



PERCEPTION OF BUSINESS EDUCATORS AND STUDENTS DIGITAL INSTRUCTIONAL APPROACHES IN 21ST CENTURY IN BUSINESS EDUCATION PROGRAMME IN COLLEGE OF EDUCATION IN KOGI STATE, NIGERIA

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Abstract

This study examined the perception of Business Educators and students on digital instructional approaches in 21st-century Business Education programmes in Colleges of Education in Kogi State, Nigeria. Specifically, the study investigated perceptions regarding the use of virtual learning platforms, multimedia instructional tools, and collaborative online learning tools in Business Education programmes. A descriptive survey research design was adopted for the study. The population comprised 5 Business Educator Lecturers and 30 Business Education Students from Federal College of Education, Okene. Data were collected using a structured questionnaire titled *Perception of Digital Instructional Approaches Questionnaire (PDIAQ)* designed on a 5-point rating scale. The instrument was validated by three experts from the Business Education Department, University of Nigeria, Nsukka, and a reliability coefficient of 0.84 was obtained using Cronbach's Alpha method. Data collected were analyzed using mean, standard deviation, and independent samples t-test at 0.05 level of significance. Findings revealed that Business Educator Lecturers and Business Education Students positively perceived the use of virtual learning platforms, multimedia instructional tools, and collaborative online learning tools in Business Education programmes. The study further revealed that there was no significant difference between the mean responses of lecturers and students on all the variables studied. The study concluded that digital instructional approaches significantly enhance instructional delivery, learner participation, communication, collaboration, motivation, and academic performance in Business Education programmes. It was therefore recommended that Colleges of Education should improve ICT infrastructure, provide continuous digital training for educators and students, and encourage the integration of modern digital instructional technologies into Business Education programmes.

Keywords: Digital Instructional Approaches, Business Education, Virtual Learning Platforms, Multimedia Instructional Tools, Collaborative Online Learning Tools, 21st-Century Education

Introduction

Perception refers to the way individuals interpret, understand, and respond to a particular phenomenon, situation, or experience. In educational research, perception represents the opinions, attitudes, beliefs, judgments, and feelings of individuals toward educational practices, instructional methods, or learning environments. Perception is important because it influences acceptance, participation, motivation, and behavioral responses toward educational innovations and institutional practices. According to Aremu and Sokan (2021), perception shapes the readiness of both teachers and learners to adopt new instructional approaches and technologies within the teaching and learning process. In the context of this study, perception relates to the views of Business Educators and students regarding the use of digital instructional approaches in Business Education programmes in Colleges of Education. The way educators and students perceive digital instructional approaches may determine the extent to which such technologies are accepted, utilized, and integrated into classroom activities. Positive perceptions may encourage active participation, improved instructional delivery, and effective learning outcomes, while negative perceptions may create resistance to technology integration and reduce instructional effectiveness.

The perception of Business Educators and students toward digital instruction may also be influenced by several factors such as digital competence, accessibility of technological resources, institutional support, prior exposure to ICT tools, and attitudes toward innovation. According to Yusuf and Balogun (2020), educators who possess adequate technological knowledge are more likely to perceive digital instructional tools as useful and beneficial for improving teaching effectiveness. Similarly, Bolanle, Kari, and Ismail, (2025) explain that students who are familiar with digital technologies often demonstrate greater interest, participation, and motivation in technology-supported learning environments. Perception further serves as a connecting factor between technology integration and educational effectiveness (Pittas, & Adeyemi, 2019). When educators and students perceive digital instructional approaches positively, the likelihood of successful implementation of e-learning systems, virtual classrooms, and smart instructional tools increases significantly. Therefore, understanding perception is essential for evaluating the effectiveness and sustainability of digital instructional practices in Business Education programmes.

