

The Effect of Formative Assessment Strategy on Students' Academic Achievement in Social Studies in Nasarawa State Public Junior Secondary Schools. Implication for Counselling.

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Abstract

The study examined the effect of formative assessment strategy on students' academic achievement in social studies in Nasarawa state public junior secondary schools. The study adopted quasi-experimental research design. The population of the study comprises 46,532 JSS2 students in 370 public junior secondary schools in Nasarawa State, Nigeria. The sample for the study comprised of two intact classes with 128 JSSII Students. The instrument used for data collection was a 40-item Social Studies Achievement Test (SSAT). The instrument was subjected to the scrutiny of experts in social studies as well as Measurement and Evaluation. Scores emanating from the scrutiny of the experts based on its appropriateness and comprehensiveness was used to obtain validity index of 0.73. Furthermore, it was subjected to pilot study in order to ascertain its reliability. The instruments were pilot tested on 30 students. These respondents were part of the population but not part of the sample for this study. The data obtained from the pilot test was used to compute the internal consistency of the instruments using Cronbach's Alpha reliability method. Results obtained from the exercise were used to obtain a reliability index of 0.77. Mean and standard deviation were used to answer the research questions developed for the study while ANCOVA statistic was used to test the hypotheses at 0.05 level of significance. The findings from the study showed there is a significant effect of formative assessment strategy on students' academic achievement in social studies in Nasarawa state public junior secondary schools and there is a significant effect of formative -assessment strategy on students' academic achievement in social studies when segregated according to gender in Nasarawa state public junior secondary schools. The implication is that counselling through the guidance counsellors in those schools should be provided to both the teachers and students on the need to use formative

assessment in teaching and learning process for success in students' academic achievement. The study concluded that .. The study recommended that the use of formative assessment, assessment strategy by teachers should be encouraged in the assessment of assignments, class work tests in order to provide effective feedback on student's achievement and also efforts should be made to ensure effective assessment of learners using formative assessment strategy irrespective of gender.

Key Words: Formative assessment, Social Studies, Academic Achievement, counselling

Introduction

Social Studies in Nigeria is a core subject at the Primary and junior secondary levels. As a core subject, it plays a vital role in sharpening the perspective of learners regarding their social environment. Hence, the process involved in the assessment of learners in social studies should be an issue of utmost concern to educators. Assessment is a basic process, vital to promote learning and student's academic achievement in social studies. It is a part of classroom activities. The classroom is fundamentally a training environment where teaching and learning process takes place and one of the prominent forms of assessment for attaining this is formative assessment. Formative assessment is an instrument used by instructors to ascertain learners' progress during the process of teaching and learning. It enables teachers to detect teaching gaps for the purpose of improving their teaching skills even as they identify strengths, weaknesses, opportunities and threats (SWOT) during the teaching process. Simultaneously it is also used as a tool by the students to find out their learning gaps. It makes it convenient for them to learn, identify their weak points and discover areas for improvement as well as smoothening the ways to fearless learning (Ashdale, 2020). Formative assessment practices enable learners to think critically, evaluate themselves and measure their own capabilities during these ultimate practices. This is because critical thinking capability of the learners leads them towards logical thinking order, which tends towards better academic achievements. Those who are active learners and have potential to solve their problems, find this activity more result oriented and indulge themselves in these activities enthusiastically. Moreover, the formative assessment practices increase coordination between the teachers to teacher, teacher to student and student to student, and this also helps to eliminate communication gaps in teaching and learning.

Ruland (2011) posited that formative assessment practices have the quality to develop competitive environment between the students, consequently these continuous assessment practices lead learners to better academic achievements. Formative assessment practices ensure continuous improvement in students' higher order thinking when they detect out their own learning problems and try to solve them logically. Furthermore, it helps teachers to motivate the learners to have another step towards betterment through continuous improvement in their skills throughout their life (Zhang, 2018). It is observed that the formative assessment has positive impact on students learning and ultimate achievements. Thus, the use of formative assessment in the classroom settings helps the teacher to run classroom activities smoothly and also helps in enhancing students' achievement in social studies since improved learning outcomes is a key goal of any educational institution. Therefore, through continuous assessment of learners using formative assessment, improved students' academic achievement is enhanced.

