

THE EFFECTS OF LECTURE METHOD AND COLLABORATIVE LEARNING ON STUDENTS' ACADEMIC ACHIEVEMENT IN SOCIAL STUDIES IN AKWA IBOM STATE

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ABSTRACT

The main purpose of this study was to examine the effects of lecture method and collaborative learning on students' academic achievement in social studies in Akwa Ibom State. Quasi experimental of 2 X 3 factorial designs was adopted for the study. The study was conducted in Akwa Ibom State. The target population for this study was all the Junior Secondary two (JS2) Social Studies students in all the public secondary schools in Akwa Ibom State. A two-stage sampling technique was used to select 150 students from a centrally located secondary school in Akwa Ibom State. It was the use of intact classes drawn from the 3 arms of JS2 class from the selected secondary school centrally located. Each of the 3 arms of the JSS 2 class used for the study had 50 students. This gave a total of 150 participants in the study. Two research instruments were developed and used for the purpose of this study titled "Social Studies Achievement Test Questionnaire (SOSAT)" and Social Studies Self-Concept Questionnaire (SSCQ). In order to ascertain the validity of the instrument the social studies achievement test (SOSAT) and social studies self-concept questionnaire (SSCQ) were given to experts in Social Studies, Abia State University, Uturu and the researchers Supervisors to screen for face and content validity. The reliability coefficient or index was 0.89 for SOSAT. With these indices, the instruments were considered valid reliable, and capable of measuring the intended events with consistency. Analysis of Covariance (ANCOVA) was used to test the hypotheses at 0.05 level of significance. The study concluded that lecture method is often defended because it is argued that it functions well in combination with other teaching methods which have higher level objectives. In collaborative learning the teacher serves as a catalyst giving cues and prompt that will motivates the learners to take active part in the lesson. The study recommended that students should be given the best especially in the areas in which they are expected to function. Teachers should give students problems to solve in order to motivate critical thinking and reasoning.

KEYWORDS: Lecture Method, Collaborative Learning, Students' Academic Achievement, Social Studies and Akwa Ibom State.

Introduction

Numerous factors in literature have been adduced to influence students' academic achievement in social studies teaching and learning. These factors include school quality (Fisher, 2001); teacher quality (Forsythe, 2012); school environment (Frederick, 2017); provision of resources (Glasserfield, 2009); use of textbooks (Glasserfield, 2000); teaching methodology (Hake, 2018); and students' attitude to teaching and other student factors (Hoffman, 2011). Student variables, which include parents' economic status, student-student interaction, teacher-student interaction, and a student's role model, can also influence a student's academic achievement (Forsythe, 2012). The most re-occurring factor in all these studies is the teaching and learning methods used by the teacher, which cannot inculcate a lifelong learning skill in learners. This, therefore, necessitates further research and a need to search for more innovative and proactive learning strategies that are more likely to improve learning outcomes, bringing out the embedded behavioural changes inherent in social studies teaching and learning among secondary school students.

In a bid to find a solution to the inherent problems in the teaching and learning of social studies, many social studies teachers have been sourcing for innovative ways of imparting the skills embedded in the subject content. According to Carson (2015), students will benefit more from social studies teaching and learning if they are given opportunities to discover and experience for themselves the embedded affective changes inherent in the structure of the subject. It is against this backdrop that there is a need to introduce more learning strategies which are student-centered. The lecture method is usually an exposition. The lecturer tells the audience what he thinks they should know. The lecture may contain any combination of the following: citing what well-known authors have written on the topic of the lecture; expressing the lecturer's own opinions; demonstrating how something works; or stating the argument in favour of and against a particular proposition. It is essentially autocratic in form and style. This method does not permit the teacher to know the students since it does not encourage students' activities, which can help the teacher to know what his learners are like (Michael, 2013).

Statement of Problem

The capacity of the instructor to formulate precise and suitable questions that may not only allow the students to get meaningful learning experiences, but also help them to think outside the classroom is crucial because the goal of teaching social studies is not only to feed the students with data. Each of the social studies standards places a premium on the growth of students' intellectual abilities and their capacity for reasonable, rational, logical, and reflective thought. It is on this note that this paper attempts to investigate the effects of lecture method and collaborative learning on students' academic achievement in social studies in Akwa Ibom State.

