

Blended and Peer Teaching Methods on Secondary School Students' Academic Performance in Social Studies

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Abstract

The researchers investigate the blended and peer teaching methods on secondary school students' academic performance in Social Studies. The design of the study is the quasi-experimental research design which adopted the following procedures: non-randomized, pre-test, treatment, treatment and post-test for non-equivalent intact classes. Two research questions and two hypotheses guided the study. The population of the study consists was 23,678 students from public secondary schools in Kogi State. The sample consists of 122 upper basic two (JSS II) students who offer Social Studies in three selected co-educational schools. Purposive and cluster random sampling techniques were adopted for the study. The instrument used in collecting the data for this study was a researcher-made test titled Social Studies performance test (SSPT). The instrument was validated by specialist in education measurement and evaluation and social science education with a reliability co-efficient index of 0.87 obtained using Kuder-Richardson 20 statistic (K-R 20). This was considered adequate for the study. Research questions was answered using mean and standard deviation. Analysis of Covariance (ANCOVA) was used to test the hypotheses at 0.05 level of significance. Findings revealed that blended teaching method is more effective when compared with lecture method in the improvement of students' performance in Social Studies. It was recommended that teacher training institutions like Universities' Faculties of Education and Colleges of Education should include blended and peer teaching methods among the modern participatory instructional strategies in teacher preparation in order to promote teaching and learning of Social Studies towards enhanced students' academic performance in the subject.

Keywords: Academic, Blended, Methods, Peer, Performance

Introduction

Social Studies is the interdisciplinary integration of social sciences and humanities concepts for the purpose of practicing problem solving and decision making for developing citizenship skills on critical social issues. It is a social science that studies virtue as regards using its culture to describe man's belief and way of life. It is a subject that is seen in Nigeria schools as one of those avenues of establishing strong foundation for producing effective citizens that will support the nation for nation-building. (Ogunbiyi *et al.*, 2018). Social Studies as a junior secondary school subject is expected to help students understand the trends of the

nation's value as well as enable them make their own positive contributions towards nation building. A sound knowledge of Social Studies is a pre-requisite for entrance into such areas of specializations like sociology, political science, history and international relations, accounting, marketing, anthropology etc. It aimed at incorporating, integrating knowledge and inspirations from many realms of learning.

In a classroom situation, students differ in terms of intellectual ideas and perception; they learn and understand more quickly and easily than others but these facts are not taken into consideration in lecture method of teaching (Akpan, & Aminikpo, 2018; Al-Qahtani & Higgins, 2013). Lecture method of teaching alone may not be suitable for individual requirements thus, there is need for modern technology and innovative teaching methods and strategies to cater for difference in learning styles. These modern technology and innovative teaching methods and strategies could include flipped classroom, e-learning, Blended teaching, Peer teaching among others.

The concept of Blended teaching has been around for a long time, but its terminology was not firmly established until around the beginning of the 21st century. Blended teaching can be defined as teaching systems that combine face-to-face instruction with computer mediated instruction (Eleanya, 2018). With the trend of using Information Technology, blended teaching is an approach that gives the best advantage from class and online teaching. Furthermore, students' technological knowledge of various aspects of learning can also be essential in assessing students' readiness, which is a prerequisite for the successful application of blended teaching (Firdaus et al 2020 and Tuguic, 2021).

Contrarily, Chang *et al* (2014) found no significant difference in achievement test scores between blended e-learning and traditional method of teaching. Also, Elmer *et al* (2016) found no significant difference between blended and traditional laboratories. To this effect, Peer teaching method could also be looked at as another alternative teaching method.

Peer teaching is a method of instruction that involves students teaching other students, a system of instruction in which learners help each other and learn by teaching. Paul (2016) defines Peer teaching as a teaching method that partners with students to help one another learn materials, reinforce skills or practice a learned task. The pairing of higher and lower-achieving students is intended so that students gain knowledge from each other through practice and reinforcement. In peer teaching, the teacher serves as a facilitator. Educators such as Ayuba (2021) considered peer teaching as one of the effective and powerful instructional methods that can be used to develop academic as well as social skills in both the tutor and the tutee (the learner). In a Peer teaching class, each student gets more attention from the tutor and more time to speak while others listen. This allows the students take active part in constructing their knowledge. Also, this method focuses on peers to solve a problem, and is most effective in fostering creativity, experimentation, problem-solving skills and the learning of difficult concepts (Williams *et al* 2016).

