IMPACT OF BLENDED LEARNING APPROACH ON ACADEMIC PERFORMANCE OF NCE SOCIAL STUDIES STUDENTS IN NIGERIA

BY

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Abstract
The study examined the Impact of Blended Learning Approach on Academic Performance of NCE Social Studies Students in Nigeria. The design of the study was a quasi-experimental design. The population of the study consisted of all NCE II Social Studies Students in Colleges of Education in North Central Nigeria numbering 7,662. The sample size for the study was 433. Random sampling technique was used in sample selection. Social Studies Achievement Test (SOSAT) was used as data collection instrument.The instrument was duly validated and has reliability coefficient index of 0.778. The arithmetic means and standard deviations were used to answer the questionsposed by the study, while two sample t-test was used to test the null hypotheses at α 0.05 alpha level of significance. The study found that students taught Social Studies using Blended Learning Approach performed academically better than those taught using Lecture Method in Colleges of Education in North Central Nigeria. Some recommendations were proffered which include the need for educational Stakeholders in Federal and State Colleges of Education to make provision for effective utilization of blended learning approach in Social Studies Teacher Education Programme. This will assist in incorporating technology in curriculum delivery process.
Keywords: Impact, Blended learning, Approach, Academic performance and Social Studies

Introduction
Education in Nigeria is now a pragmatic and dynamic one. This is one of the reasons changes continuously take place within its structure from time to time. The society which education is meant to serve is equally a dynamic one. Therefore, to be relevant to the needs and aspirations of the society, education must continue to keep pace with changes in the society. This dynamism is reflected in the contemporary Nigerian society where educational policies have been very unstable, keeping in line with the unstable political climate of the country. Education is meant to solve the problems of the society; and since new problems keep surfacing in the society from time to time, education too must respond accordingly to keep relevant. It is this issue of relevance in education that leads to the emergence and development of new disciplines and curriculum in the area of education from time to time (Alhassan, 2006; Graham, Woodfield & Harrison, 2013). The dynamism in education led to the introduction of Social Studies in the school curriculum as a discipline soon after World War II.

Classroom teachers for a very long time are used to integrating different types of learning activities and resources in classroom, laboratory, practicum, studio contexts among others with the aim of enhancing effective transaction and communication between teacher and learners. The advent of Information and Communication Technology (ICT) has evolved a new version of blended teaching and learning to mean the integration of classroom face-to-face teaching and learning with e-learning. Information technologies have brought about social, political, and economic changes throughout the world. Developments in information technologies have reshaped people's views towards themselves and their environments, as a result of which a parallel change and development at the same pace has become inevitable in the field of Social Studies education. This change and development in the field of Social Studies education is determined by numerous factors. One of the most important among these factors is teachers, which is undoubtedly followed by information technologies. A teacher has a crucial function in managing

information technologies and establishing a link between students and information technologies (Adeyemi, 2012). The primary drivers for such innovations in education are; the desire to enhance the learning experience, the desire to enhance quality and the desire to act as a motivator to improve retention and academic performance of students. As a consequence, lecturers are under constant pressure to find ways to stimulate students with the aim to improve their motivation for learning, retention and academic performance in their courses. Historically these innovations have been decided upon in a haphazard manner, often based on anecdotal evidence, prior practice, and even best guess (Alhassan, 2006).

Learning of Social Studies can only be achieved with the teaching strategies that appeal to various learning styles. Several studies have shown many advantages of different technology based instructional strategies for effective teaching and learning. Thus, many educational institutions are using blended learning as complimentary means in developing students' knowledge, enhancing motivation and retention thereby enhancing students' academic performance. Due to the short comings inherent in Information and Communication Technology and Traditional method of transmitting knowledge, blended learning which combines the use of both the traditional and Information and Communication Technology tends to offer better options. As this strategy combines classroom instruction with Information Communication Technology and computer assisted instruction. Here the students are exposed to teaching through the conventional method and complimenting it with electronic learning. The use of blended learning strategy in teaching Social Studies education has become a paramount priority to Social Studies teachers all over the world. Social Studies through web-based tools is not totally a new trend. Graham, Woodfield & Harrison (2013) observed that we have always used a 'blend' of teaching approaches in order to provide rich learning environment as much as possible for our learners. What is new is the expectation of our learners to use technology in and out of the classroom as part of the learning process. Concerning the individual differences and classroom instruction, Adeyemi (2012) also believe that teachers can help learners enhance their repertoire of learning strategies hence develop greater flexibility in their approach to learning. As a result of their exposure to various learning materials that include various instructional materials such as videos, blogs, online forums and other digital tools, students are offered opportunities to study facts, concepts and generalization relevant to Social Studies.

