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Digital-Based Learning and the Sustainability of Business Education Programmes among College of Education Lecturers in Cross River State

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Abstract

The study examined digital-based learning and the sustainability of business education programs among College of Education lecturers in Cross River State. Two research questions and two null hypotheses guided the study. The study adopted a descriptive survey research design. The study was carried out in Cross River State. The population of this study consisted of forty (40) students in business education from the Federal College of Education Obudu and the College of Education Akamkpe, all in Cross River State. There was no sampling since the population is manageable and accessible to the researchers. A self-developed questionnaire titled "Digital Based Learning and the Sustainability of Business Education Programmes Questionnaire (DBLSBEPQ). A 10-item self-developed questionnaire was validated by three experts. The reliability of the instrument was established using a pilot-testing approach, and the Cronbach's alpha calculation yielded an overall coefficient's value of.78. The mean and standard deviation were used to analyze the responses to the items in the questionnaire, while an independent t-test was used to test the hypotheses at the 0.05 level of significance. The decision level was based on a 2.50 cut-off point. Findings of the study showed that business education lecturers in colleges of education in Cross River State do not adopt nor utilize digital learning tools for the sustainability of business education programs in colleges of education in Cross River. Based on the findings of the study, the researcher concludes that business education lecturers should be able to develop digital skills to enhance their adaptation and the utilization of digital skills for the sustainability of business education programs in Nigerian colleges of education. It was recommended, among others, that the provost of colleges of education should make regular digital technology training programs compulsory for all college lecturers in Nigeria.

Keywords: *Digital, learning, adaptability, sustainability and progrmmes*

1. Introduction

Technology is a buzzword nowadays. Undoubtedly, it has taken the world by storm. Technology influences every part of our lives, from food to communication, travel, sports, and governance. Technologies represent vitality, and adapting to such a dynamic necessitates appropriate skills. Education is the only way we can prepare for and adapt to technological changes. As a result, education must keep up with the digital transformation of everything else. Technology has caused dramatic developments in the world of education. E-learning is a product of technology. However, it differs from online learning or simply digital learning. In digital learning, students learn via digital technologies. It may include online lessons, electronic study resources such as audio-video lectures, and textbooks and notebooks for reference. It combines blended and virtual learning. In contrast, digital e-learning relies solely on electronic materials. Teachers and students do not meet in person and instead communicate through technological gadgets. Teaching is now conducted online. The need for classroom instruction online has also resulted in an increase in the number of platforms that provide teachers with the required abilities to teach online. Business education lecturers must consider several factors when teaching in the digital age. What are they?

Learning is an equally crucial skill as teaching. Learning begins with a desire to learn. A learner must be aware of a few things when learning through digital media. Digital learning, often known as via the internet or digital e-learning, offers limitless opportunities to study and improve in life. Anyone can use digital learning to learn anything and become an expert in their field of interest. Online learning provides equitable learning opportunities for men and women of all ages. The Internet and AI have changed education, enabling digital e-learning. There are various sorts of digital learning strategies, including adaptive learning, badging and gamification, e-textbooks, mixed-media online learning, interactive whiteboards, and applications for software. According to Atah et al. (2024), innovation is the sole constant in daily life, and digital technology has allowed for rapid changes in all aspects of existence. Significant societal gains in the twenty-first century have resulted from the introduction of digital technology and talent in industries such as banking, healthcare, engineering, and education. Office Technology and Management (Business Education) education prepares new students to adapt to the ever-changing professional environment. Business education has the mandate and is equipped with the curriculum to educate prospective office managers, accounting managers, marketing managers, and entrepreneurial managers with the knowledge and skills needed to perform effectively in today's workplace.

In accordance with Akeke et al. (2023), Nigerian colleges and universities must adapt to evolving digital technologies in order to meet the demands of the twenty-first century classroom. In keeping with the preceding remark, Atah et al. (2023) advocated digitizing business education curricula to correspond with the trend toward omnipresent

online learning. In addition to the foregoing, the International Labour Organization, or ILO, (2021) mentioned that in developing countries such as Nigeria, colleges and universities should institutionalize digitalization with the goal of providing learners with digital abilities and reaping the numerous advantages of digital-based learning.