On the other hand, In Nigeria, traditional/conventional/lecture method of teaching is normally used. In this method, the teacher stands before the students and deliver his lecture while students listen, take notes and remained passive throughout the teaching and learning

process. This method is a teacher-centred approach. (Onye & Ajuzie, 2018) Umoh, and Akpan (2014), further stated that in the implementation of the lecture method in a well-organized manner, the instructors need to take into account various factors. These are, grade levels of students, learning abilities, subjects and concepts, academic goals and objectives and the overall system of education. In this method, there are various methods and approaches, which need to be put into practice, in order to make it useful and meaningful to the students.

Empirically, Harahap *et al*, (2019) carried out a study titled: effect of blended learning strategy on learning achievement and science process skills of students in plant tissue culture course in the Universitas Negeri Medan. The results of the study showed that $t\text{-count} = 3.769$, $P = 0.001$ at the level significance of 0.05 in learning achievements score. It also showed that $t\text{-count} = 5.435 > t\text{-table} = 1.661$ $P = 0.001$ at the significance level of 0.05 in science process skills score. Samuel & Sambo (2019) examined the effect of Peer Tutoring and Reversed Jigsaw Instructional Strategies on senior secondary school science students' interest and achievement. Findings from the study have revealed a significant difference between the achievement of Science students in Peer Tutoring, Reversed Jigsaw instructional strategies and conventional Demonstration method in favour of the two instructional strategies. The result indicated that the instructional strategies are more effective in enhancing Science students' interest and achievement than the conventional demonstration method.

Social Studies is a field of studies which has social sciences concepts as its foundation. Over the years, the performance of students in Social Studies in Kogi State has been very poor. National Examination Council's (NECO) Chief Examiner's Report on Social Studies from 2021 - 2023 summaries at the junior secondary school examinations also depicts poor performance of students in Social Studies. This could be attributed to teachers' use of less effective teaching methods and strategies as well as non-use of appropriate teaching methods. To overcome the problem of constant under performance of students in Social Studies, researchers have advocated the use of more effective teaching methods as opposed to traditional lecture method of teaching Social Studies. Innovative Blended Teaching and Peer Teaching Methods could be a solution to the problem of poor performance of students in Social Studies. The innovative teaching method requires students to be active participants in the teaching and learning process. This attribute of innovative teaching is near absent in most schools and could be responsible for lack of understanding, which in turn leads to poor performance. Hence, the problem of this study posed as a question, what is the effect of blended teaching and peer teaching on the academic performance of secondary school students in Kogi State?

Statement of the Problem

Social Studies is a field of studies which has social sciences concepts as its foundation. Over the years, the performance of students in Social Studies in Kogi State has been very poor. National Examination Council's (NECO) Chief Examiner's Report on Social Studies from 2021 - 2023 summaries at the junior secondary school examinations also depicts poor performance of students in Social Studies. This could be attributed to teachers' use of less effective teaching methods and strategies as well as non-use of appropriate teaching methods.

Of all the causes of underperformance of Social Studies students, lecture method has continued to receive a major condemnation by researchers. This could be because of its ineffectiveness in arousing the interest of students, thus leading to constant under performance and lack of interest in students.

To overcome the problem of constant under performance of students in Social Studies, researchers have advocated the use of more effective teaching methods as opposed to traditional lecture method of teaching Social Studies. Innovative Blended Teaching and Peer Teaching Methods could be a solution to the problem of poor performance of students in Social Studies. The innovative teaching method requires students to be active participants in the teaching and learning process. This attribute of innovative teaching is near absent in most schools and could be responsible for lack of understanding, which in turn leads to poor performance. Hence, the problem of this study posed as a question, what is the effect of blended teaching and peer teaching on the academic performance of secondary school students in Kogi State?