Business Educators are professionals responsible for teaching business-related subjects and equipping learners with vocational, entrepreneurial, managerial, and technological competencies required for employment and self-reliance (Adeoti, 2019). Business Educators teach courses such as accounting, commerce, marketing, office technology and management, entrepreneurship, and business communication. Their responsibilities include curriculum implementation, instructional delivery, students' assessment, and preparation of learners for modern business environments. According to Osuala (2018), Business Education is a

vocational programme designed to prepare individuals for gainful employment and effective participation in the business world. In Colleges of Education, Business Educators play a major role in preparing future teachers and business professionals through both theoretical instruction and practical skill development. As education becomes increasingly digitalized, Business Educators are expected to integrate modern technologies and innovative teaching strategies into classroom instruction. This expectation has transformed the traditional role of educators from mere transmitters of knowledge to facilitators of interactive and technology-supported learning experiences.

The emergence of 21st-century education has further increased the responsibilities of Business Educators in adapting to digital instructional approaches. Educators, according to Chukwuemeka, Dominic, Akanbi, and Aregbesola, (2025) are now expected to possess ICT competence, digital literacy, and technological adaptability to effectively utilize smart learning tools such as projectors, virtual classrooms, multimedia resources, online learning platforms, and simulation software. According to Ezeani and Oladele (2022), Business Educators who integrate digital instructional tools into teaching are more likely to improve students' engagement, participation, and practical understanding of business concepts. Business Educators also influence students' attitudes toward digital learning. Their perception, competence, and willingness to adopt technology often determine the effectiveness of digital instructional implementation within Business Education programmes. Consequently, continuous professional development, technological training, and institutional support are necessary for enhancing educators' readiness to utilize digital instructional approaches effectively.

Students are learners, according to Nwachukwu, (2024) enrolled in educational institutions for the purpose of acquiring knowledge, skills, competencies, and values required for personal, academic, and professional development. In this study, students refer specifically to individuals enrolled in Business Education programmes in Colleges of Education. These students are trained in various business-related disciplines such as accounting, office technology, entrepreneurship, marketing, and commerce, with the aim of preparing them for teaching careers, employment opportunities, and self-reliance. Students according to Isa, Mammam, Badar, and Bala, (2020) occupy a central position in the teaching and learning process because educational activities are primarily designed to improve their learning experiences and academic achievement. In the 21st century, students are increasingly exposed to digital technologies, online learning platforms, and internet-based instructional resources that shape modern educational experiences. According to Prensky (2019), modern learners are often described as "digital natives" because they are more familiar with technological devices and online communication systems than previous generations.

The integration of digital instructional approaches into Business Education programmes has significantly changed students' learning experiences. According to Ukpe, (2023) students now interact with multimedia presentations, e-learning platforms, virtual classrooms, online assignments, educational applications, and collaborative digital environments that support active learning and independent study. Chukwuemeka, et al. (2025) digital instructional approaches also provide opportunities for students to learn at their own pace, access learning resources remotely, and engage in interactive educational activities that improve understanding and retention of knowledge. However, students' ability to benefit from digital instruction may depend on factors such as digital literacy, accessibility of ICT facilities, internet connectivity, socioeconomic background, and institutional support (Olanrewaju, Adebayo, Omotosho, & Olajide, (2021). Some students may experience difficulties in adapting to digital learning environments due to inadequate technological exposure or limited access to digital devices. Therefore, students' perceptions and experiences are important for evaluating the effectiveness of digital instructional approaches in Business Education programmes.

Digital instructional approaches according to Chukwuemeka, Dominic, Akanbi, and Aregbesola, (2025) refer to technology-based teaching and learning methods that utilize digital devices, software applications, internet resources, and smart technologies to facilitate instructional delivery and improve learning outcomes. These approaches involve the use of tools such as computers, multimedia projectors, virtual classrooms, mobile learning applications, learning management systems, online collaboration platforms, and interactive educational software. According to Anderson and Dron (2017), digital instruction enhances educational delivery by promoting flexibility, accessibility, interaction, and learner-centered education. Digital instructional approaches have become increasingly important in modern education due to rapid technological advancement and globalization. Unlike conventional instructional methods that depend heavily on face-to-face lectures and printed materials, digital instruction promotes interactive learning, immediate feedback, collaborative activities, and personalized educational experiences. According to Elogbo, and Ettah, (2024) in Business Education, digital instructional approaches provide opportunities for practical simulations, online accounting exercises, business case analysis, and virtual office practices that strengthen students' practical competencies.

