IMPACT OF BLENDED LEARNING APPROACH ON RETENTION ABILITY OF NCE SOCIAL STUDIES STUDENTS IN NIGERIA

BY
Adam Buba A’ishatu: Department of Arts and Social Science Education, Ahmadu Bello University, Zaria-Nigeria
&
Abubakar I.D. (Ph. D): Department of Arts and Social Science Education, Ahmadu Bello University, Zaria-Nigeria

Abstract
The study examined the Impact of Blended Learning Approach on Retention Ability 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. The instrument used was Social Studies Achievement Test (SOSAT).The instrument was duly validated and has the reliability coefficient index of 0.778. The arithmetic means and standard deviations were used to answer the questions posed by the study, while two sample t-test was used to test the null hypotheses at a 0.05 alpha level of significance. The study found that students taught social studies using Blended Learning Approach retained contents more 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: Retention, Blended learning, Social Studies and Impact

Introduction
In the age of globalization, information technology and the Internet is becoming a critical demand for any individual who intends to follow up the vast change in our modern world. However, teaching and learning social studies is not an easy job for both teachers and learners. The quality of modern teaching and learning processes has been increased by using computers and digital technologies. There has been an educational shift towards blended learning which enables the use of information and communications technology and the inclusion of the internet in teaching and learning. Blended learning enhances the learning processes by offering a different way of delivering education; flexible and easy to use (Adeyemi, 2012).

Auwal (2013) 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 (Graham, 2006). 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 (Alhassan, 2006).

In the light of the foregoing, Adeyemi (2012) 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-Blended students usually compliment their traditional learning with online course work (Auwal, 2013). 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.

The application of ICT to present learning contents to students in Nigerian Colleges of Education has been a challenging task to most teachers. Problems associated to the utilization of electronic instructional resources could stem up from different aspects ranging from teachers’ attitude to work, dispositions of school managements to use of instructional media, and a multitude of other factors. A reasonable percentage of the teachers or lecturers in Colleges of Education are not abreast to new trends and developments in the field of education (Alhassan, 2006; Graham, Woodfield & Harrison, 2013). As a result, most of them lack the required knowledge about the peculiarities of ICT and the conditions in which they provide best results in learning. This may be attributed to the scantiness of literatures on the subject, and shortfall in refresher courses / workshops for the teachers. Inadequacy of skills on design of graphic resources among teachers is also another area of concern. After the decision to present a learning content in visual form has been reached by a teacher, the problem of basic illustration techniques arise.

The deficiency of knowledge about the principles and elements of ICT, a nervous hand, and a dripping pen often force many teachers into the avenue of escape. Except for the few who have the advantage of training in ICT which is one of most challenging problems in teaching (Bada & Olusegun, 2015). The problem of this study hinges on the determination to investigate the extent to which blended learning approach when effectively utilized could improve instructional effectiveness of Social Studies lecturers, thereby, enhancing Students’ Motivation, Retention and Academic Performance in colleges of education in north-central zone, Nigeria.

**Objectives of the Study**

The major objective of this study is to Impact of Blended Learning Approach on Retention Ability of NCE Social Studies Students in Nigeria. The study has the following specific objectives which are to:

1. Find out the difference in the mean retention scores of NCE Social Studies students taught using Blended Learning Approach and those taught using Lecture Method;
2. Investigate the difference in the mean retention 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 retention 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 retention 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 retention 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 retention 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-tests were 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 (Graham, Woodfield & Harrison, 2013). In its simplest form, it requires a pretest and posttest for a treated and comparison group. In this regard, Granito & Chernobilsky (2012) 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:

Experimental Group (BTA): NR ⟷ EG ⟷ O₁ X₁ ⟷ O₂ ⟷ O₃
Control Group (CLA): NR ⟷ CG ⟷ O₁ X₀ ⟷ O₂ ⟷ O₃

The NR represents non-randomization, O₁ represents pretests, X represents the treatment implemented, O₂ and O₃ represent posttests (Cohen, 2007).

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 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. Bada & Olusegun (2015) 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 used intact 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 thereshuffled SOSAT was used to determine students’ retention. 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 was 0.675. 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 ≤ 0.05 level of significance.
Results

Answering Research Questions

**Question One**: What is the difference in the mean retention 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 Retention Scores of NCE Social Studies Students taught using Blended Learning Approach and those taught using Lecture Method

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Post-test</th>
<th>SDev</th>
<th>Mean</th>
<th>SDev</th>
<th>Mean Diff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>224</td>
<td>29.27</td>
<td>8.83</td>
<td>57.64</td>
<td>13.02</td>
<td>28.37</td>
</tr>
<tr>
<td>Control</td>
<td>209</td>
<td>29.23</td>
<td>8.94</td>
<td>36.89</td>
<td>8.89</td>
<td>7.71</td>
</tr>
<tr>
<td>Mean Difference</td>
<td>0.04</td>
<td>20.75</td>
<td>20.66</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1 revealed the mean retention scores (post-posttest) of 57.64 for students in the experimental group with standard deviation of 13.02, while the control group has a mean retention (post-posttest) score of 36.89 standard deviation of 8.89. Students in the experimental group gained by mean retention difference of 28.37, while those in the control group gained by mean difference of 7.71. The difference in the post-posttest mean retention scores of the two groups stood at 20.75 in favour of experimental group. This implied that students taught social studies using blended learning approach were able to retained contents taught better than their counterparts in the control group i.e. students taught social studies using conventional lecture method.

