agreed with the findings of Ezeonwurie (2017) who identified computer skill needs of secretaries to include, Create PowerPoint graphics/slides of business products to be sent online (Electronic marketing, opening an existing document, using page set-up and paper sizes,

Ability to communicate with colleagues and clients online, Use the internet to store specifically formatted documents in multimedia and graphics. Furthermore, The findings are also in agreement with Ezeonwurie (2021) who stated that for the secretarial profession to remain relevant in the digital work place, there is need for the secretaries to acquire skill that will enable them to be able to create PowerPoint graphics/slides of business products to be sent online, use computer aided design such as digital camera, touch screen, trackballs for records creation, placing and confirming orders online (electronic marketing), Opening and working with more than one application at a time amongst others.

### **Conclusion**

Based on the findings of the study, It was concluded that the Secretarial profession of the 21<sup>st</sup> century are saddled with a lot of responsibilities and organisations expect so much from them. This need is further compounded by the dynamic nature of today's offices which have gone highly electronic. Thus, the secretaries need to be adequately equipped with relevant knowledge, attitude and competencies in digital work place skill needs to be relevant and also to be able to effectively and efficiently execute tasks.

### **Recommendations**

Based on the findings of the study and conclusions drawn from the study, the following recommendations were made:

1. Secretaries across ministries, department and agencies should attend periodic training and retraining on ICT in order to acquire current digital work place skills and competencies needed to utilize and manage a digital work places.
2. There should be an orientation programme organised by the head of service for newly employed secretaries where they will be taken through skills and competencies needed in digital work place as identified in this study.
3. The office technology and management education curriculum should be constantly reviewed, revised and adjusted by specialists in the field in collaboration with the industries. This is necessary to enable graduates fit properly and competently in the digital workplace of the 21<sup>st</sup> century.
4. Governments should recognize the need for Information Communication Technology skills and their benefits to the progress of every organization. Consequently, adequate training and resources should be provided. Model offices should be equipped with the latest equipment's/facilities to enable students have adequate exposure to practical's.

### **References**

Adebayo, T.O. and Akinyele, T.A. (2012). Challenges of modern professional secretary/office managers in achieving success at work, *Journal of Management and Corporate Governance* (2).36-50.



- Adedoyin, T. (2010). I.T. Productivity Tools for Managing the accounting function. *The Nigerian Accountant*, 43(4): 30-36.
- Adu, F. (2014). *Assessment of records management practices among the administrative staff of university of education, Winneba Kumasi (KEW-K) and Mampong (UEW-M) campus* (Unpublished doctoral dissertation). University of science and Technology, Ghana.
- Appah, E. and Emeh, Y. (2011). Information technology and internal auditors' Activities in Nigeria, *Asian Journal of Information Technology*, 10(6): 201-208.
- Boladele, Y. (2012) Secretarial Efficiency in an Automated Office: *Journal of the School Vocational and Technical Education*, 7(1), 123-134.
- Ezeonwurie, O.A (2017). Assessment of Information and communication technology Skills needed by secretaries in Collèges of Education in North West Nigeria for effective work performance. *Online Journal of Arts, Management and Social Sciences (OJAMSS)*. 2 (3) 82-93.
- Ezeonwurie, O.A (2021). Electronic records management practices implemented by secretaries in ministries, department and agencies in Kano State Nigeria. *International Journal of Management (IJM) Volume 12(4)*, 839-854.
- Igbinedion, V.I. (2010). Knowing the Graduate office Secretary, *Ozean Journal of Social Sciences*, 3(1): 116-120.
- Jaiyeola, R. (2007). Information communication technology as a tool for effective performance of chartered accountants. *The Nigerian Accountant*, 40(1): 48-49
- Nwaokwa E. and Okoli B.E. (2012) Information of communication technology on the influence performance of secretaries in Government Ministries in Nasarawa State, North-Central Nigeria. *Research Journal of Information Technology* 4(3): 93-97, 2012.
- Oguejiofor, C.S. (2015). Office records management competencies used by secretaries in Anambra State civil service. *An unpublished Ph.D thesis* submitted to the Department of Business Education, Ebonyi State University, Abakaliki.
- Okolocha, C. C. and Baba, E.I. (2017). Assessment of skills possessed by secretaries for effective electronic records management in Polytechnics in North Central, Nigeria . *Global journal of management and business research administration and management*. 17(1) 1-9
- Onifade, A. (2009). The third millennium secretary and information and communication technology: Nigerian Experience, *International Journal of Management and Information System*, 13(2): 39-48.



## **FRAMEWORK FOR DIGITAL SKILLS ACQUISITION FOR GLOBAL COMPETITIVENESS BY BUSINESS EDUCATION STUDENTS OF TERTIARY INSTITUTIONS IN NIGERIA**

**<sup>1</sup>OKUTE AGNES LAWRENCE, Ph.D**

*Department of Vocational Education, University of Calabar, Calabar*  
[agnesokute@unical.edu.ng](mailto:agnesokute@unical.edu.ng), [agnesokute@gmail.com](mailto:agnesokute@gmail.com)

**<sup>2</sup>ENANG CHRISTIANA ETONG, Ph.D**

*Learning and Development Department*  
*Office of the Head of Civil Service of the Federation*  
*Federal Secretariat, Phase II, Abuja-Nigeria*  
[christianaenang@yahoo.co.uk](mailto:christianaenang@yahoo.co.uk)  
[christianaenang@gmail.com](mailto:christianaenang@gmail.com)  
[etong.christiana@fedcs.gov.ng](mailto:etong.christiana@fedcs.gov.ng)

**<sup>3</sup>ETOMA MOSES GEORGE**

*Department of Vocational Education,*  
*University of Calabar, Calabar*  
[mosesetoma@unical.edu.ng](mailto:mosesetoma@unical.edu.ng)

### **Abstract**

*The digital era calls for continuous acquisition of new skills and updating of existing skills in order to align with global trend. This is because new technologies are emerging at an exponential rate, with attendant need for constant change in work environment. This underscores the need for this paper which is a framework for digital skills acquisition for global competitiveness by business education students in tertiary institutions in Nigeria. The Paper proposed a framework for digital skills acquisition in three dimensions, namely: Use of digital systems and tools, use of software application and application of security measures in a digital environment. The paper identified skills cluster that should be structured as a framework in each of the skills dimension proposed. The paper concludes that the acquisition of digital skills by business education students of tertiary institutions in Nigeria is fundamental in the 21<sup>st</sup> century and beyond if they must be globally competitive. It was suggested, among others, that the three levels of digital skills and the skills clusters identified should be embedded in the curriculum of business education at the tertiary level.*

**Keywords:** Digital skills, tertiary institutions, business education, framework.

### **Introduction**

Globally, the use of digital technology which gives people access to huge amount of information has necessitated the acquisition of a new set of skills to access, manage, integrate and evaluate information. All over the world, the workplace is changing as a result of computerization, automation and mechanization of which Nigeria is not an exception. To be



relevant after graduation, students of business education need the acquisition of new sets of skills which are referred to as digital skills. This is so because studies carried out by Helsper and Reisdorf, (2016) have revealed that public and private organizations worldwide are embarking on digitalization of their services which is becoming a risk on the general public becoming digitally excluded. The danger of becoming digitally excluded poses a threat to all individuals who do not have the necessary skills to handle the digitization of the various services of life domains. Also, research carried out by experts in the field of digital skills like van Deursen and van Dijk (2014) and Helsper and Eynon (2013) stressed that digital skills and competences, and the ability to make use of digital media in an autonomous and strategic way, are of increasing importance to ensure full participation in the digital work environment by users.

A key element on the agenda of many scholars, practitioners and policy makers worldwide is the development of digital skills and competences in order to ensure citizens' ability to fully participate in today's increasingly digitized society. Thus, scholars in the field of digital skills often make use of conceptual framework and models on digital literacy. This is because models and framework play a vital role in gaining insight into the concepts and ideas put forward by experts. A framework is structure that underlies the context in which an idea can be better explained. Digital Skills according to van Deursen, Helsper, and Eynon (2014), and van Dijk and van Deursen, (2014), refer to the technical aspects of competences and knowledge. They distinguish between six types of practice-oriented skills as follows:

- i. operational skills known as "button knowledge" that refers to the operational manipulation of computer and Internet software and hardware;
- ii. formal skills, or the ability to understand and use formal characteristics of computer and Internet, such as hyperlinks or move between Internet pages;
- iii. information skills, or the skills required to search, select, handle and critically evaluate Internet and digital media contents;
- iv. strategic skills, or the capacity to use Internet to one's personal advantage;
- v. communication skills required to participate in online networks, online communication strategies; and
- vi. content creation skills needed to create and distribute content on the Internet

Another practice-oriented interpretation of skills is used in the European Qualifications Framework (European Commission, 2008). In the framework, the distinction is made between knowledge, skills and competence. Knowledge is defined as "the body of facts, principles, theories and practices related to a field of work or study". Skills are referred to as "the ability to apply this knowledge", whereas competence is seen as "the proven ability to use these sets of knowledge and skills for one's personal development". Digital skills according to the framework are seen as the more practical and measurable outcomes of media, information or digital literacy. Martin and Madigan (2006) conceptualization of digital literacy corroborate the distinction between skills and literacy thus, digital literacy is the awareness, attitude and ability of individuals to appropriately use digital tools and facilities to identify, access, manage, integrate, evaluate, analyze and synthesize digital resources, construct new knowledge, create media expressions, and communicate with others, in the context of specific life. Digital skills are discrete, multi-step procedures enabling the operators to navigate through a series of menus and submenus to set parameters and execute commands. The acquisition of digital skills and the use of computer-based tools are expected of graduates of business education programme in



tertiary institutions.