Nevertheless, Nigeria's colleges and universities have expanded swiftly in order to fully capitalize on this new trend in a lifetime of learning. To do this, Bessong et al. (2022). Consequently, it was stressed that digital-based instructional devices are urgently required for teaching and studying business curriculum content. According to the World Health Organization (2019), there are currently inadequate technological-based assets available in Nigerian higher education institutions to increase graduates' digital capabilities and enable them to compete with other graduates in the job market.

Based on these scenarios, it appears that Nigerian colleges and universities have proved unable to develop and implement an educational program that sufficiently prepares undergraduates for work in the age of digital technology after graduating. To improve skill development, business education must combine digital instructional objectives and employ creative methodologies. In the words of Onwubuya et. al. (2023), the implementation of digital-based learning in education may result in the creation and enhancement of existing educational programs that meet the new skill requirements of the digital world. The adaptable nature of digital-based learning allows business education to detect and tune in to digital demands (Akpomi, 2021). Business education programs that are flexible, forecast, embrace evolution, are curiosity-driven, and stay current

In the opinion of Agim et al. (2022), adopting digital integrated learning to provide business education programs has a chance to drive innovations in how programs are implemented. This necessitates a move from traditional teaching approaches to digital learning, which incorporates technology into the learning process. The use of digital innovations could help business education lecturers better prepare students by teaching them new and novel skills needed to find work and succeed in today's labor market. Digital advancements in business education education include the development of the World Wide Web, apps, video and audio recordings, telephone/video conference capabilities, laptop/desktop devices, interactive whiteboards, digital imaging and printing machinery, rockets for space exploration, a telnet, and a web-based.

In the opinion of Agim et al. (2022), incorporating digital-based learning into business education programs has an opportunity to promote the enhancement of skills among business education graduates, making them more relevant in the 21st century workplace. In line with the preceding opinion, Idike et al. (2022) claimed that the development of digital skills among business education graduates will provide them with opportunities while also boosting their maximum productivity in today's workplace. In the view of Atah et al. (2021), the scarcity of digital learning resources in some Nigerian college and university institutions should not prevent the adoption of digitally-based learning. They highlight that business education lecturers, as opposed to other colleges,

should work together to generate and propagate real-world assets that help individuals.

In line with Atah et al. (2023), digital-based learning has revolutionized the employment market as well as the skills and abilities required for business education graduates to gain an international competitive edge. Business education is under enormous pressure to reorient as well as maintain its programs in order to adapt to virtual-based learning. Business education should remain relevant in terms of developing learners' digital skills and meeting Nigerian students' digital-based learning needs. Fortunately, these objectives cannot be realized until the curriculum is updated to meet twenty-first-century needs. Business education instructors in Nigerian universities may be in a poor situation. There doesn't exist enough infrastructure, including information and communication technology laboratories and technological advances, to provide training for skills. Additionally, there is currently an excessive emphasis on antiquated teaching methods, and the majority of business education lecturers possess digital abilities that are essential to making the curriculum pliable for reform. In light of the foregoing, the researchers believe it is critical to undertake a study on the adaptation of digital-based learning and the sustainability of business education programs among college of education lecturers in Cross River State.

2. Purpose of the Study

The research objective was to ascertain the extent of adaptation of digital-based learning and the sustainability of business education programs among College of Education lecturers in Cross River State**.** Specifically, the study sought to ascertain the extent of:

- Digital-based learning tools adapted for the sustainability of business education programs among College of Education lecturers in Cross River State
- Digital-based learning tool utilization for the sustainability of business education programs among college of education lecturers in Cross River State

2.1 Research Questions

The following research questions guided the study:

- To what extent are digital-based learning tools adopted for the sustainability of business education programs among College of Education lecturers in Cross River State?
- To what extent does the utilization of digital learning tools contribute to the sustainability of business education programs among College of Education lecturers in Cross River State?