Academic achievement is the outcome of instruction. According to Konyefa and Okigbo (2021) it is the grade obtained through achievement test in which the teacher evaluates the extent to which instructional objectives have been achieved. Sikhwari (2014) described academic achievement as knowledge attaining ability or degree of competence in school tasks being measured by standardized tests and expressed in a grade or units based on students' achievement. Achievement is measured by standardized achievement test developed for school subjects. Achievement is conceived in the present study as the students score on a standardized test from a given instructional content. In the views of Fajemidagba & Sule (2019) is the output of students' evaluation in the educational process indicating to what level the students have achieved in the educational goals as specified in the school curriculum, which is greatly influenced by internal and external classroom factors. Therefore, in order for improved achievement of learners, formative assessment is crucial because it provides continuous, real-time feedback to students and teachers allowing for ongoing adjustments to instruction irrespective of gender.

Gender plays a crucial role in students' academic achievement and the use of formative assessment strategy affects the achievement of male and female learners. Studies show that gender impacted students' conceptual shifts, with male students benefiting more. Some academics believe that male students do better than female students. However, others disagree, claiming that success is influenced by various factors, including socio-economic (Allahnana et al, 2018). The purpose of learning is to ensure improvement in students' learning outcomes in school. This may however become a mere wish if learners are not well assessed through the use of effective assessment techniques. The study therefore is geared towards examining effect of formative assessment on students' academic achievement in social studies in Nasarawa state public junior secondary schools.

Statement of the Problem

The decline in students' achievement in social studies in public junior secondary schools in Nasarawa has been worrisome to stakeholders. As a core subject at Junior Secondary, the teaching and learning of social studies is expected to develop and improve the knowledge of learners regarding their physical and social environment, this has however not been the case as desired results are yet to be attained in terms of students' learning outcomes. Some stakeholders and researchers have blamed this ugly trend on the inadequacy of qualified social studies teachers while others have attributed it to the non-availability of appropriate teaching resources. There is a growing concern that other factors may be responsible for this undesirable trend in students' academic achievement and prominent among such factors is the use of inappropriate assessment techniques. The assessment of social studies requires the use of appropriate and creative assessment techniques such as formative evaluation in order to enhance learners' achievement. The use of formative assessment practices is crucial in learning because it enhances students' higher order thinking because it enables them to detect out their own learning problems and how they can solve them logically for the purpose of enhancing their academic achievement. It is further important to note that gender disparities may exist in learning achievement in social studies. Hence, it is important for social studies teachers to take cognizance of the need to ensure that while employing the use of formative assessment, gap that exists in gender achievement must be addressed. The purpose of learning in any school system is to ensure improved learning outcomes. This may however become unattainable if the appropriate assessment techniques are not utilized. It is based on this realization that the current study is geared towards examining the effect of formative assessment on students' academic achievement in social studies in Nasarawa state public junior secondary schools.

Objectives of the Study

The main objective of the study is to examine the effect of formative assessment on students' academic achievement in social studies in Nasarawa state public junior secondary schools. Specifically, the study is geared towards achieving the following objectives:

1. To determine the effect of formative assessment on students' academic achievement in social studies in Nasarawa State public junior secondary schools.
2. To examine the effect of formative assessment on students' academic achievement in social studies when segregated according to gender in Nasarawa State public junior secondary schools.

Research Questions

The following research questions guided the study:

1. What is the effect of formative assessment on students' academic achievement in social studies in Nasarawa State public junior secondary schools?
2. How does formative assessment affect students' academic achievement in social studies when segregated according to gender in Nasarawa State public junior secondary schools?

Statement of Hypotheses

The following null hypotheses guided this study and was tested at 0.05 level of significance:

1. There is no significant effect of formative assessment on students' academic achievement in social studies in Nasarawa State public junior secondary schools.

2. There is no significant effect of formative -assessment on students' academic achievement in social studies when segregated according to gender in Nasarawa State public junior secondary schools

Review of Literature

Olagunju, A.M. (2020) investigated the effect of formative assessment on students' achievement in secondary school Mathematics. Three hypotheses guided the study. The experimental research design was employed. One hundred and twenty (120) Mathematics students in secondary II Art classes in two public schools in Iseyin Local Government of Oyo State, Nigeria. Sample was selected through purposive technique made up the study sample. Formative Test I, II and III and Mathematics Achievement Test (MAT) were used for data collection. Data were analyzed using paired sample t-test and independent sample t-test statistical tools. Findings from analysis revealed a strong significant difference in the mean achievement score of Mathematics students that are exposed to formative assessment while there was no significant difference in the mean achievement scores of students who are not expose to formative assessment. Also, there was no gender difference in the achievement scores of Mathematics students that are exposed to formative assessment. The study recommended that all School Administrators should emphasis the use of formative assessment by all teachers and they should allow, encourage and provide incentives for them to attend seminars, workshops, conference and in-services training to enhance their performance and to acquire necessary skills to constructing formative tests.

