EXPLORING THE TRANSFORMATIVE EFFECT OF NEW TECHNOLOGIES ON BUSINESS AND ENTREPRENEURSHIP EDUCATION DELIVERY IN NIGERIA

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Abstract

This study explored the transformative effect of new technologies on business and entrepreneurship education delivery in Nigeria. Descriptive survey design was adopted. Three research questions and three null hypotheses guided the study. The population comprised 65 business educators and 205 final year (2024/2025 academic session) business education students, drawn from the universities that offer business education in Delta State. The entire number of the 270 was used as the study sample due to its size. A 30-item questionnaire graded on a four-point rating scale of Strongly Agreed (4points) Agreed (3points), Disagreed (2points), and Strongly Disagreed (1point) was used as instrument for data collection. The instrument was validated by two educational technology experts and the instrument reliability was determined using the Cronbach's alpha statistical where a coefficient of 0.87 was obtained. This value was suitable for the study. Data generated from the research questions were analyzed using Mean and Standard Deviation while Pearson Product Moment Correlation Coefficient was used in testing the null hypotheses at 0.05 alpha level. Findings revealed that the integration of new technologies (Learning Management Systems (LMS), Virtual Classrooms Platforms, Multimedia Content in education are linked to enhanced instructional delivery, promotion of students' engagement, and learning flexibility particularly in business and entrepreneurship education programme in Delta State.. Further findings identified some notable challenges that are associated with the utilization of these new technologies in education, these include: poor infrastructural development, teachers' unpreparedness due to inadequate training, un-equal access to learning tools among students. Based on these findings, recommendations were made to include: Developing quality Infrastructure for service delivery, Regular capacity building programmes for Educators, Establish viable evaluate mechanism among, others.

Keywords: New Technologies, Transformation, Challenges, Business and Entrepreneurship Education

Introduction

The rapid advancement of digital technologies has revolutionized the educational landscape, particularly in tertiary institutions. In recent times the education industry has continued to witness transformation through digital learning platforms by redefining the traditional pedagogical practices. According to Dhawan (2020), digital learning tools support diverse learning styles, offer flexibility in content delivery, and promote interactive learning. The global push towards digitalization and remote learning as become inevitable especially after the COVID-19 pandemic

disruption of the traditional face-to-face class interaction, an era where most institutions opted for online learning system. Eziechine and Iyamu (2021) noted that the COVID-19 pandemic spur the rapid adoption of e-learning system which served as a significant shift from the traditional face-to-face interactions to the online learning classes in most of the tertiary institutions in Nigeria. E-learning technologies encompass a wide range of digital learning platforms, such as the Learning Management Systems (LMS), Virtual Classrooms Platforms, Multimedia Content, Mobile Learning Platforms, Collaborative Platforms, Video-Based Learning Tools, among others. These digital platforms if properly utilized, promote instructional delivery, offering both the educators and the learners' the opportunity of real-time interaction, and access to wide range of educational resources. Generally, e-learning platforms have become so vital in facilitating teaching and learning procedures especially in the teaching and learning processes of business and entrepreneurship education in Nigerian universities. The teaching methodology in business and entrepreneurship education are basically anchored on lecture methods, case studies, and group projects. Leveraging on digital tools for teaching transmissions have resulted in improved accessibility, collaborative learning, and enhanced learning outcomes. E-learning tools like LMS, virtual classroom platforms, and multimedia contents have become inevitable tools in business and entrepreneurship education content delivery and effectiveness in teaching/learning processes. Dhawan (2020) noted that the increasing reliance on MLS, Virtual classroom platforms, and Multimedia contents has dramatically transformed the delivery pattern in education. Specifically, business education and entrepreneurship programmes have witnessed dramatic learning modifications as a result of the integration of digital tools in the learning procedures.

Learning Management System is a software platform used in e-learning environments to manage, plan, implement, and assess learning contents. Ajijola, Ogunlade, and Aladesusi, (2021) asserted that the Learning Management System (LMS) as a web-based software, supports instructional planning, delivery, mentoring, tracking, and reporting of learners' progression. The system manages course content, track student performance, administers assessments and facilitates learning outcomes. Yakubu, Dasuki, Abubakar and Kah (2020) also observed that LMS significantly improves teaching and learning by offering interactive tools to boost students' engagement, thus enabling personalized learning experiences, and providing real-time feedback. In line with this assertion, Ajijola, Ogunlade, and Aladesusi, (2021) further stressed that LMS platforms such as Moodle and Canvas improve students' academic preparedness and allow for personalized learning experiences. The Learning Management Systems that are mostly used in tertiary institutions include the Academic LMS which are used for course contents' management, assessments and communication, Training-Oriented LMS used for professional trainings and Cloud-Bases. Generally, LMS and other e-learning platforms are used by institutions seeking ease access to Google classroom and scalability among others.