Purpose of the Study

The main purpose of this study was to examine the effects of lecture method and collaborative learning on students' academic achievement in social studies in Akwa Ibom State. Specifically, the study sought to:

1. Find out the effect of lecture method on academic achievement of students in Social Studies.
2. Determine the effect of collaborative learning on academic achievement of male and female students in Social Studies.

Hypotheses

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

HO₁: There is no significant difference in academic achievement of students with low and high self-concept taught using lecture method.

HO₂: There is no significant difference between the performances of male and female student's achievement taught using collaborative learning.

Conceptual Review

Concept of Lecture Method

The lecture method, to a very large extent, is the traditional method of teaching adults. It is essentially autocratic in form and style. Superficially, it might seem that the lecture method is the easiest teaching strategy to describe and define, since the lecturer's role is apparently to transmit information. According to Obanya (2009), a lecture is usually an exposition. The lecturer tells the audience what he thinks they should know. The lecture may contain any combination of citing what well-known authors have written on the topic of the lecture; expressing the lecturers' own opinions; demonstrating how something works; or stating the argument in favour of and against a particular proposition.

The lecture method can deal with very large classes in a comparative period of time. There are also cases at the lower level of education when the lecture method may have to be used. For example, some subjects (e.g., history) may require a certain amount of storytelling. Some others may require scientific concepts by the teachers. Ketchum (2009) compared the notes students wrote during lectures with what the lecturer actually said. He arrived at two broad conclusions. Firstly, students did not regard the lecture primarily as a source of detailed, factual information. Secondly, students did not regard the lecture as a means of providing them with a framework of ideas and theory. Lectures offer little scope. There are indications that lecturing is less effective, even for imparting information, than certain methods. So, despite all the work done on the efficiency of

lectures, there is little evidence which might justify an emphasis on lecturing. Lectures are not the best way to get facts across (Ketchum, 2009).

Paulins (2004) identified 21 studies which found lecturing to be less effective than discussions, reading, writing, individual work in class, and so on. The evidence of the weakness of lectures to achieve this goal is devastating. Mike (2013) asserted that during lectures, students attempt to solve problems, synthesise or inter-related information for only 1% of their time, while 78% of the lecture time was spent on passive thoughts about the subject and irrelevant thoughts. Mike (2013) further stated that the best way to learn to solve problems is to be given problems that have to be solved. The best way to develop critical skills is to practice using the canons of criticism.

Mike reported that when lecturers speak indistinctly or are going over difficult ground, the information processing demands were so high that students could not even hear what was being said while they were struggling to write down the previous bit. They had a choice to either listen and (with luck) understand, or record. They are capable of doing both simultaneously unless the lecture content was unfamiliar. Nwankwo (2002) stated that lecturing is the worst way to give students a proper set of notes and results in all sorts of associated problems for students.

The lecture method is often defended because it is argued that it functions well in combination with other teaching methods that have higher-level objectives. If preparation for a discussion requires gaining some understanding of the subject matter, and this would seem more realistic, then lectures are poor preparation. If you want students to think and discuss, then the best preparation involves thought and discussion. If you want students to solve problems, then give them some problems to solve. If you want students to read or write, then they will spend some time on it.

Concept of Collaborative Method of Teaching

Collaborative learning is an instructional strategy derived from the theory of constructivism. According to Golehale (2012), collaborative learning is an indirect form of teaching where the teacher, as a member of the learning community, sets the problem, guides the students, and organises them to work collaboratively to accomplish a given task. In collaborative learning, the teacher serves as a catalyst, giving cues and prompts that will motivate the learners to take an active part in the lesson. Again, he makes sure that they are hands-on activities for the students to practice what they have learnt. According to Rudduck (2009), the teacher needs to keep records of each activity a student takes part in and if the activities are rewarding, students will become eager to read, write, and want to take part in class activities as they strive to get the reward. According to Michael (2014), the strategy allows the teacher to go round the various groups and make further clarifications where they are needed. It promotes dialogue with the students, listens to what they have to say, and encourages them to write. By so doing, students have the opportunity to interact and socialise with peers without inhibitions.

They also connect their previous and current experiences, as this helps them to see all the progress they are making in the subject. The teacher, in turn, corrects their mistakes in a way that students do not feel bad. Golehale (2012) also sees collaborative learning as involving direct interaction and maximum involvement of students in their learning process.