2.2 Null Hypotheses

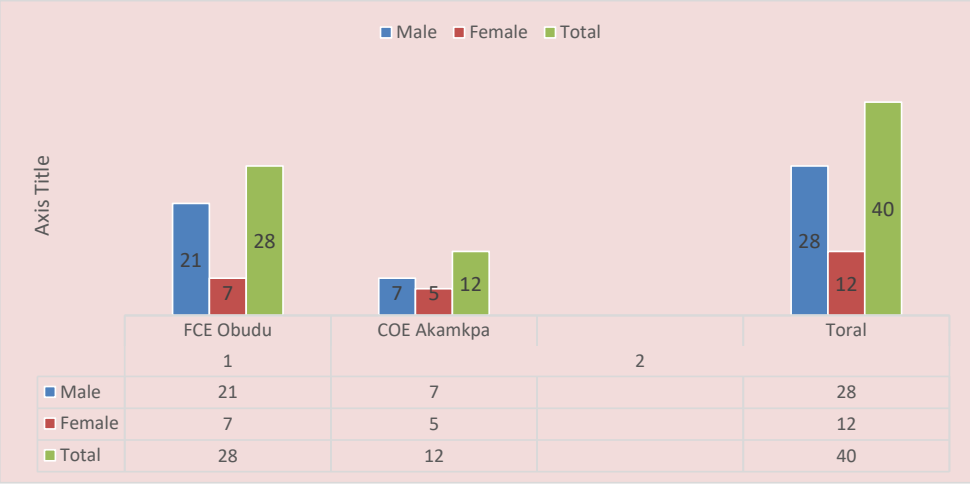
The following null hypotheses were tested at 0.05 level of significance;

- There is no significant difference in the mean ratings of male and female Business Education lecturers on the extent digital-based learning and the sustainability of business education programmes among College of education lecturers in Cross River State
- There is no significant difference in the mean ratings of Business Education lecturers with below 10 years of experience and those with 10 years of experience and above on the extent digital-based learning and the sustainability of business education programmes among College of education lecturers in Cross River State

3. Research Methodology

This study adopted a descriptive survey research design. The study was carried out in Cross River State. The population of this study consisted of forty (40) students in business education from the Federal College of Education Obudu and the College of Education Akamkpe, all in Cross River State. There was no sampling since the population is manageable and accessible to the researchers. A self-developed questionnaire titled "Digital Based Learning and the Sustainability of Business Education Programmes Questionnaire (DBLSBEPQ). The questionnaire consisted of two sections: A and B. Section A contained one item on the demographic information of the respondents, such as years of teaching experience, while Section B contained 10 items with respect to the two research questions and was structured on a four-point rating scale of adapted (A) and not adapted (NA) for research question 1 and utilized (U) and not utilized (NU) for research question 2, respectively. The face and content validity of the instrument were determined using the opinions of two experts from the Faculty of Vocational and Entrepreneurial Education and one expert from Measurement and Evaluation, all from the University of Calabar, Nigeria. The reliability of the instrument was established using the pilot-testing method, and the collected data were calculated with Cronbach Alpha, which yielded coefficient values of.81 for clusters B1 and B2, respectively, with an overall index of.78. The researcher, with the help of two research assistants, administered copies of the questionnaire to business education lecturers in their institutions. On-the-spot distribution and collection of questionnaires were deployed, and those who did not fill out theirs immediately were revisited on another agreed-upon date. Of the 40 copies of questionnaires distributed, 40 (100%) were correctly filled out and returned. The mean and standard deviation were used to analyze the responses to the items in the questionnaire, while an independent t-test was used to test the hypotheses at the 0.05 level of significance. The decision level was based on a 2.50 cut-off point. Any item with a cluster mean of 2.50 and above indicates agreement with the

adaptation and utilization of digital-based learning tools for the sustainability of business education lecturers, and any item below 2.50 indicates disagreement. A null hypothesis was rejected where the p-value was less than 0.05 level of significance; otherwise, the null hypothesis was accepted. The population of the study is shown in Figure 1, using a bar graph.