Virtual classroom platform is another e-learning initiative for on-line interaction. A virtual classroom platform is a model classroom that allows students to perform typical face-to-face classroom tasks online. It is an online learning environment where teachers and students interact in real-time using digital tools like video conferencing, chat, forums, and digital whiteboards. It is also an online learning space for teacher/students' interaction without the constraints of physical location. Adedoyin and Soykan (2020) noted that virtual classrooms are the platforms that enable learning through Zoom and Google Meet, thereby fostering interactivity and collaborative remote learning. In times, where physical learning interactions become difficult, virtual classrooms and multimedia contents are used to maintain educational activities.

Multimedia contents involve the integration of various forms of media and interactive elements to promote teaching/learning process. The content is designed to engage multiple senses, support learning styles and foster understanding. It includes the use of text, audio, video, animations, and interactive elements to facilitate learning and enhance learning experiences. According to

Wagbara (2024), multimedia contents are diverse sets of technological tools and resources used in communicating, creating information, disseminating, storing, and managing information especially in the modern education environments. Multimedia tools like visual and auditory materials help in better conceptualization and comprehension by increasing students' motivation and engagement. In the words of Adeyemi and Ojo (2022), the use of multimedia-rich environments leads to deeper understanding and improved cognitive development among learners. Eze and Nwagwu (2023) asserted that virtual classroom and Multimedia tools promote inclusive education, enabling students from remote areas to gain quality knowledge despite infrastructural challenges

The integration of e-learning platforms, such as the Learning Management System, Virtual classrooms platforms, and Multimedia content in teaching and learning, have greatly enhanced the pedagogical routines and have also helped in reshaping the system. Though, students in rural areas often face some difficulties in the usage as a result of low bandwidth, digital fatigue, and lack of access to smart devices, which may hinder equitable learning. Apart from these difficulties encountered by students in the remote areas, limited digital literacy and unreliable internet access stand as key barriers in maximizing the full potentials in digital learning platform effectiveness and benefits to institutions. As a result of the facts on the transformative effect of digital learning platforms in learning outcomes, it is important that all users of the platforms conform with the global ethical standard in order to limit or reduce the persistent criticisms on the e-learning ethical implications on Nigerian educational system. More also, impediments have been identified by exceptional critics as potential challenges in digital learning, these include: power outages, poor infrastructure, inadequate training of personnel, poor policy implementation, inequality in accessibility and inclusiveness among others. The most threatening among these barriers, is the unreliable power supply or the epileptic nature of power supplies in Nigeria. The power failure syndrome disrupts virtual classes, device charging, and network operations. Frequent power outages make learning activities difficult especially in virtual learning environments. Another significant challenge associated with digital learning tools is poor internet connectivity and limitation of broadband, especially in rural areas. These have made most learners and institutions of learning to constantly lack access to live lessons and digital contents. The high internet costs and inconsistent network quality also restricts learners' usage.

In addition, inadequate devices & ICT Infrastructure such as the computers, digital libraries, or learning software in most institutions have contributed negatively to the learners' ability in maximum engagement coupled with obsolete ICT equipment that lack regular maintenance. Low-level digital literacy and irregular training of stakeholders (teachers, students and educational administrators) also constitute as major barriers in e-learning implementation. Akinyemi, Amaechi, and Etoh, (2022) observed that limited knowledge of the digital skills needed for effective online teaching and learning experiences reduce users' confidence in navigating the digital learning platforms. The authors further stressed that the irregular or non-existent of in-service trainings hamper educators' readiness. Again, the issue of poor implementation and weak ICT policy remained as critical constrains. Lack of strategic vision, inadequate policy framework, ineffective monitoring mechanism and weak institutional supports have limited the proper integration and sustainability of e-learning initiatives and progress in some learning environments.