Purpose of the Study

The main purpose of this study was to examine blended and peer teaching methods on secondary school students' academic performance in Social Studies. Specifically, the study sought to:

1. Examine the difference in the academic performance of students exposed to blended teaching and those in control group
2. Examine the difference in the academic performance of students exposed to peer teaching and those in control group; and

Research Questions

The following research questions were poised to guide the study

1. What is the performance mean scores of students taught Social Studies using blended teaching and Lecture Method?
2. What is the performance mean scores of students exposed to Social Studies using Peer teaching and Lecture Method;

Research Hypotheses

The following null hypotheses are formulated and tested at 0.05 level of significance.

H₀₁: There is no significant difference in the academic performance of students exposed to blended teaching and those in control group.

H₀₂: There is no significant difference in the academic performance of students exposed to peer teaching and those in exposed to lecture method;

Methodology

The design of this study is quasi-experimental research design. Specifically, pre-test, treatment, post-test and post-post-test of non-equivalent group procedures were adopted. The population of the study consists of a total of 23,678 students from public secondary schools in Kogi State. The sample consists of 122 upper basic two (JSS II) students who offer Social Studies in three selected co-educational schools. Purposive and cluster random sampling

techniques were adopted for the study. Specifically, 42 students were for experimental group I (BL), 39 students for experimental group II (PT) and 41 students for experimental group III (LM). Male and female Social Studies students made up the sample size; 17 male and 25 female students for group I, 19 males and 20 females for group II, and 19 males and 22 females for group III. The instrument used in collecting the data for this study was a researcher-made test titled Social Studies performance test (SSPT). The instrument was validated by specialist in education measurement and evaluation and social science education with a reliability coefficient index of 0.87 obtained using Kuder-Richardson 20 statistic (K-R 20). This was considered adequate for the study. Research questions was answered using mean and standard deviation. Analysis of Covariance (ANCOVA) was used to test the hypotheses at 0.05 level of significance. But in the case of using SPSS, the rejection of the hypotheses was based on the comparison of the SPSS p-value or significance level in the output directly with the chosen 0.05 alpha level of significance. When the p-value is equal to or less than the chosen alpha, reject the null hypothesis, if otherwise, accept the null hypotheses.

Experimental Procedure: The researcher obtained permission from the authorities concerned for the involvement of their teachers and students in the study. The study lasted for 8 weeks (1st week for the pre-test, 2nd -7th week for the training and 8th week for the post-test). The researcher briefed the research assistants [regular classroom teachers] on the techniques to be used before commencement of the experiment. In the eight-week, post-test was administered by the class teachers so as to reduce the Hawthorn effect which might be introduced if the researcher administers the test. The teaching was conducted during the normal school period using the school time table. Students were taught once a week for six weeks using 40 minutes per week. The experimental group I were taught using blended teaching method, experimental group II were taught using Peer teaching method and experimental group III were taught using lecture teaching method.

Procedure for Data Collection: Treatment Administration: At the end of each lesson and discussion, typed questions on the topic were distributed to every member of the class in the experimental groups. In the control group, students were taught using the conventional [lecture] method where the teacher's activities dominated the class.

Experimental Group I (BT): The BT was used here. The class was taught the concepts using the BT package. It consists of Social Studies contents linked with website and which can be accessed through internet via Personalised Digital Assistants (PDAs) such as computer systems, android phones etc. In accordance with online learning approach of the research, the experimental group I were taught Social Studies through a website with various visual and animations specifically designed for this purpose. The classes for the experimental group I were held in a computer laboratory with one computer for each student or using their mobile phones. In the face-to-face learning process during the class, the instructor introduced an outline of the subject and illustrated it with visual in the website. After the participants were exposed to the learning contents, the students were assigned to perform the activities on the website outside the classroom environment to provide them with further detail about the subject, as well as

with further various examples through the website. The students delivered their activities/assignment to the teacher through e-mail or Telegram group and whenever they had questions about the subject or the assignments. The teacher's role was to monitor the activities of the students so as to ensure strict compliance with instructions of non-interaction among members.