Tertiary institutions have a key role in the digital transformation of our societies, particularly in addressing the need for adequate skills. According to Okute and Agomuo (2014), tertiary institutions are the third tier of learning that provides training in an ever-increasing number of specialized knowledge and skills for modern society. It is incumbent on all business educators as stakeholders in education to pay greater attention to educating their students for sustainable development. According to the United Nations Educational, Scientific and Cultural Organization (UNESCO) (2014), education for sustainable development allows every human being to acquire the knowledge, skills, attitude and values necessary to shape a sustainable future. For business education programme to be sustainable, its recipients at the tertiary level are expected to be equipped with appropriate knowledge and skills for global competitiveness in a digital era that is highly dominated with technology. Similarly, Enang and Okute (2019) pointed out that skills and knowledge are the engines of economic growth and social development of any nation. Therefore, business education students are expected to adequately acquire these skills to enable them fit into the digital work environment in which they will find themselves upon graduation from the university, if they must be relevant and compete favourably with their counterparts in a highly competitive global marketplace where knowledge and skills are the major commodities for survival in any endeavour.

As the digital transformation is moving ahead, the question of digital skills has become a societal challenge. Iordache, Mariën, and Baelden, (2017) stated that people should be equipped with the right skills to make use of the new possibilities in their work. This is because labour markets are changing due to automatization. As pointed out by the Organization for Economic Cooperation and Development (OECD) the need for mid-skilled labour has decreased while that for high-skilled labour, often university graduates, has increased over the last decades (OECD, 2018). Digital technologies have the potential to change the way we work and interact, which is likely to create new opportunities, but also challenges (Thomas, 2019).



**Fig. 1. Framework for digital skills**

It is based on these challenges that digital skills acquisition for business education students in tertiary institution in Nigeria becomes a necessity.

Business education is that aspect of Technical and Vocational Education and Training (TVET) involving, in addition to general education, the study of technologies and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of the economy and social life (FGN, 2013). Business education is also an educational



programme offered in tertiary institutions in Nigeria. It is a programme designed to inculcate in the students the understanding, values, knowledge, and skills required for efficient performance in the world of work. The need to prepare business education students to fit into the global market of the 21st century and beyond requires the acquisition of digital skills. It is imperative to develop a framework for digital skills acquisition for business education students in tertiary education in Nigeria, with emphasis on the use of digital systems and tools, software applications and security measures in a digital environment. The diagram below presents the framework for digital skills acquisition for business education students.

Literature on framework for digital skills acquisition that would be suitable for business education students were sourced from e-skills UK Sector Skill Council (2009), Smith and Anderson (2010), Centiport (2008), Chinien and Boutin (2011), van Deursen and van Dijk (2014), Helsper and Eynon (2013). The literature pointed to the fact that digital skills acquisition is imperative for functional participation in the digital world.

This paper examines the framework for digital skills acquisition in three (3) dimensions, namely:

- Use of digital systems and tools
- Use of software application; and
- Application of security measures in digital environment

#### **Use of Digital Systems and Tools**

There is no gainsaying the fact that the success of every activity in a digital world is anchored on the versatility of the worker in the use of digital systems and tools. The Business education students must be adequately equipped to meet job requirements in the use of these digital systems and tools. The onset of the global Coronavirus also known as COVID-19 pandemic in the latter part of 2019 that suddenly shut down the world economy with the attendant lockdown has made it more compelling for both the teachers and the thought to be more conversant with the use of digital systems and tools. Therefore, the students need to be prepared to meet this demand, and the teachers need to constantly update their knowledge to be able to align with the global knowledge and skill expectation. This is more so because no matter how sophisticated the digital systems and tools are, their utilization and capacity to enhance performance is dependent of the knowledge, skill and competency of the teacher that facilitates the learning activities. That is why learning at home using e-learning is difficult especially in developing countries, Nigeria for example, where power supply, internet connectivity, affordability of laptops and other online infrastructure are the exclusive right of the most privileged few. Even those who can afford all of these still need the guidance of facilitators.

The skills cluster in the use of digital systems and tools generated by these researchers is presented in table 1.



**Table 1:** Framework for Acquisition of Digital Skills by the use of Digital Systems and Tools

Use of Digital Systems and Tools	Digital Skills Cluster for the Use of Digital Systems and Tools by Business Education Students
Types of Digital Tools and Systems	<ul style="list-style-type: none"><li><input type="checkbox"/> Ability to:</li><li><input type="checkbox"/> Identify types of digital systems and tools like the desktop computers, laptops, Ipad, et cetera.</li><li><input type="checkbox"/> Select, set up and use digital systems and tools to access, process and communicate information</li><li><input type="checkbox"/> Identify the function of different digital systems and tools and hardware components</li><li><input type="checkbox"/> Identify different input and output devices and how there are connected and installed in digital systems and tools</li><li><input type="checkbox"/> Identify the factors to consider when purchasing digital systems and tools</li><li><input type="checkbox"/> Identify the role of the Central Processing Unit (CPU) including how the speed of a microprocessor is measured.</li><li><input type="checkbox"/> Identify concepts related to computer memory like measurement of memory, RAM, ROM, et cetera.</li><li><input type="checkbox"/> Identify the features and benefits of storage capacity, shelf-life, etc. of different storage media.</li><li><input type="checkbox"/> Identify how to maintain digital systems and tools and troubleshoot common problems relating to different hardware.</li><li><input type="checkbox"/> Identify factors that can cause damage to computer hardware or media like environmental factors, magnetic fields, etc.</li><li><input type="checkbox"/> Identify how to protect hardware from fluctuations in the power supply, power outages and other electrical issues such as use of computers on different electrical systems.</li><li><input type="checkbox"/> Customize work environments by using digital systems and tools to access, process, communicate, collaborate, learn and solve problems.</li><li><input type="checkbox"/> Migrate to new digital system and tools as they advance.</li></ul>

Table 1 presents the framework for skills cluster necessary for use of digital systems and tools as proposed by the authors of this paper. Business education students are expected to acquire computational procedures that are required everywhere to manage job tasks. The ability to solve problems with digital technologies is linked to the achievement of work-related goals, which in turn take the form of concrete, practical tasks that requires the use of hardware devices which rely on digital technologies such as desktop or laptop computers, PDAs, mobile phones, etc, (Chinien & Boutin, 2012). The acquisition of digital skills and competence involves the confident and critical use of Information Society Technology (IST) for work, leisure and communication. It includes basic skills in ICT which is the use of computers to retrieve, store, produce, present and exchange information, and to communicate and participate in collaborative networks via the Internet. Digital skills encompass functional aspects involving interpersonal attributes of social and organizational skills and ethical values.



Digital skills contain the basic knowledge of how to deal with the hardware and software of digital tools. Åkerblom, (2012) states that the digital workplace is evolving and new tools are doing old things. Business education students who are ready for the world of work should be prepared to collaborate in different spaces of knowledge sharing, and in real time find the information they need to solve problems using digital systems and tools.

Organizations deploy a variety of information systems to support the creativity and innovation of workers, as knowledge management aims to identify, create, represent, distribute, and enable adoption of insights and experiences. The first step toward using digital tools to retrieve and use information is acquiring the skills required to use the technology. Therefore, it is appropriate that the acquisition of digital skills by the use of digital system and tools for Business Education Students be introduced by tertiary education institutions in Nigeria.

#### Use of Software Application

Software is the general term used to describe the various kinds of programmes that are used to operate and manipulate computers and their peripheral devices. In a digital era such as this, business education students are expected to acquire the basic skills for the use of software application in the performance of their various tasks. There are basically two major types of software, namely, application software and system software. Application software refers to a variety of programmes that are used to accomplish specific tasks. Application software directs the performance of a particular use of computer to meet the information processing needs of users. Application software is categorized as general-purpose and function-specific application (O'Brien & Marakas, 2008). General-purpose application programmes are those developed to enhance the performance of common information processing tasks for end users. General-purpose application software includes word processing, spreadsheet, database management and graphics programmes. These programmes are commonly used with microcomputers to accomplish different purposes for home, education, business and many other purposes (O'Brien & Marakas, 2008; Inyang & Ekpenyong, 2012). Function-specific application software refers to those programmes designed to support the specific application of end users in business and other fields. Examples include specific software for accounting operations, human resource management, e-commerce, customer relationship management etc.

System software consists of programmes developed to enable the functioning of the computer and its processing activities. System software is concerned the control and functionality of the computer. Without the system software, no application software can run on any computer. System software consists of those programmes that control the operation of the computer. Examples of system software include different types of operating system like Disk Operating System (DOS), Windows Operating System (WinOS), Macintosh OS and UNIX/Linux OS

The operating system manages the software and the hardware, as well as provide interface which the installed applications can work with. There are numerous other functions of the operating system. Language translators and utility programmes are also components of system software application.

Table 2 presents the framework for digital skills cluster on use of software application.



**Table 2:** Framework for Acquisition of Digital Skills by the Use of Software Applications

<b>Use of Software Applications</b>	<b>Skill cluster for the use of Software Applications by Business Education Students</b>
Types of skills	<p>Ability to:</p> <ul style="list-style-type: none"><li><input type="checkbox"/> Identify how software and hardware work together to perform tasks and how software is developed and upgraded.</li><li><input type="checkbox"/> Identify the difference between an operating system and application software.</li><li><input type="checkbox"/> Identify issues relating to software distribution like licenses and upgrades.</li><li><input type="checkbox"/> Shut down, restart, log on and log off the digital systems and tools.</li><li><input type="checkbox"/> Start and run programmes on digital systems and tools.</li><li><input type="checkbox"/> Manipulate windows by minimize, maximize and resize.</li><li><input type="checkbox"/> Manipulate desktop folders and icons and shortcuts.</li><li><input type="checkbox"/> Manage files by identifying files, folders, directories, moving and retrieving files, display file properties, etc.</li><li><input type="checkbox"/> Identify precautions to take when manipulating files including using standardized naming conventions.</li><li><input type="checkbox"/> Solve common problems associated with working with files like incompatibility of application programmes corruption of files, denied access, etc.</li><li><input type="checkbox"/> Identify and display different control panel system preference settings</li><li><input type="checkbox"/> Change simple settings like date and time, audio, security, etc.</li><li><input type="checkbox"/> Install and uninstall software including updates from online sources</li><li><input type="checkbox"/> Identify fundamental concepts relating to word processing and common uses for word processing applications.</li><li><input type="checkbox"/> Identify fundamental concepts relating to spreadsheets and common uses for spreadsheet applications.</li><li><input type="checkbox"/> Identify fundamental concepts relating to presentation software and common uses for presentation applications.</li><li><input type="checkbox"/> Identify fundamental concepts relating to databases and common uses of database applications like fields, tables, queries, reports, etc.</li><li><input type="checkbox"/> Identify fundamental concepts relating to graphic and multimedia programs and common uses for graphic or multimedia software like drawing, painting, animation tools, etc.</li><li><input type="checkbox"/> Identify fundamental concepts relating to education and entertainment programs like computer based training (CBT), video, audio, etc.</li><li><input type="checkbox"/> Identify and troubleshoot common problems associated with installing and running software applications.</li><li><input type="checkbox"/> Comply with legal copyright provisions on software applications.</li><li><input type="checkbox"/> Migrate to new software applications as there are developed.</li></ul>

Table 2 present the digital skills cluster for use of software application as proposed by the authors of this paper.



