

RESTORING STUDENTS' ACADEMIC ACHIEVEMENT IN POST COVID-19 CLASSROOM THROUGH BLENDED LEARNING ENVIRONMENT IN KADUNA STATE, NIGERIA

BY

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Abstract

This study is titled "Restoring Students' Academic Achievement in Post Covid-19 Classroom through Blended Learning Environment in Kaduna State, Nigeria". The study is aimed at determining impact of blended learning environment in restoring students' academic achievement in post covid-19 classroom through blended learning environment in secondary schools in Kaduna State, Nigeria. The research question and null hypothesis were postulated based on the objective raised. The study was a non-equivalent pre and post-test comparison group design. The population consists of junior secondary schools students in Zaria Education Zone numbering 26,322 as at 2016/2017 academic session. However, 120 were purposively used. The Social Studies Achievement Test (SOSAT) was used as the data collection instrument. The instrument was duly validated by experts. The Guttman split half method was used in determining reliability coefficient and 0.89 was realised. The arithmetic means, standard deviation and independent samples t-test were used as data analysis tools. The researchers found from the study that students taught in a blended learning environment (BLE) outperformed students taught in a traditional learning environment (TLE). Based on the findings, it was recommended among others that blended learning environment to be incorporated as instructional strategy of choice for Social Studies teaching in post covid-19 classroom.

Keywords: *Academic achievement, Blended learning, Covid-19, and Social Studies*

Introduction

The information and communication technology revolution has spread widely like a bush fire to all nooks and crannies of human endeavours including education industry. Nowadays, ICTs are taking the centre stage in almost every sector of life. They seem to have the solution to most of the problems plaguing educational systems especially in third world countries. World Bank (2006:2) remarks that communication technologies have opened up entirely new horizons in information access and retrieval and are revolutionizing the ways in which people interact, conduct businesses and compete in international markets. Worthy of note is the fact that many Nigerian students use ICT gadgets in one way or the other. Psychologically, these technologies especially Internet and computer have changed the way people think and behave in society. As a matter of fact, ICTs have potentials to improve teaching and learning as well as harbours a threat to education if poorly used (Lumadi, 2013).

One key point to be kept in mind that the crux of these issues like online teaching and evaluation have precipitated recently due to the devastating effect of global pandemic Covid-19. Maintaining of social distance of 2 meters is recommended as a key and consensus parameter in order to prevent its spread. And this is also mandatory even in a physical classroom for the resumption of educational operation. But most of the educational institutions are not well- equipped all on a sudden in implementing these methods like online classes and evaluation to maintain the continuity of the operation. And primary inhibition, keeping aside issues like quality of teaching, students' engagement etc., appearing to adopt with online activities is the accessibility and affordability of high speed internet and data to the mass of the students.

In a recently conducted survey by University of Hyderabad, India, with a participation of 2,500 students have shown that only 37% of the students have been successfully able to participate in online classes. This has been alike experience of teachers in Indian top notched technology teaching and research Institutions like IITs and Central Universities. If the circumstances in India, being one of the emerging economy of the world, appears like this; someone can easily gaze the implication of online classes in the lesser developed countries like Nigeria. The lethally contagious Covid-19 pandemic has made the class room gathering impossible and has forced to adopt the online delivery of education as the sole and safest method of delivery in order to keep teaching-learning process on-the-go. The global teaching community has whole heartedly accepted the challenges of online delivery of teaching and is trying their best to contribute in the making of competent, knowledgeable, skillful and above all socially empathetic future citizens.

In a related development, Bonk and Graham (2005), stated that the widespread adoption and availability of digital learning technologies has led to increased levels of integration of computer-mediated instructional elements into the traditional face-to-face learning experience. One important approach to teaching and learning that is facilitated by the Information and Communication Technology (ICT) is referred to as blended learning. Blended learning, also referred to as hybrid learning combines the best features of traditional face-to-face teaching and learning with the advantages of online learning to deliver personalized, differentiated instruction across a group of learners. Students in formal blended learning educational programmes learn online part of the time, yet have the benefit of face-to-face instruction and supervision to maximize their learning and to best fit their own needs. According to Christensen, Horn, and Staker (2013), blended learning is defined as: "...a formal education programme in which a student learns at least in part through online learning with some element of student control over time, place, path, and/or pace and at least in part at a supervised brick-and-mortar location away from home. Bonk and Graham (2005) described blended learning systems as a combination of face-to-face instruction and computer-mediated instruction.

