



DIGITAL SKILLS ACQUIRED BY BUSINESS EDUCATION LECTURERS FOR IMPLEMENTATION OF BUSINESS EDUCATION CURRICULUM IN COLLEGES OF EDUCATION IN DELTA STATE

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Abstract

This study ascertained level of digital skills acquired by business education lecturers for implementation of business education curriculum in colleges of education in Delta State. Descriptive survey design was adopted for the study. The population comprised 95 business education lecturers from three colleges of education in Delta State. One research question guided the study and a null hypothesis tested. A validated structured questionnaire with 25 items on a five points rating scale was used to collect data. The internal consistency of the instrument was established using Cronbach Alpha statistics, which yielded a reliability coefficient of 0.88. Ninety-five (95) copies of the questionnaire were distributed; only 89 copies representing 94 percent were retrieved and used for analysis. The data collected were analyzed using mean and standard deviation to answer research question while t-test statistics was used to test the null hypothesis at 0.05 level of significance. The findings of the study revealed among others that business education lecturers acquired the ability to locate and use appropriate storage devices (hard-disk, flash drives) for storing and sharing files, use of printing machine and mobile phone for voice, messaging and internet source at a high level. Ability to use zoom for video conferencing and use of google classroom in instructional delivery were acquired at a low level while the ability to use Microsoft Team for conversation with online video call and screen sharing were acquired at a moderate level. In fact, outside the mere computer basic literacy skills, the rest of the needed and core digital skills were lowly and moderately acquired by the lecturers. It was concluded that business education lecturers have not acquired digital skills at a significant level for effective implementation of business education curriculum in colleges of education in Delta State. It was recommended among others that business education lecturers in colleges of education should be engaged in digital skills' acquisition training and re-training for capacity building, to effectively implement the current business education curriculum in colleges of education.

Keywords: Digital Skills, Acquisition, Business Education, Lecturers, Implementation, Curriculum

Introduction

The digital world no doubt is paving ways into every aspect of human endeavour, ranging from manufacturing, marketing, office occupation and education is not left out. The modern work environment is digitally-driven and only the digitally-equipped worker can cope with it. It is more challenging to the lecturers who are expected to be ahead of their students in display of knowledge, skills and attitudes. These lecturers are also expected to inculcate those knowledge, skills and attitudes to their students, who will pass same to the younger generation as would be teachers or in other employments, either paid or self-employed. The performance of business education graduates of colleges of education in the labour market, will significantly reflect how well the curriculum is being implemented, as the school mirrors the society. It is glaring that the entire globe is under the influence of digitalization and manual office functions now automated. Ndubuisi, Ezeani and Ile (2022) noted that the world is going digital and there is need for business education students to acquire the right digital skills for future use. This is necessary as potential teachers and entrepreneurs to establish and manage their personal future business enterprises more profitably. Acquisition of digital skills in the teaching/learning process is necessary for integration of technology in instructional delivery. This enable the lecturers to conduct classes online, in collaboration,



sharing information and resources over the internet. Okute, Enang and Etoma (2022) noted that digital skills are needed by business education lecturers to prepare business education students to fit into global market of the 21st century and beyond. National Commission for Colleges of Education (NCCE), (2020) in the Minimum Academic Standard noted the digital skill needs of a business education lecturer as those skills which he is expected to possess so as to competently incorporate digital technologies, such include basic skills in ICT, which is the use of computer to retrieve, store, produce, present and exchange information and to communicate, participate in collaborative networks via the internet. As outlined by National Commission for Colleges of Education (NCCE) (2020), the teaching of business education requires digital technologies which include computer, internet connectivity/network, printer, scanner, projector/projector screen, electronic board, photocopier, including word processor, graphic design and accounting software among others.

Business education is education for and about business, which makes a learner to acquire skills for personal development, occupational and economic transformation. Ntukidem and Anyasador (2018) informed that business education as a facet of education stresses the training of character and skill acquisition with a view to building mutual trust in business transactions. In generic terms, the major aim of business education is the provision of requisite skills to its graduates to meet societal needs. According to Edokpolor and Egbri (2017), the actual goals of business education shall be to prepare students for specific career in office occupations, equip students with the requisite skills for job creation and entrepreneurship, expose students to knowledge acquisition for and about business with a good blend of computer technologies which incorporates information and communication technology (ICT). These laudable goals of business education cannot be adequately achieved without appropriate acquisition of digital skills required to use digital technologies by business education lecturers.

