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APPLICATION OF MOBILE LEARNING AS A DELIVERY TECHNIQUE IN BUSINESS EDUCATION IN COLLEGES OF EDUCATION IN ANAMBRA STATE.

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Abstract

Mobile learning represents a significant advancement in the integration of technology in education. This survey research design study was adopted to examine the application of mobile learning as a delivery technique in business education in colleges of education in Anambra state, Nigeria. The population comprised of all the 83 Business Educators in two colleges of Education in Anambra state. They were not sampled. Three research questions guided the study. A 33-item structured questionnaire was used to collect data from the respondents. The instrument was validated by three experts from the Faculty of Education, Nnamdi Azikiwe University, Awka. Cronbach Alpha was used to test for reliability which gave a coefficient reliability of 0.73. Data were analyzed using mean and standard deviation. The findings revealed several benefits of mobile learning as a delivery technique in business education in colleges of education in Anambra State, among others. It was recommended that business educators integrate mobile learning into business education programmes to maximize its benefits, among others.

Keywords: Business Education, Mobile Learning, Delivery technique, College of Education.

Introduction

Mobile learning, commonly referred to as m-learning, represents a significant advancement in the integration of technology in education. It utilizes mobile devices such as smartphones, tablets, laptops, and other wireless technologies to facilitate flexible and personalized learning experiences (Lin *et al*, 2023). The evolution of mobile learning stems from the broader fields of e-learning and distance education, leveraging wireless connectivity to ensure accessibility and seamless knowledge

dissemination across diverse geographical locations (Valencia-Arias *et al*, 2024). In recent years, the proliferation of mobile devices and increased internet penetration have positioned mobile learning as a viable instructional strategy in both formal and informal educational settings. Business education, which focuses on equipping learners with essential skills for entrepreneurship, innovation, and effective participation in the global economy, stands to benefit immensely from the adoption of mobile learning techniques. Through mobile learning, students in business education programmes can access course materials, collaborate with peers, and engage with instructors without the constraints of time and location (Parsons *et al* 2023).

The benefits of mobile learning in business education are numerous and transformative. First, mobile learning fosters accessibility, enabling students to access learning resources anytime and anywhere, thus breaking the barriers posed by traditional classroom settings (El-Sofany & El-Haggar, 2020; Kang, 2024; Li & Li, 2024). This flexibility allows learners to balance their academic pursuits with personal and professional responsibilities. Furthermore, mobile learning encourages personalized instruction by allowing learners to progress at their own pace, review complex concepts multiple times, and access supplementary materials that cater to their individual needs (Yin *et al*, 2019; Ibrahim, 2024). The interactive nature of mobile applications and platforms also enhances engagement and participation among learners, as multimedia tools such as videos, podcasts, and gamified content make learning more dynamic and appealing (Zhang, 2022). Additionally, mobile learning facilitates collaboration and communication through discussion forums, group chats, and video conferencing tools, fostering teamwork and the exchange of ideas among students and instructors. Beyond improving knowledge acquisition, mobile learning also develops critical thinking and problem-solving skills, as students engage with real-world case studies and simulations via mobile platforms.

Moreover, mobile learning proves to be a cost-effective alternative to traditional instructional methods, as digital resources reduce the dependence on expensive textbooks and printed materials. These advantages highlight the potential of mobile learning to revolutionize business education, especially in developing countries where access to quality education remains a challenge.

However, despite its numerous benefits, mobile learning in business education seems not to be without challenges. One of the primary limitations is the technological constraints of mobile devices, including small screen sizes, limited storage capacities, and reliance on battery power (Calderon-Garrido *et al* 2022). These hardware limitations can affect the quality of the learning experience and hinder students' ability to fully engage with digital resources. Furthermore, the high cost of mobile devices and internet data plans presents a significant barrier, particularly for students from low-income backgrounds (Tong *et al* 2023). In regions with poor network infrastructure, inconsistent internet connectivity disrupts the delivery of learning materials and communication between instructors and students. Additionally, mobile devices, while beneficial for education, can also become sources of distraction. Social media notifications, gaming apps, and non-academic content often compete for students' attention, reducing focus and productivity (Crompton & Burke, 2018). Privacy and data security concerns also pose challenges, as sensitive information shared on mobile learning platforms may be vulnerable to breaches and unauthorized access. Health-related concerns, such as eye strain and musculoskeletal issues caused by prolonged use of mobile devices, further highlight the potential drawbacks of mobile learning (Krokhina, *et al*, 2024). Addressing these challenges requires a multi-faceted approach that includes infrastructure development, financial support for disadvantaged students, and the establishment of clear usage guidelines to minimize distractions and misuse of mobile devices.