Digital skills are often characterized by competency with computational basics, hardware, software, and networks (Jenkins, 2006; Trilling & Fadel, 2009). The acquisitions of these skills are important for the business education students who are expected to perform competently and efficiently and effectively in any area of business occupations, whether in the teaching profession, managerial positions in the public or private sector, in entrepreneurial endeavour. Basic information technology competency appears in virtually every study of digital literacy as it is the foundation upon which all other digital literacy skills are based. A mastery of operating technology does not alone create the digitally literate person. Research has indicated that technical capability is only one part of the equation, stressing that more intangible ways of thinking and acting and other knowledge on the culture of technology and its risks and rewards is equally necessary. Other scholars like Lankshear and Knobel, (2008); Martin, (2010); Dede; (2010) also agree with this necessity of multi-level competency and technical skills and that computer skills are only one dimension of digital literacy. In practice, this translates to an introduction to the skills required to operate a variety of computer applications programmes like word processing, databases, spreadsheets, presentation skills, etc, together with some general IT skills, such as copying disks and generating hard-copy printout. It is expected of business education to acquire the use of application software in order for them to fit in the world of work of the 21<sup>st</sup> century and beyond after graduation.

Acquisition of digital skills clusters of knowing and using hardware, and knowing and using digital software applications are fundamental for business education students in the tertiary institutions. Since the Internet has become a part of everyday life, business education requires the skills and competences to make full use of the medium. Lordache, Baelden, and Mariën, (2016) stated that the ability to know where to seek assistance, both online and offline, is related to concepts such as autonomy and problem-solving, which have been identified as important factors in the development of digital skills and competences. Problem-solving skills can have a positive effect on the development of digital skills and competences, helping users identify the correct digital tools needed to reach their goals, as well as enhance their ability to use digital tools in order to solve conceptual, but also technical problems. This knowledge could empower the business education students to act independently in the development of their digital skills, to search for information, and to solve problems they may encounter.

### **Application of Security Measures in Digital Environment**

The increasing use of digital technology to acceleration business activities, the exponential rise in online transaction, and the proliferation of internet access have created a big problem – that of security. There is increasingly high threat of cybercrimes associated with networked transactions in today's digitalized business environment. It is a common phenomenon these days that unscrupulous fraudsters hack into people's, bank accounts, email and other sensitive private information via the internet. O'Brien and Marakas (2008) asserted that today's networked business enterprises are faced with security as a major management challenge. Business education programme should equip the students with those digital skills that will enable them adopt and integrate security measures to protect the accuracy, integrity and safety of information processes and systems. This is pertinent in order to forestall or ameliorate the menace of errors, fraud and losses occasioned by cybercrimes in the course of transacting businesses in a digital environment.

A framework highlighting the skills cluster that will enhance the security management while transacting business in a digital environment as proposed by Okute, Enang and Etoma in this paper is presented in Table 3.



**Table 3:** *Framework for the Application of Security Measures in a Digital Environment*

<b>Digital skills Acquisition</b>	<b>Skills cluster for the Application of Security Measures in a Digital Environment by Business Education Students</b>
Application of Security Measures	Ability to: <ul style="list-style-type: none"><li><input type="checkbox"/> Identify different types of anti-virus software and use them to protect data from cyber attacks.</li><li><input type="checkbox"/> Install local firewall on digital systems and use same to protect systems</li><li><input type="checkbox"/> Distinguish between hoaxes and real threat warnings</li><li><input type="checkbox"/> Securely connect to network in order to send and open digital messages and content</li><li><input type="checkbox"/> Encrypt sensitive information</li><li><input type="checkbox"/> Backup and store digital contents</li><li><input type="checkbox"/> Delete sensitive digital content</li><li><input type="checkbox"/> Secure user ID and password</li><li><input type="checkbox"/> Protect digital content against accidental destruction</li><li><input type="checkbox"/> Protect unauthorized use and modification of digital content</li><li><input type="checkbox"/> Comply with legal issues of digital contents</li><li><input type="checkbox"/> Determine trustworthiness of digital sources</li><li><input type="checkbox"/> Identify digital frauds, suspicious activity and cybercrimes</li><li><input type="checkbox"/> Practice safe online behaviours</li><li><input type="checkbox"/> Secure personal information against identity threats</li><li><input type="checkbox"/> Maintain a secure digital footprint</li><li><input type="checkbox"/> Report suspicious online activity</li><li><input type="checkbox"/> Report breaches on insecurity</li><li><input type="checkbox"/> Comply with employer’s digital policy</li></ul>

Table 3 presents the digital skills cluster for application of security measures in a digital environment as proposed by the authors of this paper.

In order to prevent technology lock-in or unforeseen negative consequences, students of business education need to know the basic technology issues and contexts that accompany the knowledge economy especially the Application of Security Measures in a Digital Environment. This includes an understanding of the risks associated with the use of digital technology, the possibility of loss of information or mistranslation when using digital tools in various social contexts, and legal or social issues that affect technology use (Trilling & Fadel,2009). Moreover, the prevalence of internet fraud and other internet-mediated crimes has made it imperative for all business educators to be equipped with adequate skills in the application of security measures while working in a digital environment.

Privacy and the implications of an online use is another key knowledge area, which includes items such as knowing how to manipulate the various Facebook and Twitter privacy controls and why they matter. Knowing privacy controls and their implications become especially important when technologies change their



default access or interface, such as in the case of Facebook's recent transition to the Timeline format, which had dramatic social consequences for those who were less informed of Facebook's privacy controls. This category also includes an understanding of the programmed nature of technology. Rushkoff (2010) argues that technologies embody the values of their designers and that people should know these frameworks in order to meet their personal and organisational goals. Rushkoff also added that a broader knowledge of the underlying social constructs and learning the reasons under which technologies are designed is extremely valuable for the digitally literate person. This knowledge would give students of business education the ability to use technologies in new ways and anticipate the effects they would have on them in the world of work.

Furthermore, the skills related to privacy and the protection of personal data are very important for students, particularly, business education students of tertiary institutions. Research in the field of privacy has determined a trend that is particularly present in social networking sites (SNSs), where the responsibility is pushed towards the user (De Wolf, Heyman, & Pierson, 2013). In this context, it becomes instrumental for individuals to understand the way their data and personal information is being shared, accessed by others, or used by governments and corporations; and, more importantly, they need to have the necessary skills to protect themselves from disclosing information they may not need, or want to: "it is crucial that users understand that those sites (without the appropriate privacy settings and critical skills) can lead to loss of control of personal data, and to having it delivered to third parties for commercial purposes" (Ala-Mutka, 2011).

### **Conclusion**

Technology has frequently played a dominant role in defining what skills have been considered important. This is because new technologies continue to emerge at an exponential rapidity, replacing the older one as soon as they are adopted, and rendering former skills obsolete. With the diffusion of Information and communication technologies, new work environments continue to emerge, requiring additional skills to complement those of earlier technologies which are now known as digital skills.

The acquisition of digital skills by business education students in tertiary institutions in Nigeria is fundamental in this 21<sup>st</sup> century and beyond. This is so because the use of digital systems and tools, software applications and application of security measures in a digital environment is what would make the business education graduate perform ultimately well in the world of work after graduation. It is imperative, therefore, that business education students in tertiary institutions should be adequately exposed to the acquisition of these skills through a robust and enriched curriculum content as a framework.

### **Recommendations**

The following recommendations were made from this study:

1. The framework for the acquisition of digital skills with emphasis on the use of digital systems and tools, software applications and application of security measures in a digital environment should be adopted by all tertiary institutions.
2. The three levels of skills clusters identified in this study should be embedded into the curriculum of business education programme in tertiary institutions.
3. Lecturers of business education should acquaint themselves on application of digital skills for effective delivery of the skills to students.
4. Professional development on digital skills acquisition is encouraged by all practitioners of business education programme.
5. A course on digital skills acquisition should be introduced to final year students offering business education in all tertiary education institutions in order for them to fit into the digital workplace environment after graduation.

### **References**

- Ala-Mutka, K. (2011). *Mapping Digital Competence: Towards a Conceptual Understanding* (Technical Note No. JRC67075-2011). European Commission Joint Research Centre, Institute for Prospective Technological Studies.