The likelihood of participation by all the students is increased when they are divided into groups of four (4) or five (5). The larger the group, the more opportunity there is for the diffusion of responsibility among group members. Active participation in the collaborative process is essential for learning to occur. Group members can help one another through explanations, reminders, and questions when the group interactions are structured to ensure equitable participation. This can be accomplished by assigning specific roles, alternating roles and activities, or requiring that consensus among group members be reached. Students must be prepared to work with one another so that patterns of inclusion and exclusion associated with having high or low status in a group are minimized. In collaborative learning groups, students develop interpersonal skills and learn how to deal with conflict (Dornyei, 2006).

Empirical Review

Vantran (2014) in his experimental study investigated the effects of collaborative learning retention of 110 first year primary education students in psychology subject over the eight weeks of instruction at AnGiang University. These tertiary students were divided in to matched groups of 55 to be taught by the same lecturer. In the experimental group collaborative learning and discussion method were employed, while in the control group, lecture-based teaching was used. The results showed that after approximately eight weeks, students who were instructed using collaborative learning and discussion method achieved significantly higher scores on the achievement and knowledge retention at posttests than students who were instructed using lecture-based teaching.

In a similar development, Busari (2010) also conducted an experimental study on comparative effect of four instructional strategies on students' achievement and self-concept in chemistry in some selected secondary schools in Lagos State. The purpose of the study was to compare the effect of instructional strategies are; students' achievement in chemistry; and self-concept of students in chemistry. The design was a randomized experimental and control group, pretest-posttest instructional design. Two null hypotheses were formulated and tested at thus 0.05 level of significance, the sample for the study, consisted of 218 SSII chemistry students randomly drawn from seven (7) schools in Lagos state. There were 130 students in the experimental group and 88 students in the control group. The researcher used Pre-Achievement Test (PAT); the chemistry Achievement Test (CAT) and the questionnaire. The result indicated each of the instructional strategies except lecture method contributed positively to learning of chemical concept and development of high self-concept in chemistry students. The research helped in directing the current research on the choice and formulation of the

instrument for data collection. However, the researcher did not state the statistical tool that was used in analyzing the data. However, this study will make use of the appropriate tool.

Methodology

Quasi experimental of 2 X 3 factorial designs was adopted for the study. The study was conducted in Akwa Ibom State. The target population for this study was all the Junior Secondary two (JS2) Social Studies students in all the public secondary schools in Akwa Ibom State. A two-stage sampling technique was used to select 150 students from a centrally located secondary school in Akwa Ibom State. It was the use of intact classes drawn from the 3 arms of JS2 class from the selected secondary school centrally located. Each of the 3 arms of the JSS 2 class used for the study had 50 students. This gave a total of 150 participants in the study. Two research instruments were developed and used for the purpose of this study titled "Social Studies Achievement Test Questionnaire (SOSAT)" and Social Studies Self-Concept Questionnaire (SSCQ). In order to ascertain the validity of the instrument the social studies achievement test (SOSAT) and social studies self-concept questionnaire (SSCQ) were given to experts in Social Studies, Abia State University, Uturu and the researchers Supervisors to screen for face and content validity. To establish the reliability of the research instruments, (SOSAT) and (SSCQ) reliability testing was conducted. The validated instruments were tried out on a group of 20 JSS II students from Aka Community Secondary School, Aka-Offot that was not used in the actual study. Measures of the reliability of the instruments were obtained through test-retest approach which measured the same set of subjects again with the same measuring instruments. After a period of two weeks the instruments were again re-administered on the same group of students, and the scores generated on the first and the second administration of the instruments were subjected to analysis using Pearson Product Moment Correlation Coefficient (PPMCC) statistic the reliability coefficient or index was 0.89 for SOSAT. With these indices, the instruments were considered valid reliable, and capable of measuring the intended events with consistency. Analysis of Covariance (ANCOVA) and Independent t-test analyses was used to test the hypotheses at 0.05 level of significance.

Data Analysis and Results

Hypothesis Three

There is no significant difference in academic achievement of students with low and high self-concept taught using the lecture method.

