
EFFECTS OF GROUP-INVESTIGATION LEARNING
TECHNIQUE ON STUDENTS ACHIEVEMENT IN SOCIAL
VALUES IN SOCIAL STUDIES IN, JOS, PLATEAU STATE

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Abstract

The continuous rise in the rate of social vices, social disturbance, injustice, ethnic intolerance creating cracks in the very foundation sustaining the unity of Nigeria calls for a pedagogical inquiry that will imbue in the learners a spirit of values re-invention and re-orientation. Hence, this paper investigated the effects of group-investigation learning technique on students' achievement in social values in Social Studies in Jos Plateau State. The study was guided by three research questions and two hypotheses. The quasi-experimental research design, specifically, the non-equivalent group pre-test–post-test control group design was employed for the study. The population of 6,320 (M=3,275, F=3,045) junior secondary II students of both public and private schools in Jos North. 174 students were selected as found in four intact classes. Social Studies Achievement Test (SSAT) with 20 multiple choice questions was prepared based on the content of social values, was used for data collection. The research questions were answered using the Mean and t-test of independent sample used to test the hypotheses formulated. After treatment, it was found that students in the experimental group had a

higher achievement mean score in social values. The study recommended that Social Studies Educators should use a pragmatic teaching technique such as group-investigation in teaching Nigerian social values such as honesty, equity, social justice, tolerance to help in achieving the Nigerian project of indissolubility.

Keywords: Achievement, Group-investigation, Social Studies, Social Values.

Introduction

Social Studies as a subject offered in Nigerian schools is one of the compulsory subjects at primary up to junior secondary which seeks to nurture responsible citizenship in students and this is made possible through various teaching and learning methods, strategies and techniques used to impact knowledge. Thus, the process is a complex one of cooperation and communication between the teacher and the students on one side, and between students to students, as well as students to materials. This enables the students to acquire new skills, values, attitudes, appreciations, knowledge and understanding of concepts, facts, generalizations and societal issues (Najmonnisa & Haroon, 2014). Social Studies is a social subject that is more interdisciplinary and more concerned with skills and development and more normative. Adewuya (2002) defined Social Studies as an integration of experiences and knowledge concerning human relations for the purpose of citizenship education. This view is also supported by Onyabe (2003) who argued that Social Studies is a field of study that deals with the integration of knowledge, experiences, and the effective use of resources for the purpose of citizenship education. Therefore, it can be said that the contributions of Social Studies to nation building are enormous which include among others, patriotism, loyalty, respect for one another, friendliness and tolerance which help to build in the young ones' values for national development.

Furthermore, the prime importance of Social Studies is the ability to help students achieve appropriate relationships with peers and teachers to acquire effective social knowledge for life affairs.

Application of values, attitudes, skills and knowledge (VASK) in teaching is vital because Social Studies contribute in developing the spirit of patriotism, loyalty, spirit of fair play, justice, national consciousness, preserving the country's national heritage and becoming useful citizens to the nation and the individual person. The Nigerian government on the other hand, has equally made conscious efforts towards achieving Social Studies objectives by making the subject compulsory at the primary and junior secondary level, provision of teacher textbooks and materials to enhance students' participation in teaching/learning process, and the continuous review of the curriculum to meet the contemporary needs of the society and improve students' achievement.

Achievement is success in any field. Scholastic achievement is one in which the success of students performance in learning is brought out. This success is measured by means of scores awarded to test items in different subjects and varies from student to student and teacher to teacher. Academic achievement thus, refers to the level of performance in school, accomplishment or success in school". However, academic achievement is the core of educational growth (Aremu & Oluwole, 2001). Academic achievement of students therefore consists of scores obtained from teacher-made test or examination. Several factors have been identified as affecting students' academic achievement. Some of these include: students' family background, parental discipline degree of self-efficacy and anxiety (Aremu & Adika, 2001), gender and school location. Another emerging factor of academic achievement is the method as well as technique the learner is exposed to (Sentamu, 2003). Hence, it is expedient to look for alternative means of improving students' achievement in social values in Social Studies.

Never the less, the achievement of students in social values as contained in junior secondary II Social Studies syllabus is still a worrisome issue to the specialists. This is could be due to the utilization of conventional teaching-learning methods, strategies, and techniques whereby Social Studies teachers stand in front of students, talking and rendering students into passive listeners is another issue at stake. These approaches to teaching-learning seem to be negative to Social Studies lessons accomplishment (Ige &

Aremu, 2005). With Ige and Aremu's submission, no meaningful learning can take place in such situation. Perceiving the possible link between students' performance in Social Studies and teaching approaches, it therefore, befits on Social Studies teachers to device or utilize teaching strategies and techniques among other factors, as the center piece of improving Social Studies learning outcomes in classrooms as well as the students' approaches to issues of social values outside the classroom.