- Centiport. (2008). *IC<sup>3</sup> 2005 Standard-Computing Fundamentals*. Retrieved from [http://www.certiport.com/portal/common/pagelibrary/TestObjectives\\_IC3Computing2005ENU.htm](http://www.certiport.com/portal/common/pagelibrary/TestObjectives_IC3Computing2005ENU.htm)
- Chinien, C., Boutin, F., & Chinien, A. (2011). *Learning to learn workbook: Developing analytical skills*. Retrieved from WDM Consultants: <http://www.wdm-consultants.com/>
- Chinien, C. & Boutin, F. (2012). *Defining essential digital skills in the Canadian workplace*: Final Report. WDM-Consultants.
- De Wolf, R., Heyman, R., & Pierson, J. (2013). Privacy by Design through a Social Requirements Analysis of Social Network Sites from a User Perspective. In S. Gutwirth, R. Leenes, P. de Hert, & Y. Poullet (Eds.), *European Data Protection: Coming of Age* (pp. 241-265). Springer Netherlands. [https://doi.org/10.1007/978-94-007-5444-1\\_14](https://doi.org/10.1007/978-94-007-5444-1_14)
- Dede, C. (2010). Comparing frameworks for 21st century skills. In J. Bellanca & R. Brandt (Eds.), *21st Century Skills: Rethinking How Students Learn* (pp. 51-75). Bloomington, IN: Solution Tree Pre E-skills UK Sector Council. (2009). *e-skill UK: Strategic skills assessment for the digital economy*. London: Retrieved from [http://www.oph.fi/download/141906\\_asset\\_14618.pdf](http://www.oph.fi/download/141906_asset_14618.pdf)
- Enang, C. E. & Okute, A. L. (2019). Leveraging on new technologies for skills acquisition of business education students in tertiary institutions in Nigeria for the e-world. *Nigerian Journal of Business Education*, 6 (1), 331 – 330. Retrieved from [www.nigjbed.com.ng](http://www.nigjbed.com.ng).
- FGN (2013). *National Policy on Education* 6<sup>th</sup> Edition, Yaba, Lagos: NERDC Press.
- Helsper, E. J., & Eynon, R. (2013). Pathways to digital literacy and engagement. *European Journal of Communication*, 28(6).
- Helsper, E. J., & Reisdorf, B. C. (2016). *The emergence of a "digital underclass" in Great Britain and Sweden: Changing reasons for digital exclusion*. New Media & Society .<https://doi.org/10.1177/1075547016666666>
- Inyang, U. G. & Ekpenyong, M. E. (2012). Computer software: In Udosen, E. D. Joshua, E. E. & Inyang, U. G. (Eds.). *Fundamentals of Science and Computing*. Uyo: Chf Prints.
- lordache, C., Baelden, D., & Mariën, I. (2016). Reconsidering digital skills: A theoretical questioning of the skills that define e-inclusion. <https://doi.org/10.1080/10580473.2016.1191111>
- lordache, C., Mariën, I., & Baelden, D. (2017). Developing Digital Skills and Competences: A Quick Scan Analysis of 13 Digital Literacy Models. *Italian Journal of Sociology of Education*, 9(1), 6-30. doi: 10.14658/pupj-ijse-2017-1-2
- Jenkins, H. (2006). *Confronting the challenges of participatory culture: Media education for the 21st century*. Cambridge: MIT Press.
- Lankshear, C., & Knobel, M. (2008). *Digital literacies: Concepts, policies and practices*. New York; Oxford: Peter Lang.
- Mariën, I. (2016). *De Dichotomie van de Digitale Kloof Doorprikt: Een Onderzoek naar de Oorzaken van Digitale Uitsluiting en naar Strategieën voor een Duurzaam e-Inclusiebeleid* (Unpublished dissertation). Department of Communication Sciences, Vrije Universiteit Brussel.
- Martin, A. (2008). Digital literacy and the "digital society." In M. K. Colin Lankshear (Ed.), *Digital literacy's: Concepts, policies and practice* (pp. 166-167). New York: Peter Lang
- Martin, A., & Madigan, D. (Eds.). (2006). *Digital literacies for learning*. London: Facet.
- O'Brien, J. A. & Marakas, G. M. (2008). *Management information system*. New York: McGraw-Hill Irwin.
- Okute, A. L. & Agomuo, E. E. (2014). Electronic learning and business education in tertiary institutions in Nigeria: Issues of adoption and adaptation. *Computer Education research Journal*, 1 (1), 101 – 107.
- Organization for Economic Cooperation and Development - OECD (2018). *Putting a face behind the jobs at risk of automation*, Policy Brief on the Future of Work, OECD Publishing, Paris.
- Rushkoff, D. (2010). *Program or Be Programmed*. Berkeley, CA: Soft Skill Press.
- Smith, J., & Anderson, L. (2010). *Scoping study: Identifying digital literacy skills*. Melbourne: Innovation and Business Skills Australia.
- Thomas J (2019). *Digital skills Where universities matter*. Brussels, EUA. Retrieved from: <https://eua.eu/downloads/publications/digital%20skills%20%20where%20universities%20matter.pdf>
- Trilling, B., & Fadel, C. (2009). *21st century skills: Learning for life in our times*. San Francisco: Jos.
- UNESCO (2014). *Shaping the Education for Tomorrow*, 2012 Report on the UN Decade of Education for Sustainable Development, retrieved from <https://sustainabledevelopment.un.org/index.php?page=view&type=400&nr=919&menu=1515>.
- VanDeursen, A., & Van Dijk, J. (2014). The digital divide shifts to differences in usage. *New Media & Society*, 16(3), 507–526.
- VanDeursen, A., Helsper, E. J., & Eynon, R. (2014). *Measuring*



## **PREPARING BUSINESS EDUCATION STUDENTS IN A CHANGING WORLD IN SOUTH-WEST COLLEGES OF EDUCATION: CHALLENGES AND PROSPECTS.**

**<sup>1</sup>OLUWADARE, AYODEJI ABRAHAM**

*alleluyah2010@yahoo.com*

**<sup>2</sup>AJISAFE, OLATUNBOSUN EMMANUEL**

**<sup>3</sup>ADEBAYO, SUNDAY FATOBA**

*sunnydebayo@yahoo.com*

Department of Business Education  
Adeyemi Federal University of Education,  
Ondo, Ondo State, Nigeria.

**<sup>4</sup>EBINIYI, OLUFUNMILAYO. O. (Mrs).**

*febiniyi@gmail.com*

Department of Business Administration and Management  
Rufus Giwa Polytechnic, Owo, Ondo State, Nigeria.

### **Abstract**

*The study was aimed to investigate the challenges and prospects of preparing business education students for work in a changing world in south-west colleges of education. Two research questions guided the study and two null hypotheses were tested at 0.05 level of significance. The theory of learning by Dekeyser was used. A descriptive survey research design was adopted. A total of 219 business educators in 12 Colleges of Education in South-West, Nigeria made up the population of the study. No sample was taken, as the population size was manageable. A structured 15-item validated questionnaire was used for data collection. The reliability of the instrument was ensured using pilot test that was analyzed using Cronbach Alpha which yielded reliability co-efficient of 0.78. A total of 219 copies of the questionnaire were distributed to the respondents, 211 copies were returned by the respondents, and were used for data analysis. Data related to the research questions were answered using mean and standard deviation while Z-test was used to test the null hypotheses. The findings of the study revealed that respondents agreed with all the mentioned challenges of preparing business education students for work and the possibilities of overcoming the challenges in a changing world in south-west colleges of education as it will help in promoting national economic development. The study revealed that business educators in federal colleges of education did not differ significantly from business educators in state colleges of education on the challenges and possibilities of overcoming the challenges for preparing students for work in a changing world in colleges of education in South-West. It was recommended, among others, that government and other major stakeholders should focus their attention and invest their resources on business education so as to help address the challenges of business education for preparing students for work most especially at the teacher education tertiary institutions.*

**Keywords:** Business education, Challenges, Changing world, Prospects, Tertiary institutions



## **Introduction**

The world has become a global village just as the global economy has become the center of every nation's marketing interest and activities. The United Nations Educational, Scientific and Cultural Organization (UNESCO) in Umoru (2015) aims at ensuring that all countries, both developed and developing, have access to the best educational facilities necessary to prepare young people to play full roles in modern society and to contribute to a knowledge nation. As a result, nations are positioning their educational system to be part of the global economy and compete very favourably. Global economy has become so sophisticated and as a result undergoing unprecedented transformation and no nation would want to be left behind. In realization of this fact, the federal government of Nigeria has put in place a robust transformation agenda in education intended to put Nigeria in a better position to be a competitive player and in the process transform all sectors of its economy through tertiary education particularly colleges of education.

Colleges of Education in Nigeria recognize the fact that mastering the basic skills and concepts of new technologies as the core of education must be the major plank through which transformation agenda in education could be realized. This is because education is a catalyst for any meaningful change in the society. Education, according to Adesina in Umoru (2015) is the tool for integration of individual effectively into a competitive society so that the individual can achieve self-realization, develop national consciousness, promote unity, and strive for social, economic, political, scientific, cultural and technological process. In the opinion of Alufahal and Ezeani (2012), education is a vital instrument that liberates the people from ignorance and stimulates development. From the forgoing, this can be achieved through business education programme.

Business education is one vital programme in Nigeria tertiary institutions that has the capacity to bring about the required liberation and stimulation of the citizens for global competition and national development. It is believed that for any nation to help in promoting sustainable economic growth or development, efforts shall be made to invest sufficient amount of financial resources on education particularly business education programme.

Sadly, business education is faced with the challenges of improving the capacity of their workforce to respond to the national development needs and the demands of a rapidly changing and globally competitive world. Suffice to mention that the future success of nations, individuals, enterprises and communities increasingly depends on existence and possession of transferrable and renewable skills and knowledge. Interestingly, both developed and developing countries across the world have come to recognize the importance of education particularly, business education towards equipping individuals with relevant skills and knowledge, hence enabling people to effectively participate in socio-economic and technological innovation processes. The globalization process, knowledge economy, advances in technology and increased competition due to liberalization are major forces driving change in the world of work. These have important implication for the demand of skills, human resource development and training (UNESCO, 2016).

Generally, inadequate provision of financial resources has been identified as greatest challenge facing education in Nigeria (Edokpolor & Owenvbiugie, 2017), especially technical and vocational education sector because of its capital-intensive nature (Adeyanju, Adekunle & Osifila in Edokpolor & Owenvbiugie, 2017) of which business education programme is a major component. By virtue of this nature, every item within the business education instructional environment is subjected to adequate optimization of financial resources. However, in view of the contending demands for financial resources by various sectors of the Nigerian economy, business education have been finding it difficult



to employ manpower in terms of quality and quantity, develop or renew curriculum, and offer a wide-range of modern infrastructure and facilities, such as the state-of-the-art lecture halls, workshops, studios, libraries, entrepreneurial research centres and Information Technology (IT) services.

Another challenges facing the effective delivery of business education is inadequate supply of qualified manpower or shortage of qualified manpower in business education at completely all levels of education. This situation is more pronounced at the tertiary level. This is to be expected since there are no enough funds to employ qualified manpower. Ilusanya in Idris and Mbudai (2016) had observed that the state of vocational education generally in Nigeria is becoming embarrassing. Idris and Mbudai further lamented on the inadequacy of personnel as well as their lackadaisical attitude towards the teaching of the subject.