Online teaching and learning is evolving as fast as the emerging technology that provides an engine for personalization. It is important to note the underlying benefits of converging online learning with face-to-face environments. Experts report the following benefits of blended learning: There are three foundational changes influencing online education: a philosophical shift from objectivism towards constructivism; a theoretical shift from behaviorism towards socio-cognitive views of education; and a pedagogical shift from direct instruction to collaborative

learning (Shea, 2006). Blended learning is viewed as a pedagogical approach that combines the effectiveness and socialization opportunities of the classroom with the technologically enhanced active learning possibilities of the online environment, rather than a ratio of delivery modalities. Most importantly, blended learning represents a cultural shift in instruction and learning. Just as online learning represents a fundamental shift in the delivery and instructional model of distance learning, blended learning offers the possibility to dramatically change how teachers and administrators optimize and maximize student productivity in a face-to-face (F2F) setting.

Despite the reported values of computer-mediated teaching and learning in enhancing effective transaction and communication between teacher and the learners which later translate into enhanced academic performance, teachers in this part of the world are still accustomed to traditional methods of teaching especially the lecture and didactic techniques despite the availability of learner-centered approaches which are facilitated by Information and Communication Technology. Many of today's teachers are caught in the midst of a change for which they may not have been professionally prepared. This has contributed to negative academic performances and attitude towards Social Studies as a subject by the learners. One of the major causes of students' poor academic performance in Social Studies in Nigeria as reported by various studies conducted by Social Studies experts has to do with the instructional techniques used by Social Studies teachers, which are inadequate to bring about desired level of academic achievements and classroom participation in both male and female students (Salihu, 2015).

These traditional and teacher-centered techniques of teaching Social Studies are characterized and largely criticized for stifling interest and creativity in students thereby limiting academic achievements among learners. Many Nigerian Social Studies teachers mostly used the Traditional Lecture Method which does not allow students inputs in the teaching and learning encounter and hardly encourages students to engage in practical and creative learning activities during the teaching and learning process (Salihu, 2015). The current global thinking of teaching and learning in education and Social Studies education in particular is that learning should be child-centred or child friendly. Hence, the need for practicality of teaching and learning enterprise through cooperative and collaborative activities in the application of blended teaching and creation of conducive environment for effective learning in a post COVID-19 classroom.

Objective of the Study

- i. To find out the academic achievement of students taught in a blended learning Environment (BLE) and students' taught in a traditional learning environment (TLE)

Research Question

- i. What is the difference in the mean academic achievement of students taught in a blended learning environment (BLE) and students taught in a traditional learning environment (TLE)?

Null Hypothesis

H₀₁: There is no significant difference in the mean academic achievement of students taught in a blended learning environment (BLE) and students taught in a traditional Learning environment (TLE)

Methodology

The study was a non-equivalent pre and post-test comparison group design. The population consists of junior secondary schools students in Zaria Education Zone numbering 26,322 as at 2016/2017 academic session. However, 120 were purposively used. The Social Studies Achievement Test (SOSAT) was used as the data collection instrument. The instrument was duly validated by experts. The Guttman split half method was used in determining reliability coefficient and 0.89 was realised. The arithmetic means, standard deviation and independent samples t-test were used as data analysis tools.

The participants were pre-tested prior to any form of treatment. The participants in a blended learning environment (BLE) i.e. the experimental group were taught Social Studies using expository method supplemented by online audio-visual resources depicting various aspects and features of the physical environment of man. The desk top computers in the laboratory were connected to the internet. The connectivity allowed the pupils to access the websites where various audio-visual resources are readily available which are designed in the form of tutorials. The researchers assisted the students to gain access to the websites. Barewa College, Zaria, was tagged “Blended Learning Environment” (BLE). For the experimental group (BLE), lesson started with a set of induction of a situation that needs to be completed by the students at the end of learning. Then, students are to explore the online module supplied to seek answers to questions raised. Teachers act as facilitators to monitor the students and were willing to answer the questions posed. Upon completion of exploration through online modules, discussions were conducted in order to make sure learning objectives were achieved. Then, students answered questions to test the topics learned. For the control group (TLE), the same topics were taught using conventional method (Story Telling). The schools controlled were Government Commercial College, Zaria.

Results

Answering Research Question

Research Question 1: What is the difference in the mean academic achievement of students taught in a blended learning environment (BLE) and students taught in a traditional learning environment (TLE)?