Digital technology has become a pedagogical tool for lecturers of higher education in this 21st century, which is also known as “the digital age”. Manual office functions are now automated. Teaching and learning process have also taken a new dimension of integrating technology in instructional delivery which enables conducting classes online, collaborating, sharing information and resources over the internet. Such digital technologies that should be competently incorporated in instructional delivery as outlined by National Commission for Colleges of Education (NCCE) include, computer, internet connectivity/network, printer, scanner, projector/projector screen, electronic board, photocopier, including word processing, graphic design and accounting software among others.

Consequently, the essential digital skills needed by business education lecturers for effective implementation of business education curriculum in colleges of education include the ability to use devices like computers for simple, personal and work tasks, in teaching and business services, identification and use of information on the internet, understanding how to be safe and responsible online, communicating socially and professionally using email, messaging, social and multimedia. UNESCO (2018) noted digital skills as those abilities needed to use devices, communication, application and networks to access and manage information. Digital skills are often characterized by competency with computational basics, hardware, software and networks (Jenkins, Trilling & Fadel in Okute, Enang & Etoma, 2022). These digital skills include basic skills in ICT, which is the use of computer to retrieve, store, produce, present and exchange information and to communicate, participate in collaborative networks via the internet. National Commission for Colleges of Education (NCCE), (2020) in the Minimum Academic Standard noted the digital skill needs of a business education lecturer as those skills which he is expected to possess so as to competently incorporate digital technologies. Ajie-Uche, Efughi and Ajaero (2018) revealed that business education lecturers in south-south Nigeria need capacity building in the following internet skills: ability to create web page for teaching, ability to upload lecture notes or other materials on the web, skills in slide presentation, retrieving and replying email and ability to display teleconferencing skills and so on.

Acquisition of digital skills by business education lecturers as used in this study refers to the possession of computer basics, hardware and soft skills; internet and online application competence for effective implementation of business education curriculum. This digital competence goes beyond mere knowledge of basic operations of the computer to positive attitudes in the lecturer with the capacity to effectively putting the ICTs into action and mobilize them in certain educational context in line with the teacher and learner’s aspirations. Udeme and Akpan (2023) noted that acquisition of digital skill includes subset of computer skills that enable content management and allows the use of computers and applications on a computer. These skills are relevant to business education lecturers in the use of digital instructional materials to execute lessons. The benefits of application of digital skills in education is overwhelming as this allows teaching and learning to become more interesting, effective, and efficient as technology can automate repetitive tasks for the learners’ understanding and also speed up common



processes like computation of results. Berger and Frey (2016) noted that majority of occupations now require application of digital skills as they have become critically important for present and future jobs. Employers are equally giving priority to graduates who can demonstrate digital skills as most organizations are drastically transiting to e-commerce, e-learning, e-office among others. Insteford and Munthe (2017) asserted that educators are expected to enhance their pedagogical digital skills and that of their students. Corroborating this, Aina (2018) noted that business education, as a vital part of technical and vocational education and training programme (TVET) is principally aimed at providing graduates with appropriate skills that will ensure versatility in their business endeavor while meeting the economic needs via work engagement. By implication, the curriculum of business education should be responsive to societal changes alongside innovations in education with methods of teaching that is relevant to development of digital skills among recipients.

Curriculum is the totality of all that is required to be learnt by a learner in a school setting. Oluwadare, Omidiji and Awe (2022) noted that curriculum is an embodiment of all knowledge, skills and attitudes which a nation, through her schools, imparts to her citizen. Knowledge as emphasized in curriculum covers facts, theories, principles, generalizations and rules needed to be acquired to be certified as competent in the field. Okoro in Ndubuisi, Ezeani and Ile (2022) 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 use in careers as administrators, managers, teachers wherever one may find oneself in the business world. Thus, business education curriculum of colleges of education, Nigeria Certificate in Education (NCE), which is coordinated by the National Commission for Colleges of Education (NCCE); aims at producing quality teachers for primary and junior secondary schools; competent individuals for office occupation and enterprising self-reliant individuals who can confidently hold positions in other sectors of the economy. College of education is one of the tertiary institutions in Nigeria that offers business education. The new curriculum has four options in the field of business education, which includes, accounting education, entrepreneurship education, marketing education and office technology and management education (NCCE, 2020).

Business education curriculum of college of education had gone through series of revisions in recent times. The current curriculum is information and communication technology (ICT) driven and enriched with modern courses, which are entrepreneurship and marketing education. The old curriculum had its shortfalls and considered not adequate for the production of graduates for the digital work place. Thus, the removal of manual typewriting and shorthand in the curriculum and inclusion of Information and communication technology/computer application, computer keyboarding, desktop publishing, online marketing, entrepreneurship, among others are means of repositioning the programme for the production of skillful graduates fit for the modern office job, teaching career and for self-employment. These could come to bear if the implementation of the curriculum is effective.