Socio-economic and cultural factors also pose as considerable challenges to effective e-learning initiatives. Cultural skepticism towards online education discourages the adoption of digital learning approaches especially in regions where the cultural belief prefers the face-to-face learning to the online learning. Furthermore, lack of effective quality assurance mechanism and curriculum misalignment of online/offline curriculum components impair learning effectiveness. The lack of tailored e-learning support or special needs students or groups have resulted to lack

of inclusiveness and marginalization. The high rate of insecurity and insurgencies such as the Boko Haram insurgents, Islamic-West African State Progress (ISWAP) and other forms of banditry have significantly pose great barriers to digital access due to restricted movement, destruction of ICT infrastructure in conflict zone and subversion (Ofor-Douglas 2021).

Some strategic ways have been identified as ways to mitigate the persistent challenges associated with e-learning initiatives. The expansion of internet accessibility has been identified as key measure to improve internet connectivity and reliability. This would grant learners' speedy access to e-learning activities particularly those in remote areas. Another strategic means is the provision of affordable device schemes and maintenance plans. Making digital devices available at a reduce cost would reduce financial burden on teachers and learners, thus making more learners to participant effectively in digital learning. The study also highlights the importance of delivering continuous, context-adapted training for both educators and learners, designing training programmes to reflect the specific needs of learners and teachers. Such training enhances digital literacy; improve competencies in the adoption and the use of digital learning activities. Furthermore, strengthening the ICT policies and institutional investments are essential in addressing on-line learning difficulties. Inclusive contents and e-learning tools should be developed to promote equitable participation and learners' engagement.

However, ethical alignment of the curriculum and pedagogy are necessary to ensure seamless integrating and ethical use of the new technologies in education. Therefore it should be considered relevant by institutions to constitute workable evaluation mechanism for regular assessment of the e-learning integration outcomes thus, promoting the transformative potentials of the tech-enhanced teaching/learning processes. According to Adeyemi and Ojo (2022), adopting new technologies have shifted from sermonic learning procedures to interactive inquiry-based techniques that promote student-centered pedagogies resulting in active learning outcomes. Eze and Nwagwu (2023) also affirmed that the transformative impact of technology integration in education and its effectiveness in pedagogical assessment shift is crucially important.

Statement of the Problem

Regardless of the increasing importance of digital technologies (Learning Management Systems (LMS), virtual classrooms, and multimedia content) in education, most of the Nigerian higher institutions seems to be overwhelmed with the new trend and as such are yet to fully transit from the traditional teaching methods to the new technology-enhanced learning environments while the few that have adopted the digital learning tools, did that without the clear understanding of the transformative potentials of the e-learning system in measuring educational outcomes. Consequently, these lacunas have been identified to be among the indefinable concerns in e-learning initiatives, hence the degree of learning transformation through the e-learning platforms have remained vague. Similarly, the effectiveness of these digital tools in achieving the general educational objectives remained an issue of debate, with varying opinion based on institutional readiness, users' proficiency and the long-term effect on quality learning outcomes. Previous researches and observations have revealed that challenges such as; poor internet connectivity, lack of technical skills among instructors, and inadequate/obsolete infrastructure in institutions contribute to the ineffective utilization of e-learning platforms. More also, the evaluation mechanisms ranging from the instructional practices, assessment strategies, and student participation seem not to be satisfactorily accepted. These obvious issues have continuously raised concerns about the learning qualities, the consistency, and the inclusiveness in the technology reforms in education. Therefore it is pertinent to critically investigate the depth in which these learning innovations have practically and positively influenced teaching effectiveness and learning quality particularly in business and entrepreneurship education programme in Nigerian universities. It is based on the aforementioned, that necessitate the need to empirically investigate the transformative effect of the new technologies (Learning Management System,

Virtual Classroom and Multimedia platform) on business and entrepreneurship education programme delivery in universities in Delta State.

Research Questions

1. How does learning management system (LMS) affect business and entrepreneurship education learning outcomes in universities in Delta State?
2. Do the use of virtual classroom and multimedia contents influence students' knowledge in business and entrepreneurship education in universities in Delta State?
3. What are the effects of new technologies adoption on teaching pedagogies in business and entrepreneurship education in universities in Delta State?