In a nutshell, business education is an academic programme intended to inculcate into the students understanding, values, knowledge, business skills, and technical skills required in the world of work and for teaching other business students. The skills to be learned by business education students are technical, manipulative and thinking habits applied to global competition, machines, tasks, procedures and operations. These skills are necessary to operate new technologies that global competition platforms depend in the real world of work and are required globally by businesses, employees, and individuals.

Salome in Ikpesu (2016), agreed with this position that business education inculcates in its recipients attitudes, knowledge, skills, values that are required in the world of work. Amoor and Udoh (2018) further emphasized that business education improves personal qualities and builds the attitude of the individual that are necessary for adjustment to personal and employment situations and also provides knowledge, skills and competence for individuals to function well in office occupations and also create jobs for themselves and others. One can therefore, conclude that a well-trained business educator upon graduation would be able to produce healthy, literate, skilled and self-reliant citizens, as well as teachers or effective and efficient producers of goods and services, which businesses require as workers for businesses and employees or employers of labor as self-employed or entrepreneurs.

The influencing factor on the challenges of business education for preparing business education students for work in a changing world in Nigeria tertiary institutions could be type of institutions. Type of institutions in this research study refers to tertiary institutions that offer business education programmes such as colleges of education and universities. Okoye (2011) pointed out that the types of institutions do not differ significantly in their mean ratings on the challenges facing business education for effective teaching of entrepreneurship education in tertiary institutions.

Considering that the success or failure of business education programme in producing graduates who would become self-reliant upon graduation and be able to compete effectively in the global market is dependent on the ability of relevant stakeholders to be able to identify and tackle some of the challenges of the programme in recent times. It is essential to focused to determine the challenges of business education for preparing students for global competition in Nigeria tertiary institutions with business and technical skills so as to proffer objective remedial actions.

### **Statement of the Problem**

Business Education is a programme of instruction that equips recipients with the requisite attributes for job creation and further education. Despite these dual missions, available evidence has shown that Nigeria is handling this sector with levity (Obunadike, 2015; Oladunjoye, 2016). This situation has consequently deprived business education of proper funding, qualified staff, modern facilities, quality curriculum and proper attention. This has devalued the image and reputation of



business education both in the education sectors and labour market and has also contributed to the high rate of unemployment and poverty among business education graduates.

For business education to provide the individual with the knowledge, skills and attitude needed to take up readily available jobs or openings in this changing world, it becomes imperative that all hands must be on deck, stakeholders and particularly government and teachers must be up to the task at all times. An in-depth or adequate instruction must be assured such that will provide the requisite knowledge, skills and attitude needed for work in a changing world. Available evidences reveal that institutions offering business education turn out large numbers of graduates annually. Yet, unemployment is on the increase in Nigeria while the issue of unemployment has resulted in involvement of idle youths in terrorist attacks, kidnappings, banditry, suicide bombing, high crime rate, vandalism, turgery and break down of law and order thereby contributing to the under-development of Nigerian economy. Those who are employed are found unable to carry out their assigned duties without further training. A question therefore arises as to the adequacy of preparedness of business education students in colleges of education in south-western, Nigeria. It is in an attempt to provide answers to this question that the authors embarked on this research.

### **Purpose of the Study**

The objective of this study was to investigate the challenges confronting business education in preparing business education students for work in a changing world. Specifically, the study sought to:

1. Examine the challenges confronting business education in preparing students for work in a changing world in south-west, Nigeria Colleges of Education?
2. Determine possible means of overcoming the challenges confronting business education in preparing students for work in a changing world in south-west, Nigeria Colleges of Education?

### **Research Questions**

The following research questions were raised to guide the study:

1. What are the challenges confronting business education in preparing students for work in a changing world in south-west Colleges of Education?
2. What are the possible means of overcoming the challenges confronting business education in preparing students for work in a changing world in south-west Colleges of Education?

### **Hypotheses**

The following research hypotheses were formulated and tested at 0.05 level of significance:

1. The mean ratings of Business educators in federal and state colleges of education in South-West do not differ significantly on the challenges confronting business education for preparing students for work in a changing world.
2. The mean ratings of male and female Business educators in colleges of education in South-West do not differ significantly on the possible means of overcoming the challenges confronting business education in preparing students for work in a changing world.

### **Method**

Descriptive survey research design was adopted for the study. The researchers considered this design appropriate for this study since it is intended to collect data from practicing business educators regarding the challenges in preparing students for work in a changing world in Nigerian colleges of education. The population for the study consisted of 219 business educators from twelve government-owned colleges of education that offer business education in South-West, Nigeria. No



sample was taken for the study because the population size was manageable. The instrument for data collection was a structured questionnaire titled Challenges in Preparing Business education Students for Work in a Changing World in south-west colleges of education (CPBSWCW). The instrument was validated by three experts, two from the Department of Business Education in Adeyemi College of Education, Ondo and one from college of education, Ikere-Ekiti. To ascertain the internal consistency of the instruments, the researcher conducted a pilot test whereby copies of the instrument were administered to 20 business educators from Kwara State College of Education, who were not part of the population of the study. The internal consistency of the questionnaire was established through a pilot testing and the data generated thereof was subjected to Cronbach Alpha analysis. The results yielded a coefficient of 0.78 which is deemed reliable for the study. The administration of the instrument was carried out personally by the researcher with the aid of three research assistants who are business educators. A total of 219 copies of the questionnaire were distributed to the respondents, 211 copies were returned by the respondents and found useable. This represented 95% return rate. Data collected regarding the research questions were analyzed using descriptive statistics. The decision rule regarding the research questions were based on the real limit of numbers. For decision, items with a mean range of 3.01-4.00 were regarded as “strongly agree”, 2.01-3.00 as “agree”, mean range from 1.01-2.00 as “disagree”, while mean range between 0.01-1.00 were regarded as “strongly disagree”. The Z-test was used to test the null hypotheses at 0.05 level of significance. Where the calculated p-value was less than the 0.05, it means that there was significant difference and the hypothesis was rejected.

## Results

### Research Question 1:

What are the challenges confronting business education in preparing students for work in a changing world in south- west colleges of education?

**Table 1:** Business educators' mean ratings on the challenges confronting business education in preparing students for work in a changing world in south-west Colleges of Education? N =219

S/N	Challenges Confronting Business Education	X	SD	Remarks
1.	Inadequate optimization of qualified manpower	3.15	0.22	SA
2.	Inconsistent development of staff skills and resources	2.71	0.89	A
3.	Inadequate provision of befitting infrastructures	3.57	0.31	SA
4.	Inadequate supply of modern facilities and equipment	3.61	0.25	SA
5.	Utilization of outdated curriculum	3.11	0.20	SA
6.	Successive government and other major stakeholders have been handling business education with levity	3.73	0.16	SA
7.	Inadequate provision of resources has not devalued the image of business education	2.21	0.21	SA
8.	Inadequate annual budgetary provision or allocation	3.25	0.36	SA
9.	Inadequate utilization of budgetary allocation	3.09	0.67	SA
	<b>Cluster Mean/Standard Deviation</b>	<b>3.16</b>	<b>0.36</b>	<b>Agree</b>



**Source:** Field survey, 2021

Table 1 shows the mean responses of business educators' in both federal and state colleges of education on challenges in preparing students for work in a changing world in South-west colleges of education. Item by item analysis revealed that out of nine items, only eight items had the mean scores that ranged from 2.71 to 3.73. The mean scores are indications that these are challenges facing business education programme. Item 7 inadequate provision of resources has not devalued the image of business education had the mean score of 2.21.

### **Research Question 2:**

What are the possible means of overcoming the challenges confronting business education in preparing students for work in a changing world in south-west colleges of education?

**Table 2:** Business educators' mean ratings on the possible means of overcoming the challenges confronting business education in preparing students for work in a changing world in south-west colleges of education. N=219.

<b>S/ N</b>	<b>Possible Means of Overcoming the Challenges in Business Education</b>	<b>X</b>	<b>SD</b>	<b>Remarks</b>
10.	Adequate optimization of resources would help to equip students with requisite skills for gainful employment and decent work	3.87	0.24	SA
11.	Adequate optimization of resources would help to equip students with requisite skills to generate income and eradicate poverty	3.74	0.16	SA
12.	Adequate provision of resources would help to equip students with requisite skills of redeeming the youths from a bleak future	3.53	0.31	SA
13.	Adequate optimization of resources would help to equip students with skills to improve the standard of living among graduates	3.48	0.21	SA
14.	Adequate optimization of resources would help to equip students with the requisite attributes for personal dignity and self-esteem	3.60	0.33	SA
15.	Adequate optimization of resources would help to equip students with the requisite skills that free them from serving others	3.64	0.15	SA
	<b>Cluster Mean/Standard Deviation</b>	<b>3.64</b>	<b>0.23</b>	<b>Agree</b>

**Source:** Field survey, 2021



Table 2 shows the mean responses of business educators in colleges of education on possible means of overcoming the challenges confronting business education *in* preparing students for work in a changing world in south-west colleges of education. The results revealed that all the items had the mean scores that ranged from 3.48 to 3.87. The mean scores are indications that possible means of overcoming challenges confronting business education in preparing students for work in a changing world in south-west colleges of education. The study specifically revealed that adequate optimization of resources, development of employability skills, alleviation of poverty, improvement of standard of living among graduates, development of self-esteem and personal dignity will contribute effectively to business education programme delivery.

### **Hypotheses Testing**

#### **Hypothesis 1:**

HO1: The mean ratings of Business educators in federal and state colleges of education in South-West do not differ significantly on the challenges confronting business education for preparing students for work in a changing world.

**Table 3:** Summary of z-test result analysis of business educators in federal and state colleges of education in south-west on challenges confronting business education *in* preparing students for work in a changing world.