Table 1: Summary of ANCOVA on the Mean Performance of Low and High Self Concept Students Taught Using Lecture Method (N = 50).

Source of Variation	Sum of Squares	df	Mean square	F	Ho Decision
Between Groups	1458.8	1	1458.8		P< 0.05
Within Groups	18699.1	48	389.56	3.74	Accept Ho
Total	20157.9	49			

Not significant at P< 0.05 alpha level; critical F= 4.04; degree of freedom =1 and 48.

The analysis of covariance (ANCOVA) was done to test hypothesis three. The result showed a calculated F- ratio of 3.74 given 1 and 48 degrees of freedom while the critical F-value remains at 4.04 at 0.05 alpha level of significance given 1 and 48 degrees of freedom. Since the critical F is greater than the calculated F- ratio, the null hypothesis was retained. Retaining the null hypothesis means that differences do exist in the mean performance of the low and high concept groups when they are taught with lecture method. However, the group means highlighted that, the low self-concept group had a mean of 54.88 and a standard deviation of 6.82 while the self-concept group had a mean of 67.58 and a standard deviation of 4.9. The result of F showed that the difference of 12.7 in mean performance was not statistically strong to be significant at the 0.05 alpha level. The researcher therefore concluded that both group mean performance remains the same and uphold that the 12.7 mean error difference can be attributed to chance effect.

Hypothesis Two

There is no significant difference between the performance of male and female student's achievement taught using collaborative method of learning.

Table 2: Summary of Independent t-test Comparison of Male and Female Students' Achievement using Collaborative Learning (N=50)

Gender	n	X	SD	Std error	Df	t	Ho Decision
Males	28	86.89	8.5				P > 0.05
Females	22	87.55	4.67			0.35	Retain Ho
Total	50	87.22					

Not significant at P < 0.05 alpha level; critical t=2.021; degree of freedom = 48

An independent t-test comparison was done to test the achievement of the male and female students taught with collaborative learning. The calculated t- test gave a t- ratio of 0.35, given 48 degree of freedom while critical value of t remains at 2.021 at the 0.05 alpha level of significance given 48 degree of freedom. The null hypothesis was therefore retained. This by implication means that neither the males nor the females perform better than the other when collaborative learning method was used. However, table 4.5 showed that the males made a mean gain of 86.89 while the females had 87.55. The 0.66 difference in mean was not statistically strong to be significant at the 0.05 alpha

level. The researcher therefore concluded that when the collaborative learning method is used, the performances of the male and female students remain the same.

Discussion of Findings

The result of the data analysis in table 1 revealed that students with high self-concept exhibit high academic achievement over low self-concept when lecture method was used. This was in agreement with the findings of Busari (2010) who conducted an experimental study on comparative effects of four instructional strategies on students' achievement and self-concept in chemistry in some selected secondary schools in Lagos State. The design of the study was a randomized experimental and control group, pretest-posttest instructional design. Two null hypotheses were formulated and tested at 0.05 level of significance. The sample for the study consisted of 218 SSII Chemistry students randomly drawn from seven (7) schools in Lagos State. There were 130 students in the experimental group and 88 students in the control group. The result indicated that lecture method did not contribute positively to the learning of chemical concept and development of high self-concept in chemistry students in Lagos State.

The result of the data analysis in table 2 revealed no significant status between academic achievement of male and female students taught using collaborative method. The result was in line with the finding of Aderogba and Amu (2011) who reported that gender status has no significant effect on students' academic achievement in Social Studies. Although several other scholars and researchers are in support of the fact that gender has significant effect on students' academic performance.

Conclusion

Lecture method is often defended because it is argued that it functions well in combination with other teaching methods which have higher level objectives. In collaborative learning the teacher serves as a catalyst giving cues and prompt that will motivates the learners to take active part in the lesson. Again, he makes sure that they are hands-on activities for the students to practice what they have learnt. The strategy allows the teacher to go round the various groups and makes further clarifications where they are needed. It promotes dialogue with the students, listen to what they have to say and encourage them to write. By so doing, students have the opportunity to interact and socialize with peers without inhibitions. They also connect their previous and current experiences, as these help them to see all progress they are making in the subject.

Recommendation

Students should be given the best especially in the areas in which they are expected to function. Teachers should give students problems to solve in order to motivate critical thinking and reasoning.

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