Bada & Olusegun (2015) observes that the exploration in science and technology has necessitated the emergence of E-learning as learning model. Hence the traditional method is not able to cope with this breakthrough. Despite the enormous advantage of E-learning, it has some limitations reflected in the lack of face-to-face interaction which necessitates the availability of a new model combining some attributes of both traditional learning and E-learning which can overcome the disadvantages of both kinds of learning. Thus, a more advanced strategy, blended learning has spouted. It brings together the virtual learning environments with traditional learning environments as it is based on face-to-face learning as a form of learning as well as introducing information technology and telecommunications as an asynchronous model (Granito & Chernobilsky, 2012). Besides, it mixes a learning environment based on online and a face-to-face traditional -environment in a strategy which utilizes all possible means for both of them in the educational process (Bada & Olusegun, 2015).

In the light of the foregoing, Fadeiye (2000) classified blended learning into six categories namely; Face to face driver, where the teacher drives the instruction and supplements it with digital tools. Rotation student's cycle through a schedule of independent online study and face-to –face classroom time. Flexible curriculum is delivered through a digital platform and teachers are available for face –to – face consultation and support. Labs-all curriculum is delivered via digital platform but in a regular physical location and students usually take traditional classes in this model as well. Self- Blend students usually compliment their traditional learning with online course work. Online Driver- all curriculum and teaching is delivered through a digital platform and face-to-face meetings are made available, here ample opportunities are available for the teachers to choose whichever model he/she wants to adopt in order to motivate, facilitate retention thus, enhancing academic performance. Many researchers have agreed that

blended learning is the best strategy that suits modern day educational practice because it is learners-centered. More so, that it builds on the deficiencies of both e-learning and traditional method, so it offers the teacher a robust and sophisticated strategy to easily do his work.

Objectives of the Study
The major objective of this study is to investigate into the impact of blended learning on academic performance of NCE Social Studies students in North-central zone, Nigeria. The study has the following specific objectives which are to:
1. Examine the difference in the mean academic performance scores of NCE Social Studies students taught using Blended Learning Approach and those taught using Lecture Method;
2. Find out the difference in the mean academic performance scores of federal and state owned NCE Social Studies students taught using Blended Learning Approach and those taught using Lecture Method.

Research Questions
In the light of the objectives stated, the following research questions are formulated to guide the study:
1. What is the difference in the mean academic performance scores of NCE Social Studies students taught using Blended Learning Approach and those taught using Lecture Method?
2. What is the difference in the mean academic performance scores of federal and state owned NCE Social Studies students taught using Blended Learning Approach and those taught using Lecture Method?

Research Hypotheses
The following null hypotheses are postulated for the study and shall be tested at 0.05 level of significance:
1. There is no significant difference in the mean academic performance scores of NCE Social Studies students taught using Blended Learning Approach and those taught using Lecture Method;
2. There is no significant difference in the mean academic performance scores of federal and state owned NCE Social Studies students taught using Blended Learning Approach and those taught using Lecture Method.

Methodology
The design of the study was a quasi-experimental design in which pre and post-testswere conducted for the comparison of two groups namely; the experimental and control.This design was widely believed to be the most commonly used for group comparison (Garrison, & Kanuka, 2004). In its simplest form, it requires a pretest and post-test for a treated and comparison group. In this regard, Glogowska, Young, Lockyer & Moule (2011) asserts that, it is a design in which the effects of a treated or intervention are estimated by comparing outcomes of a treatment group and a comparison group but without the benefit of random assignment. The pre-test and post-test of a quasi-experimental comparison group design were represented thus:

$$\text{Experimental Group} \quad (BTA): \quad NR \rightarrow EG \rightarrow O_1 \quad X_1 \rightarrow O_2 \rightarrow O_3$$
$$\text{Control Group} \quad (CLA): NR \quad CG \quad O_1 \rightarrow X_0 \rightarrow O_2 \rightarrow O_3$$

The NR represents non-randomization, O_1 represents pretests, X represents the treatment implemented, O_2 and O_3 represent posttests (Gerbic, 2011).

