

Effects of Test Feedback on Junior Secondary School Students' Achievement in Social Studies in Bekwarra Local Government Area of Cross River State

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Abstract

The study investigated the effects of test feedback on junior secondary school students' achievement in Social Studies in Bekwarra, Cross River State, Nigeria. The study was guided by two objectives, two research questions and two hypotheses and employed the quasi-experimental research design. Specifically, the non-equivalent pretest-posttest control group design, since intact classes was employed as experimental and control groups without randomization. The population consists of is 2,215 JS II students from 7 public secondary schools and two intact classes were purposively sampled. The experimental group had 94 students and the control group with 92 students. Social Studies Achievement Test (SSAT) was used for data collection and the result revealed that there was a significant effect of test feedback on students achievement in Social Studies and that male students performed slightly better than their female counterparts in Social Studies when exposed to test feedback. The study concluded that test feedback is an effective instructional in tool in fostering significant improvement on the achievement of students in Social Studies.

Keywords: Achievement, Bekwarra, Test Feedback, and Social Studies

Introduction

Education is a weapon that exposes the individual to social advancement and can build significant analytical and social skills that will enable the individual to make good choices in life and pursue responsible life styles. Access to quality basic education is a fundamental human right for every Nigerian child. Education is thus, a systematic process through which an individual is equipped to acquire knowledge, experience skills and sound attitude that is needed for the development of civilized and cultured individuals capable of solving the various problems confronting man. This may be one of the reasons why the Nigerian National Policy on Education (FRN, 2014) declares that, education from the primary to junior secondary level is designed, to inspire students to desire for self-improvement and to achieve excellence, to

raise a generation of people who can think for themselves, respect the views and feelings of others, respect the dignity of labour, appreciate those value specified under the nation's broad national goals and live as good citizens.

The teaching of Social Studies can only become meaningful and attractive to the students, when both the theoretical and practical aspects of the curriculum are comprehensively emphasized in the classroom so that, students can easily apply the knowledge gained to solve personal and societal problems. Indeed, the National Policy on Education (FRN, 2014) states that, the importance of studying Social Studies is because the subject possesses the potential of bringing about some educational advantages including high expectation for nation building, patriotism, loyalty, and respect for one another, friendliness and tolerance that will help to build in the students' values for national development (Egan, & Effiom, 2022). This could be the reason why some concepts and topics in Social Studies including culture, social issues and problems, values, science and technology, people and the environment among others can be perceived as difficult to learn by junior secondary school students. This might have contributed to poor Social Studies achievement and requires urgent attention to address if the objectives of Social Studies is to be achieved.

Social Studies achievement is the ability of students to study and remember facts and being able to communicate same knowledge orally and in written form even in an examination condition (Egan, Ariya, Oti, & Umaru, 2023). The seeming poor achievement of students' in Social Studies is a source of worry to stakeholders in education. For example, parents are worried that Social Studies is a core subject at the junior secondary school level and students' continued failure in the subject may not allow them to be promoted to the next class. Also, the Nigerian society is worried that students' poor achievement in Social Studies may be attributed to lack of proper testing which may also affects the students socialization in school and in the society, values re-orientation, increase in moral decadence in the society among other vices.

The level of students' involvement in teaching-learning process in Social Studies classroom otherwise known as students' classroom participation is becoming an issue of concern to stakeholders in Social Studies education, the educational sector and the researcher in particular. Classroom participation involves a variety of activities and can be in different forms, like students' simple questions and explanations. Also, the duration of participation also varies from individual to individual; it can take a few moments or a long time. Wade (2014) opines that, ideal class discussion require participation, interest, learning of all the students and absorbing others' explanations and information. In this context, distinctive social and cultural tenets, contextual, circumstantial experiences, and previous information and assumptions can be brought to discourse by the teacher-students and by doing this, the students' knowledge, abilities and dispositions required for independent problem solving might be facilitated and thereby, enhancing the students' achievement in the subject.

The need to enhance students' academic achievement, through means capable of breaking gender barriers in Social Studies classroom instructions. For example, a study by Yara (2017) reveals that, males achieved higher than females in civic. Yara findings also show that there is no significant difference in the achievement of males and females students in civic education. Hence, this study will seek to find out whether gender will have any effect on students' achievement after exposure to test feedback in Social Studies.

Test feedback is the use of quality assessment tools to gather information on students learning progress and the subsequent use of such information derived from this assessment to improve teaching and learning instructions. The essence of using tests feedback as an

evaluation tool during the instructional process is to guide, direct and monitor students' learning and progress towards attainment of subject objectives. Therefore, test feedback is a technique designed to identify students' learning difficulties with a view to providing remediation measures to enhance the academic achievement of majority of students.