One major advantage of digital instructional approaches is the promotion of active learning. According to Adekunle, (2025) explain that through online discussions, multimedia resources, virtual collaboration, and interactive assignments, students become more involved in the learning process rather than remaining passive recipients of information. Digital instruction according to Olanrewaju, Adebayo, Omotosho, and Olajide, (2021) also supports flexibility in learning because students can access educational resources at any time and from different locations. Furthermore, digital instructional approaches improve instructional effectiveness

by enabling educators to integrate multimedia content, simulations, animations, and virtual demonstrations into classroom instruction. According to Salomon (2020), technology-supported instruction enhances students' understanding, motivation, creativity, and retention of knowledge. However, effective implementation of digital instructional approaches depends on the availability of ICT infrastructure, internet access, digital competence, and institutional support systems.

21st Century Education according to Nkaanee, and Mgbomo, (2025) refers to modern educational practices designed to equip learners with the knowledge, skills, competencies, and attitudes needed to function effectively in a rapidly changing and technology-driven world. It emphasizes critical thinking, creativity, communication, collaboration, digital literacy, innovation, and problem-solving abilities. According to Atiku, Kankia, and Abdulkadir, (2025) unlike traditional educational systems that focused mainly on memorization and theoretical instruction, 21st-century education promotes learner-centered instruction, practical learning experiences, and technology integration. The emergence of globalization, digital transformation, artificial intelligence, and automation has significantly reshaped educational expectations worldwide. According to Trilling and Fadel (2018), 21st-century education aims to prepare learners for complex social, economic, and technological realities through the development of transferable skills and lifelong learning abilities. Educational institutions are therefore expected to adopt innovative teaching strategies and digital learning environments capable of preparing students for modern workplaces and global competitiveness.

In Business Education programmes, 21st-century education encourages the integration of ICT tools, online learning systems, entrepreneurial education, collaborative learning, and practical problem-solving activities (Wahab, & Akintade, 2024). These approaches help students develop competencies relevant to digital business environments and contemporary organizational practices. Business Educators according to Olawoyin, and Adeniji, (2025) are therefore expected to adopt instructional methods that encourage creativity, independent learning, teamwork, and technological competence. Another important feature of 21st-century education is learner-centeredness. Students according to Olamoyegun, and Edinoh, (2025) are encouraged to actively participate in the learning process through collaboration, inquiry-based learning, project-based instruction, and digital interaction. This educational model aligns closely with digital instructional approaches because technology provides the tools needed for interactive, flexible, and personalized learning experiences.

Technology integration according to Adenubi, Samuel, and Oyenuga, (2025) refers to the effective incorporation of digital technologies, ICT tools, and smart instructional resources into teaching and learning processes to improve educational effectiveness and learning outcomes. Technology integration involves the use of computers, internet resources,

multimedia devices, educational software, online learning platforms, and virtual instructional systems within classroom instruction. According to Mishra and Koehler (2016), effective technology integration requires the combination of technological knowledge, pedagogical knowledge, and content knowledge to support meaningful learning experiences. In Business Education programmes, technology integration plays a major role in modernizing instructional delivery and preparing students for digital business environments. The integration of technology enables educators to deliver interactive lessons, online assessments, virtual simulations, multimedia presentations, and collaborative learning activities that improve students' understanding of business concepts and practical skills.