The population of the study consisted of all NCEII social studies students in 11 public Colleges of Education in North-Central zone, Nigeria. There are 7662 NCE II Social Studies students consisting of 4241 males and 3421 females in the study area based on the official data (2018) from the said institutions. The study used random sampling technique for selecting 4 out of the 11 Colleges of Education in the study area. Two colleges received experimental treatment while the other two received control treatment. The use of random sampling technique was to ensure that all the institutions selected offers Social Studies as a course. Auwal (2013) states that 30 participants of each group (experimental and control) are considered adequate for this kind of study. In this study intact classes were used. The decision to use

intact classes was to avoid disruption of academic activities during the period of the study which may not be welcomed by the institutions. Based on the above, the study usedintact classrooms from the following colleges: Federal College of Education, Kontagora and Plateau State College of Education, Gindiri were used as Experimental Group; and the selected students were taught using online method of blended learning approach while Federal College of Education Okene and Kwara State College of Education, Oro were used as Control Group and the students were taught using traditional lecture method of blended learning approach. The study utilized Social Studies Achievement Test (SOSAT). The SOSAT was used for testing students' achievement before receiving any kind of treatment by the researcher. Table of specification was used for content validity in setting the questions (SOSAT) so as to satisfy the most important criteria of the test and that of the content validity. In addition, the instruments were vetted by the supervisors, language experts and statisticians for improvement in the areas of structure, contents and face validity.

In order to determine the reliability of the instruments, pilot studies were carried out at Federal College of Education, Zaria using 30 NCE II students. The Pearson Product Moment Correlation formula was used to determine the reliability coefficient for SOSAT which was0.675. The data for the study were the scores of the teacher- made test (SOSAT) obtained from the pre-test and post-test administered to the control and experimental groups. The study used simple percentage and frequency counts in analyzing and presenting the bio-data variables of the study participants. The study's research questions were analysed using mean and standard deviation while two samples t-test (two-tailed) was used in testing the null hypotheses at $p \leq 0.05$ level of significance.

Results
Answering Research Questions
Question One: What is the difference in the mean academic performance scores of NCE Social Studies students taught using blended learning approach and those taught using lecture method?

Table 1: Descriptive Statistics on the Difference in the Mean Academic Performance Scores of NCE Social Studies Students taught using Blended Learning Approach and those taught using Lecture Method

Group	N	Pre-test Mean	SDev	Post-test Mean	SDev	Mean Diff
Experimental	224	42.95	13.89	67.37	10.08	24.42
Control	209	41.74	12.48	50.78	11.54	9.04
Mean Difference		1.21		16.59		15.33

Table 1 revealed the mean post-test academic performance score of 67.37 for students in the experimental group with standard deviation of 10.08, while the control group has a mean academic performance score of 50.78 standard deviation of 11.54. Students in the experimental group gained by mean academic performance difference of 24.42, while those in the control group gained by mean difference of 9.04. The difference in the post-test mean academic performance scores of the two groups stood at 16.59, and in favour of experimental group. By implication, the students taught social studies using blended learning approach outperformed their counterparts taught social studies using conventional lecture method.

Question Two: What is the difference in the mean academic performance scores of NCE Social Studies students taught using blended learning approach and those taught using lecture method in relation to institution's ownership type?

Table 2: Descriptive Statistics on the Difference in the Mean Academic Performance Scores of NCE Social Studies Students taught using Blended Learning Approach and those taught using Lecture Method in relation to Institution's Ownership Type

Group	Institution Type	Mean	Std. Deviation	N
Experimental	1 federal	21.29	6.804	115
	2 state	17.09	6.065	109
	Total	19.37	6.786	224
Control	1 federal	16.66	5.398	103
	2 state	15.32	5.695	106
	Total	16.06	5.562	209
Total	1 federal	18.31	6.326	218
	2 state	15.97	5.879	215
	Total	17.25	6.231	**433**

Table 2 presents the means and standard deviations of NCE II students from federal and state colleges that made up the experimental and control groups. The mean academic performance score of students from federal college in the experimental group was (M=21.29, SD=6.804) while that of the state college in the experimental group was (M=17.09, SD=6.065). Also, the mean academic performance score of federal students in the control group was (M=16.66, SD=5.398) while that of the state in the same control group was (M=15.32, SD=5.695). The overall mean academic performance score for the students from federal college was (M=18.31, SD=6.326) while the state college was (M=15.97, SD=5.879). The mean difference was 2.34 in favour of the federal college.