In Social Studies teaching-learning process, one of the factors causing boredom based on the researcher's experience, is the need to memorize, in a short time, substantial amounts of information concerning topics and sub-topics taught within the term. This is because many secondary schools still use traditional teaching methods where the student receives information passively during a series of theoretical classes in which there is little student participation, consequently hindering meaningful learning and the development of critical and reflective thinking. Also, an additional challenge as related to the traditional teaching method is the use of tests at the end of a series of lessons, since during the teaching-learning process the students are unable to identify doubts and correct concepts that have been misunderstood, only to be confronted with such unfamiliar concepts at the time of the test. Therefore, there is a need to examine the effects of test feedback technique on classroom participation and achievement in Social Studies in Bekwarra Local Government Area of Cross River State.

Objectives of the Study

The aim of the study was to examine the effects of test feedback on junior secondary school students' achievement in Social Studies in Bekwarra Local Government Area of Cross River State. Specifically, the objectives of the study were to;

1. determine the achievements of junior secondary II students in Social Studies
2. determine if test feedback on junior secondary II students will improve their Social Studies students achievement

Research Questions

The following research questions guided the study:

1. What are the achievements mean scores of junior secondary II Social Studies students' in experimental and control groups?
2. What is the achievement mean scores of male and female JS II Social Studies students' after exposure to test feedback?

Hypotheses

The following hypotheses were tested at 0.05 level of significance:

1. There is no significant difference between the post-test achievement mean scores of the experimental and control groups in Social Studies
2. There is no significant difference between in the achievement mean scores of male and female Social Studies students' after exposure to test feedback

Methods and Materials

The study adopted the quasi-experimental research design, specifically the non-randomized pre-test post-test control group design. The population for this study comprised of all Junior Secondary II (JSS) students and teachers in Bekwarra Local Government Area of Cross River State, which is 2,215 JSS II students. Two intact classes within Bekwarra Local Government Area were used for the study. The classes were purposively assigned to either of the experimental and control group. The experimental group had 94 students and the control group with 92 students. The instrument used for data collection was Social Studies Achievement Test (SSAT). The SSAT contained two sections; A and section B. Section A consists of demographic data of the respondents such as name of school, class, and gender. The

section B was a multiple-choice test consisting of 50 items with four options lettered A – D. the SSAT was validated by two experts and the reliability coefficient of 0.88 was obtained. The research questions were answered using descriptive statistics such as mean, while inferential statistics was employed in testing the hypotheses one and two. Specifically, the Analysis of Variance (ANCOVA) using the Statistical Package for the Social Sciences (SPSS) version 2.5. at .05 level of significance.

Results

Research Questions One

What are the achievements mean scores of junior secondary II Social Studies students' in experimental and control groups?

Table 1

Pre-test and Post-test Achievement of JSII Social Studies Students in the experimental and Control Groups

Group	N	Pre-test		Post-test		Mean Gain	\bar{x} - difference
		Mean	SD	Mean	SD		
Experimental	94	52.68	11.37	76.59	12.56	23.91	20.44
Control	92	51.21	16.37	54.68	12.94	3.47	

Table 1 revealed the pre-test and post-test mean score of JS II students in Social Studies in the experimental and control groups. From the result, in the experimental group the post-test mean score ($\bar{x} = 76.59$, $SD = 12.56$) is higher than the pre-test mean score ($\bar{x} = 52.68$, $SD = 11.37$) with a mean gain of 23.91, indicating that there was improvement in the achievement of students after treatment. Also, for the control group the mean score was 51.21 and a standard deviation of 16.37 at the pretest. However, in the post-test the mean score of students rouse to 54.68; $SD = 12.944$. The findings show that students in the experimental group had a higher mean score after treatment using test feedback than those in the control group who were not given treatment with a mean difference of 20.44. This means that at the pre-test the students in both groups had almost same achievement, but after the intervention the experimental group achieved better than the control group.

Research Question Two

What is the achievement mean scores of male and female JS II Social Studies students' after exposure to test feedback?

Table 2
Result of Post-test Male and Female Students Achievement mean scores in Social Studies in the Experimental Group

Group	Gender	N	Mean	SD	\bar{x} - Difference
Experimental	Male	42	79.19	9.95	4.71
	Female	52	74.48	14.07	

Table 2 shows the mean and standard deviation result of post-test mean scores of male and female social studies students' mean achievement scores in the experimental group. The mean score for male is 79.19 and a standard deviation of 9.95 and female had a mean score of 74.48 and a standard deviation of 14.07 with a mean difference of 4.71. This implies that male students performed slightly better than their female counterparts in Social Studies when exposed to test feedback.

