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# Effects of collaborative learning and discussion method 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 collaborative learning and discussion method 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 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) was used to test the hypotheses at 0.05 level of significance. The study concluded that there is significant influence in the academic achievement of students with low and high self concepts taught using collaborative learning. Also, there is significant difference in the academic achievement of students with low and high self concept taught using discussion method. One of the recommendations made in the study was that students should always be encouraged by the class teachers and other stakeholders to develop high self concept towards social studies as a subject.

**Keywords:** Social Studies, Academic achievement, Collaborative & Discussion method of learning.

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## INTRODUCTION

Teaching and learning methods that create active learning among students is imperative, this is because students do not learn much just sitting in classes listening to teachers, memorizing prepackaged assignments and giving out answers. They should be able to talk about what they are learning, write reflectively on it, relate it to the past experiences, and apply it to their daily living and for learning to become part of them. The studies of (Grabowski, 2002) established the fact that teaching and learning patterns coupled with negative learning behaviors can be inhibitors to effective and adequate learning patterns as such a study in this regard will tend to put forward the benefits to be derived when innovative patterns of teaching and learning is in proper use.

Social Studies is the study of man and his interactions with the environments. Its overall aim is to promote civic competence of its learners. Social Studies is most commonly recognized in Nigeria as the name of a course taught in the primary and junior secondary schools. The primary purpose of Social Studies at this level is to help young people develop the ability to make informed and reasoned

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decisions for the public good as citizens of a multi-ethnic democratic society in an independent world. It is also offered in the tertiary institutions up to the doctoral level. The discipline is taught as a career to students at Colleges of Education and Universities. Social Studies provides coordinated, systematic study of every aspect of human endeavours which spans through the social, economic, political, religious, cultural, education, legal/law-related, science and technological inclinations of man (Nkire, 2013).

Collaborative learning is a learning strategy which could enhance the learning outcomes of the learners in social studies as a subject, if properly employed. Learning is enhanced when it is more of teamwork than a solo race. Good learning, like a good work is collaborative and social, not competitive and isolated, sharing ideas during learning process and responding to others improves thinking as well as deepens understanding. It is a strategy which involves students working in teams to accomplish a common goal, and has the potentials for cultivating and grooming in students the ability to help team mates to achieve collective goal. In the method, learners have the opportunity of working together to solve a problem, complete a task or create a product (Brembeck, (2011). Collaborative learning is an umbrella term for a variety of educational approaches involving joint intellectual effort of learners, learners and teacher, forming small group project, to the more specific form of group work known as co-operative learning (Jennifer, 2013).

#### **Statement of the Problem**

The role of Social Studies is enormous and its primary objective is to help young people make informed and reasoned decisions for the public good as citizens of a culturally diverse, democratic society and an inter-dependent world. Over the years, the majority of students who sat for their certificate examination have been recording mass failure in 2013, and the percentage of students who passed their JSCE with credit in Social Studies was below 50%. It is in this regards that this study prompts to examine the various teaching methods that can boost the academic achievement of social studies students.

#### **Purpose of the Study**

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

1. Determined the effect of collaborative learning on academic achievement of Social Studies students.
2. Ascertain the effect of discussion method on academic achievement of students in Social Studies.

#### **Hypotheses**

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

HO1: There is no significant influence in academic achievement of students with low and high self concepts taught using collaborative learning strategy.

HO2: There is no significant difference in academic achievement of students with low and high self concepts taught using discussion method.

#### **Theoretical Review**

##### **Generative Learning Theory**

Wittrock (1974) introduced generative learning theory with its companion model generative teaching to stress the importance of learners. The theory states that although a student may not understand sentences spoken to him by his teacher, it is likely that the student understands sentences generate by himself (Wittrock, 1974). Generative learning theory emphasizes that learning is not by

discovery but by generating knowledge from interactions between students, teacher and instruction. In Wittrock's view, students are not passive recipients of information but active participants in the learning process working to construct meaningful understanding from the pieces of information found in the learning environment. The theory recognizes that both the students and learning environment are of equal importance, that intentionality on the part of the teacher and the students are critical (Bonn & Grabowski, 2011).

Even though Wittrock stressed individual students' active participation in instruction and learning, the theory showed that students can learn more through interaction and collaboration. The teacher's role is knowing how and when to facilitate construction of the relationship by the students. The focus of generative learning theory is on selecting appropriate student-centered instructional activities for the students with emphasis on generation of new conceptual understanding and not on transforming the information (Grabowski, 2002). In so doing, the student is active and conscious, comprehend, elaborate and recognize information to generate new knowledge from the relationship between interactions. Bonn and Grabowski (2011) described generative learning theory as practical cousin of constructivism and second cousin to behaviorism.