Allahnana etal (2018) examined the effects of formative assessment with feedback on secondary school economics students' achievement in Lafia, Nasarawa State, Nigeria. Two research questions with two hypotheses were formulated to facilitate the study— a quasi- experimental design involving a pretest, post-test, and post-posttest control group. The study population comprised 4,508 senior secondary II Economics students in Lafia Local Government. The sample consisted of two intact classes of 105 senior secondary II Economics students from two schools in Lafia Local Government. A simple Random Sampling procedure was used to select four schools that participated in the pretest, after which two schools with similar abilities were chosen for the study. The instruments used for data collection were the researcher developed Economics Achievement Test (EAT). Experts validated the instrument in Education and Economics with a mean achievement Introduction validation index of 0.80. A reliability index of 0.82 was also obtained through the Cronbach alpha method. Data analysis was conducted using mean and standard deviation to answer research questions and Analysis of Covariance to test the hypotheses. The result showed that there was a significant difference between the experimental group and the control group. The result also indicated that gender was not an important factor in students' achievement when taught Economics using formative assessment with feedback. The study concludes that using formative assessment feedback in teaching Economics significantly affected the mean achievement score of students in Economics. Based on the findings and conclusion, the researchers recommended that formative assessment with feedback for teaching economics be encouraged and mandated to use formative assessment with feedback when teaching Economics to close the gender gap and maintain better retention.

Methodology

Quasi-experimental research design was adopted in this study. The population of the study comprises 46,532 JSS2 students in 370 public junior secondary schools in Nasarawa State, Nigeria. The sample for the study comprised of two intact classes with 128 JSS3 Students. The instrument used for data collection was a 40-item social studies achievement Test (SSAT). The instruments were subjected to the scrutiny of experts in social studies as well as Measurement and Evaluation. Scores emanating from the scrutiny of the experts based on its appropriateness and comprehensiveness was used to obtain a validity index of 0.73. Furthermore, it was subjected to pilot study in order to ascertain its reliability. The instruments were pilot tested on 30 students. These respondents were part of the population but not part of the sample for this study. The data obtained from the pilot test was used to compute the internal consistency of the instruments using Cronbach's Alpha reliability method. Results obtained from the exercise were used to obtain a reliability index of 0.77.

Mean and standard deviation was used to answer the research questions developed for the study while ANCOVA (analysis of covariance) statistic was used to test the hypotheses at 0.05 level of significance.

.Results and Discussion

Research Questions 1: What is the effect of formative assessment strategy on students’ academic achievement in social studies in Nasarawa State public junior secondary schools?

Table 1: Mean and Standard Showing Effect of Formative Assessment Strategy on Students’ Academic Achievement in Social Studies in Nasarawa State Public Junior Secondary Schools

S/N	Groups	N	Pretest		Posttest		Mean Achievement Gain
			Mean Dev	Std	Mean Dev	Std	
1	Experimental	60	35.29	7.71	53.25	9.73	17.96
2	Control	68	20.71	3.24	27.87	3.17	7.16

Table 1 shows the effect of formative assessment strategy on students’ academic achievement in social studies in Nasarawa State public junior secondary schools. Results indicate that the pretest mean and standard deviation interest scores for the experimental group was given as 35.29 and 7.71 respectively while the posttest mean and standard deviation scores were 53.25 and 9.73. As for the control group, the pretest means and standard deviation interest scores were 20.71 and 3.24 respectively while the posttest mean and standard deviation mean scores were given 27.87 and 3.17 respectively. It is observed from the table that the mean gain for the experimental group was found to be higher at 17.96 than the mean achievement gain of the control group at 7.16. Hence, formative assessment strategy has a high effect on students’ academic achievement in social studies in Nasarawa State Public Junior Secondary Schools.

Research Questions 2: How does formative assessment affect students’ academic achievement in social studies when segregated according to gender in Nasarawa State public junior secondary schools?

Table 2: Mean and Standard Showing effect of Formative Assessment on Students’ Academic Achievement when Segregated according to Gender in Social Studies in Nasarawa State Public Junior Secondary Schools

S/N	Gender	N	Pretest		Posttest		Mean Achievement Gain
			Mean Dev	Std	Mean Dev	Std	
1	Male	76	17.00	2.79	67.75	8.40	50.75
2	Female	52	12.29	4.59	40.00	2.45	27.71

Table 2 shows the effect of formative assessment on students’ academic achievement in social studies when segregated according to gender in Nasarawa State public junior secondary schools. Results indicate that the pretest mean and standard deviation academic achievement scores for the male learners was given as

17.00 and 2.79 respectively while the posttest mean and standard deviation scores were 67.75 and 8.40. As for female learners, the pretest means and standard deviation academic achievement scores were 12.29 and 4.59 respectively while the posttest mean and standard deviation mean scores were given 40.00 and 2.45 respectively. It is observed from the table that the mean gain for the male students was found to be higher at 50.75 than the mean achievement gain of the female students at 27.71. Hence, formative assessment has a high effect on students' academic achievement in social studies when segregated according to gender in Nasarawa State public junior secondary schools.