Male	21	7		28
Female	7	5		12
Total	28	12		40

Figure 1: Bar graph shows the study population

4. Result of the Findings

4.1 Research Question 1

To what extent does digital-based learning and the sustainability of business education programmes among College of education lecturers in Cross River State?

Table 1: Respondents' mean ratings and standard deviation on digital-based learning and the sustainability of business education programmes among College of education lecturers in Cross River State

S/No	Item Statement	N	Mean	Std. Dev.	Decision
1	Massive online courses	40	1.78	0.34	NA
2	Virtual Classroom	40	1.81	0.11	NA
3	Mobile Learning	40	1.78	0.43	NA
4	Social and facilities Collaboration	40	1.45	0.15	NA
5	Iterative model	40	1.33	0.61	NA
	Grand mean	**40**	**1.63**	**0.32**	NA

Note: NA = Not Adopted

The data in Table 1 shows that all five digital-based learning tools listed for adoption for sustainable business education, namely items 1, 2, 3, 4, and 5, were not adopted for the sustainability of business education programs among college of education lecturers in Cross River State. This conclusion is supported by the grand mean of 1.63. This suggests that business education professors believe that digital-based learning is not being used to support business education programs in colleges of education in Cross River State, Nigeria. The standard deviations for all items are within the same range, indicating that respondents' assessments are not significantly different. The result is also shows in figure 2 using stacked graph.

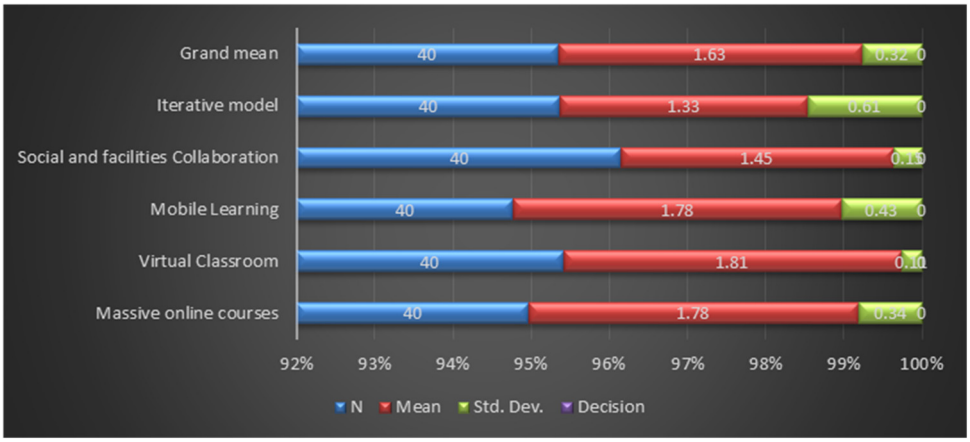


Figure 2: Stacked graph showing respondents opinion

4.2 Research Question 2

To what extent does utilization of digital-based learning and the sustainability of business education programmes among College of education lecturers in Cross River State?

Table 2: Respondents' mean ratings and standard deviation on the utilization of digital-based learning and the sustainability of business education programmes among College of education lecturers in Cross River State

S/No	Item Statement	N	Mean	Std. Dev.	Decision
6	Massive online courses	40	1.33	0.35	NU
7	Virtual Classroom	40	1.54	0.54	NU
8	Mobile Learning	40	1.82	0.77	NU
9	Social and facilities Collaboration	40	1.12	0.18	NU
10	Iterative model	40	1.71	0.64	NU
	Grand Mean	40	**1.51**	**0.49**	NU

Note: NU = Not Utilized

Table 2 demonstrates that all items 6, 7, 8, 9, and 10 were not used by college of education lecturers in Cross River State to ensure the sustainability of business education programs. This study demonstrates, with a grand mean of 0.49, that business education does not use digital-based learning to sustain business education curricula at Nigerian colleges of education, particularly in Cross River State. The standard deviations for all the questions are within the same range, indicating that the respondents' assessments are not significantly different. The result of the findings is eqully shown in figure 3 using stacked graph.