Hypothesis One

There is no significant difference between the post-test mean achievement scores of the experimental and control groups in Social Studies

Table 3
ANCOVA Result on Posttest Achievement Mean Scores of Experimental and Control Groups

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	22432.384 ^a	2	11216.192	68.910	.000	.430
Intercept	49133.493	1	49133.493	301.865	.000	.623
Pre-achievement	132.438	1	132.438	.814	.368	.004
Group	22057.954	1	22057.954	135.519	.000	.425
Error	29786.240	183	162.766			
Total	856374.000	186				
Corrected Total	52218.624	185				

a. R Squared = .726 (Adjusted R Squared = .721)

Analysis of Covariance (ANCOVA) was conducted to determine if a significant difference exists in the posttest achievement mean score of social studies students in experimental and control groups. Table 6 shows that $F(1,183) = 135.52$, $p < 0.05$, partial $\eta^2 = .425$, since the p -value of 0.000 is less than 0.05 level of significance with an effect size of 43%, the null hypothesis was rejected, indicating that there was a significant effect of test feedback on students achievement in social studies. The result further revealed an adjusted R squared value of .423 which means that 42.3 percent of the variation in the dependent variable

which is achievement is explained by variation in the treatment, while the remaining is due to other factors not included in this study. The Sidak post hoc test in Table 7 confirms that the corrected difference between experimental and control groups was statistically significant, $(I - J) = 21.81$. Hence, we can say that test feedback can help students' improve their achievement in Social Studies.

Hypothesis Two

There is no significant difference between the achievement mean score of male and female Social Studies students' after exposure to test feedback

Table 4
ANCOVA Result on Posttest Achievement of Experimental Group in Social Studies based on Gender

Source	Type III Sum of Squares	Df	Mean Square	F	P-value	Partial Eta Squared
Corrected Model	523.554 ^a	2	261.777	1.684	.191	.036
Intercept	23367.155	1	23367.155	150.284	.000	.623
Pre-test	8.192	1	8.192	.053	.819	.001
Gender	502.883	1	502.883	3.234	.075	.034
Error	14149.265	91	155.486			
Total	566009.000	94				
Corrected Total	14672.819	93				

a. R Squared = .036 (Adjusted R Squared = .014)

The data were subjected to analysis of covariance (ANCOVA) for experimental group having two levels of gender (male & female). The main effect of male yielded ($\bar{X} = 79.19$; $SD = 9.95$) and female ($\bar{X} = 74.48$; $SD = 14.07$); $F(1, 91) = 3.23$, $P > 0.05$, $\text{partial } \eta^2 = .034$. Since the p-value of .075 is greater than the 0.05 level of significance, the null hypothesis was retained. This indicates that the achievement of male students in Social Studies do not significantly differ from those of female students. It means that students' achievement in Social Studies is not affected by gender.

Discussion

The objectives that sought to find out the effects of test feedback on the achievement of junior secondary II students in Social Studies in the experimental and control groups revealed that test feedback was effective in improving the achievement of JS II students in Social Studies as indicated in the post-test result that there is significant difference between the achievements of students in the experimental and control groups in Social Studies. Finding of the study was in agreement with Ukoh and Dibie (2021) study that found a significant relationship between classroom participation and students' achievement in Physics and further added that classroom participation was the only variable that predicted students' achievement. Though, an earlier study conducted by Egan, Ariya, Oti, and Umaru (2023) contended that peer influence has stronger significant positive effects on students' academic achievements than testing and instructional techniques adopted in Social Studies classroom. However, the

outcome of Fan, Odidi and James study was not a product of experiment like that of Egan, Ariya, Oti, and Umaru (2023) and the current study.

The result was subjected to hypothetical test to find out whether any significant difference will exist across gender line. It was found that test feedback is effective in improving students' achievement across gender groups. The result indicated that the achievement mean scores of male students did not significantly differ from that of the female students in Social Studies. The result was not unexpected as evidence from empirical review revealed that there were significant differences in the mean scores of students' achievement in mathematics and study habits as a result of exposing students to varying test frequencies (Oluwatomi, & Olaotan, 2022) and gender is not a significant factor when planning to improve study habits and achievement using testing. This is an indication that test feedback is effective instructional tool, because test feedback help students in gaining knowledge about Social Studies concepts, hence it is workable tool which are good for educational purposes that is capable in developing in the students, a sense of nature and an understanding of their world and environments which is the core theme of Social Studies.

Conclusion and Recommendations

The study concluded that test feedback is an effective instructional in tool in fostering significant improvement on the achievement of students in Social Studies. significant difference was found between the post-test mean achievement scores of the experimental and control groups in Social Studies. More so, it was found that the achievement of male students in social studies do not significantly differ from those of female students. The study therefore recommends that, 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 technique such as the test feedback that will help in achieving the social values behind the introduction of Social Studies into the Nigerian school curriculum.

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