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INTERPLAY BETWEEN BUSINESS EDUCATION AND SUSTAINABLE ECONOMIC DEVELOPMENT: EVIDENCE FROM DIGITAL SKILLS POSSESSED BY BUSINESS EDUCATION GRADUATES

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Abstract
Acquisition of digital skills among graduates has become crucial to enable them to contribute sustainably for economic development. The study determined the interplay between business education and sustainable economic development through digital skills possessed by business education graduates. Two research questions and two null hypotheses guided the study. The study adopted survey research design, and 109 postgraduate students in Anambra State were studied without sampling. A-20 item questionnaire validated by three experts in the field of education was used for data collected. The reliability of the instrument was established using Cronbach's alpha formula which yielded coefficients of 0.91 and 0.78 obtained for e-entrepreneurial skills and cyber security skills respectively. Mean, standard deviation and t-test were used for data analysis. Findings showed that the level business education graduates possess e-entrepreneurship and cybersecurity skills necessary for contributing to sustainable economic development is low. Gender difference was not found in their mean ratings on the level of e-entrepreneurship and cybersecurity skills possessed for sustainable economic development. It was recommended that curriculum of business education programme should be reviewed so as to incorporate cybersecurity contents.
Key Words. Business education graduates, sustainable economic development, digital skills,

Introduction

Education is one of the essential components of every country's success. It is where the foundations of all development, including a large portion of social well-being. Enhancing economic efficiency requires education, and by increasing the value and efficiency of labor, education helps the poor to escape poverty. According to Ajash and Kummer (2018), the Federal Government of Nigeria (FGN) acknowledged in her National Policy on Education that functional education is vital for human capital building. The amount to which knowledge, skills, attitudes, habits, and beliefs are acquired via education enable youths contribute to the society's development. Ogbaga, Ike and Edet (2021) stated that quality education is judged by the knowledge and skills students possess following graduation. Recognizing the importance of functional education, the Federal Republic of Nigeria (FRN) called for the incorporation of business education into the Nigerian educational system (Federal Republic of Nigeria (FRN), 2014).

Business education, a sub-field of vocational education, focuses on imparting knowledge and skills to recipients for gainful employment or self-employment. Nwokike, Ezeabii, and Jim (2018) defined it as a skill-oriented programme concerned with imparting knowledge, abilities, and attitudes required for a prosperous career in the office and business world. According to Azuka and Nwosu (2018), business education is an important component in training the young for productive life and living. The primary purpose of business education is to

provide students with the core skills they will need in their future careers. FRN (2014) noted that one of the goals of business education is to provide students with the technical knowledge and vocational skills needed for agricultural, commercial, and development work. This goal, according to FRN suggests that business education is critical for any nation's sustainable economic development.

A development is considered to be sustainable if it meets current requirements without endangering the ability of future generations to meet their own needs (Data Revolution World, 2020). Sustainable development encompasses both personality development and nation-building according to Nwaukwa, Iloeje, Nzeh, and Nwagu (2018). The goal of sustainable development is to improve human living conditions in society and use resources to satisfy human wants while preserving the ability of future generations to satisfy their own needs (Ogbaga, Ike, and Ede, 2021). The Johannesburg World Summit on Sustainable Development in 2002 included the three pillars of sustainable development—economic, social, and environmental. Economic development is the gradual rise in the quantity of goods and services generated per person over time. Comparing one historical period to another, it is a growth in the production of economic commodities and services. According to Ogbaga et al. (2021), economic development and business education are inter-related, since increase in labor quality brought on by business education skill acquisition training programmes increases in productivity. Similarly, Nwaukwa et al. (2018) argued that by providing students with 21st century skills necessary for nation-building, business education becomes one of the main tools for achieving sustainable economic development in Nigeria.