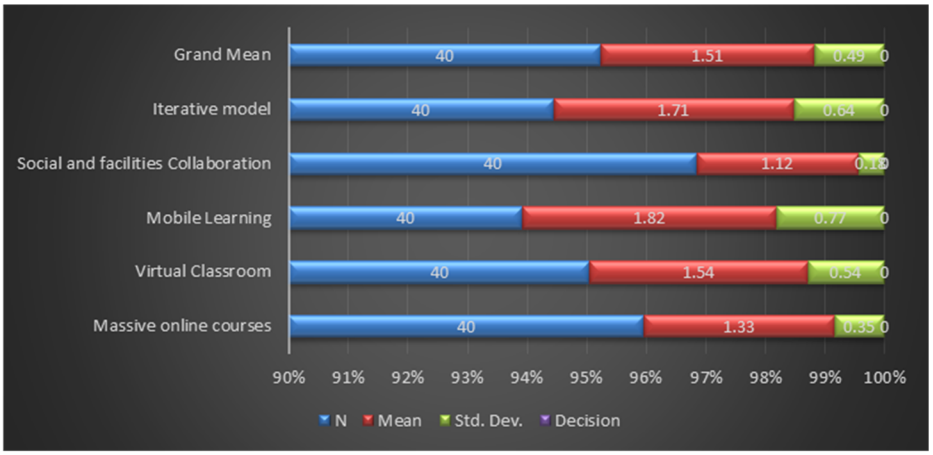


Figure 3: Stacked graph shows the respondent decision

4.3 Hypothesis 1

There is no significant difference in the mean ratings of male and female business education lecturers on the extent digital-based learning and the sustainability of business education programmes among College of education lecturers in Cross River State.

Table 3: Summary of t-test Analysis of significant difference in the mean ratings of male and female business education lecturers on the extent digital-based learning and the sustainability of business education programmes

Items	Category of Respondents	N	Mean	SD	t-cal	df	p-val.	Decision
Item 1	Male Lecturers	28	1.58	1.01	0.04	38	0.05	NS
	Female Lecturers	12	1.62	1.01				
Items	Male Lecturers	28	2.32	0.93	0.04	38	0.34	NS
	Female Lecturers	12	2.26	0.99				
Item 3	Male Lecturers	28	2.21	1.07	0.02	38	0.18	NS
	Female Lecturers	12	2.22	1.07				

Item 4	Male Lecturers	28	2.81	0.72	0.04	38	0.14	NS
	Female Lecturers	12	2.76	0.91				
Item 5	Male Lecturers	28	1.46	0.84	0.06	38	0.21	NS
	Female Lecturers	12	1.42	0.84				
	Male Lecturers	28	**10.38**	**4.57**	**0.04**	38	**0.18**	**NS**
	Female Lecturers	12	**10.28**	**4.82**				

Table 3 demonstrates that the t-cal of 0.04 with 38 degrees of freedom has a p-value of 0.18, which is higher than the alpha level of 0.05. Thus, the null hypothesis is accepted. This suggests that there is no significant difference in the mean assessments of male and female business education lecturers about the extent to which digital-based learning aids are adapted for the sustainability of business education programs. The null hypothesis was retained. This suggests that both male and female business education lecturers are expected to adapt digital-based learning tools for the long-term viability of business education programs in Nigerian colleges of education. The result is further domonstrate in figure 4 using colume bar.