Experimental Group II (PT): Peer teaching method was used here. This took the form of class-wide method. Class-Wide Peer Teaching involves dividing the entire class into groups of two to five students with differing ability levels. Students then acted as tutors, tutees, or both tutors and tutees. Typically, CWPT involves highly structured procedures, direct rehearsal, competitive teams, and posting of scores. The entire class participated in the structured peer teaching activities two or more times per week for approximately 30 minutes.

Experimental Group III (Lecture Method/Control Group): The lecture method was used here. This took the form of the normal lesson/lecture. The lecture was presented by the class teacher for the control group. The contents of the lecture were the same as in the case of the BT and PT on Social Studies.

Post-Test and post-post-test: After weeks of the experiment, the post test was given to the students after another reshuffling so as to measure the performance/achievement of the students in Social Studies. Furthermore, the post-posttest was administered to the students so as to measure the retention level of the achievement.

Result

Research Question 1: What is the performance mean scores of students taught Social Studies using blended teaching and Lecture Method?

Table 1: Descriptive statistics for the performance mean scores of students taught Social Studies using blended teaching, and Lecture Method.

Teaching Methods	Mean ($\bar{X}$)	SD(S)	Sample (n)
Blended Teaching	18.00	2.036	42
Lecture Method	18.88	1.778	41
Post Test	Mean ($\bar{X}$)	SD(S)	Sample (n)
Blended Teaching	33.12	2.725	42
Lecture Method	21.27	1.628	41

Table 1, presents the result of data concerning research question 3 for the mean achievement scores of students taught Social Studies using blended teaching, and lecture method. The result shows that students that were taught Social Studies with blended teaching method had pre-test performance mean score of 18.00 and post-test mean score of 33.12. On the other hand, the students that were taught with lecture method had pre-test performance mean score of 18.88 and post-test performance mean score of 21.27. Looking at the standard deviations, it was seen that the distance between the standard deviation and the mean scores of the groups shows that there is homogeneity of scores in the distribution. The gap in the mean

scores of the two groups at posttest indicates that blended teaching method is effective in the improvement of students' performance in Social Studies than the lecture method.

Null Hypothesis 1; There is no significant difference in the academic performance of students exposed to blended teaching and those in control group.

Table 2: Summary of ANCOVA for the significant difference between the performance mean scores of students taught Social Studies using blended teaching, and lecture method

Dependent Variable: Post-Test					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	3.732 ^a	2	1.866	.316	.730
Intercept	939.918	1	939.918	159.148	.000
Pre-Test	.049	1	.049	.008	.928
Teaching Methods	3.698	1	3.698	.626	.431
Error	460.663	78	5.906		
Total	88212.000	81			
Corrected Total	464.395	80			

a. R Squared = .008 (Adjusted R Squared = -.017)

Table 2, presents the result of data concerning hypothesis 3 for the significant difference between the mean achievement scores of students taught Social Studies using blended teaching, and lecture method in the pretest and posttest. It was indicated in the table that the F-calculated (F-cal) value is low at 0.626. The p-value of 0.431 is greater than 0.05 level of significance leading to the acceptance of the null hypothesis indicating that mean achievement scores of students taught Social Studies using blended teaching and Lecture methods in the pre-test and post-test is not significantly different.

Research Question 2: What is the performance mean scores of students exposed to Social Studies using Peer teaching and Lecture Method?

Table 3: Descriptive statistics for the performance mean scores of students exposed to Social Studies using Peer teaching and Lecture Method.