In an effort to make teaching of Social Studies more students' friendly and reduce rote-learning among junior secondary students, the researcher investigated an alternative by looking at group-investigation cooperative-learning technique. Group investigation occurs when students work together in small groups and are rewarded for their collective accomplishments, which facilitates interdependence, and involves the entire spectrum of learning activities in which groups of students work together in or out of classroom. It can be as simple and informal as pairs working together in a Think-pair-share procedure, where students consider a question individually, discuss their ideas with one another and reach a consensus answer, then share the results with the entire class. It implies students learn more materials, feel more comfortable about them and are motivated to learn, and are more accepting of differences among peers. Hence, the need to investigate the effects of group-investigation learning technique on junior secondary two students achievement in social values in Social Studies, in Jos North Local Government Area of Plateau State, Nigeria.

The fluctuating academic achievement in Social Studies social values among junior secondary school students in Jos, Plateau State has raised concerns not only to specialists in the area of Social Studies but to educationists, parents, stakeholders and the entire society. This dawdling achievement of students in Social Studies social values has raised lots of questions on the extent to which Social Studies has effected desirable change in the behaviour of students' in junior secondary schools. The concern has prompted the doubt on the efficacy of the teaching strategies and techniques utilized by Social Studies teachers in classroom instructions which achievement in the affective domain is dependent upon.

Moreover, the inefficacy of these teaching strategies and techniques is the manifestation of jungle justice, disrespect for constituted authority, in-adherence to rule of law, electoral malpractice, disobedience to school rules, loyalty to ethnic supremacy over state sovereignty, thuggery, terrorism, kidnapping among other social vices. However, the researchers are fascinated by the increasing poor achievement and unabated social vices in the Nigerian society sought to find out whether group-investigation learning technique will improve students' achievement in social values in Social Studies.

Purpose of The Study

The aim of the study is to investigate the effects of group-investigation learning technique on students' achievement in social values in Social Studies in Jos Plateau State. The specific objectives are;

1. determine the effect of group-investigation learning technique on achievement of JS II students on social values in Jos, Plateau State
2. determine the effect of group-investigation learning technique on achievement of JS II students on social values based on gender
3. find out whether there will be any significant difference between the control and experimental group before and after intervention.

Research Questions

They sought to answer the following research questions:

1. what is the pre-test and post-test mean scores of the experimental and control groups on social values in Jos, Plateau State?
2. what is the mean scores of male and female JS II students on social values before and after exposure to group-investigation learning technique in Social Studies?
3. to what extent will the mean score of JS II students on social values differ between the experimental control groups before and after intervention?

Hypotheses

The following hypotheses were tested at 0.05 level of significance:

Ho1. There is no significant difference between the pre-test and post-test mean score on social values in the control and experimental groups.

Ho2. There is no significant difference between the mean score of male and female JS II students' taught social values in Social Studies with group-investigation learning technique

Methods

This study adopted a quasi-experimental research design. Specifically, the non-equivalent group pre-test–post-test control group design, in which intact groups were assigned to one of the experimental and control groups. The choice of the design was because the school did not allow for the split of the class for the experimental. The population of the study consisted of all JS II Social Studies students in Jos North, Plateau state. There are 22 Junior Public Secondary Schools and 151 Private Secondary Schools with JS II students' population of 6,320 (M=3,275, F=3,045). The sample size is 176 students as found in two (2) intact classes for each school assigned to the experimental and control group respectively. The sampling technique used in the study was simple random sampling technique. The instrument was Social Studies Achievement Test (SSAT) with 20 multiple choice questions that was prepared based on the content of social values.

The experimental procedure spanned for three (3) weeks. During the first week, the experimental group teachers received training designed to equip them with the necessary instructional techniques for implementing the treatments. The control group teachers engaged as assistant where by the researcher was given instructions on how to teach, following the group-investigation learning technique. 2 intact classes of one hundred and seventy six JSS II Social Studies students were randomly assigned into two groups of two classes each. One of the groups [N=99] was randomly assigned were taught social values in Social Studies using Group-investigation. The other group [N=77] were taught social values in

Social Studies using Traditional Lecture Method. The group taught social values with group-investigation learning technique was the experimental group while the group taught social values with traditional lecture method was the control group. Students in both the experimental and control groups were then given pre-test two weeks prior to the initiation of Group-investigation Learning Technique and Traditional Lecture Method. Here, the test scores were used to determine the existing levels of Social Studies knowledge of social values among students prior to the commencement of the experiments. The research assistants [regular Social Studies teachers] administered the test to the groups during the continuous assessment periods. At the end of the three weeks, the tests were repeated following the same procedures as in the pre-test. The essence of the post-test was to determine the achievement gains of the students as a result of participating in the experiments. All the research questions were answered using the Mean method, and t-test used to test the hypotheses formulated.