<b>Nature of Institution</b>	<b>N</b>	<b>X</b>	<b>SDDF</b>	<b>Z-cal</b>	<b>Z-crit</b>	<b>Remarks</b>	
<b>Federal</b>	<b>104</b>	<b>3.42</b>	<b>0.63</b>	<b>209</b>	<b>1.29</b>	<b>1.96</b>	<b>Not Rejected</b>
<b>State</b>	<b>107</b>	<b>3.63</b>	<b>0.68</b>				

*Source: Field Study, 2021.*

From table 3, the calculated Z-value of 1.29 is less than the Z-critical value of 1.96 at 209 degree of freedom and at 0.05 level of significance. This indicates that the null hypothesis will not be rejected. It therefore shows that the null hypothesis which states that the mean ratings of Business educators in federal and state colleges of education in South-West Nigeria do not differ significantly on the challenges confronting business education for preparing students for work in a changing world will be upheld.

#### **Hypothesis 2:**

HO2: The mean ratings of male and female Business educators in colleges of education in South-West do not differ significantly on the possible means of overcoming the challenges confronting business education in preparing students for work in a changing world.



**Table 4:** Summary of t-test result analysis of male and female business educators in colleges of education in south-west on the possible means of overcoming challenges in preparing students for work in a changing world.

<b>Variables</b>	<b>N</b>	<b>X</b>	<b>SDDF</b>	<b>Z.cal</b>	<b>Z.crit</b>	<b>Remarks</b>		
<b>Male</b>		<b>89</b>	<b>4.23</b>	<b>0.78</b>	<b>209</b>	<b>1.60</b>	<b>1.96</b>	<b>Not Rejected</b>
<b>Female</b>	<b>122</b>	<b>3.99</b>	<b>0.64</b>					

**Source: Field Study, 2021.**

From table 4, the calculated Z-value of 1.60 at degree of freedom of 209 and at 0.05 level of significance is lower than the critical value of 1.96. This indicates that the null hypothesis will not be rejected. It therefore shows that the null hypothesis which states that the mean ratings of male and female Business educators in colleges of education in South-West, Nigeria do not differ significantly on the possible means of overcoming the challenges confronting business education in preparing students for work in a changing world will be upheld.

### **Discussion of Findings**

Findings of the study in the first research question agreed that there are challenges confronting business education for preparing students for work in a changing world in the colleges of education in south western part of Nigeria with mean ratings ranged from 2.71 to 3.73 will help in promoting national development. This agreed with the views of Obunadike (2015); Edokpolor and Owenvbiugie (2017) and Okoye and Udegbumam (2018) that inadequate provision of funds, qualified manpower, modern facilities, and quality curriculum, coupled with low public interest, are some of the possible challenges confronting the delivery of business education in colleges of education in south west, Nigeria. Similarly, Ikpesu (2016) also argued that this situation would consequently affect the production of competent graduates that are useful for unemployment eradication and national development.

The result in Table 3 revealed that business educators in federal colleges of education did not differ significantly from business educators in state colleges of education on the challenges in preparing students for work in a changing world. This means that the institution type does not affect the challenges for preparing business education students for work in a changing world in South-West, Nigeria.

The findings of the study on the second research question also agreed that there are need for the possibilities of overcoming the challenges confronting business education in preparing students for work in a changing world in the colleges of education in south western part of Nigeria with mostly mean scores ranged from 3.48 to 3.87 would help in promoting national development. This is in line with the findings of Idris and Mbudai (2016): who asserted that the optimization of resources (both financially and otherwise) for the effective delivery of business education would help in promoting national development.

Results in Table 4, revealed that male and female business educators in both federal and state colleges of education did not differ significantly on the possible means of overcoming the challenges confronting business education in preparing students for work in a changing world in the colleges of education in south west. This invariably implies that business education skills can grant students the opportunities to access basic life-sustaining essentials, such as food, education, protection, healthcare, clothing and shelter, as well as access quality living, self-esteem, and freedom from servitude.

### **Conclusion**

Based on the findings of the study, it was concluded that business education are faced with a lot of challenges in preparing students work in a changing world in the colleges of education in south west and the



possible means of overcoming these challenges was treated which would help in preparing students for work in a changing world and promoting national development. The outcome of the study also revealed that type of institutions did not affect the challenges and possibilities of overcoming the challenges in preparing students for work in a changing world in the colleges of education in south west.

### Recommendations

Based on the findings of this study, the following recommendations were made:

1. The federal government should declare a state of emergency in the education sector, approve intervention fund. They should as a matter of necessity approach the international donor agencies and World Bank for financial assistance.
2. Adequate budgetary provision should be prioritized by governments at all levels. This will help ameliorate equipments deficit, provide basic infrastructural facilities and technical training of teachers that will in turn teach the students. This will in no small measure equip the students and adequately prepare them for various task in the world of work.
3. Government and other major stakeholders should focus their attention and invest their resources on business education programme so as to help address the challenges confronting it particularly at the tertiary level. This is to enable bussiness education programme produce competent graduates who can compete favourably with their contemporaries globally in the world of work.
4. Governments and other major stakeholders should endeavour to invest their resources in order to help equip recipients with the requisite employability skills which will boost their fortunes at securing gainful employment. This will enhance their standard of living, entrepreneurial development and poverty alleviation towards national development.
5. Business Education curriculum should be periodically reviewed and harmonized for all tertiary institutions in order to be 21<sup>st</sup> century compliant.

### References

- Alufohal, A. E. & Ezeani, C. P. (2012). The relevance of education for social change and good governance in Nigeria. *Journal of Sociology of Education*, 4(1), 149-156.
- Amoor, S. S. & Udoh, A. A. (2018). The role of secretarial education in Nigeria economic development. *Journal of Educational Research and Development*, 3(1), 294-298.
- Dekeyser, R.(2007). *Skill acquisition theory*. In B.Vanpatten & J. Williams (Eds.), *Theories in second languageacquisition: An introduction*, 97-113. New Jersey: Lawrence Erlbaum Associates, Inc.
- Edokpolor, E. J. & Owenvbiugie, O. R. (2017). Business education in Nigeria: Issues, challenges and way forward for national development. *Journal of Collaborative Research and Development (JCRD)*, 5(1), 1-25.
- Idris, A. I. & Mbudai, Y. (2016). Technical and vocational education: Challenges towards youth's empowerment in Kano State-Nigeria. *Journal of Technical Education and Training(JTET)*, 9(1), 1-12.
- Ikpesu, O. C. (2017). Globalizing business education curriculum experiences in Nigeria higher education for enhanced students' employability. *European Journal of Business andInnovation Research*, 5(5), 47-57. Retrieved from [www.eajournals.org/16/06/2021/](http://www.eajournals.org/16/06/2021/)
- Nwosu, B.O. & Okoro, C.(2018). Preparing business education students for global competition: Challenges and Prospects. *ABEN conference proceeding*, 5(1), 944-949.
- Obunadike, J. C. (2015). Vocational and technical education: A tool for national development in Nigeria. In R. Okoye, J. E. O. Otuka & S. Iheonunekwu (Eds.). *Vocational and technical education in Nigeria: Trends and prospects*. Onitsha: Global Academic Group OnlineAcademic Resources.
- Okoye, A.C & Udegbumam, E.O.(2018).Challenges of business education for preparing students for global competition in Nigerian tertiary institutions. *ABEN conference proceedings*, 5(1), 935-943
- Oladunjoye, G. T. (2016). Optimizing business education for national development. *Nigerian Journal of Business Education*, 3(1), 1-16.
- Umoru, A. T. (2015). Challenges and opportunities of utilization of social media by business education students in Nigeria universities. *International Journal of Educational andPedagogical Sciences*, 9(11), 69-73.
- UNESCO (2016). *Education for all global monitoring report: Education for all by 2015 will we make it?* Oxford University Press UK.
- Vanpatten, B. & Benati, A. G. (2010). *Key terms in second language acquisition*. New York: Continuum International Publishing Group.



## **EMERGING TECHNOLOGIES AND SUSTAINABILITY OF BUSINESS EDUCATION DELIVERY IN THE WAKE OF PANDEMIC**

**DR. EDET E. OKON**

Business Education Unit  
Department of Vocational Education  
Faculty of Vocational & Science Education  
University of Calabar, Calabar - Nigeria  
[okon\\_e@ymail.com](mailto:okon_e@ymail.com)

### **Abstract**

*This study achieved three specific objectives, adopted ex post facto research design and was conducted in Cross River State using 1, 385 business education undergraduates with 302 respondents selected using the multi-stage sampling technique. Data was generated from a structured questionnaire tagged, "Emerging Technologies and Sustainability of Business Education Delivery in the Wake of Pandemic Questionnaire (ETSBEPQ)", duly validated and reliability tested with a coefficient of .68. Research questions were answered using descriptive statistics. The Analysis of Variance (ANOVA) was used to test the three null hypotheses at degrees of freedom 1 and 301 and .05 levels of significance. The grand (weighted) mean value of 2.97, 2.64 and 2.69 for virtual realities, wearable technologies, and Artificial Intelligence (AI) respectively have positive and high relationship with sustainability of business education in the wake of Pandemic. Null hypothesis one was upheld since the calculated F-Ratio of 3.462 is less than the critical F-Ratio of 3.94, implying that there is no significant relationship between virtual realities and sustainability of business education delivery in the wake of pandemic. The calculated F-Ratios of 266.594 and 379.094 for null hypotheses two and three respectively, were by far greater than the critical F-Ratio of 3.94 hence; null hypotheses two and three are rejected, implying that significant relationship exists between wearable technologies, Artificial Intelligence; and the sustainability of business education in the wake of pandemic. It is concluded that emerging technologies are vital to the sustainability of business education in the present and future realities. It is therefore, recommended that business educators should: Equip business education programme with Virtual Realities technologies; Wearable Technologies and Artificial Intelligence.*

**Keywords:** Emerging technologies; VR; WT; AI; Sustainability; Pandemic

### **Introduction**

Generally, the deployment of technology in business education can be advantageous. The educational process, especially teaching had long ceased to be a localised process with internalisation and globalisation demand of the 21<sup>st</sup> Century. In the words of Zolfaghari, Sabran and Zolfaghari (2009), internalisation is a dynamic process and not a set of isolated activities. Given this attribute, internalisation cannot excel without technology to carry information around either far or near. Technology therefore prevents these dimensions from being marginal, allow for delivery of ideas at both international and at the same time intercultural directions thus, reducing



any gap that may have existed among countries as well as among the multi-cultural and ethnic groups within and outside a country.