Generating learning activities require internal processing of external stimuli and that is what exists between external (teaching) stimuli and the students. Generative learning theory as student-centered learning theory has specific steps for engagement and construction of knowledge. It does not assume dominance of the role of the students or the instructor but partnership in the process (Ritchie & Volkl, 2009). Activities can be selected based on the type and learning outcome desired. This theory is of importance to this study as Social Studies teacher will acquire the ability to select or create appropriate learning activities that would help students to engage actively and also relating experiences to meaningful understanding of concepts through challenging instructional delivery.

### Conceptual Review

#### Concept of Collaborative Learning

Collaborative learning is broadly defined as a situation in which two or more people learn or attempt to learn something together and more specifically as joint problem solving (Dillenbough, 2009). Collaborative learning is an instructional strategy derived from the theory of constructivism. According to Share (2006) collaborative learning is an indirect form of teaching where the teacher a member of the learning community set the problem, guide the students and organizes them to work collaboratively to accomplish a given task. Collaboration is a demanding bit result-oriented instructional method in which successful teacher use in making learning meaningful. Collaborative learning is base on the view that knowledge is a social construct. Collaborative activities are most often base on four principles.

- (i) The learner or student is the primary focus of instruction
- (ii) Interaction and doing are of primary importance
- (iii) Working in groups is an important mode of learning
- (iv) Structured approaches to developing solutions to real world problems should be incorporated into learning.

Collaborative learning can occur peer-to-peer or in large groups (Adele, 2009). Peer learning, or peer instruction is a type of collaborative learning that involves students working in pairs or small group to discuss concepts, or find solutions to problems. This often occurs in a class session after students are introduced to course material through reading or videos before class, and instructor lectures.

Similar to the ideas that two or three heads are better than one, many instructors have found that through peer instruction, students teach each other by addressing misunderstanding and clarifying misconceptions. Group work or collaborative learning can take a variety of forms, such as quick, active learning activities in class or more involved group project that span the course of semester (Daniella, 2010).

### Concept of Discussion Method

In a way, discussion implies the participation of students in the process of learning by raising issues of their own, contributing ideas, asking questions and seeking solutions based upon the study and drawing conclusion under the teacher's guidance. Discussion is important as a learning process because it is a way of considering various facets of a problem and also because it lays the ground work for many discussion situations in which young people and adult are constantly taking part (Riclin, 2007). Essentially, discussion is based on extensive contribution of ideas and expression from the members of the group participating. In order for the discussion to be effective as a teaching method, the teacher must know how to guide the students without dominating the discussion. His role is to develop the interest of his students to participate actively in the discussion. It is to be noted that discussion may not be appropriate or effective for any given topic.

Okorie (2009) pointed out that as a guideline for the use of discussion method, during the discussion period, all the students should be active and the teacher should see that no small group is allowed to monopolize the discussion. Michael (2014) also maintained that the subject under discussion must be within the reach of the participants. He meant that the discussion should be centered on issues that are familiar. Marsh (2010) observed that any class discussion must be purposeful in order to keep it from degenerating to the level of idle talk or conversation. This is to say the discussion of any class must be about something pertinent to the work of the course.

### Self-Concept and Academic Achievement

The study of self-concept has awakened growing interest in psychology research in recent years. According to Clark (2009), self concept is considered to comprise various dimensions, areas or facets of academic and non-academic components. Academic self-concept is then divided into self concept in particular subject areas (biology, maths, English and so on) while non-academic is divided into social, emotional and physical self concepts. Marsh (2010) later tested the academic self-concept portion of the model and concludes that the model is supported when it is limited to self-concepts in academic core subjects such as biology, English and mathematics.

Self-concept, according to Hamadrek (2001) in Machurgo (2014) is the set of perceptions or reference points that the subject has about himself/herself; the set of characteristics, attributes, qualities and deficiencies, capacities and limits, values and relationships that the person knows to be descriptive of herself/himself and which he/she perceive as data concerning his/her identity. He explains further that it is a set of knowledge and attitudes that we have about ourselves; the perceptions that the individual assigned to himself and characteristics or attributes that we use to describe ourselves. It is understood to be fundamentally a descriptive assessment and has a cognitive nuance.

### Empirical Studies

This segment of the study x-rayed empirical studies as indicated in the work. Moore (2005) conducted an experiment on the impact of collaborative learning and lecturing method on first year non-Asian ethnic minority engineering students on calculus. In engineering department, University of Sri-

Langa. The experiment was to specifically, determine the retention level of fresh non Asian students in the calculus class. The findings of the study revealed that the collaborative learning was more successful and produce positive result than the lecture learning method in improving retention and academic success rate away non-Asian fresh engineering students.