Implementation of business education curriculum is central to the achievement of the aims and objectives of the programme. Curriculum implementation entails execution of the curriculum contents to the learners with a view to achieving the goals and objectives of the curriculum. Implementation of curriculum is a critical stage and it is at the implementation stage that many excellent curriculum plans and other educational policies are marred if not well executed. With the removal of shorthand and typewriting courses from the current business education curriculum, the business education lecturers who implement the curriculum are under obligation to acquire digital skills for preparing digitally compliant graduates who can compete favourably in a digitalized work environment.

Regrettably, Pangrazio (2020) remarked that despite the popularity of digital devices and educational tools available, educational institutions and teachers are still battling with how to integrate technologies into the curriculum for preparation of students for digitalized work place. Okoli and Ikpata (2022) revealed that business educators in tertiary institutions in Anambra State applied virtual learning in instructional delivery at a moderate level. These are unacceptable as business education lecturers must possess the right transferrable skills for a quality instructional delivery in the modern digital world. Could it be that these teachers lack digital skills? The future employment prospect of business education products is being mortgaged in a digital world and more disastrous in a foundational teacher training institute like colleges of education in Nigeria, where the current curriculum is information and communication technology (ICT) driven. It therefore becomes imperative for business education lecturers to acquire digital skills that will enable them integrate technologies successfully into their teaching and conduct online classes with their students in the course of implementing business education curriculum.

Relevant to this study is the influence of gender on acquisition of digital skills among business education lecturers for implementation of business education curriculum. There are varied findings in



studies available in male and female interests in digital skills acquisition for instructional delivery. Oyinloye and Umoru (2022) discovered slight difference with male lecturers having higher mean response ratings than their female counterparts on online pedagogical skills needed for effective online teaching and learning of office technology and management courses. However, Okoli and Ikpat (2022) found out that male and female business educators in tertiary institutions in Anambra State did not significantly differ on their level of application of virtual learning in instructional delivery which is relative to digital skills acquired.

It is against this backdrop that this study was conceived to ascertain the level of digital skills acquired by business education lecturers for effective implementation of business education curriculum in colleges of education in Delta State.

Research Question

1. What is the level of digital skills acquired by business education lecturers for implementation of business education curriculum in colleges of education in Delta State?

Research Hypothesis

One null hypothesis was tested at 0.05 level of significance:

- : Male business education lecturers do not differ significantly from their female counterparts regarding the level of digital skills acquired for implementation of business education curriculum in colleges of education in Delta State

Method

Descriptive survey research design was adopted for the study. The population of the study was 95 business education lecturers from the three colleges of education in Delta State, namely: Federal College of Education (Technical), Asaba (75); College of Education, Warri (10) and College of Education, Mosogor (10). The instrument used for data collection was a structured validated questionnaire with 29 items, structured on a five points rating scale of Very Highly Acquired (VHA), Highly Acquired (HA), Moderately Acquired (MA), Slightly Acquired (SA) and Not Acquired (NA). The reliability of the instrument was determined using Cronbach Alpha statistics, which yielded reliability coefficient scores of 0.88. The researcher distributed 95 copies of the questionnaires to the respondents with the help of two research assistants who were duly informed on what to do. Out of the 95 copies of questionnaires distributed, only 89 were correctly filled, returned and used for analysis. This represents 94 percent return rate. Mean and standard deviation were used to answer the research questions and to determine the homogeneity of the respondent's opinion. The null hypothesis was tested using t-test statistics at 0.05 level of significance. The decision rule was based on the boundary limit of numbers: 4.50 – 5.00 for very highly acquired; 3.50 – 4.49 is highly acquired, 2.50 – 3.49 is moderately acquired, 1.50 – 2.49 is slightly acquired and 1.00 – 1.49 is not acquired.

Results

Table 1: Business Education Lecturers' Mean Responses on level of digital Skills Acquired for Implementation of Business Education Curriculum in Colleges of Education in Delta State (N = 89)

S/N	Digital Skills Acquired to Implement Business Education Curriculum:	Mean	SD	Remark
1	Ability to use Zoom for video conferencing.	1.99	1.08	SA
2	Ability to use Google classroom in instructional delivery.	1.79	0.82	SA
3	Ability to use Microsoft Team for conversation with online video call and screen sharing.	2.87	0.91	MA
4	Ability to use interactive multimedia technology.	2.18	0.87	SA
5	Ability to use diverse internet connection options to connect to the web for educational materials.	3.07	0.90	MA
6	Ability to upload and download teaching and learning contents through electronic file transfer.	2.33	0.84	SA
7	Ability to use cloud computing for storing and sharing files.	2.42	1.02	SA
8	Ability to use Web application (Web 2.0) tool to aid interactive teaching and learning	1.93	0.94	SA