To effectively integrate mobile learning into business education, strategic measures must be adopted by educators, policymakers, and stakeholders. First, there is a need for adequate investment in digital infrastructure, including reliable internet access, affordable mobile devices, and stable power supply systems, particularly in underserved regions (Huang *et al*, 2020). Policymakers must prioritize bridging the digital divide by implementing initiatives that subsidize mobile devices and data costs for economically disadvantaged students. Educators also play a crucial role in the successful implementation of mobile learning by designing mobile-friendly curricula and adopting pedagogical approaches that harness the full potential of mobile technology (Badawood & AlBadri, 2021). Training programs and workshops need to be organized to equip instructors with the skills needed to effectively utilize mobile learning tools in their teaching. Moreover, institutions need to establish guidelines for mobile device usage in educational contexts, striking a balance between academic engagement and minimizing distractions (Naveed *et al* 2023; Guptal *et al* 2021; Kumar & Chand, 2018). Collaboration between educational institutions and technology providers can further drive innovation in mobile learning, resulting in the development of user-friendly applications tailored specifically for business education. Additionally, continuous evaluation and feedback mechanisms need to be put in place to assess the effectiveness of mobile learning strategies and address any emerging challenges.

It is worrisome that Business Education programmes in colleges of education in Anambra seem not to integrate mobile learning in its programmes despite the potential of mobile learning to significantly enhance the delivery of business education by providing accessibility, personalization, interactivity, and cost-effective solutions. It is the crux of this study therefore to examine the application of mobile learning as a delivery technique in business education, identifying the benefits, challenges, and strategies for effective implementation.

The increasing demand for flexible, accessible, and technology-driven education in the 21st century has necessitated innovative approaches to teaching and learning. Mobile learning, leveraging the ubiquity of mobile devices and internet connectivity, has emerged as a transformative tool in enhancing educational delivery across various disciplines, including business education. Business education plays a pivotal role in equipping learners with entrepreneurial, managerial, and technological skills essential for economic growth and sustainable development. However, traditional instructional methods often fall short in meeting the dynamic needs of today's learners, who require engaging, interactive, and on-demand learning experiences. Mobile learning fosters accessibility, enabling students to access learning resources anytime and anywhere, thus breaking the barriers posed by traditional classroom settings. This flexibility allows learners to balance their academic pursuits with personal and professional responsibilities.

The researchers' observation of the college of education system in Anambra state seem to suggest that mobile learning is not applied in business education programmes in colleges of education in Anambra state. For instance, smart phones, tablets, laptops, and other wireless technologies to facilitate flexible and personalized learning experiences seem not to be maximally used. This results in lack of collaboration and communication through discussion forums, group chats, and video conferencing tools, which foster teamwork and the exchange of ideas among students and instructors. Furthermore, the lack of application of mobile learning in business education programmes limits the development of critical thinking and problem-solving skills, since students do not engage with real-world case studies and simulations via mobile platforms.

This study, therefore, seeks to examine the application of mobile learning as a delivery technique in business education, identifying the benefits, challenges, and strategies for effective implementation. The findings of this study aim to provide

valuable insights for educators, policymakers, and stakeholders in optimizing mobile learning to enhance the quality and accessibility of business education.

Research Objectives

The main objective of this study is to examine the application of mobile learning as a delivery technique in business education in colleges of education in Anambra state. Specifically, the study sought to:

1. To examine the benefits of mobile learning as a delivery technique in business education in colleges of education in Anambra state
2. To identify the challenges of mobile learning as a delivery technique in business education in colleges of education in Anambra state
3. To assess strategies for enhancing mobile learning as a delivery technique in business education in colleges of education in Anambra state

Research Questions

The following research questions guided the study:

1. What are the benefits of mobile learning as a delivery technique in business education in colleges of education in Anambra state?
2. What are the challenges of mobile learning as a delivery technique in business education in colleges of education in Anambra state?
3. What are the strategies for enhancing mobile learning as a delivery technique in business education in colleges of education Anambra state?

Research Methods

A descriptive survey design was adopted for the study. This was done by seeking the opinions of Business Educators on the problem of the study. The study was carried out in the two Colleges of Education in Anambra state- Nwafor Orizu College of Education, Nsugbe (NOCEN) and Federal College of Education (Tech), Umunze (FCETU). The population is made up of 83 Business Educators, consisting of 66 Business Educators in FCETU and 17 Business Educators in NOCEN as gotten

from the office of the HOD of the respective departments and schools. The whole population was used because the size was manageable, hence, no sampling and sampling technique.