Hypotheses

Three null hypotheses were formulated and tested at 0.05 alpha level

H01: There is no significant relationship between LMS and business and entrepreneurship education learning outcomes in universities in Delta State

HO2: The use of virtual classroom and multimedia contents do not have significant influence on students' knowledge in business and entrepreneurship education in universities in Delta State

HO3: New technologies integration in education do not have significant effect on teaching pedagogies in business and entrepreneurship education in universities in Delta State

Method

A descriptive survey design was employed in this study. Three research questions guided the study and three null hypotheses were formulated and tested at 0.05 alpha level. The study population comprised 65 business educators and 205 final year (2024/2025 academic session) business education students drawn from the universities that offer business education in Delta State. The entire population of the 270 was used as sample due to its' size. Instrument for data collection was a 30-item structured questionnaire with sections A and B. Section A was meant to elicit demographic information of respondents (Age, Gender Years of experience and School location) while the section B consists of the statements which were based on four point rating scale of Strongly Agreed (4points) Agreed (3points), Disagreed (2points), and Strongly Disagreed (1point). The questionnaire was validated by two educational technology experts while the reliability was confirmed using the Cronbach's alpha statistical tool. It yielded a reliability coefficient of 0.87 which was suitable for the study. Mean and standard deviation were used to analyze data obtained from respondents while Pearson Product-Moment Correlation Coefficient (Pearson r) was used in testing the null hypotheses. Findings revealed that the integration of new technologies (Learning Management Systems (LMS), Virtual Classrooms Platforms, Multimedia Content) in education, enhance instructional delivery; promote students' learning engagement, collaboration and learning flexibility particularly in the teaching of business and entrepreneurship education in Delta State. However, further findings identified some notable challenges that are associated with the integration of new technologies in education, particularly in business and entrepreneurship education programme in Delta State. These include: poor infrastructure, teachers' unpreparedness due to inadequate training, un-equal access to learning tools among others. Based on the findings, the study recommends the followings: Developing quality Infrastructure for service delivery, regular capacity building programmes for Educators, establishment viable evaluate mechanism for quality assurance among others.

Results

Research Question 1: How does learning management system (LMS) influence business and entrepreneurship education learning outcomes in universities in Delta State?

Table 1: Mean responses on learning management system (LMS) influence on business and entrepreneurship education learning outcomes in universities

S/N	Item Statement	$\bar{X}$	SD	Remark
1	LMS allows for timely feedback	4.58	0.73	Agreed
2	Accessing resource materials is easy with LMS	3.86	0.88	Agreed
3	The learning management system improves learning experience	3.63	0.74	Agreed
4	LMS allows for effective communication between instructors and students	3.89	0.57	Agreed
5	The LMS supports different content formats like videos	3.66	0.73	Agreed
6	Students' progress can easily be tracked and graded on the learning management system	3.87	0.86	Agreed
7	The interface in LMS is visually well organized	4.43	0.75	Agreed
8	Submitting assignments through the LMS is straight forward	3.69	0.93	Agreed
9	Course materials and other learning resource are readily available in LMS	2.47	0.67	Disagreed
10	The LMS is very easy to navigate and use	3.74	0.86	Agreed
	Grand Total	**3.78**	**0.77**	**Agreed**

Source: Field Survey 2025

The result from the data in Table 1, indicate that learning management system has influence on learning outcomes of business and entrepreneurship education programme. With a grand mean of 3.78, it indicates that on the average, respondents agree that the use of learning management system positively influence learning outcomes in tertiary institutions. A standard deviation of 0.77 depicts a moderate variability in response. While most respondents hold similar views, there werel some variation in opinion on how strongly they felt about learning management system's influence on learning outcomes in business and entrepreneurship education programme. Conclusively, it can be stated that LMS have significant influence on learning outcomes

Research Question 2: Do the use of virtual classroom and multimedia contents influence students' knowledge in business and entrepreneurship education in universities in Delta State?

Table 2: Mean responses on the use of virtual classroom and multimedia contents influence on students' knowledge in business and entrepreneurship education in universities

S/N	Item Statement	$\bar{X}$	SD	Remark
1	Virtual classroom platforms are regularly use in lecture delivery	2.43	0.73	Disagreed
2	The platform allows for effective interaction between students and teachers	4.76	0.97	Agreed
3	My learning understanding has improved through virtual class and participation	3.83	0.76	Agreed
4	I find it easier to ask questions in a virtual classroom	3.39	0.47	Agreed
5	The use of recorded virtual lectures allows me to understand complex content	3.96	0.63	Agreed
6	Multimedia contents such as animations and videos enhance my understanding of subject matter	3.85	0.76	Agreed
7	Virtual labs and simulations enhance understanding practical concept	3.53	0.79	Agreed
8	I understand better when lecturers use real-world case study videos.	3.69	0.83	Agreed
9	Overall use of multimedia content and virtual classroom has significantly improve my learning outcomes	3.47	0.67	Agreed
10	I prefer the use of e-learning platforms to the traditional textbooks	2.44	0.76	Disagreed
	Grand Total	**3.54**	**0.74**	**Agreed**

Source: Field Survey 2025

The data analysis in Table 2 is on the extent to which the use of virtual classroom and multimedia contents influence students' understanding of business and entrepreneurship education. With a grand mean of 3.54, this implies that majority of respondents strongly agreed that virtual classroom and multimedia contents are considerably used in teaching/learning of business and entrepreneurship education. This suggests a general adoption of these learning platforms in teaching and learning. A standard deviation of 0.74 suggests that while many respondent strongly agreed, a few disagreed, this reflects a minor inconsistencies in usage across universities in Delta State.