Business education must innovate to bridge the sustainability economic development gap in today's society. This requires concentrating on a wide range of digital skills, and delivering effective training through innovative approaches. Today's students (digital natives) anticipate creative business education programme that will help them build life skills, become moral, accountable, and sustainable citizens after graduation (Nwokike et al., 2018). The current sustainability imperatives hint to new course contents that incorporate digital skills. The capacity to find, assess, use, share, and create content using digital devices, such as computers and smartphones, is referred to as having digital skill. Gómez-Poyato, Eito-Mateo, Mira-Tamayo and Matías-Solanilla (2022) defined it as the safe use of ICT in all areas (work, leisure, communication). This is in addition to knowing how to use electronic devices to store, evaluate, reproduce and exchange information and participate via the Internet.

Digital skills include: information processing, communication, content production, digital security, and digital problem-solving abilities (Vuorikari, Punie, Carretero, & Van den Brande, 2016). The Internet of Things (IoT), big data, open-source education, cyber security, cloud computing, data analytics, and internet research skills are some further examples. Ogbaga et al. (2021) stated that the Policies Commission for Business and Economic Education in Policy Statement Number 71 highlighted skills to be offered by business education for sustainable economic development as follows: data management, e-entrepreneurship, e-marketing, e-accounting, career development, economic and personal finance, and ICT skills.

E-entrepreneurship is the term used to describe entrepreneurial activity carried out online (Mohammad and Mohammed, 2018). It is the establishment of a new business with an innovative idea for the Net Economy and using an electronic platform in data networks to market products and services based entirely on electronic value creation. E-entrepreneurship abilities include the capacity to use ICTs and the internet to search, assess, use, share, and create material for the sale of goods and services. Others are; the capability to use automation to

manage and achieve effective branding, marketing, communication, and obtaining the targeted audience for the provision of goods and services (Ukata and Amini, 2021).

E-entrepreneurship skills are advantageous whether or not young people envision themselves opening an online store in the future because they may be applied to both their personal and professional lives (Nwaukwa et al., 2018). Students are expected to develop e-entrepreneurship skills in business education programme so that they can succeed after graduation in fields such as digital technologies, online business executives, e-marketing operations, e-accounting services, data analysis, and network technologies (Okoye (2017). Nwaukwa et al. stated that possessing e-entrepreneurship can help business education graduates launch and flourish in small-scale businesses that will enable them to contribute to GDP per capita, reduce poverty, and unemployment rate, which are some indicators of a country's sustainable economic development.

Cybercriminals' illicit actions have seriously harmed people, organizations, enterprises, institutions, and the government. Nigeria's national security and sustainable economic development are seriously threatened by cybercrime (Onyema, Edeh, Gregory, Edmond, Charles and Richard-Nnabu, 2021). Spamming, credit card fraud, ATM fraud, phishing, and identity theft are examples of cybercrime in Nigeria (Makeri, 2017). Nigeria needs to strengthen its cyber resilience by giving students (young) the knowledge and abilities to actively participate in the battle against the threats it faces (Aaltola and Taitto, 2019). Students in higher education use the internet frequently and rely on it for both information and social media (Garba, Siraj, Othman and Musa, 2020).

Long-term internet use can make students more vulnerable since it exposes them to dangers and risks that exist online. According to Topham, Kifayat, Younis, Shi, and Askwith (2016), students are frequently the weak link since they lack the necessary abilities to counteract cyberthreats. Assessing computer hazards, keeping an eye on network activity for potential breaches, comprehending wireless networks, analyzing malware, and using critical thinking, communication, and teamwork are all examples of cyber security skills (Sussman, 2021). Others include the ability to manage vast amounts of data and knowledge of the many sorts of databases and how they operate.