Technology integration also promotes flexibility and accessibility in education. Students according to Olanrewaju, Adebayo, Omotosho, and Olajide, (2021) can access learning materials remotely, participate in online discussions, submit assignments electronically, and engage in independent learning activities beyond the traditional classroom environment. This contributes to improved learner engagement, motivation, and academic achievement. Despite its benefits, technology integration in many Colleges of Education still faces challenges such as inadequate ICT infrastructure, unstable electricity supply, poor internet connectivity, insufficient funding, and limited digital competence among educators and students. Nevertheless, technology integration remains an essential component of 21st-century education and an important strategy for improving the quality of Business Education programmes.

E-learning and online learning according to Matthew, Kazaure, and Okafor, (2021) refer to educational processes that utilize electronic technologies and internet-based platforms to facilitate teaching and learning activities. E-learning according to Omachi, (2021) involves the delivery of instructional content through digital devices such as computers, smartphones, tablets, and online platforms, while online learning specifically emphasizes internet-supported educational interaction between educators and learners. The growth of digital technologies and internet accessibility has increased the popularity of e-learning in educational institutions worldwide. According to Moore and Kearsley (2019), e-learning provides flexible, accessible, and learner-centered educational opportunities that support continuous learning and instructional innovation. Online learning platforms such as Google Classroom, Moodle, Zoom, Microsoft Teams, and virtual learning environments have become important tools for instructional delivery in modern education.

In Business Education programmes, e-learning and online learning support interactive instruction, virtual collaboration, online assessments, digital business simulations, and remote access to educational resources (Abdullateef, 2022). Students can participate in lectures, discussions, assignments, and practical activities regardless of geographical location. These technologies also encourage self-directed learning, independent research, and collaborative knowledge sharing among learners. E-learning and online learning are closely linked with

digital instructional approaches and technology integration because they provide the technological foundation for modern instructional delivery. However, successful implementation depends on adequate internet connectivity, digital literacy, institutional support, and access to technological devices. In many developing regions, challenges such as poor network services, limited ICT infrastructure, and inadequate technological competence continue to affect effective adoption of online learning systems.

Statement of the Problem

In the past, Business Education programmes in Colleges of Education relied mainly on traditional instructional approaches such as face-to-face lectures, chalkboard teaching, printed instructional materials, note-taking, and teacher-centered classroom practices. These methods were effective during periods when educational systems focused primarily on theoretical knowledge delivery and routine skill acquisition. Business Educators served as the major source of information, while students played largely passive roles in the learning process. At that time, limited technological advancement and low digital exposure made conventional instructional methods suitable for educational delivery. However, the rapid growth of information and communication technologies, globalization, and digital transformation has significantly changed educational practices and the competencies expected from graduates in modern workplaces.

In the present era, 21st-century education emphasizes digital literacy, critical thinking, collaboration, communication skills, creativity, and the effective use of technology in teaching and learning. Consequently, Colleges of Education are increasingly expected to integrate digital instructional approaches such as e-learning platforms, multimedia presentations, virtual classrooms, online collaboration tools, and smart learning technologies into Business Education programmes. These digital instructional approaches have the potential to improve instructional effectiveness, learner engagement, flexibility, and students' academic performance. Despite these advantages, many Colleges of Education still experience challenges such as inadequate ICT infrastructure, unstable internet connectivity, insufficient digital competence among educators and students, limited access to technological devices, and resistance to technological change. These challenges may influence how Business Educators and students perceive digital instructional approaches within Business Education programmes.

Although several studies have examined educational technology integration and digital learning in higher institutions, limited empirical attention has been given to the perception of both Business Educators and students regarding digital instructional approaches specifically within Business Education programmes in Colleges of Education. Existing studies often focus on general ICT usage without adequately examining how educators and students perceive the effectiveness, usefulness, and challenges of digital instructional approaches in the context of 21st-century Business Education. This gap creates uncertainty regarding the

acceptance and readiness for digital instructional practices in Colleges of Education. Therefore, this study seeks to fill this gap by examining the perception of Business Educators and students toward digital instructional approaches in 21st-century Business Education programmes in Colleges of Education in Kogi State, Nigeria.