Ugwanyi (2008) carried out a study to determine the effect of collaborative learning and expository teaching methods on students' achievement in economics in selected secondary Schools in Nsukka in Enugu State. The study employed a quasi-experimental design and the entire SS 2 Economics students in the selected public Senior Secondary Schools within the study area constituted the population of the study. The researcher administered pretest to students in order to ascertain the entry level of the subjects. After the treatment, a posttest was administered to the students in order to ascertain the effect of the treatment. The purpose of the study was to find out the extent to which collaborative learning and expository teaching methods actually affected performance in Economics with a view to recommending a better opinion. Three hypotheses were formulated and tested at 0.05 level of significance and analysis of variance (ANOVA) test was used to verify the initial abilities of the students in Economics before they were treated with either collaborative learning or expository teaching methods. It was revealed that sex has a significant effect on performance of students, as female students performed significantly better than their male counterparts, the findings of the study were that collaborative learning in economics was more effective than the commonly used expository method.

### **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) was used to test the hypotheses at 0.05 level of significance.

**Data analysis and Results**

**Hypothesis One**

There is no significant influence in academic achievement of students with low and high self concepts taught using collaborative learning.

**Table 1: Analysis of Covariance (ANCOVA) of the Mean Performance of the High and Low Self Concept of Students Taught with Collaborative Learning (N=50)**

Source of variation	Sum of square	df	Mean Square	F-cal	F-crit	Ho Decision
Between Groups	6421.41	1	6421.41			
Within Groups	643.34	48	13.40	479.21	4.04	P<0.05 Reject
<b>Total</b>	<b>7064.75</b>	<b>49</b>				

**Significant at P< 0. 05 alpha level, critical F = 4.04, df = 1 and 48**

From the result the computed F- test gave an F-ratio of 479.21 given 1 and 48 degrees of freedom at the 0.05 level of significance while the critical F value remains 4.04. The null hypothesis was therefore rejected. This implies that the high self concept group is superior over the low self concept group using collaborative method. The result of the data analysis confirms the result obtained from the mean and standard deviation of both groups. The high self concept group is superior over the low self concept group using the collaborative method.

**Hypothesis Two**

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

**Table 2: Analysis of ANCOVA on the Mean Performance of High and Low Self Concept Students Taught with Discussion Method (N= 50)**

Source of variation	Sum of Square	df	Mean Square	F-cal	F-crit	Ho Decision
Between Groups	2101.96	1	2101.96			
Within Groups	2759.16	48	57.48	36.6	4.04	P<0.05 Reject Ho
<b>Total</b>	<b>4861.12</b>	<b>49</b>				

**Significant at P<0.05 alpha level, critical f=4.04, df = 1 and 48**

The analysis of covariance (ANCOVA) was computed to establish the mean difference between the high and low self concept groups taught using the discussion method. The calculated F- test gave an F- ratio of 36.6 at 0.05 alpha level of significance, given 1 and 48 degrees of freedom, while the critical F-value remains at 4.04. Since the calculated F is greater in value than critical F- value, the null hypothesis was therefore rejected. The researcher therefore concluded that the high self concept students made more gains than the low concept students when the discussion learning method is employed.

**Discussion**

The result of the data analysis in table 1 which sought to find out the influence in academic

achievement of students with low and high self concepts taught using collaborative learning was significant due to the fact that the calculated F-ratio of 479.21 was greater than the critical F value of 4.04 at 0.05 alpha level of significance. This implies that the high self concept group is superior over the low self concept group using collaborative method. The result therefore is in agreement with the research finding of Hamadrek (2001) in Machurgo (2014) who stated that self-concept is the set of perceptions or reference points that the subject has about himself/herself; the set of characteristics, attributes, qualities and deficiencies, capacities and limits, values and relationships that the person knows to be descriptive of herself/himself and which he/she perceive as data concerning his/her identity. The null hypothesis was therefore rejected while the alternative was upheld.

The data analysis in table 2 which sought to find out the difference in academic achievement of students with low and high self concept taught using discussion method was significant due to the fact that the calculated F- ratio of 36.6 was greater than the critical F-value of 4.04 at 0.05 alpha level of significance. This means that that the high self concept students made more gains than the low concept students when the discussion learning method is employed. The result is therefore in compliance with the study of Riclin, (2007) who postulated that discussion is important as a learning process because it is a way of considering various facets of a problem and also because it lays the ground work for many discussion situations in which young people and adult are constantly taking part. Hence, the null hypothesis was rejected while the alternative was retained.

#### **Conclusion**

The study concluded that neither high nor low self concept groups were able to make any impressive gain when lecture method was used. This implies that lecture method did not create much impact in either of the groups. The high self concept group or students were able to perform better than their low self concept counterparts when collaborative and discussion methods were used. The superiority of this result was proven when analysis of covariance (ANCOVA) was used to analyze the result. The study further concluded that there is significant influence in the academic achievement of students with low and high self concepts taught using collaborative learning. Also, there is significant difference in the academic achievement of students with low and high self concept taught using discussion method.

#### **Recommendations**

Based on the conclusion of the study, the following recommendations are made.

1. Students should always be encouraged by the class teachers and other stakeholders to develop high self concept towards social studies as a subject.
2. There is a strong need for teachers to always use the method most appropriate or a combination of teaching method, especially when using collaborative method in teaching certain concepts in social studies.

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