EFFECT OF BLENDED LEARNING STRATEGY ON MOTIVATION AND ACADEMIC ACHIEVEMENT AMONG STUDENTS OF COLLEGES OF EDUCATION IN BAUCHI STATE, NIGERIA

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Abstract

This study investigated the effects of blended learning on motivation and academic achievement in special education among students in colleges of education, Bauchi state Nigeria, two research objectives were stated, two research questions were answered and two null hypotheses formulated were tested. A quasi-experimental research design was adopted for the study and a simple random sampling technique was used to select a sample size of The sample for this study consisted of 150 students (105) males and (45) females drawn from the three (3) Three Colleges of Education of State, Nigeria from a population of five hundred and seventy seven (577) both male and female students. Male Students are four hundred and two (402) female students were one hundred and seventy five (175) NCE II Students. Two instruments were used for data collection from the sampled population of the study Special Education Achievement Test (SEAT) and Academic Motivation Scale (AMS) for measuring motivation were adopted, and administered on the sample. The reliability was established after pilot study 703 and .762 respectively. Null hypotheses were tested at $P \leq 0.05$ levels of significance using analysis of covariance (ANCOVA). Results revealed no significant effect of gender on motivation of colleges of education students in Bauchi State, Nigeria. There is no statistically significant interaction effect of blended learning, lecture method (Groups) and gender on motivation among colleges of education students in Bauchi State, Nigeria. There is no statistically significant main effect of the gender on academic achievement among colleges of education students in Bauchi State, Nigeria Finally, some recommendations were made, which include, Educational psychologist and counsellors should organize workshops and seminar programs for lecturers, in order to advocate the effectiveness of blended learning and Mind mapping metacognitive Strategies in teaching and learning.

Keywords: Academic Achievement, Blended Learning Strategy, Motivation, Special Education

Introduction

Education remains the veritable instrument of positive change for sustainable human development. Education is a sacred ingredient of development; a potent means of an enduring life and is the bedrock of economic development of any nation (Olutola, Galadanchi & Olatoye, 2023). The landscape of education is rapidly transforming, driven by technological innovation, increased access to digital resources, and the need to create inclusive and personalized learning experiences. Educational psychology emphasizes the necessity of aligning teaching methods with students' interests, skill sets, and psychological needs (Banditvilai, 2016). In recent years, the integration of educational technology into classroom instruction

has emerged as a vital tool to promote digital literacy, student autonomy, critical thinking, and metacognitive skills. Among these innovations, blended learning - a hybrid of traditional face-to-face instruction and digital learning—has gained prominence as a powerful instructional model that can improve student engagement, motivation, and academic performance (Ceylan & Kesici, 2017; Nortvig et al., 2018).

Blended learning environments combine the best of both worlds: they maintain the human interaction essential in traditional classrooms while leveraging the flexibility and accessibility of digital tools. This approach fosters authentic learning experiences by allowing students to participate in synchronous and asynchronous learning activities, offering them opportunities to take ownership of their educational journey (Boone, 2015). Blended learning models are especially relevant in special education contexts, where students often require differentiated instruction, additional scaffolding, and adaptive strategies to thrive academically (Yusoff, 2017).

Despite the growing global adoption of blended learning, its application in Nigerian Colleges of Education remains limited. Traditional lecture-based, teacher-centered methods continue to dominate instructional practices, particularly in special education programs. These methods have been widely criticized for their inability to promote deep learning, active participation, and critical thinking (Ifeakor, 2005; Dike & Chinda, 2007). Consequently, many students in special education programs in Nigeria, including those in Bauchi State, struggle with low motivation, poor academic achievement, and disengagement from the learning process. Factors such as lack of technological infrastructure, inadequate training for teachers, and resistance to pedagogical change have hindered the effective implementation of blended learning in Nigerian classrooms.