**Question Two**: What is the difference in the mean retention scores of NCE Social Studies students taught using blended learning approach and those taught using lecture method in relation to gender?

**Table 2**: Descriptive Statistics on the Difference in the Mean Retention Scores of NCE Social Studies Students taught using Blended Learning Approach and those taught using Lecture Method in relation to Gender

<table>
<thead>
<tr>
<th>Group</th>
<th>Gender</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>1 male</td>
<td>21.68</td>
<td>6.390</td>
<td>109</td>
</tr>
<tr>
<td></td>
<td>2 female</td>
<td>16.30</td>
<td>6.497</td>
<td>115</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>19.23</td>
<td>6.956</td>
<td>224</td>
</tr>
<tr>
<td>Control</td>
<td>1 male</td>
<td>16.66</td>
<td>5.398</td>
<td>103</td>
</tr>
<tr>
<td></td>
<td>2 female</td>
<td>15.32</td>
<td>5.695</td>
<td>106</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>16.06</td>
<td>5.562</td>
<td>209</td>
</tr>
<tr>
<td>Total</td>
<td>1 male</td>
<td>18.46</td>
<td>6.245</td>
<td>248</td>
</tr>
<tr>
<td></td>
<td>2 female</td>
<td>15.67</td>
<td>6.001</td>
<td>185</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>17.21</td>
<td>6.284</td>
<td>433</td>
</tr>
</tbody>
</table>

Table 2 presents the means and standard deviations for the male and female NCE II students that made up the experimental and control groups as used in the study. The mean retention score of male students in the experimental group was (M=21.68, SD=6.390) while that of the female students (experimental) was (M=16.30, SD=6.497). Again, the mean retention score of male students in the control group was (M=16.66, SD=5.398) while that of female students was (M=15.32, SD=5.695). The overall mean retention score for the male students was (M=18.46, SD=6.245) while that of the female students was (M=15.67, SD=6.001). The overall mean difference was 2.79 in favour of the male participants.
Hypotheses Testing

Hypothesis One: There is no significant difference in the mean retention scores of NCE Social Studies students taught using Blended Learning Approach and those taught using Lecture Method.

Table 3: Comparison between the results of retention tests for the Control and Experimental Groups

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Df</th>
<th>t-value</th>
<th>Sig (2 tail)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>209</td>
<td>33.68</td>
<td>8.89</td>
<td>431</td>
<td>15.28</td>
<td>0.177</td>
</tr>
<tr>
<td>Experimental</td>
<td>224</td>
<td>57.64</td>
<td>13.02</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results of two samples t-test on Table 3 shows that there is statistical significant difference between the mean retention scores of NCE students in control group and experimental group in Social Studies retention test. It showed that significant differences existed in the mean retention 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 0.177 (2-tailed) is found to be less than the α=0.05 alpha level of significance while the t-calculated value of 15.28 is greater than the t-critical value of 1.96, at Df 431. Their calculated posttests mean motivation scores were 57.64 and 33.68 for experimental and control groups respectively. Consequently, the null hypothesis which states that there is no significant difference in the mean retention 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 retention 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 Retention tests for the Control and Experimental Groups in relation to Institution Ownership Type

<table>
<thead>
<tr>
<th>Institution Type</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Df</th>
<th>t-value</th>
<th>Sig (2 tail)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal</td>
<td>218</td>
<td>49.83</td>
<td>7.09</td>
<td>431</td>
<td>0.33</td>
<td>0.74</td>
</tr>
<tr>
<td>State</td>
<td>215</td>
<td>49.28</td>
<td>5.85</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results of two samples t-test on Table 4 shows that there is no statistically significant difference between the mean retention scores of NCE students in control group and experimental group in Social Studies in relation to institution’s ownership type. It showed that there no significant difference in the mean retention 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 0.74 (2-tailed) is found to be higher than the α=0.05 alpha level of significance while the t-calculated value of 0.33 is less than the t-critical value of 1.96, at Df 431. Their calculated posttests mean retention scores were 49.83 and 49.28 for federal and state students respectively. Consequently, the null hypothesis which states that there is no significant difference in the mean retention scores of federal and state owned NCE Social Studies students taught using blended learning approach and those taught using lecture method is retained.

Discussion

The study found that there is significant difference in the mean retention 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 retention 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). It is believed that while implementing
blended learning, using a comprehensive learning portal along with face-to-face learning, using all information, visuals, interactive activities outside class for homework, having the tests and homework done in a particular period of time, following student performance constantly and using great many videos, visuals etc. in the lesson along with the internet statistically provided the group with blended learning to have a higher and more meaningful success.

**Conclusion**
The following basic conclusions could be deduced from the study; these are:
i. Students taught social studies using blended learning approach retained contents more than those taught using lecture method in colleges of education in north central Nigeria;
ii. Institution’s ownership type does not affect retention of NCE students in colleges of education in north central Nigeria.

**Recommendations**
The following recommendations are put forward for the study
i. Teachers should be encouraged to use blended learning approach in teaching Social Studies because of it enhances students’ retention ability;
ii. Social Studies teachers should endeavor and be encouraged to utilize blended learning approach especially in co-educational settings since the approach has proven to be gender-friendly.

**References**
Alhassan, Y.S. (2006). The role of social studies in the character development of primary school pupils. Ilorin; *Nigeria Education Digest*, 9(1)58-65