The instrument for data collection was a questionnaire constructed by the researchers based on the research questions. The questionnaire was made up of 33 items and was divided into three parts 1, 2 and 3. Part 1 with 13 items to elicit information on benefits of mobile learning as a delivery technique in business education; part 2 has 12 items which covered challenges of mobile learning as a delivery technique in business education and part 3 has 8 items and covered strategies for enhancing mobile learning as a delivery technique in business education. The instrument was validated by three experts from the Faculty of Education, Nnamdi Azikiwe University, Awka. The instrument was pilot tested to ensure its reliability and the data collected was analyzed using cronbach alpha. This gave a coefficient reliability of 0.73. The questionnaire was administered by the researchers using direct administration method. Out of the 83 copies of the questionnaire administered only 70 copies were used for analysis representing about 84.34% which was considered adequate for the study. The other 13 copies were either not duly filled or not retrieved.

The data obtained were analyzed using mean and standard deviation based on the 4-point scale ranging from strongly agree of 4 points to strongly disagree of 1 point. Any item with a mean response of 2.50 and above was considered ‘agreed’ while anyone with a mean response below 2.50 was considered ‘disagreed’.

Results

The results from research questions are presented in the tables below

Research Question 1: What are the benefits of mobile learning as a delivery technique in business education in colleges of education in Anambra state?

Table 1: Mean Ratings of Respondents on the benefits of mobile learning as a delivery technique in business education in colleges of education in Anambra State.

S/N	ITEMS	MEAN	SD	REMARK
1	Ability to learn anytime.	3.17	0.75	Agreed
2	Access to learning from anywhere.	3.33	0.82	Agreed
3	Learning at one's own pace.	3.33	0.52	Agreed
4	Improved higher-order thinking skills	3.33	0.82	Agreed
5	Personalized learning environment.	3.00	0.63	Agreed
6	Effective tracking of students' growth.	3.67	0.52	Agreed
7	High levels of engagement and novelty	3.3	0.84	Agreed
8	Encourages interaction among teachers and students.	3.4	0.55	Agreed
9	Decrease in training costs for teachers.	3.5	0.59	Agreed
10	Availability of multimedia content delivery and creation options.	3.1	0.44	Agreed
11	Transformation of pedagogy to include active learning strategies.	2.9	0.42	Agreed
12	Opportunity for continuous and situated learning support.	3.0	0.43	Agreed
13	Potential for a more rewarding learning experience.	3.5	0.59	Agreed
	Cluster mean	3.2	0.45	Agreed

In table 1, all the 13 items have mean ratings greater than or equal to 2.50, showing that they are all benefits of mobile learning as a delivery technique in business education in colleges of education in Anambra State

Research Question 2: What are the challenges of mobile learning as a delivery technique in business education in colleges of education in Anambra state?

Table 2: Mean Ratings of Respondents on challenges of mobile learning as a delivery technique in business education in colleges of education in Anambra State.

S/N	ITEMS	MEAN	SD	REMARK
1	Small screen size of mobile devices.	3.6	0.55	Agreed
2	Difficulty typing on smaller interfaces (e.g., smartphones, tablets).	3.2	0.45	Agreed
3	Rapid obsolescence of mobile devices.	3.8	0.45	Agreed
4	Differentiated access to mobile devices due to economic disparities.	3.4	0.55	Agreed
5	Mobile devices can be expensive for some students.	3.2	0.45	Agreed
6	Limited availability of broadband in schools and homes.	3.0	0.63	Agreed

7	Resistance to adopting mobile technologies due to prevailing attitudes and prejudices.	3.2	0.71	Agreed
8	Need for cultural shift from traditional educational methods.	3.4	0.86	Agreed
9	Potential distraction when using mobile devices.	3.1	0.68	Agreed
10	Health concerns related to increased screen time.	3.0	0.66	Agreed
11	Privacy concerns about students or devices and over-sharing personal information.	3.5	0.89	Agreed
12	Limited suitability of mobile devices for teaching certain subject areas (e.g., typing, shorthand, accounts).	3.0	0.66	Agreed
	Cluster Mean	**3.3**	**0.84**	**Agreed**

Table 2 above shows that all the 12 items are above 2.50 which is the cut-off point. This means that they are all challenges of mobile learning as a delivery technique in business education in colleges of education in Anambra state.

Research Question 3: What are the strategies for enhancing mobile learning as a delivery technique in business education in colleges of education in Anambra state?

Table 3: Mean Ratings of Respondents on strategies for enhancing mobile learning as a delivery technique in business education in colleges of education Anambra state.