9.	Ability to select and use effective social networking services to post teaching contents	2.94	1.33	MA
10.	Ability to organize educational online conferences and discussion groups with students on the web.	2.12	1.21	SA
11	Ability to use interactive e-book			
12	Ability to use digital students' response systems for instant feedback.	1.99	0.78	SA
		2.10	0.45	SA
13.	Ability to manipulate computer devices with appropriate excel software in teaching tabulation or table-work	2.73	0.99	MA
		3.21	1.15	MA
14	Ability to manipulate hardware devices such as computer in teaching word processing course.	3.22	1.04	MA
15	Ability to use modern technological devices such as photocopier.	3.20	0.87	MA
16	Ability to use modern technological devices such as Scanner.	4.17	0.79	HA
17	Ability to locate and use appropriate storage devices (hard-disk, flash drives) for storing and sharing files.	3.73	0.85	HA
18	Ability to use Printing Machine	2.71	0.75	MA
19.	Ability to use Projector to enhance lecture delivery	3.14	0.56	MA
20	Ability to professionally produce official letters using a word processor.	2.33	0.96	SA
21	Ability to use Dropbox to enhance involvement in public discussions.	4.37	0.70	HA
22	Ability to use mobile phone for voice, messaging and internet sources.			
23	Ability to compute with Peach-tree software for teaching accounting course.	2.29	0.89	SA
24	Ability to access and use e-marketing sites	3.06	0.93	MA
25	Ability to post tests and examination questions in online platform and apply password	2.31	1.00	SA
Cluster Mean		2.73		MA

Table 1 revealed that only three items on digital skills with mean scores ranging between 3.73 and 4.37 were rated by the respondents as highly acquired. Ten items with mean scores ranging from 2.71 to 3.22 were rated as moderately acquired while twelve items which ranged between 1.79 and 2.42 were rated as slightly acquired by the respondents. The grand mean of 2.73 shows that the respondents moderately acquired the digital skills for implementing business education curriculum in colleges of education in Delta State.

The standard deviation score for eighteen items ranged from 0.45 to 0.99 and seven items ranged between 1.00 and 1.33. The standard deviation for all the items are not within the same range. This shows that the respondents were slightly apart in their ratings of acquired digital skills for implementing business education curriculum in colleges of education in Delta State.

Test of Null Hypothesis

Table 2: Summary of t-test Analysis of Male and Female Business Education Lecturers' Mean Responses on Level of Digital Skills Acquired for implementation of Business Education Curriculum in Colleges of Education in Delta State

Variable	N	Mean	SD	Df	α-Level	t-cal	t-crit	Decision
Male	43	3.26	1.02	87	0.05	2.03	1.96	Significant
Female	46	2.67	0.78					

The data presented on the t-test statistics in Table 2, shows that there are 43 male and 46 female business education lecturers in colleges of education in Delta State, with their mean scores and standard deviation. Males ($\bar{X} = 3.26$; $SD = 1.02$) and Females ($\bar{X} = 2.67$; $SD = 0.78$) respectively. The t-calculated value is 2.03 and the t-critical value is 1.96 at 0.05 level of significance and 87 degree of freedom. This means that there was significant difference in the mean responses of male and female business education lecturers on level of digital skills acquired for implementation of business education curriculum in colleges of education in Delta State. Therefore, the hypothesis that stated that male business education lecturers do



not differ significantly from their female counterparts on the level of digital skills acquired for implementation of business education curriculum in colleges of education in Delta State was rejected

Discussion of Findings

Findings of the study revealed diverse levels of digital skills acquisition by business education lecturers for implementation of business education curriculum in colleges of education in Delta State for items rated. Business education lecturers acquired the ability to locate and use appropriate storage devices (hard-disk, flash drives) for storing and sharing files, use of printing machine and mobile phone for voice, messaging and internet sources at a high level. These digital skills are regarded as basic computer literacy skills.

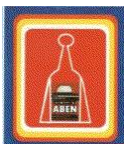
The business education lecturers acquired the ability to use Microsoft Team for conversation with online video call and screen sharing, diverse internet connection options to connect to the web for educational materials, selection and use of effective social networking services to post teaching contents, manipulate the computer devices with appropriate excel software in teaching tabulation or table-work, manipulate hardware devices such as computer in teaching word processing course, use of modern technological devices such as photocopier, scanner, projector to enhance lecture delivery, professionally produce official letters using a word processor and accessibility and use of e-marketing sites at moderate levels .