Teaching Methods	Mean ($\bar{X}$)	SD(S)	Sample (n)
Peer Teaching	18.82	1.862	39
Lecture Method	18.88	1.778	41
Post Test			
	Mean ($\bar{X}$)	SD (S)	Sample (n)
Peer Teaching	32.69	2.028	39
Lecture Method	21.27	1.628	41

Table 3 presents the result of data concerning research question 4 for the mean achievement scores of students exposed to Social Studies using Peer teaching and Lecture

Method. The result shows that students that were taught Social Studies with Peer teaching method had pre-test performance mean score of 18.82 had post-test mean score of 32.69. On the other hand, the students that were taught with lecture method had pre-test performance mean score of 18.88 and post-test performance mean score of 21.27. Looking at the standard deviations, it was seen that the distance between the standard deviation and the mean scores of the groups shows that there is homogeneity of scores in the distribution. The gap in the mean scores of the three groups at post test indicates that peer teaching methods is effective in the improvement of students' performance in Social Studies more than the lecture method.

Null Hypothesis 2: There is no significant difference in the academic performance of students exposed to peer teaching and those in exposed to lecture method.

Table 4: Summary of ANCOVA for the significant difference between the performance mean scores of students taught Social Studies using peer teaching and lecture method

Tests of Between-Subjects Effects					
Dependent Variable: Post Test					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	4.151 ^a	2	2.076	.352	.705
Intercept	996.715	1	996.715	168.919	.000
Pre-Test	.001	1	.001	.000	.993
Teaching Methods	4.118	1	4.118	.698	.406
Error	460.244	78	5.901		
Total	88212.000	81			
Corrected Total	464.395	80			

a. R Squared = .009 (Adjusted R Squared = -.016)

Table 4, presents the result of data concerning hypothesis 4 for the significant difference between the performance mean scores of students taught Social Studies using peer teaching, and lecture method in the pre-test and post-test. The result shows that the F-calculated (F-cal) value is 0.698. The p-value of 0.406 is greater than 0.05 level of significance. This led to the acceptance of the null hypothesis indicating that mean achievement scores of students exposed to Social Studies using peer teaching and lecture method do not differ significantly.

Discussion of Findings

It was revealed in this study that blended teaching method is more effective when compared with lecture method in the improvement of students' performance in Social Studies. That is to say, those students in blended teaching method achieved better than those taught with Lecture method. This finding is true because, blended teaching leverages technology and focuses on the student-teacher relationship to enhance independence, engagement, and performance. It provides a big convenience for the course to achieve its target by combing the face-to-face interaction in traditional learning and time; place and material richness provided

by web-based learning. This is in agreement with the findings of Harahap *et al* (2019) that the blended teaching strategy is found to be significantly more effective in enhancing students' learning performance as compared to the conventional learning strategy. Similarly, Alsalhi *et al* (2019) findings revealed that there were statistically significant differences between the experimental and the control groups, in favor of the experimental group using of blended learning. The effective difference recorded in this finding could be attributed to potency of the activities of blended teaching method more than that of the lecture method.

It was revealed in this study that peer teaching method is more effective when compared with lecture method in the improvement of students' performance in Social Studies. That is to say that those students in peer teaching method achieved better than those taught with lecture method. This finding is true because, peer teaching instructional method is learner centered unlike the traditional lecture method which is teacher centered. Traditional teaching methods are not suitable for tactile learning because tactile learning needs direct experience and involve manipulation of materials. In agreement with this finding, Harahap *et al* (2019) result indicates that the peer tutoring is more effective in enhancing students' interest and achievement than the conventional demonstration method. Furthermore, Nmonwu *et al* (2018) findings indicated that peer learning strategy improved student's achievement in Social Studies. The similarities recorded in this finding could be attributed to potency of the activities of peer teaching method more than that of the lecture method.

Conclusion

The conclusion from this study is that blended and peer teaching methods have the capacity of improving low academic performance in Social Studies irrespective of the students' gender category.

Recommendations

- 1) Teacher training institutions like Universities' Faculties of Education and Colleges of Education should include blended and peer teaching methods among the modern participatory instructional strategies in teacher preparation in order to promote teaching and learning of Social Studies towards enhanced students' academic performance in the subject.
- 2) School administrators should encourage the teachers to utilize blended and peer teaching methods as part of instructional methods for teaching and learning Social Studies so as to promote and develop students' positive attitude, interest and achievement in the subject matter.

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