Purpose of the Study

The aims of this study are to examine the perception of Business Educators and Students on the use of digital instructional approaches in the 21st century within Business Education programmes in Colleges of Education in Kogi State, Nigeria. Specifically, objectives are to:

- a. determine the perception of Business Educators and Students on the use of virtual learning platforms in Business Education programmes in Colleges of Education.
- b. examine the perception of Business Educators and Students on the use of multimedia instructional tools in Business Education programmes.
- c. assess the perception of Business Educators and Students on the use of collaborative online learning tools in Business Education programmes.

Research Questions

- a. What are the perceptions of Business Educators and Students on the use of virtual learning platforms in Business Education programmes?
- b. What are the perceptions of Business Educators and Students on the use of multimedia instructional tools in Business Education programmes?
- c. What are the perceptions of Business Educators and Students on the use of collaborative online learning tools in Business Education programmes?

Hypotheses

H₀₁: There is no significant difference between the mean responses of Business Educators and Students on the use of virtual learning platforms in Business Education programmes;

H₀₂: There is no significant difference between the mean responses of Business Educators and Students on the use of multimedia instructional tools in Business Education programmes; and

H₀₃: There is no significant difference between the mean responses of Business Educators and Students on the use of collaborative online learning tools in Business Education programmes.

Methodology

This study adopted a descriptive survey research design to examine the perception of Business Educators and Students on digital instructional approaches in 21st century Business Education programmes in Colleges of Education in Kogi State. The population of the study comprised 5 Business Educator Lecturers and 30 Business Education Students from Federal College of Education, Okene in Kogi State, Nigeria, while data were collected using a structured questionnaire titled: *Perception of Digital Instructional Approaches Questionnaire (PDIAQ)* designed on a 5-point rating scale of Strongly Agree (5), Agree (4), Undecided (3), Disagree (2), and Strongly Disagree (1). The instrument was validated by 3

experts from the Business Education Department of University of Nigeria, and the reliability coefficient of 0.84 was obtained using Cronbach's Alpha method, while data collected were analyzed using mean, standard deviation, and independent samples t-test at 0.05 level of significance.

Research Question 1: Perception of Business Educators and Students on the Use of Virtual Learning Platforms in Business Education Programmes

S/N	Item Statements	Business Educator Lecturers		Business Education Students		Remark
		Mean (X)	SD	Mean (X)	SD	
1	Virtual learning platforms improve access to instructional materials in Business Education	3.80	0.45	3.54	0.61	Agree
2	Online learning platforms enhance flexibility in teaching and learning activities	3.60	0.55	3.47	0.68	Agree
3	Virtual classrooms promote effective interaction between lecturers and students	3.40	0.55	3.36	0.72	Agree
4	Learning management systems improve instructional organization in Business Education	3.80	0.45	3.52	0.63	Agree
5	Virtual learning environments support independent learning among students	3.60	0.55	3.45	0.69	Agree
6	Online instructional platforms improve students' participation during lessons	3.80	0.45	3.57	0.60	Agree
7	Virtual learning systems increase digital literacy among Business Education students	3.40	0.55	3.35	0.71	Agree
8	Digital classroom platforms enhance communication and collaboration in learning	3.60	0.55	3.49	0.67	Agree
Grand Total		3.63	0.51	3.47	0.66	Agree

The findings presented in Table 1 indicate that both Business Educator Lecturers and Business Education Students agreed on the usefulness of virtual learning platforms in Business Education programmes in Colleges of Education. The mean ratings of lecturers ranged from 3.40 to 3.80, while those of students ranged from 3.35 to 3.57. The grand mean scores of 3.63 for lecturers and 3.47 for students exceeded the criterion mean of 2.50, indicating overall agreement among respondents. The findings suggest that virtual learning platforms improve instructional delivery, learner participation, communication, collaboration, and digital literacy in Business Education. The low standard deviation values indicate that

respondents shared similar opinions regarding the use of virtual learning platforms in instructional processes.