Moreover, students with special educational needs face unique challenges that require instructional strategies tailored to their specific cognitive, emotional, and social profiles. Research suggests that motivational factors—both intrinsic and extrinsic—play a critical role in influencing students' engagement and success in academic tasks (Ryan & Deci, 2000). Blended learning can provide a supportive and flexible environment that fosters motivation by allowing learners to progress at their own pace, access diverse learning resources, and receive timely feedback. Additionally, it can mitigate some of the barriers that prevent students from succeeding in conventional classroom settings, such as rigid schedules, limited interaction, and standardized instruction.

The situation in Bauchi State reflects many of these national challenges. Students in Colleges of Education often experience low academic performance, especially in special education courses that require both theoretical understanding and practical application. Many of these students lack self-regulatory skills, exhibit low self-esteem, and suffer from limited parental and institutional support. This underscores the need for innovative teaching approaches that not only engage students cognitively but also support their emotional and motivational development. Blended learning offers a promising solution by enabling the delivery of content in multiple formats, encouraging collaboration, and facilitating personalized learning paths.

Furthermore, the theoretical underpinnings of blended learning draw on several educational frameworks, including the Complex Adaptive Blended Learning System Theory (Wang et al., 2015), the Self-Determination Theory of Motivation (Deci & Ryan, 2000), and David Ausubel’s Learning Theory of Mind Mapping Metacognitive Strategies (1968). These frameworks emphasize the importance of learner autonomy, intrinsic motivation, and meaningful learning experiences. By integrating these theoretical

perspectives, blended learning can create a rich and dynamic educational environment conducive to the development of higher-order thinking skills and academic success.

Therefore, the present study seeks to investigate the effectiveness of blended learning strategies in enhancing motivation and academic achievement among special education students in Colleges of Education in Bauchi State, Nigeria. By focusing on this specific population and context, the research aims to fill critical conceptual, methodological, and practical gaps in the literature and provide evidence-based recommendations for policy and practice.

Objectives of the Study

This study focuses on the following objectives:

1. To determine the mean difference in motivation scores of students taught special education using blended learning and those taught using the lecture method in Colleges of Education in Bauchi State.
2. To determine the mean difference in academic achievement scores of students taught special education using blended learning and those taught using the lecture method.

Research Questions

1. What is the mean difference in motivation scores of students taught special education using blended learning and those taught using lecture method?
2. What is the mean difference in academic achievement scores of students taught special education using blended learning and those taught using lecture method?

Hypotheses

The following hypotheses were formulated for the study.

1. H_{01}: There is no significant mean effect of blended learning and lecture method on motivation among Colleges of Education students in Bauchi State.
2. H_{02}: There is no significant mean effect of blended learning and lecture method on academic achievement in special education among Colleges of Education students in Bauchi State

Literature Review

Concept of Blended Learning

Blended learning is an instructional model that combines traditional face-to-face classroom teaching with online learning components. This strategy offers a balanced approach that supports student engagement, autonomy, and knowledge retention (Ceylan & Kesici, 2017). It bridges the gap between physical and virtual environments, providing students with flexible access to content while maintaining teacher-student interaction. Models such as rotation, flipped classroom, and enriched virtual learning have been proven effective in various educational contexts (Kaur, 2013; Chaeruman et al., 2018)

Concept of Motivation

Motivation is a psychological construct that drives individuals to pursue goals. In the academic context, it determines the level of effort, persistence, and interest a student exhibits in learning tasks (Pintrich & Schunk, 2002). According to Deci and Ryan's (2000) Self-Determination Theory, motivation can be intrinsic (arising from internal satisfaction) or extrinsic (stimulated by external rewards). Motivation plays a pivotal role in students' learning outcomes, especially in environments that encourage self-directed learning.

Blended Learning and Motivation

Research indicates that blended learning significantly impacts student motivation by offering autonomy, immediate feedback, and engaging multimedia content. By allowing students to take control of their learning process, it fosters a sense of ownership and personal relevance (Boelens et al., 2017). This is particularly important for special education students, who often require motivational reinforcement to sustain academic efforts.

Academic Achievement and Instructional Methods

Academic achievement refers to measurable learning outcomes, typically represented by grades or test scores. Traditional lecture methods, while informative, often limit students' engagement and fail to cater to diverse learning styles. Blended learning, in contrast, offers multiple pathways for content delivery, enabling better comprehension and application of knowledge. Studies by Ellis et al. (2016) and Moskal et al. (2013) have demonstrated that blended learning contributes to improved academic performance across various disciplines.