Results

Research Question One: What is the pre-test and post-test mean scores of the experimental and control groups on social values in Jos, Plateau State?

Table 1: Pretest and posttest Achievement Mean Scores of JS II Students on Social Values in the experimental and Control Groups

Group	Before			After		\bar{x} - Difference
	N	Mean	SD	Mean	SD	
Experimental	99	47.58	25.52	76.97	22.34	16.71
Control	77	38.73	22.88	60.26	25.76	

Table 1 showed the pre-test and post-test mean score of JSS two students on social values in the experimental and control groups. From the result, the post-test mean score ($\bar{x} = 76.97$, $SD = 22.34$) is higher than the pre-test mean score ($= 47.58$, $SD = 25.52$) with a mean difference of 29.39, indicating that there was improvement

in the achievement of students after treatment. Also, for the control group the mean achievement score was 38.73 and a standard deviation of 22.88 for the pretest. However, the mean achievement score of students in the control group for the posttest rose to 60.26; SD = 25.76. The findings showed that students in the experimental group had a higher achievement mean score in social values (76.97) after treatment using group investigation learning technique as against those in the control group (60.26) who were not given treatment with a mean difference of 16.71.

Research Question Two: What is the mean scores of male and female JS II students on social values before and after exposure to group-investigation learning technique in Social Studies?

Table 2: Achievement Mean Scores of Male and Female JS II Students Before and After Exposure to Group Investigation Learning Technique

Gender	Test	N	\bar{x}	SD	\bar{x} diff
Male	Pre-test	45	37.02	20.77	43.67
	Post-test	45	80.69	14.08	
Female	Pre-test	54	40.76	19.77	38.43
	Post-test	54	79.19	13.28	

Table 2 showed the achievement mean scores of male and female students before and after exposure to group investigation learning technique in Social Studies social values. From the result, the pre-test mean score for the male was 37.02, with a post-test mean score of 80.69, the differential mean was 9.05. Also, the pre-test achievement mean score for female was 40.76 and a post-test achievement mean score of 79.19, indicating that there was improvement in the post-test for both male and female students after treatment, although male achievement better than female students with a mean differential of 1.5. This implies that group

investigation learning technique improves students' achievement in Social Studies social values.

Research Question Three: To what extent will the mean score of JS II students on social values differ between the experimental control groups before and after intervention?

Table 3: Difference in the Performance Scores of JS II Students in The Control and Experimental Group Before and After Intervention

Group		N	\bar{x}	SD	\bar{x} diff
Experimental	Pre-test	99	39.06	20.21	40.81
	Post-test	99	79.87	13.60	
Control	Pre-test	77	32.88	21.52	26.48
	Post-test	77	59.36	14.57	

Table 3 showed the pre-test and post-test performance mean scores of students in the control and experimental groups. The pre-test and post-test performance mean scores of the experimental group were 39.06 and 79.87 respectively. Also, the pre-test and post-test performance mean scores of students in the control group were 32.88 and 59.36. The mean difference for pre-test in the two groups is low (6.18) showing no much difference before exposure to treatment, while the mean difference for post-test in the two groups is higher (20.51). This implies that after intervention the experimental group performed better than the control group in Social Studies.

Hypothesis One: There is no significant difference between the pre-test and post-test mean score on social values in the control and experimental groups.

Table 4: Summary t-test result on the Pretest-Posttest Mean Score on Social Values in the Experimental and Control Groups

Group	Test	N	\bar{x}	SD	df	T	p-value	Decision
Experimental	Pre-test	99	47.58	25.52	98	-9.55	.000	Significant
	Post-test	99	76.97	22.34				
Control	Pre-test	77	38.73	22.88	76	-6.45	.000	Significant
	Post-test	77	60.26	25.76				

Table 4 showed the t-test result on the pre-test and post-test mean score on social values of JS II students' in the experimental and control groups. The result for experimental group yielded $t(98) = -9.55$, $P < 0.05$. Since the P value of 0.00 is less than the 0.05 level of significance, the null hypothesis was rejected. It was concluded that there is a significant difference between the pre-test and post-test mean score of JS II students on social values in the experimental group in Social Studies. Also, the result for control group yielded $t(76) = -6.45$, $P < 0.05$. Since the P value of 0.00 is less than the 0.05 level of significance. The null hypothesis was rejected. It was concluded that there was a significant difference between the pre-test and post-test mean score of JS II students on social values in the experimental and control groups in Social Studies. This implies that there was improvement in both groups, but the experimental group performed better than the control group on social values.