Hypothesis 1: There is no significant difference between the mean responses of Business Educator Lecturers and Business Education Students on the use of virtual learning platforms in Business Education programmes

Respondents	N	Mean (X)	SD	df	t-cal	Sig. (2-tailed)	Decision
Business Educator Lecturers	5	3.63	0.51	33	1.22	0.231	Not Rejected
Business Education Students	30	3.47	0.66				

The independent samples t-test analysis revealed that the significance value of 0.231 is greater than the 0.05 level of significance. Therefore, the null hypothesis was not rejected. This indicates that there is no significant difference between the mean ratings of Business Educator Lecturers and Business Education Students regarding the use of virtual learning platforms in Business Education programmes in Colleges of Education.

Research Question 2: Perception of Business Educators and Students on the Use of Multimedia Instructional Tools in Business Education Programmes

S/N	Item Statements	Business Educator Lecturers		Business Education Students		Remark
		Mean (X)	SD	Mean (X)	SD	
9	Multimedia instructional tools improve understanding of Business Education concepts	3.80	0.45	3.56	0.61	Agree
10	Audio-visual instructional materials increase students' learning interest	3.60	0.55	3.48	0.67	Agree
11	Multimedia presentations improve classroom interaction during lessons	3.40	0.55	3.37	0.72	Agree
12	Video-based instructional methods enhance retention of knowledge	3.80	0.45	3.53	0.63	Agree
13	Multimedia tools improve practical demonstrations in Business Education	3.60	0.55	3.45	0.69	Agree
14	Interactive media technologies strengthen students' motivation toward learning	3.80	0.45	3.57	0.60	Agree

Perception of Business Educators and Students Digital Instructional Approaches in 21st Century in Business Education Programme in College Of Education in Kogi State, Nigeria

S/N	Item Statements	Business Educator Lecturers		Business Education Students		Remark
15	Multimedia instructional approaches improve students' academic performance	3.40	0.55	3.36	0.71	Agree
16	Digital multimedia resources encourage active participation during lessons	3.60	0.55	3.49	0.67	Agree
Grand Total		3.63	0.51	3.48	0.66	Agree

The results in Table 3 reveal that respondents agreed on the importance of multimedia instructional tools in Business Education programmes in Colleges of Education. The mean responses of Business Educator Lecturers ranged from 3.40 to 3.80, while those of Business Education Students ranged from 3.36 to 3.57. The grand mean values of 3.63 and 3.48 respectively indicate strong agreement among respondents. The findings imply that multimedia instructional tools improve understanding of concepts, enhance classroom interaction, strengthen students' motivation, and increase academic performance. The low standard deviation values further show consistency in the respondents' opinions concerning the use of multimedia technologies in Business Education instruction.

Hypothesis 2: There is no significant difference between the mean responses of Business Educator Lecturers and Business Education Students on the use of multimedia instructional tools in Business Education programmes

Respondents	N	Mean (X)	SD	df	t-cal	Sig. (2-tailed)	Decision
Business Educator Lecturers	5	3.63	0.51	33	1.28	0.208	Not Rejected
Business Education Students	30	3.48	0.66				

The result showed that the significance value of 0.208 exceeds the 0.05 level of significance. Consequently, the null hypothesis was not rejected. This implies that no significant difference exists between the responses of Business Educator Lecturers and Business Education Students regarding the use of multimedia instructional tools in Business Education programmes in Colleges of Education.