According to Ukata and Amini (2022), graduates of vocational education in Nigeria—including business education—lag behind in terms of digital self-reliance, which has an impact on their possibilities of making a contribution to the country's economic progress. According to Ukata and Amini, business education graduates lack the necessary e-entrepreneurship skills to launch and successfully run e-small enterprises, which contribute to a high rate of failure, unemployment, and economic underdevelopment. Similar to this, Garba, Siraj, Othman, and Musa (2020) found that the majority of Nigerian higher education institutions do not have active cyber security awareness programs in place, which means that Nigerian students do not have enough cyber security awareness and abilities. According to Onyema, Edeh, Gregory, Edmond, Charles, and Richard-Nnabu (2021), the majority of Nigerian university students are not aware of how to defend themselves from cyber threats and attacks. Onyema et al. expressed sadness that many schools in Nigeria do not include cyber security in their curriculum and that those that do frequently lack the necessary knowledge to teach cyber security courses. Despite having over 92 million internet users, a sizable portion of the Nigerian populace lacks knowledge about and skills in cyber security (Njoku, Nwokorie, Okolie & Odii, 2019).

Gender is a moderator in this study. There may be differences in the e-entrepreneurship and cyber security skills of male and female graduates of business education. According to Garba et al. (2020), male students are better at cyber security than female pupils. Onyema et al. pointed out that there was not enough empirical research done, particularly in Nigeria, to

determine how well-versed graduates of higher institutions were in cyber security. This study was necessary in order to further Nigeria's sustainable economic development. It is against this backdrop that this study was carried out to determine the interplay between business education and sustainable economic development through acquisition of digital skills by business education graduates.

Statement of the Problem

The federal government decided to include business education as a form of intervention programme in Nigeria's educational system in response to the country's current unemployment crisis. This was done in an effort to refocus students' emphasis on job development by giving them digital skills. Having digital skills will help individuals to find productive job or work for themselves, which will reduce unemployment and poverty and thus support the country's long-term economic development. The subject of the relationship between business education and sustainable economic development is raised by the observation that many graduates with degrees in business education appear to still be lacking some relevant digital skills for profitable work or self-employment. The issues here are that graduates of business education would be hindered from contributing to the nation's sustainable economic development if they had insufficient digital skills, which would limit their prospects of finding lucrative job or working for themselves. This study examined the digital skills necessary for sustainable economic development among graduates of business education in Anambra State. The study examined two areas in particular: (1) the level of e-entrepreneurship skills possessed by business education graduates for sustainable economic development; and (2) the level of cybersecurity skills possessed by business education graduates for sustainable economic development.

Research Question

The following research questions guided the study:

1. What is the level of e-entrepreneurship skills possessed by business education graduates for sustainable economic development?
2. What is the level of cybersecurity skills possessed by business education graduates for sustainable economic development?

Hypotheses

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

1. Male and female business education graduates do not significantly differ in their mean ratings on the level of e-entrepreneurship skills they possess for sustainable economic development.
2. There is no significant difference in the mean ratings of male and female business education graduates on the level of cybersecurity skills they possess for sustainable economic development.

Method

Descriptive survey research design was adopted for this study. The study was carried out in Anambra State. The population of the study consisted of 102 postgraduate students in the two universities in Anambra state namely Chukwuemeka Odumegwu Ojukwu University, Igbariam campus (n = 34) and Nnamdi Azikiwe University, Awka (n = 78). There was no sampling since the population was manageable. The instrument for data collection was a structured questionnaire titled “Digital Skills of Business Education Graduates for Sustainable

Economic Development, with two section A and B. Section A was designed to elicit demographic information of the respondents such gender, while section B contains 20 items which has into two clusters for the two research questions. The instrument was a five-point rating scale of Very High Level (VHL), High Level (HL), Moderate Level (ML), Low Level (LL) and Very Low Level (VLL). The face validity of the instrument was established using experts in Business Education and Measurement and Evaluation. The reliability of the instrument was carried out using pilot-test and data collected were calculated with Cronbach's alpha formula which yielded coefficients of .91 and .78 for the two scales that measured e-entrepreneurial skills and cyber security skills respectively. Mean and standard deviation were used to answer the researcher questions, while t-test was used to test the null hypotheses. A null hypothesis was rejected where the p-value is less than or equal to the significant level; otherwise, the null hypothesis was accepted. The analysis was carried out using Statistical Package for Social Sciences (SPSS) version 23.0.