Table 1: Descriptive Statistics on the Academic Achievement of Students taught in a BLE & TLE

Variables	Groups	N	Mean	Mean Diff	Std.Dev	SDev Diff
Students' Academic Achievement	BLE	60	66.23	19.63	7.07	-2.41
	TLE	60	46.60		9.48	

The result in the Table 1 reveals the mean academic achievement of taught in a BLE and students taught in TLE. The mean academic achievement are 66.23 and 46.60 for BLE and TLE groups respectively. The mean difference as seen in Table 1 is 19.63.

Test of Null Hypothesis

H₀₁: There is no significant difference in the mean academic achievement of students taught in a blended learning environment (BLE) and students taught in a traditional Learning environment (TLE);

Table 2: Independent t-test statistics on the Academic Performance of Middle-Basic Pupils taught in a BTLE & Pupils taught in a TTLE

Variable	Groups	N	Mean	Std.Dev	Df	t-cal	t-crit	Sig (p)	Decision
Students' Academic Achievement	BLE	60	66.23	7.08	118	12.86	1.96	0.001	H ₀₁
	TLE	60	46.60	9.48					Rejected

Calculated p < 0.05, calculated t > 1.96 at DF 118

Result from the independent t-test statistics in Table 2 shows that significant differences exists between the academic achievement of students taught in BLE and students taught in TLE. Reason being the fact that the calculated p value of 0.001 is less than the 0.05 level of significance while the calculated t-value of 12.86 is higher than the 1.96 critical t-value at Df 118. Therefore, the null hypothesis is hereby rejected.

Discussion of Findings

Based on the result from the study, it is revealed that students taught in a blended learning environment (BLE) significantly outperformed students taught in a traditional learning environment (TLE). Blended learning models feature elements of learners control over time, pace, path, and/or place, allowing for more learner-centered learning experiences. Corroborating the findings of this study, the United States Department of Education (2014) observes that learners with access to a combination of online and face-to-face instruction excel in relation to peers who have exposure to only one method of instruction. Similarly, Kurt and Somchai (2004) reported that students participated more in the classroom activities and gained content knowledge when a constructivist approach was used. In the study, e-learning strategy is classified as one of those constructivist approaches.

Similarly, Salihu, Abdullahi, Alfa and Muhammed (2015) in a study on the effects of interactive multimedia instruction on academic performance of Upper Basic level students in Kaduna State, Nigeria found that Upper Basic students who were taught Social Studies with Interactive Multimedia Instruction (IMI) significantly outperformed students who were taught using Conventional Lecture Method (CLM). Interactive multimedia instruction integrates face-to-face learning with online or computer-mediated instruction. There is significant correlation between the two studies despite the fact that they were conducted at different educational level. In the same vein, Salihu (2016) in a study to examine the impact of Virtual Field Trip on learning outcome of Upper Basic Level students in Zaria Education Zone, Kaduna State found that Upper Basic Level students performed significantly better when they were taught with virtual field trip as against lecture method.

In a related development, Boris (2016) in a study entitled “the effect of blended learning in social studies on students’ performance and retention among 7th graders” concur with the current

findings. Borış (2016) discovered significant difference in the posttest and retention tests scores in favour of the experimental group exposed to blended learning. From the results of repeated - measures analyses of variance of pretest and posttest scores and posttest and retention test scores, both groups affected student performance in pre and posttest comparisons. The effect size of blended learning was found large. Posttest and retention test results showed that blended learning is more effective in retention than face-to-face instruction. Moreover, in 2003, the American Society for Training and Development identified blended learning as among the top 10 trends to emerge in the knowledge delivery industry (Rooney, 2003). In K–12 education, a recent study by the North American Council for Online Learning predicted that the blended approach is likely to emerge as the predominant model of instruction and become far more common than either conventional, purely face-to-face classroom instruction or instruction done entirely online (Watson, 2008).

Conclusion

In line with the findings made, the researchers conclude that blended learning environment (BLE) is more efficacious than traditional learning environment in Social Studies lessons at junior secondary schools in the study area.

Recommendations

In the light of the findings, the following recommendations are put forward:

- i. For the education to serve its major purpose of human transformation of human capital towards the rapid development of the society, the education provided should be permanent, applicable, science and technologically-oriented. This can be achieved through training and retraining of teachers in blended teaching methodologies.
- ii. There is the need for creation of conducive atmosphere to make application of blended learning approach possible for effective teaching and learning of Social Studies at junior secondary schools;

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