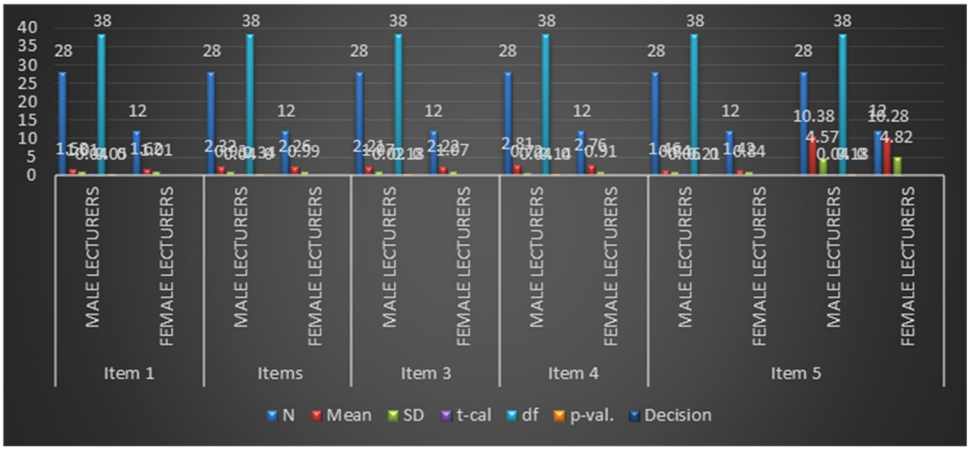


Figure 4: Colume bar shown the respondents decision

4.4 Hypothesis 2

There is no significant difference in the mean ratings of business education lecturers with below 10 years of experience and those with 10 years of experience and above on the extent digital based learning tools utilization for the sustainability of business education programmes among College of education lecturers in Cross River State

Table 4: Summary of t-test Analysis of significant difference in the mean ratings of business education lecturers with below 10 years of experience and those with 10 years of experience and above on digital-based learning and the sustainability of business education programmes

Items	Category of respondents	N	Mean	SD	t-cal	df	p-val.	decision
6	below 10 years of experience	28	2.34	0.74	-2.45	38	0.01	NS
	10 years of experience and above	12	2.32	0.98				
7	below 10 years of experience	28	2.4	0.99	-1.22	38	0.34	NS
	10 years of experience and above	12	2.36	0.82				
8	below 10 years of experience	28	1.7	1.03	-231	38	0.28	NS
	10 years of experience and above	12	1.78	1.05				
9	below 10 years of experience	28	2.4	0.99	-2.43	38	0.19	NS
	10 years of experience and above	12	2.32	0.98				
10	below 10 years of experience	28	1.32	0.75	-1.87	38	0.29	S
	10 years of experience and above	12	1.38	0.73				
	below 10 years of experience	28	**10.16**	**4.51**	**-47.79**	38	**0.22**	**NS**
	10 years of experience and above	12	**10.18**	**4.56**				

The results in Table 4 demonstrate that the t-value of -47.79 with 38 degrees of freedom has a p-value of 0.22, which is greater than the alpha threshold of 0.05. Thus, the null hypothesis is accepted. This means that there is no significant difference in the mean ratings of business education lecturers with less than ten years of experience, and those with ten years of experience or more are expected to adopt and use digital-based learning tools for the sustainability of business education programs in Nigerian colleges of education, particularly in Cross River State. The result is further demonstrated in figure 5 using column bar.