Antecedents in the development and deployment of technology in the work and business environment have evolved over time therefore prompting further expectation in the future of business education in response to emerging technologies and the need to be abreast with these changes. Umoru (2020:16) stated *inter alia*:

*..... the first and second Industrial Revolution brought dramatic changes but these changes cannot be compared to transformations which came with development of digital systems communication and rapid advances of computing power that have accentuated new ways of generating, processing and sharing information. Yet, these changes are nothing compared to the expected digitisation impact on the capabilities of humans and machines which the Forth Industrial Revolution, described as cyber physical systems will unleash. The conclusion is that a new kind of training is necessary, a training in basic, intermediate and advanced digital skills needed by business education students for employability in the digital workplace of the future thereby meeting the expected market demand of over 230 million jobs in Sub-Saharan Africa alone.*

Technology supports information and knowledge sharing on a large-scale, especially to a larger audience, makes available just-in-time information and knowledge for learning. Technology can significantly reduce costs without necessarily outliving the usefulness of business education in facilitating knowledge and skill programmes. Adesina (2013) observed that one of the most serious problems facing Nigeria like many other countries in the world include unemployment.

The sustainability of business education programme was threatened during the emergence of COVID-19 as classes were completely halted. Stakeholders in business education should note that this dreaded monster has not completely left humanity. In the event it continues to rage, delivery of business education under physical contact would be far from reality. The only avenue to stay afloat and avoid disruption is to embrace emerging technologies in administration, instructional delivery and supervision, evaluation, research, among others. Facts emerging after about a year of ease of lock down and eventual resumption of school across the globe confirm new cases of COVID-19.

At the foreign scene, international or foreign students are seriously affected. Kakuchi and Leung (2021) reported that as the new semester begins this month (referring to September 2021) in Japan, China, Taiwan and South Korea, local and foreign students are facing continued online teaching and in some cases border restrictions for international students even as vaccine programmes get under way, adding to the uncertainty for students.

A study by Oh and Chua (2021) on the relationship between teacher computer-mediated communication (CMC) competence and teacher attitude toward using Frog VLE through a virtual learning platform showed a medium level of attitude and a medium level of CMC competence toward using Frog VLE and statistically significant direct causal relationship between teacher CMC competence and teacher attitude toward using Frog VLE.

Among the emerging technologies for sustaining the future of business education include: Virtual realities, wearable technologies and artificial intelligence tools. Virtual reality is described as computer simulation with three dimensional environments for interaction with real objects using special electronic equipment. This equipment includes helmet with a screen, gloves fitted with



sensors, among others. Virtual reality according (VR) to ITF (2021) facilitates experimental learning by simulating real-world environments. Advantageously, learners can test their skills, record their work and interact with experts all with Virtual Reality. It also encourages learners to respond overwhelmingly positive to active learner engagement.

A study conducted by Addane (2021) on integrating virtual reality technology and education teaching asserted that Virtual Reality (VR) technologies are essential for teaching and learning, where findings showed that participants expressed a high level of appreciation of VR applications which could be attributed to the fact that more than three-quarters of the participants had never previously tried them either for educational or entertainment purpose. An overwhelming majority of participants ultimately agreed that VR technologies as instrumental tools would be very effective in visualising abstract concepts for practical understanding, making learning more interactive, encouraging active participation rather than passivity, and making learning more exciting and fun. In another study, Neves, Duarte, Dais and Saraiva (2017) presented the result of a pilot study conducted in a basic design rooted discipline named Laboratorio de Design in IADs graduation in Design where results suggest positive contributions of the VR tools.

Wearable technologies (WT) are modern tools that fit into the reality of the present and unforeseeable future realities. They are smart electronic devices with micro-controllers that can be worn on the body as implants or accessories. Industrial Training Fund (ITF) (2021) highlights these categories of modern technologies to include fashionable technology, wearable devices, tech togs or fashion electronics. Such technologies are useful in: Synchronising data and communication from other gadgets; navigation tools; media devices and communication gadgets. The application of wearable technologies in the classroom is already gaining momentum. Therefore, the classroom of the 21<sup>st</sup> Century embraces various avatars of wearable technologies such as Google Glass, Smartwatch, Wristband and Keyglove. In a study by Okon and Chukwurah (2020) on Technology-driven teaching skills' needs of business education lecturers and content delivery in a globalised economy, findings were that Technology-driven teaching skills significantly predict effective delivery of the content of business education, an implication that business educators require skills in the use of modern technology in teaching business education. The use of technology in the teaching of business education can be result-oriented and of critical significance to the future.

Artificial Intelligence (AI) is the development of computer systems to be able to perform tasks normally requiring human intelligence. Such tasks include: Visual perception; speech recognition; decision-making; and translation between languages. Thus, ITF (2021) explained that the emergence of AI has made it important to take a look at learning methods and consider how facilitators/lecturers/teachers and learners are spending their time. The question therefore is, "How can business education lecturers and students as well as administrators spend their time interactively with the emerging technology such as AI"? It is equally necessary to ask, "How possible was such face-to-face interaction during the surge of COVID-19 Pandemic"?

### **Statement of the problem**

The outburst of COVID-19, coupled with the demand of the 21<sup>st</sup> Century has rendered business education graduates jobless for lack of skills. Throughout the period that the Pandemic lasted in year 2020, teaching and learning activities remained suspended. The fear that the Pandemic is still surging signals further suspension of academic activities through physical contact.



The inability of business education stakeholders to address the problem of skill gap has been a major source of worry. It is therefore observed that poor skill among graduates of business education is largely due to lack of students' exposure to emerging and industry-based technologies. The lack of exposure of students is as a result of inability of stakeholders in business education to equip business education Programme with such technologies with ineffectiveness in collaborating with industries. This study is apt.

#### **Objectives of the study**

1. To determine the relationship between Virtual realities and sustainability of business education delivery in the wake of pandemic from learners' perspective
2. To determine the relationship between Wearable technologies and sustainability of business education delivery in the wake of pandemic from learners' perspective
3. To determine the relationship between artificial intelligence tools and sustainability of business education delivery in the wake of pandemic from learners' perspective

#### **Research questions**

1. What is the relationship between Virtual realities and sustainability of business education delivery in the wake of pandemic from learners' perspective?
2. What is the relationship between Wearable technologies and sustainability of business education delivery in the wake of pandemic from learners' perspective?
3. What is the relationship between Artificial intelligence tools and sustainability of business education delivery in the wake of pandemic from learners' perspective?

#### **Statement of hypotheses**

- H<sub>01</sub> There is no significant relationship between Virtual realities and sustainability of business education delivery in the wake of pandemic from undergraduate learners' perspective
- H<sub>02</sub> There is no significant relationship between Wearable technologies and sustainability of business education delivery in the wake of pandemic from undergraduate learners' perspective
- H<sub>03</sub> There is no significant relationship between Artificial intelligence tools and sustainability of business education delivery in the wake of pandemic from undergraduate learners' perspective

#### **Research methods**

This study adopted the ex-post facto research design and was conducted in Cross River State using a population of 1,385 and a sample of 302 respondents selected using multi-stage random sampling technique alongside Krejcie & Morgan, (1970) table of sampling determination. A structured questionnaire tagged, "Emerging Technologies and Sustainability of Business Education Delivery in the Wake of Pandemic Questionnaire (ETSBEPQ)" duly validated and reliability-tested using Cronbach Alpha reliability technique was used. The three research questions were answered using descriptive statistics. Linear Regression Analysis was used to test the three null hypotheses generated after coding.



## Results/Discussion of findings

### Research question one

What is the nature of relationship between Virtual realities and sustainability of business education delivery in the wake of pandemic from learners' perspective?

**Table 1**

Descriptive statistics of nature of relationship between VR and sustainability of Business Education in the wake of Pandemic

S/N		Weighted mean	Nature of Relationship
1.	VR uses computer simulation for business education delivery	2.5	Positive/High
2.	VR promotes three dimensional environments for interaction	2.5	Positive/High
3.	VR uses real objects for interaction	3.0	Positive/High
4.	VR equipment used for business education delivery includes helmet with a screen	3.4	Positive/High
5	VR equipment used for business education delivery includes gloves fitted with sensors.	3.7	Positive/High
6	VR facilitates experimental learning by simulating real-world environments	3.7	Positive/High
7	Learners can test their skills using VR	3.7	Positive/High
8	Learners can record their work and interact with experts all with VR.	2.7	Positive/High
9	VR encourages learners to respond overwhelmingly positive to active learner engagement.	2.7	Positive/High



10	I have used VR applications for educational use	2.7	Positive/High
11	VR technologies are instrumental tools for visualising abstract concepts for practical understanding		
	VR makes learning more interactive		Positive/High
	VR encourages active participation rather than passivity, and making learning more exciting and fun.	2.7	Positive/High
12	VR promotes students' performance	3.0	
13	VR makes acquisition of knowledge permanent		Positive/Low
	<b>TOTAL</b>	1.6	Positive/Very High
14		3.7	Positive/High
15		3.0	
			<b>Positive/High</b>
		<b>44.6/2.97</b>	

Table 1 presents answer to the research question one. Items 1 – 15 in ETSBEWPQ generated data analysed using weighted mean. Results presented indicate that the grand (weighted) mean value of 2.97 implies that the nature of relationship between virtual realities and the sustainability of business education is positive and high. Item-by-item analysis reveals that 13 items show positive and high relationship; one very high and the other low and positive relationship.

### Research question two

What is the nature of relationship between Wearable technologies and sustainability of business education delivery in the wake of pandemic from learners' perspective?