Hypotheses Two: There is no significant difference between the mean score of male and female JS II students' taught Social Studies social values with group-investigation learning technique

Table 5: t-test Result on Difference Between the Mean Score of Male and Female Students Exposed to Group Investigation Cooperative Learning Technique in Social Studies

Gender	N	\bar{x}	SD	Df	T	p-value	Decision
Male	45	80.69	14.08	98	.55	.586	Accept HO
Female	54	79.19	13.28				

The t-test for independent sample was used to determine if a significant difference exists in the mean score of male and female Social Studies students exposed to group investigation cooperative learning technique. The mean score for male ($= 80.69$, $SD = 14.08$) is almost same with that of female, Social Studies students ($= 79.19$, $SD = 13.28$). Also, the result yielded $t(98) = .55$, $P > 0.05$ since the P value of $.586$ is greater than 0.05 level of significance, the null hypothesis was retained, it was concluded that there is no significant difference in the mean score of male and female JS II students' taught Social Studies social values with group-investigation learning technique.

Discussions

The finding of the first research question revealed that students in the experimental group had a higher mean score in social values after treatment using group investigation learning technique as against those in the control group who were not given treatment. The finding of the study corroborates with Rasta (2010) study on the effect of applying group investigation method on students' achievement in reading comprehension and found that the scores of the students in the experimental group were significantly higher than the scores of the students in the control group. The finding is not unexpected because when students are allowed to work in group, it will result to promotive interaction, which may be defined as individuals encouraging and facilitating each other's efforts to achieve, complete tasks, and produce in order to reach the group's goals.

The finding of the second research question which sought to find out whether any difference exist between the mean scores of male and female JS II students on social values before and after exposure to group-investigation learning technique in Social Studies, the study revealed that there was improvement in the post-test for both male and female students after treatment, although male students achieved better than female students. The finding contradicted Garduno (2003) who found no statistically significant difference in students' performance on self-efficacy in single or mixed gender groups. However, the affirmed that males thrive better in a collaborative environment while females excel in a competitive classroom setting.

The research question three tried to find out whether there will be any significant difference between the control and experimental group before and after intervention. The finding revealed that after intervention the experimental group performed better than the control group in social values in Social Studies. The finding supported Reza, Abozar, Ali and Akbar (2013) assertion that group-investigation learning has a significant effect on students' academic achievement in social skills of students exposed to it.

The first hypothesis sought to test the significant difference between the pre-test and post-test mean score on social values in the control and experimental groups. It was revealed that there was a significant difference between the pre-test and post-test mean score of JS II students on social values in the experimental and control groups in Social Studies. This implies that there was improvement in both groups, but the experimental group performed better than the control group on social values. The finding corroborated Adesoji, Ayodeji, and Ochanya (2015); Ige and Gbemuga (2017), these researchers found that when students learn Chemistry concepts like periodicity and the rate of chemical reactions through group investigation teaching technique, their mental abilities determine the effect of the teaching technique on their achievement and improvement in conceptual understanding of selected concepts in the group investigation learning group over those in the conventional group.

The outcome of the second of hypothesis revealed that there was no significant difference in the mean score between male and female students exposed to Social Studies social values using group investigation learning technique. This implies that group investigation learning technique improves students' achievement in Social Studies social values. Thus, the result proved beyond reasonable doubt that gender did not interact and influence the posttest mean score of students exposed to group investigation learning technique in Social Studies social values. The result was not a surprise to the researchers because the issue of gender difference in academic performance is yet undetermined in the academic cycle, making it an issue of controversy among scholars in the academic field. The finding is in agreement with Efe and Khalil (2016) that there was no significant difference in the academic performance of both male and female students exposed to cooperative learning instruction in teaching chemistry.

Conclusion

In order to assist students to think critically and support issues of multiculturalism, peace and social justice, equity and diversity, Social Studies Educators need to intentionally challenge the students and their beliefs using thought provoking teaching technique such as group-investigation that will help in achieving the social values behind the introduction of Social Studies into the Nigerian school curriculum. The study concluded that students in the experimental group had a higher achievement mean score in social values after treatment using group investigation learning technique as against those in the control group and that there is no significant difference in the mean score of male and female JS II students' taught Social Studies social values with group-investigation learning technique.

Recommendations

Based on the findings from the study, it was recommended that Social Studies Educators should use a pragmatic teaching technique such as group-investigation in teaching Nigerian social values such as honesty, equity, social justice, tolerance to help in achieving the Nigerian project of indissolubility. Social Studies educators also need

to challenge and assess institutions of learning, students and staff in the support on building strong social values to promote the unity of Nigeria. Only then can Social Studies help in restructuring or re-orientating the Nigerian child at both the introductory levels as well as at the graduate level of school system.

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