Results

Research Question 1. What is the level of e-entrepreneurship skills possessed by business education graduates for sustainable economic development?

Table 1.

Mean and standard deviation on the level of e-entrepreneurship skills possessed by business education graduates for sustainable economic development

SN	**E-entrepreneurship skills:** I possess the ability to:	$\bar{x}$	SD	Remarks
1	use the five pillars of social media marketing	1.64	.58	LL
2	share and engage in business contents on line	2.54	.60	ML
3	use automation to manage and achieve effective branding	2.48	.81	LL
4	select targeted audience online to enhance product sales	2.53	.46	ML
5	create digital content for the sale of goods and services	1.57	.70	LL
6	Advertise products on social media platforms to increase sales	3.40	.66	ML
7	design a web page for products	1.42	.549	VLL
8	use search engine optimization to build brand awareness	1.31	.71	VLL
9	set pricing strategy and forecast product demand using data analysis tools	1.41	.76	VLL
10	use data analysis tools to reduce product costs and inefficiencies	1.46	.58	VLL
	Cluster Mean	**1.98**		**Low Level**

Data in Table 1 revealed that out of 10 e-entrepreneurship skills for sustainable economic development listed, business education graduate indicated that they possess items 2, 4 and 6 to a moderate level with mean scores ranged between 2.53 and 3.40, items 1, 3 and 5 are possessed to a low level with mean scores of 1.57 to 2.48 while the remaining four items (item 7, 8, 9 and 10) are possessed to a very low level. The cluster mean score of 1.98 shows that on the whole, business education graduates possess e-entrepreneurship skills for sustainable economic

development to a low level. The standard deviations for all the items are within the same range showing that the respondents are not wide apart in their ratings.

Research question 2. What is the level of cybersecurity skills possessed by business education graduates for sustainable economic development?

Table 2.
Mean and standard deviation on the level of cybersecurity skills possessed by business education graduates for sustainable economic development

SN	**Cybersecurity Skills -** I possess ability to:	$\bar{x}$	SD	Remarks
11	keep an eye on network activity for potential breaches	2.64	.68	ML
12	assess computer hazards	2.54	.64	ML
13	analyze malware threats	2.58	.71	ML
14	manage vast amounts of data	1.53	.59	LL
15	understand many sorts of databases and how they operate	1.50	.72	LL
16	use token such as smart cards, and USB keys to prevent authorized access to data stored in the computer	1.60	.49	LL
17	use user name and password to protect unauthorized access to personal computers	4.02	.69	HL
18	use matching fingerprint to protect data stored in the computer or phone from unauthorized access	3.41	.82	ML
19	use antivirus to detect, and prevent virus infection of computer or phone	3.71	.67	HL
20	assess computer operating system to determine if they are up-to-date	2.26	.52	LL
	Cluster Mean	**2.48**		**Low Level**

Data in table 2 show that out of 10 cybersecurity skills for sustainable economic development listed, business education graduates indicated that they to a high extent possess item 17 and 19 with a mean score of 3.71 and 4.02, items 11, 12, 13 and 18 are possessed to a moderate level with mean scores ranged between 2.54 to 3.41, while items 13, 14, 16 and 20 are possessed to a low level with mean scores ranged between 1.50 and 2.26. The cluster mean score of 2.48 shows that on the whole, business education graduates possess cybersecurity skills for sustainable economic development to a low level. The standard deviations for all the items are within the same range showing that the respondents are not wide apart in their ratings.

Hypothesis 1. Male and female business education graduates do not significantly differ in their mean ratings on the level of e-entrepreneurship skills they possess for sustainable economic development.