Methodology

A quasi-experimental pre-test and post-test control group design was adopted. The sample consisted of NCE II special education students from three Colleges of Education in Bauchi State. The experimental group received instruction through a blended learning model, integrating online resources, virtual collaboration tools, and structured in-person classes. The control group was taught using conventional lecture methods.

Data were collected using a Motivation Scale and Achievement Test tailored for the special education curriculum. Data analysis involved ANCOVA to determine statistical differences between groups.

Results

Answering Research Questions

Research Question One: What is the mean difference in motivation scores of students taught special education using blended learning and those taught using lecture method?

Table 1: Mean and Standard Deviation showing difference in motivation scores of students taught special education using blended learning and those taught using lecture method

Strategies	N	Mean	Std. Dev	Mean Difference
Blended Learning	223	58.25	15.65	6.10
Lecture Method	103	52.15	15.57	

The above shows that Students exposed to blended learning had a significantly higher mean motivation score (58.25) than those taught through the lecture method (52.15), with a mean difference of 6.10. This suggests that blended learning contributes positively to enhancing student motivation in special education.

Research Question Two: What is the mean difference in academic achievement scores of students taught special education using blended learning and those taught using lecture method?

Table 2: Mean and Standard Deviation showing difference difference in academic achievement scores of students taught special education using blended learning and those taught using lecture method.

Strategies	N	Mean	Std. Dev	Mean Difference
Blended Learning	223	51.25	15.86	6.59
Lecture Method	103	44.66	16.22	

The above table indicate that Students taught using blended learning had higher academic achievement scores (51.25) than those taught using the lecture method (44.66), resulting in a mean difference of 6.59. This reflects the effectiveness of blended learning in improving academic outcomes.

Testing of Hypotheses

Hypothesis One: There is no significant mean effect of blended learning and lecture method on motivation among Colleges of Education students in Bauchi State.

Table 3: Analysis of Covariance (ANCOVA) showing the effect of blended learning and lecture method on motivation among Colleges of Education students in Bauchi State

Source	Sum of Squares	df	Mean Square	F-value	Sig.
Groups	2924.976	2	1462.488	6.149	.002
Error	136293.187	573	237.859		

The ANCOVA test showed a significant effect ($F_{(2, 573)} = 6.149$, $p = .002$) of the teaching strategy on motivation scores. Thus, Hypothesis H01 is rejected. Blended learning significantly enhanced students' motivation compared to the lecture method.

Hypothesis Two: There is no significant mean effect of blended learning and lecture method on academic achievement in special education among Colleges of Education students in Bauchi State.

Table 4: Analysis of Covariance (ANCOVA) showing the effect of blended learning and lecture method on academic achievement in special education among Colleges of Education students in Bauchi State.

Source	Sum of Squares	df	Mean Square	F	Sig.
Groups	3013.935	2	1506.967	6.151	.002
Error	140388.500	573	245.006		

The table above shows that ANCOVA test revealed a significant difference in academic achievement based on instructional method ($F_{(2, 573)} = 6.151$, $p = .002$). Thus, Hypothesis H02 is rejected, confirming the efficacy of blended learning in enhancing academic performance.

Conclusion

Blended learning presents a promising alternative to traditional instruction, especially in special education where learner diversity requires flexible and adaptive teaching methods. This study confirms the effectiveness of blended learning in improving students' motivation and academic achievement in Colleges of Education in Bauchi State.

Recommendations

1. Colleges of Education should formally integrate blended learning into their curriculum delivery, especially for courses in special education.
2. Regular training should be provided for lecturers on how to effectively implement blended learning using available digital platforms.
3. Government and stakeholders should invest in ICT infrastructure to support digital learning environments.
4. Create support systems (e.g., academic advisors, e-tutors) to guide students in navigating blended platforms effectively.
5. National educational policy should recognize and promote blended learning as a strategic approach for inclusive and quality education.

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