S/N	ITEMS	MEAN	SD	REMARK
1	Providing professional development for teachers to obtain requisite skills in using mobile devices and technology.	3.4	0.55	Agreed
2	Changing instructional delivery to incorporate mobile devices and apps effectively.	3.2	0.84	Agreed
3	Using data from mobile devices to personalize learning and drive smarter decisions.	3.0	0.63	Agreed
4	Implementing flexible policies in schools to support mobile learning.	3.2	0.71	Agreed
5	Ensuring availability of good mobile apps that scaffold lessons and present information in a fresh way.	3.3	0.84	Agreed
6	Engaging in purposeful planning for mobile device usage, considering learning goals, learners' prior knowledge, and instructional materials.	3.4	0.55	Agreed
7	Understanding the power of internet access and addressing equity issues related to connectivity and device availability.	3.2	0.45	Agreed
8	Building personal learner efficacy and capacity for self-directed learning through mobile learning initiatives.	3.3	0.50	Agreed
	Cluster mean	**3.0**	**0.63**	**Agreed**

From table 3, it is seen that all the 7 items have means above 2.50. It is therefore evidenced that they are strategies for enhancing mobile learning as a delivery technique in business education in colleges of education Anambra state.

Discussion of Findings

The findings from Research Question 1 revealed several significant benefits of mobile learning as a delivery technique in business education in colleges of education in Anambra State. Key benefits include the flexibility and accessibility of mobile learning, allowing students to access course materials anytime and anywhere, thereby overcoming traditional classroom barriers. Respondents also agreed that mobile learning supports personalized learning, enabling students to learn at their own pace and revisit complex concepts as needed. Additionally, mobile learning was found to enhance engagement and interactivity through multimedia tools and foster collaboration among students and teachers. The results also highlighted the cost-effectiveness of mobile learning, reducing reliance on expensive printed materials and physical resources. These findings align with earlier studies by El-Sofany& El-Haggar (2020) and Zhang (2022), which emphasize the transformative potential of mobile learning in enhancing student engagement, flexibility, and cost efficiency. The evidence underscores the relevance of mobile learning in addressing contemporary educational challenges and equipping business education students with skills for a competitive economy.

The findings from Research Question 2 identified several challenges hindering the effective adoption of mobile learning in business education in Anambra State. Key issues include the small screen size and limited functionality of mobile devices, difficulty typing on smaller interfaces, and rapid obsolescence of mobile technologies. Economic barriers, such as the high cost of mobile devices and data plans, were also significant concerns, as well as disparities in access due to socioeconomic differences. Furthermore, limited broadband availability, privacy

concerns, and health-related issues, such as prolonged screen exposure, were noted as obstacles. The potential for distractions from non-academic mobile applications was another notable concern. These findings mirror those of Calderon-Garrido *et al*. (2022) and Crompton & Burke (2018), who similarly highlighted device limitations, economic challenges, and distractions as major barriers to effective mobile learning. Addressing these challenges requires targeted interventions, including infrastructure upgrades, financial subsidies, and clear mobile device usage policies.

Research Question 3 focused on strategies for enhancing mobile learning in business education, and the findings revealed several actionable measures. Respondents emphasized the importance of professional development for educators to equip them with the necessary skills for effective mobile technology integration. There was also a strong call for flexible instructional policies and purposeful planning to align mobile learning with academic goals and students' needs. Ensuring access to quality mobile applications and addressing connectivity and equity issues were also highlighted as crucial strategies. The study further revealed the need for fostering self-directed learning among students to maximize the potential of mobile technologies. These findings align with recommendations from Huang *et al*. (2020) and Badawood and AlBadri (2021), who advocate for teacher training, strategic planning, and institutional support for mobile learning initiatives. The results suggest that a collaborative effort involving educators, policymakers, and technology providers is essential for overcoming barriers and optimizing mobile learning outcomes.

Conclusion

The study examined the application of mobile learning as a delivery technique in business education in colleges of education in Anambra state. Based on the research objectives, data were collected, analyzed and interpreted. The findings revealed that, while mobile learning offers significant benefits for business

education, challenges such as device limitations, economic barriers, and distractions persist. However, with well-structured strategies, including teacher training, infrastructure development, and flexible instructional policies, mobile learning can be effectively integrated to enhance business education outcomes in colleges of education in Anambra State.

Recommendations

Based on the findings, the following are recommended:

1. Mobile has lots of benefits, it is recommended that business educators integrate mobile learning into business education programmes to maximize its benefits.
2. Institutions should provide mobile learning devices for students and lecturers, this will alleviate some of the challenges bedeviling mobile learning adoption in business education programme.
3. School management should ensure that the strategies evidenced from the study are implemented. This will help to boost the effectiveness of mobile learning.

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