Findings of the study also revealed that the business education lecturers acquired the ability to use zoom for video conferencing, google classroom, interactive multimedia technology in instructional delivery, ability to upload and download teaching and learning contents through electronic file transfer, use cloud computing for storing and sharing files, Web application (Web 2.0) tool to aid interactive teaching and learning at slight levels. Others acquired at slight levels include, organizing educational online conferences and discussion groups with students on the web, use of interactive e-book, digital students' response systems for instant feedback, Dropbox to enhance involvement in public discussions, computation with Peach-tree software for teaching accounting course as well as posting tests and examination questions in online platform and apply password. This finding corroborates with Okoli and Ikpai (2022) that revealed that business educators in tertiary institutions in Anambra State applied virtual learning in instructional delivery at a moderate level. This is also in line with that of Ajie-Uche, Efughi and Ajaero (2018), which revealed that business education lecturers in south-south Nigeria need capacity building in the following internet skills: ability to create web page for teaching, ability to upload lecture notes or other materials on the web, skills in slide presentation, retrieving and replying email and ability to display teleconferencing skills among others. When these digital skills are in place, education becomes more meaningful, engaging, exciting, improves wider access to education while bridging the digital divide and as well enhance students' digital skills for gainful employment on graduation. The outcome will be a well implemented curriculum, fulfilling the objectives of business education programme and producing quality and skillful digital compliant graduates.

Tripathy (2019) directed that digital skills required in the modern digital economy must be taught to the students to minimize the risk of digital skills gap. This statement is true, but how can it be implemented with business education lecturers lagging behind in digital skills' acquisition. They, cannot actually give out what they do not have. Evidence from this study revealed that business education lecturers in colleges of education in Delta State outside the basic and core digital skills acquired at high levels, other digital skills were acquired at moderate and slight levels.

Finally, the results of the findings on hypothesis tested revealed significant difference between male and female business education lecturers' mean responses on level of digital skills acquired for the implementation of business education curriculum in colleges of education in Delta State. The result revealed higher mean ratings for the male business education lecturers. This corroborates with the reports of Oyinloye and Umoru (2022), who discovered significant difference with male lecturers having higher mean response ratings than their female lecturers on online pedagogical skills needed for effective online teaching and learning of office technology and management courses in Adamawa state.

The implication of these findings is that business education curriculum in colleges of education in Nigeria which is information and communication technology driven, also for the training of would be teachers for primary and junior secondary schools would not be effectively implemented. The modern business world demands competent digital compliant personnel for job opportunities. Ndubuisi, Ezeani and Ile (2022) asserted that as the world is going digital, there is need for business education students to acquire the right digital skills. Effective application of digital skills in business education will adequately equip business education graduates with relevant ICT skills needed to establish and manage their personal



business enterprises more profitably. Majority of occupations now require application of digital skills as they have become critically important for present and future jobs. Consequently, employers are now prioritizing graduates who can demonstrate digital skills as most organizations are drastically transiting to e-commerce, e-learning, e-office and so on. In the teaching and learning process, when business education lecturers acquire digital skills to a high level they can conduct online classes with their students without being physically present in the classroom and the learners can as well participate from a long distance with internet accessibility. They can apply the right technology, software in teaching and learning and importantly, demonstrate skills in manipulating the digital devices. This is more evident in the case of unforeseen closure of schools, as was experienced during the Corona-virus pandemic (COVID-19).

Conclusion

Digital skills acquisition is an essential tool for effective implementation of the current business education curriculum in tertiary institutions in Nigeria, especially in the train-the-trainer institute such as colleges of education. Based on the findings, the study concludes that business education lecturers that implement business education curriculum have not acquired digital skills to a considerable level for effective implementation of business education curriculum in colleges of education in Delta state as required in the National Commission for Colleges of Education (NCCE), (2020) Academic Minimum Standard.

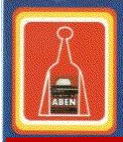
Recommendations

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

- Business education lecturers that teach in colleges of education should be exposed to constant trainings, to unlearn obsolete skills and engage on digital skill' acquisition training and re-training for capacity building; and for effective implementation of business education curriculum in colleges of education in Nigeria.
- Management of Colleges of education through Tertiary Education Training Fund (TETFUND) should strive to organize regular skills' acquisition programmes for business education lecturers especially on area of digital technology application.
- Management of Colleges of education should collaborate with employers of labour in the areas of training of business education lecturers on the digital skills needed for employability of business education graduates in the present century and the future. The employers of labour should always provide Colleges of education with information regarding these skills based on environmental and technological changes in business.

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