**Table 2**

Descriptive statistics of nature of relationship between Wearable technologies and the sustainability of Business Education in the wake of Pandemic

S/N		Weighted mean	Nature of Relationship
1.	Wearable technologies (WT) as modern tools fit into the reality of the present and unforeseeable future realities	2.09	Positive/Low
2.	Wearable technologies have smart electronic devices with micro-controllers that can be worn on the body as implants or accessories.	2.09	Positive/Low
3.	Wearable technologies are used for synchronising data and communication from other gadgets;	2.81	Positive/High
4.	Wearable technologies are used as navigation tools;	3.01	Positive/High
5.	Wearable technologies serve as media devices	3.35	Positive/High



6.	Wearable technologies serve as communication gadgets.	2.94	Positive/High
7.	Wearable technologies are applied in classroom	2.99	Positive/High
8.	Wearable technologies such as Smart watch is used in learning	3.7	Positive/High
9.	Wearable technologies such as Google Glass is applied in classroom interaction	3.02	Positive/High
10.	Wearable technologies such as Wristband used in learning	2.70	Positive/High
11.	Wearable technologies such as Key glove is used in learning		Positive/High
<b>TOTAL</b>		2.64	
		2.88	Positive/High

Table 2 presents results of nature of relationship between Wearable technologies and the sustainability of Business Education in the wake of Pandemic. Items 16 – 26 provided data used in answering the research question. The Grand (weighted) mean value of 2.64 indicates that the nature of relationship between Wearable technologies and the sustainability of business education in the wake of Pandemic is positive and high. Item-by-item assessment of the results reveal that out of the 11 items, only two items yielded positive and low relationship. All others produce positive and high relationship.

#### **Research question three**

What is the relationship between Artificial intelligence tools and sustainability of business education delivery in the wake of pandemic from learners' perspective?

**Table 3**

Descriptive statistics of nature of relationship between Virtual Realities and the sustainability of Business Education in the wake of Pandemic

S/N		Weighted mean	Nature of Relationship
1.	Artificial Intelligence (AI) performs tasks normally requiring human intelligence.	2.90	Positive/High
2.	Artificial Intelligence promotes visual perception	2.90	Positive/High
3.	Artificial Intelligence promotes speech recognition	2.90	Positive/High
4.	Artificial Intelligence promotes decision-making	2.95	Positive/High
5.	Artificial Intelligence promotes translation between languages.	2.05	Positive/Low
6.	Emergence of AI has made it important to take a look at learning methods	3.0	Positive/High



7.	Artificial intelligence determines how facilitators/lecturers/teachers and learners are spending their time.	2.14	Positive/Low
8.	Artificial Intelligence (AI) performs tasks normally requiring human intelligence. Artificial Intelligence promotes visual perception	2.4	Positive/Low
9.		3.0	Positive/High
10.	Artificial Intelligence promotes speech recognition	2.14	Positive/Low
11.	Artificial Intelligence promotes decision-making	2.9	Positive/High
12.	Artificial Intelligence promotes translation between languages.	3.0	Positive/High
<b>TOTAL</b>		<b>2.69</b>	<b>Positive/High</b>

Table 3 presents results of nature of relationship between Artificial Intelligence (AI) and the sustainability of business education in the wake of Pandemic. Item-by-item analysis shows that the grand (weighted) average value of 2.69 implies positive and high relationship. Again, out of the 12 items of the questionnaire assessed four show low relationships, while the remaining eight show high relationship.

#### Test of null hypotheses

##### Null hypothesis one

There is no significant relationship between Virtual realities and sustainability of business education delivery in the wake of pandemic from undergraduate learners' perspective

**Table 4**

Simple Linear Regression Analysis of no significant relationship between Virtual realities and sustainability of business education delivery in the wake of pandemic from undergraduate learners' perspective

Variable	$\beta$ SE	R	R2	Significant at .05
Virtual Realities	4.78269	.107	.011	Significant at .05

  

Model	Sum of Squares	df	Mean Square	F	Significant Level
Regression	79.179	1	79.179	3.462	.05
Residual	6862.225	300	22.874		
Total	6941.404	301			

Results presented in Table 4 reveal that the calculated F-Ratio of 3.462 is slightly less than the critical F-Ratio of 3.94 at degree of freedoms 1 and 301 at .05 levels of significance. With this revelation, the null hypothesis, "There is no significant relationship between Virtual realities and sustainability of business education delivery in the wake of pandemic from undergraduate learners' perspective" is upheld.

##### Null hypothesis two

There is no significant relationship between Wearable technologies and sustainability of business education delivery in the wake of pandemic from undergraduate learners' perspective.



**Table 5**

Simple Linear Regression Analysis of no significant relationship between Wearable technologies and sustainability of business education delivery in the wake of pandemic from undergraduate learners' perspective

Variable	$\beta$ SE	R	R <sup>2</sup>	Significant at .05
Virtual Realities	5.93128	.686	.471	Significant at .05

  

Model	Sum of Squares	df	Mean Square	F	Significant Level
Regression	7041.326	1	7041.326	266.594	.05
Residual	7923.645	300	26.412		
Total	14964.970	301			

Results presented in Table 5 reveal that the calculated F-Ratio of 266.594 is by far greater than the critical F-Ratio of 3.94 at degree of freedoms 1 and 301 at .05 levels of significance. Null hypothesis one is rejected, implying that significant relationship exists between Wearable technologies and the sustainability of business education in the wake of Pandemic.

**Null hypothesis three**

There is no significant relationship between Artificial intelligence tools and sustainability of business education delivery in the wake of pandemic from undergraduate learners' perspective

**Table 6**

Simple Linear Regression Analysis of no significant relationship between Artificial Intelligence and sustainability of business education delivery in the wake of pandemic from undergraduate learners' perspective

Variable	$\beta$ SE	R	R <sup>2</sup>	Significant at .05
Virtual Realities	6.23336	.747	.558	Significant at .05

  

Model	Sum of Squares	df	Mean Square	F	Significant Level
Regression	14729.640	1	14729.64	379.094	.05
Residual	11656.44	300	38.855		
Total	26386.079	301			

Results presented in Table 6 reveal that the calculated F-Ratio of 379.094 is by far greater than the critical F-Ratio of 3.94 at degree of freedoms 1 and 301 at .05 levels of significance. With this revelation, null hypothesis one is rejected, implying that Artificial Intelligence significantly relates with the sustainability of business education in the wake of Pandemic.

**Discussion of findings**

Findings from test of null hypothesis one, "there is no significant relationship between Virtual realities and the sustainability of business education in the wake of Pandemic" came as a surprise as it differed from earlier findings reviewed at the early stage of this research. For instance, Addane (2021) in a recent study conducted in Abuja investigated integrated virtual reality technology and education teaching claiming that Virtual Reality (VR) technologies are essential for teaching and learning. The study specifically assessed how much VR technologies could be practical tools to improve teaching and learning at the junior high school level from learners' perspective using 56 students randomly selected from five public secondary schools to use VR goggles to play games, watch videos, and see photograph contents based on virtual environments. Findings indicated that participants expressed a high level of appreciation of VR applications which could be attributed to the fact that more than three-quarters of the participants had never previously tried them either for educational or entertainment purpose. Findings further revealed that an overwhelming majority of the participants ultimately agreed that VR technologies as instrumental tools would be very effective in visualising abstract concepts for practical understanding, making learning more interactive, encouraging active participation rather than passivity, and making learning more exciting and fun.



The reason for the no relationship could be attributed to lack of exposure of students to virtual reality tools, the absence of such tools in delivery of business education programme or both could also account for the no relationship revealed in the findings.

Findings from null hypothesis two differed as it revealed that significant relationship exists between Wearable technologies and the sustainability of business education in the wake of Pandemic. This finding further strengthens the findings of other authors earlier reviewed such as Okon and Chukwurah that technology-driven teaching skills significantly predict effective delivery of the content of business education.

Finding from null hypothesis three that significant relationship exists between Artificial Intelligence and the sustainability of business education in the wake of Pandemic further affirmed the assertions of other authors earlier reviewed such as ITF (2021) that the emergence of AI has made it important to take a look at learning methods and consider how facilitators and learners are spending their time.

### **Conclusion**

Based on the findings of this study, it is concluded that emerging technologies are vital to the sustainability of business education now and the future as it facilitates business education delivery in the wake of any Pandemic. It is also concluded that the future of business education programme is threatened in the absence of emerging technologies such as Virtual Realities, Wearable Technologies and Artificial Intelligence.

### **Recommendations**

The following recommendations are made from the conclusions drawn

1. Management and business educators in institutions should equip business education laboratories with VR technologies.
2. Business education lecturers and students should acquire WT within their reach and others not within the reach of individual learners should be provided by the institution.
3. Virtual Intelligence should be made one of the requirements for establishing and accrediting Business Education Programme by appropriate regulatory agencies.

### **References**

- Adesina, O. S. (2013). Unemployment and security challenges in Nigeria. *International Journal of Humanities and Social Science*, 3(7), Available at: [https://www.researchgate.net/publication/316104478\\_Unemployment\\_and\\_Security\\_Challenges\\_in\\_Nigeria](https://www.researchgate.net/publication/316104478_Unemployment_and_Security_Challenges_in_Nigeria) [accessed Sep 11 2021].
- Addane, E. F. (2021). Investigating the influence of virtual reality technology in teaching and learning: From perception of Nigerian high school students. *Journal of Education and Practice*, 12(18), 29 – 42. Available at: <https://www.iiste.org/Journals/index.php/JEP/article/viewFile/56591/58437> . Accessed September 2021
- Industrial Training Fund – ITF (2021). Leveraging technology for effective SIWES supervision. *Training Manual*. A publication of Industrial Training Fund (ITF).
- Kakuchi, S. and Leung, M. (2021). New semester sees many foreign students still shut out. *University World News: The Global Window on Higher Education*. Available at: <https://www.universityworldnews.com/post.php>
- Neves, A. G.; Duarte, E.; Dais, D; and Saraiva, M. (2017). The impact of virtual-reality-based tool on a Basic Design rooted discipline: Early perceptions. *Design Doctoral Conference '17, Portugal*. Available at: <https://www.academia.edu/38212771/>
- Oh, S. P. and Chua, Y. P. (2021). Relationship between computer mediated communication competence and attitude towards using frog VLE among secondary school teachers. *International Journal of Web-based learning and teaching technologies*, 17(3), 1 – 16. Available at: <https://www.igi-global.com/gateway/article/full-text-pdf/281721.Doi:10.11591/edulearn.v14i3.14539>
- Okon, E. E. & Chukwurah, C. C. (2020). Technology-driven teaching skills' need of business education lecturers and content delivery in a globalised economy. *Journal of Education and Learning*, 14(3), 393 – 401. Available at: <https://eric.ed.gov/?id=EJ1266401> Accessed September 2021