Hypotheses Testing
This section presents the results of the analysis conducted in order to test the null hypotheses stated at α=0.05 level of significance. The three null hypotheses were tested using inferential statistics of two samples t-test.
Hypothesis One: There is no significant difference in the mean motivation scores of NCE Social Studies students taught using Blended Learning Approach and those taught using Lecture Method;

Table 3: Comparison between the results of the Motivation Posttests for the Control and Experimental Groups

Group	N	Mean	SD	Df	t-value	Sig (2 tail)
Control	209	51.76	11.54	431	12.38	0.214
Experimental	224	68.17	8.08			

Results of two samples t-test on Table 3 shows that there is statistically significant difference between the mean motivation scores of NCE Social Studies students in control group and experimental group in social studies motivation scale posttest. It showed that significant differences existed in the mean motivation scores of NCE Social Studies students taught using blended learning approach and those taught using lecture method. This is due to the fact that the calculated p value of 0.214 (2-tailled) is found to be less than the α=0.05 alpha level of significance while the t-calculated value of 12.38 is greater than the t-critical value of 1.96, at Df 431. Their calculated posttests mean motivation scores were 68.17 and 51.76 for experimental and control groups respectively. Consequently, the null hypothesis which states that there is no significant difference in the mean motivation scores of NCE Social Studies students taught using blended learning approach and those taught using lecture method is hereby rejected.

Hypothesis Two: There is no significant difference in the mean academic performance scores of federal and state owned NCE Social Studies students taught using blended learning approach and those taught using lecture method;

Table 4: Comparison between the results of Academic Performance for the Control and Experimental Groups in relation to Institution Ownership Type

Institution Type	N	Mean	SD	Df	t-value	Sig (2 tail)
Federal	218	51.35	6.13	431	0.59	0.64
State	215	51.28	6.12			

Results of two samples t-test on Table 4 shows that there is no statistically significant difference between the mean academic performance scores of NCE students in control and experimental group in Social Studies in relation to institution's ownership type. It showed that there is no significant difference in the mean academic performance scores of federal and state owned NCE Social Studies students taught using blended learning approach and those taught using lecture method. This is due to the fact that the calculated p value of 0.64 (2-tailled) is found to be higher than the α=0.05 alpha level of significance while the t-calculated value of 0.59 is less than the t-critical value of 1.96, at Df 431. Their calculated posttests mean academic performance scores were 51.35 and 51.28 forfederal and state students respectively. Consequently, the null hypothesis which states that there is no significant difference in the mean academic performance scores of federal and state owned NCE Social Studies students taught using blended learning approach and those taught using lecture method is retained.

Discussions
Significant difference exists between the pre-test and post-test in the mean academic performance scores of NCE Social Studies students taught using blended learning approach and those taught using lecture method. There is no significant difference in the mean academic performance scores of federal and state owned NCE Social Studies students taught using blended learning approach and those taught using lecture method. In the literature, studies focused on improving the success of the blended learning and ensuring it to learn permanently (Fadeiye, 2000; Garrison, & Kanuka, 2004). As in quantitative data, blended learning according to student views offers advantages such as augmenting success, better understanding, motivating and making the lesson fun. These results support the research in the literature (Gerbic, 2011; Glogowska, Young, Lockyer & Moule, 2011).

Similarly, Granito & Chernobilsky (2012) 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). In the same vein, Fadeiye (2000) in a study 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, Auwal (2013) in a study discovered significant difference in the posttest and retention tests scores in favour of the experimental group exposed to blended learning.

Conclusion
The following basic conclusions could be deduced from the study; these are:
1. Students taught social studies using blended learning approach outperformed those taught using lecture method in colleges of education in north central Nigeria;
2. Institution's ownership type does not affect academic performance of NCE students in colleges of education in north central Nigeria.

Recommendations
The following recommendations are put forward for the study
1. Teachers should be motivated to use blended learning approach in teaching NCE Social Studies by allowing them attend courses and seminars where such modern teaching methods are discussed and put in practice for effective teaching
2. The use of blended learning approach should be encouraged among social studies teachers as it enhances students' academic performance

3. The Educational Stakeholders in federal and state colleges of education should make provision for effective utilization of blended learning approach in social studies Teacher Education Programme. This will assist in incorporating technology in curriculum delivery process

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