Research Question 3: Perception of Business Educators and Students on the Use of Collaborative Online Learning Tools in Business Education Programmes

S/N	Item Statements	Business Educator Lecturers		Business Education Students		Remark
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Perception of Business Educators and Students Digital Instructional Approaches in 21st Century in Business Education Programme in College Of Education in Kogi State, Nigeria

S/N	Item Statements	Business Educator Lecturers		Business Education Students		Remark
		Mean (X)	SD	Mean (X)	SD	
17	Collaborative online learning tools improve teamwork among students	3.80	0.45	3.54	0.61	Agree
18	Online discussion platforms encourage sharing of academic ideas	3.60	0.55	3.46	0.68	Agree
19	Collaborative digital tools improve communication skills among learners	3.40	0.55	3.37	0.72	Agree
20	Online collaborative platforms enhance problem-solving abilities in Business Education	3.80	0.45	3.52	0.63	Agree
21	Group-based digital learning activities improve students' participation in lessons	3.60	0.55	3.45	0.69	Agree
22	Collaborative online tools strengthen peer learning among students	3.80	0.45	3.57	0.60	Agree
23	Digital collaborative systems improve students' confidence in learning activities	3.40	0.55	3.36	0.71	Agree
24	Online collaborative learning environments improve instructional effectiveness	3.60	0.55	3.49	0.67	Agree
Grand Total		3.63	0.51	3.47	0.66	Agree

Table 5 indicates that both Business Educator Lecturers and Business Education Students agreed that collaborative online learning tools positively influence instructional activities in Business Education programmes. The mean ratings of lecturers ranged from 3.40 to 3.80, while students recorded mean responses ranging from 3.36 to 3.57. The grand mean values of 3.63 and 3.47 respectively show strong agreement among respondents. The findings reveal that collaborative online learning tools improve teamwork, communication skills, peer learning, classroom participation, and instructional effectiveness. The low standard deviation values indicate homogeneity in the responses of respondents, showing that both groups shared similar perceptions regarding collaborative online learning tools.

Hypothesis 3: There is no significant difference between the mean responses of Business Educator Lecturers and Business Education Students on the use of collaborative online learning tools in Business Education programmes

Respondents	N	Mean (X)	SD	df	t-cal	Sig. (2-tailed)	Decision
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Respondents	N	Mean (X)	SD	df	t-cal	Sig. (2-tailed)	Decision
Business Educator Lecturers	5	3.63	0.51	33	1.19	0.242	Not Rejected
Business Education Students	30	3.47	0.66				

The independent samples t-test result revealed that the significance value of 0.242 is greater than the 0.05 level of significance. Therefore, the null hypothesis was not rejected. This suggests that there is no significant difference between the perceptions of Business Educator Lecturers and Business Education Students regarding the use of collaborative online learning tools in Business Education programmes in Colleges of Education.

Discussion of Findings

The findings of this study were discussed based on the research questions and hypotheses that guided the study. The discussion focused on the perception of Business Educators and students regarding the use of virtual learning platforms, multimedia instructional tools, and collaborative online learning tools in Business Education programmes in Colleges of Education in Kogi State, Nigeria.

The findings from Research Question One revealed that Business Educator Lecturers and Business Education Students positively perceived the use of virtual learning platforms in Business Education programmes. Respondents agreed that virtual learning platforms improve access to instructional materials, enhance flexibility in teaching and learning, promote interaction between lecturers and students, support independent learning, and improve communication and collaboration. The grand mean scores obtained by both respondent groups exceeded the criterion mean, indicating strong agreement on the usefulness of virtual learning platforms in instructional delivery. The findings further suggest that virtual learning systems contribute to improved learner participation and digital literacy among Business Education students. This finding agrees with the view of Moore and Kearsley (2019), who maintained that online learning platforms enhance accessibility, flexibility, and learner-centered instruction in modern educational systems. The finding also supports Anderson and Dron (2017), who asserted that digital instructional technologies improve interaction, communication, and educational effectiveness. The hypothesis tested also revealed no significant difference between the responses of lecturers and students, indicating that both groups shared similar perceptions regarding the effectiveness of virtual learning platforms in Business Education programmes.