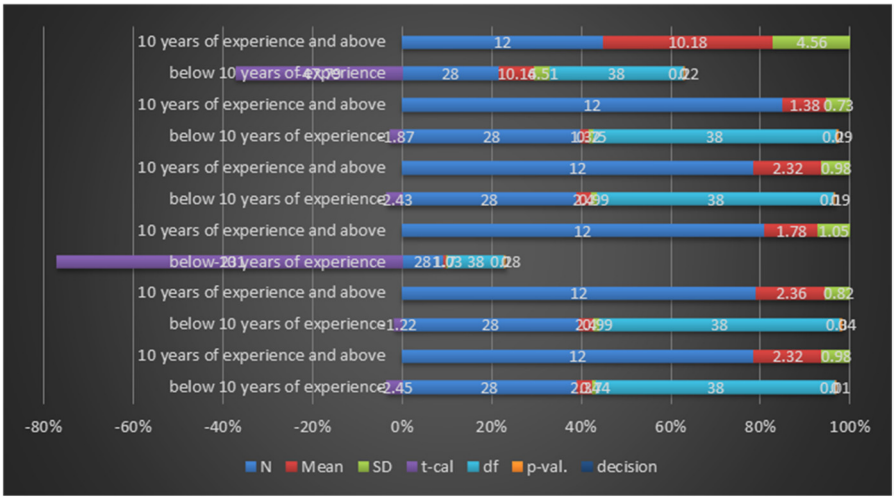


Figure 5: Column bar showing the respondents decison

5. Discussion of Findings

The results of the investigation suggested that digital-based learning tools were not used to support business education programs among college education instructors in Cross River State. This finding is consistent with the findings of Bessong et al. (2022), who discovered the lack of availability and use of digital technology in the teaching and learning of business education material in Nigerian universities. The upshot is that many graduates of business education programs lack the digital skills required to function in digital work environments, resulting in a dearth of career opportunities for business education graduates. Nevertheless, Onwubuya et al. (2023) found that the widespread adaptation of digital learning was due to insufficient information and communication technology resources. Despite fast global change, many lecturers still struggle to adapt and use digital tools for teaching and learning in the 21st century classroom. In agreement with Akeke et al., (2023) results, business education lecturers exhibit digital learning competence and have an unfavorable mindset toward adopting global educational standards. However, the hypothesis test revealed no significant difference in the mean judgments of male and female business education lecturers about the amount of digital-based learning tool adaptation for the long-term sustainability of business education training. This could be because both male and female business education teachers are under pressure to adapt and deploy digital-based learning to meet the demands of the twenty-first century.On the basis of Atah et al., (2024), adapting digital-based learning for classroom goals could entail designing and developing present educational programs to meet the modern skill requirements of the digital age.

The investigation's second research question found that business education lecturers in Cross River State Colleges of Education did not use digital learning resources to enhance their teaching. The outcomes correspond with Agim et al. (2022), who stated that college and university lecturers do not use online educational resources due to the scarcity of digital learning materials. Nonetheless, Akpomi et al. (2021) proposed that the low adoption of digital learning resources is attributable to business school lecturers' inability to adapt to new teaching and learning methodologies in the digital age. Presumably, the adaptability of digital-based training enables business education to detect and address digital needs. When it comes to implementing digital learning and resources into their teaching and learning procedures, business education instructors must be prepared for and accept change. This could be why Atah (2022) argues that improving flexibility, employing creative teaching approaches, and incorporating digital technology into business education delivery can help students learn to be adaptable and leverage digital learning. The hypothesis revealed no significant variations in the mean evaluations of business education lecturers with less than 10 years of experience versus those with 10 years or more of experience on the level of digital-based tools for learning used for the sustainability of business education training.

6. Conclusion

The study found that business education lecturers at a college in Cross River State did not use digital learning tools to ensure the sustainability of business education programs. It is likely that business education lecturers do not have 21st-century expertise regarding the use of digital learning technologies in the classroom. The implication of this could be that business education programs in Nigerian colleges of education could not be sustained in terms of student enrollment and research and development in the area of business education programs. Perhaps this implies that business education lecturers should be able to develop digital skills to enhance their adaptation and the utilization of digital skills based on the sustainability of business education programs in Nigerian colleges of education.

7. Recommendations

Based on the results of the study, the researchers make the following recommendations:

- The head of the administrators of colleges of education should make regular digital technology training programs mandatory for all business education lecturers.
- The Nigerian government should make regular digital technology training programs obligatory for all business education lecturers.

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