Research Question 3: What are the effects of new technologies adoption on teaching pedagogies in business and entrepreneurship education in universities in Delta State?

Table 3: Mean responses on the effects of new educational technologies adoption on teaching pedagogies in business and entrepreneurship education in universities in Delta State

S/N	Item Statement	$\bar{X}$	SD	Remark
1	Distractions usually occur during online learning classes	4.54	0.64	Agreed
2	Internet problem and device malfunctions disrupts online learning	3.78	0.85	Agreed
3	There is isolation in when using digital learning platforms	4.42	0.68	Agreed
4	There is no proper time management in on e-learning platforms	3.97	0.49	Agreed
5	Online learning lacks equity compared to traditional assignments	2.38	0.66	Disagreed
6	Digital learning platforms do not encourage personalized support as much as in-person classes.	3.77	0.76	Agreed
7	Practical learning is limited in the digital learning platforms	2.43	0.55	Disagreed
8	Technical support is readily available in online classes.	3.76	0.94	Disagreed
9	Digital tools do not offer better mental health support	4.67	0.78	Agreed
10	There is limited access to stable internet connection during online classes	4.54	0.66	Agreed
	Grand Total	**3.83**	**0.70**	**Agreed**

Source: Field Survey 2025

The analysis in Table 3 shows the mean responses on the challenges in adopting new educational technologies in business and entrepreneurship education programme in tertiary institutions in Delta State. With a grand mean of 3.83, this depicts that most respondents strongly agreed that there are significant challenges in adopting new educational technologies in business and entrepreneurship education. A standard deviation of 0.70 indicates a moderate agreement among respondents with some level of variation in opinion. This variability could be as a result of institutional difference in capacity, infrastructure and access to digital tools in teaching and learning of business and entrepreneurship education.

H01: There is no significant relationship between learning management system and learning outcome in business and entrepreneurship education in universities in Delta State

Table 4: Pearson's Correlation of Learning Management System and Learning Outcomes in Business and Entrepreneurship Education Programme in Universities

Variables	Number	Pearson r	Coefficient of Determination
LSM Learning Outcomes	270	.0.71	50.41%

Key: .00 - .33 = low; .34 - .67 = Moderate; .68 – 1.00 = High

The analysis in Table 4 on the correlation of learning management system and learning outcome in business and entrepreneurship education revealed that there is a significant correlation between the variables. The Pearson r of 0.71 suggests a strong positive relationship. This depicts that when LSM tools are effectively utilized, it enhances learning process which positively influence learning outcomes. The coefficient of determination of (0.5041) 50.41% indicates that only 50.41% of variation in students' learning outcome can be explained by their use of learning management system.

H**O2:** The use of virtual classroom and multimedia contents do not have significant influence on students' knowledge in business and entrepreneurship education in universities in Delta State

Table 5: Pearson's Correlation of the use of Virtual Classroom/Multimedia Contents and Students' Knowledge in Business and Entrepreneurship Education in Universities

Variables	Number	Pearson r	Coefficient of Determination
Use of virtual classroom and multimedia contents Students' knowledge	270	.0.68	46,24%

Key: .00 - .33 = low; .34 - .67 = Moderate; .68 – 1.00 = High

The data analysis in Table 5 shows a Pearson's correlation of the use of virtual classroom /multimedia contents and students' Knowledge in business and entrepreneurship education. The result reveals a Pearson r- value of 0.68and a coefficient of determination of 46.24% (0.46240, this suggests a moderately strong positive correlation which implies that these learning platforms when properly engaged, improve understanding; leading to knowledge acquisition. The coefficient determination value suggests 46.24% of the variance in students' knowledge in business and entrepreneurship education is due to the use of virtual classroom platforms and multimedia contents.