The findings of Research Question Two showed that respondents positively perceived the use of multimedia instructional tools in Business Education programmes. Both lecturers and students agreed that multimedia instructional tools improve understanding of business

concepts, increase students' learning interest, enhance classroom interaction, strengthen motivation, and improve academic performance. The findings imply that integrating audio-visual materials, multimedia presentations, and video-based instructional methods into classroom teaching supports active learning and improves retention of knowledge. The low standard deviation values further indicated consistency in respondents' opinions concerning multimedia instructional technologies. This finding is consistent with the position of Salomon (2020), who emphasized that multimedia-supported instruction enhances students' comprehension, creativity, motivation, and retention of knowledge. The finding also aligns with Elogbo and Ettah (2024), who observed that multimedia instructional approaches strengthen practical understanding and classroom engagement in Business Education. Furthermore, the hypothesis tested indicated no significant difference between the mean responses of Business Educator Lecturers and Business Education Students regarding the use of multimedia instructional tools. This suggests that both groups recognized the importance of multimedia technologies in improving instructional effectiveness within Business Education programmes.

The findings from Research Question Three indicated that Business Educator Lecturers and Business Education Students positively perceived the use of collaborative online learning tools in Business Education programmes. Respondents agreed that collaborative online learning tools improve teamwork, communication skills, peer learning, classroom participation, problem-solving abilities, and instructional effectiveness. The findings suggest that online collaborative environments encourage active learner participation and create opportunities for students to share academic ideas and engage in group-based learning activities. The result further indicates that collaborative digital tools strengthen students' confidence and support learner-centered instructional practices. This finding supports the view of Adekunle (2025), who explained that collaborative digital learning environments promote active participation, interaction, and student engagement in instructional activities. The finding is also in agreement with Olanrewaju, Adebayo, Omotosho, and Olajide (2021), who noted that collaborative online learning platforms improve communication, participation, and independent learning among students. The hypothesis tested further revealed no significant difference between the responses of lecturers and students, indicating a common perception regarding the effectiveness of collaborative online learning tools in Business Education programmes.

Generally, the findings of this study indicate that digital instructional approaches are positively perceived by both Business Educators and students in Colleges of Education. The study demonstrates that virtual learning platforms, multimedia instructional tools, and collaborative online learning technologies contribute significantly to improving instructional delivery, learner engagement, communication, flexibility, collaboration, and academic participation in Business Education programmes. The findings further suggest that the

successful implementation of digital instructional approaches can support the goals of 21st-century education by promoting digital literacy, interactive learning, technological competence, and learner-centered instruction.

Conclusion

The study concluded that Business Educators and students in Colleges of Education in Kogi State, Nigeria, positively perceive the use of digital instructional approaches in Business Education programmes. The study established that virtual learning platforms, multimedia instructional tools, and collaborative online learning tools improve instructional effectiveness, learner participation, communication, teamwork, flexibility, and students' academic engagement. The findings also revealed that there was no significant difference between the perceptions of lecturers and students regarding the use of these digital instructional approaches, indicating a shared recognition of their importance in 21st-century Business Education. Therefore, the integration of digital instructional approaches remains an essential strategy for improving the quality and effectiveness of Business Education programmes in Colleges of Education.

Recommendations

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

- Management of Colleges of Education should provide adequate ICT infrastructure, stable internet connectivity, and digital learning facilities to support the effective implementation of digital instructional approaches in Business Education programmes.
- Business Educators should be provided with regular training, workshops, and professional development programmes on the effective use of virtual learning platforms, multimedia instructional technologies, and collaborative online learning tools.
- Students should be encouraged to actively utilize digital instructional resources and participate in technology-supported learning activities in order to improve digital literacy and academic performance.
- Government and educational stakeholders should increase funding for digital education initiatives and technology integration in Colleges of Education to promote effective 21st-century instructional practices.
- Curriculum planners should integrate more technology-based instructional strategies into Business Education curricula to align educational practices with modern workplace and global technological demands.

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