Table 3.
Summary of t-test analysis of male and female respondents on the level they possess e-entrepreneurship skills for sustainable economic development

Gender	N	$\overline{X}$	SD	df	t-value	P-value	Decision
Male	32	2.16.	.64	88	1.22	2.01	Not Significant
Female	58	1.87	.78				

Table 3 shows a t-value of 1.22 at 88 degrees of freedom with a p-value of 2.01. Since the p-value of 2.21 is greater than the criterion value of .05 (P-value = 2.01 > .05), the null hypothesis is therefore accepted. This means that male and female business education graduates do not significantly differ in their mean ratings on the level of e-entrepreneurship skills they possess for sustainable economic development.

Hypothesis 2. There is no significant difference in the mean ratings of male and female business education graduates on the level of cybersecurity skills they possess for sustainable economic development.

Table 4.
Summary of t-test analysis of male and female respondents on the level they possess cybersecurity skills for sustainable economic development

Gender	N	$\overline{X}$	SD	df	t-value	P-value	Decision
Male	32	1.96.	.74				
				88	.12	1.00	Not Significant
Female	58	1.64	.81				

Table 4 shows a t-value of.22 at 88 degree of freedom with a p-value of 1.00. Since the p-value of 1.00 is greater than the criterion value of .05 (P-value = 1.00 > .05), the null hypothesis is therefore accepted. This means that male and female business education graduates do not significantly differ in their mean ratings on the level of cybersecurity skills they possess for sustainable economic development.

Discussion of Findings

Findings of the study showed that business education graduates possess e-entrepreneurship skills for contributing to sustainable economic development to a low level. This could be attributed to inadequate exposure or trainings in digital technologies. It could also be that emerging e-entrepreneurship skills covered in the study are not incorporated in the business education curriculum, or that business educators do not adequately possess requisite e-entrepreneurship skills to train students. The finding of this study is in line with that of Ukata and Amini (2022) which revealed that the level of e-entrepreneurship skills acquired by students of business education was at a very low level. This is supported by the earlier report of Chinwokwu (2013) that business education graduates lacked relevant e-entrepreneurship skills to contribute to the sustainable economic development of Nigeria. The finding also showed that male and female business education graduates did not significantly differ in their mean ratings on the level of e-entrepreneurship skills they possess for sustainable economic development. This could be because, both male and female business education graduates lack the necessary e-entrepreneurship skills covered which may have influence their opinion in this regard.

Findings of the study further showed that business education graduates possess cybersecurity skills for sustainable economic development to a low level. It could be that security awareness and skills are not taught in business education programme in higher institutions which is surprising considering the urgent need for all citizens of Nigeria to acquire security skills (cybersecurity skills inclusive) so as to help the country effectively tackle the menace of cybercrime in the country. In consonance, Onyema et al. (2021) and Garba et al.

(2020) revealed that majority of Nigerian university students were not aware of how to defend themselves from cyber attackers and found that the majority of Nigerian higher education institutions do not have active cyber security awareness and skill programmes. The findings further showed that male and female business education graduates did not significantly differ in their mean ratings on the level of cybersecurity skills they possess for sustainable economic development. In contrast, Garba et al. (2020) reported that male university students possess high cybersecurity skills than the female counterparts.

Conclusion

Business education is a veritable tool for bridging the unemployment gap. This is because business education equips youths with requisite skills that enable them contribute meaningfully to the sustainable economic development of their areas. The findings of this study however, revealed that business education graduates possess e-entrepreneurship and cybercrime skills required for sustainable economic development to a low level. Based on the findings of the study, the researcher concluded that most business education graduates surveyed do not highly possess e-entrepreneurship and cybersecurity skills needed to contribute to Nigeria's sustainable economic development.

Recommendations

Based on the findings of this study, the following recommendations were made

1. Business education graduates should go for additional digital skill training certificate training programmes so as to acquire good experience in e-entrepreneurship skills for self-reliance.
2. The curriculum of business education programme should be urgently reviewed so as to incorporate cybersecurity contents which will help to expose students to cybersecurity awareness and skills.

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