HO3: Adopting new technologies do not have significant effect on teaching pedagogies in business and entrepreneurship education in universities in Delta State

Table 6: Pearson's Correlation of New Technologies Adoption and Teaching Pedagogies in Business and Entrepreneurship Education in universities

Variables	Number	Pearson r	Coefficient of Determination
New Educational Technologies Integration Effective Teaching/learning	56	.0.74	54.76%%

Key: .00 - .33 = low; .34 - .67 = Moderate; .68 – 1.00 = High

Table 6 shows the Pearson's correlation of New Technologies adoption and teaching pedagogies in Business and Entrepreneurship Education in tertiary institutions. The result reveals a Pearson r of 0.74 that indicates a strong correlation between new technologies adoption and efficient teaching pedagogies in business and entrepreneurship education in tertiary institutions in Delta State. This implies that adopting new technologies significantly influence pedagogical effectiveness and learning experiences in business and entrepreneurship education programme. The coefficient of determination of 54.76% (0.5476) suggests a high coefficient determination confirming that adopting new technologies have positively or negatively influenced teaching and learning processes especially in business and entrepreneurship education in universities.

Discussion of Findings

The findings in Table 1 revealed that the use of Learning Management Systems (LMS) has positive influences on students' learning outcomes. The analysis showed a moderate to strong positive correlation between LMS usage and academic performance. This suggests that LMS platforms facilitate better organization of learning materials, enhance communication between students and instructors, and offer timely access to assessments and feedback. These elements contribute to improved student engagement and performance. The finding aligns with Adeyemi and Ojo (2022) who affirmed that LMS platforms like Moodle and Canvas improve students' academic preparedness and allows for personalized learning experiences. However, limited digital literacy and unreliable internet access remain key barriers in maximizing the full benefits of LMS in many Nigerian universities. It was observed also that LMS significantly improves teaching and learning by offering interactive tools to boost students' engagement thus, enabling personalized learning experiences, and providing real-time feedback.

Table 2 analyzed the Use of Virtual Classroom Platforms and Multimedia Contents influence on Students' Knowledge. The study revealed a significant relationship between the use of virtual classroom platforms, multimedia contents, and students' knowledge acquisition. Tools such as Zoom, Google Meet, and recorded video lectures, when combined with visual aids like animations and graphics, enhance students' comprehension, retention and critical thinking, these platforms promote real-time interaction. In-line with the study's findings, Wagbara, (2024) asserted that the use of multimedia-rich environments lead to deeper understanding and improved cognitive development among learners.

In Table 3, the study revealed that the adoption of new technologies have transformative effect on teaching pedagogies. It indicated that instructors who embraced innovations using blended learning approaches most likely adopt student-centered teaching methods. These teaching innovations enable differentiated instruction, real-time formative assessment, and active learning strategies. As a result, teachers shift from traditional lecture methods to more engaging, participatory, and adaptive teaching styles. Yakubu, Dasuki, Abubakar and Kah (2020) in line with the study findings affirmed that adopting new technologies have shifted from sermonic learning procedures to interactive inquiry-based techniques, thus promoting active learning and student-centered pedagogies. However, despite these transformative learning approaches, new technologies in education have been with critical challenges that have caused inequitable experiences especially among learners in the remote areas. Eze, and Nwagwu (2023) reported that despite the transformative impact of technology integration in education, that the effectiveness of the pedagogical shift is continuously dependent on access to technological infrastructures

Conclusion

This study underscores the transformative impact of new technologies in business education and entrepreneurship education programme in tertiary institutions. Digital platform such as learning management system, virtual classroom and multimedia contents were observed to have positive moderate relationship with effective teaching and learning outcomes. The findings revealed that e-learning enhances instructional delivery, student engagement, and learning flexibility when

effectively implemented. However, the study identified persistent challenges associated the full adoption of these new digital platforms and its effect in the accomplishment of educational goal. The identified challenges include but not limited to: inadequate infrastructure, lack of training, curriculum and policy misalignment, unequal access and digital divide, and insecurity.

Recommendations

The following recommendations were made based on the study's findings:

1. Ministry of higher education, institutions and other stakeholders in business education should invest more in digital infrastructure, providing reliable learning management system with undisrupted access to technology-driven delivery models.
2. Businee and Entrepreneurship Education curriculum planners and other stakeholders should align curriculum with digital learning: adopting clear policy framework that promote inclusiveness, accessibility, and effectiveness in e-learning models to encourage and support local and e-contents.
3. Consistent assessment and evaluation of e-learning models should be carried out to timely identify learning gaps and provide prompt remedies through regular capacity building outlets on digital pedagogy for effective learning outcomes.

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