Hypothesis 1: There is no significant effect of formative assessment on students' academic achievement in social studies in Nasarawa state Public Junior Secondary Schools.

Table 3: ANCOVA Test Statistic showing Effect of Formative Assessment on Students' Academic Achievement in Social Studies in Nasarawa State Public Junior Secondary Schools.

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	288.741 ^a	2	144.371	4.675	.036
Intercept	1738.243	1	1738.243	28.142	.000
Pre-test	460.546	1	460.546	3.774	.000
Techniques	288.741	1	288.741	4.675	.036
Error	2841.259	125	22.730	7.317	.000
Total	67078.000	128			
Corrected Total	3130.000	127			

Table 3 above shows analysis of covariance on the effect of formative assessment on students' academic achievement in social studies in Nasarawa state Public Junior Secondary schools. The results showed that at F-calculated value of 4.675, the p-value of 0.036 was found to be less than 0.05. Hence, the result reveals there is a significant effect of formative assessment on students' academic achievement in social studies in Nasarawa state Public Junior Secondary Schools.

Hypothesis 2: There is no significant effect of formative assessment on students' academic achievement in social studies when segregated according to gender in Nasarawa state Public Junior Secondary Schools.

Table 4: ANCOVA Test Statistic showing Effect of Formative Assessment on Students' Academic Achievement in Social Studies when Segregated according to Gender in Nasarawa State Public Junior Secondary Schools.

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	472.580	2	236.290	48.123	.000
Intercept	198.138	1	198.138	20.176	.000
pretest	43.123	1	43.123	4.595	.000

Gender	472.580	1	472.580	48.124	.000
Error	451.733	125	3.61		
Total	37721.000	128			
Corrected Total	924.312	127			

Table 4 above shows the analysis of covariance statistic on the effect of formative assessment on students' academic achievement in social studies when segregated according to gender in Nasarawa state public junior secondary schools. The results showed that at F-calculated value of 48.123, the p-value of 0.000 was found to be less than 0.05. Hence, the result reveals there is a significant effect of formative assessment on students' academic achievement in social studies when segregated according to gender in Nasarawa state junior public secondary schools.

Discussion

Findings from the study on hypothesis one reveal there is significant effect of formative assessment on students' academic achievement in social studies in Nasarawa State Public Junior Secondary Schools. This finding is in agreement with the findings from the study of Agi., Ayegba, & Igwe (2024) showed there was significant effect of formative assessment technique (PAT) on students' academic achievement in Junior Secondary School Computer Studies in Makurdi metropolis, Benue State, Nigeria.

Findings from the study on hypothesis two reveal there is a significant effect of formative assessment on students' academic achievement in social studies when segregated according to gender in Nasarawa State Public Junior Secondary Schools. This finding is in agreement with the findings from the study of Chikao, (2019) which indicated there was a significant effect of formative -assessment on academic performance of secondary school Students in Rivers State.

Implication for Counselling

Counselling was defined by National Career Development Association (NCDA) as a professional relationship that empowers diverse individuals, families and groups to accomplish education, career goals, mental health, and wellness (Hoppin, 2011) in Enem & Bahago, (2021). The findings of this study has some implications for counselling since there is significant effect of formative assessment on students' academic achievement in Social Studies and students' academic achievement in Social Studies when segregated according to gender in Nassarawa State junior public secondary schools. The in-school counsellors should explore the students' challenges in formative assessment which may be stressful situations and employ techniques towards making the client to understand themselves and make out adaptable alternative stances. The counsellors should as well train the students on problem-solving strategies through organizing seminars, providing individual and group counselling with focus on gender divider. This will enable them perform well on their academics.

Conclusions

Based on the findings of this study, the following conclusions were made:

1. There is significant effect of formative assessment on students' academic achievement in social studies in Nasarawa State Public Junior Secondary Schools.
2. There is significant effect of formative assessment on students' academic achievement in social studies in Nasarawa state junior public secondary schools.

Recommendations

Based on the findings of the study and conclusion, the following recommended were made:

1. The use of formative assessment technique by teachers should be encouraged in the assessment of assignments, class work and tests in order to provide effective feedback on students. Achievement.

2. Learners should be sensitized on the need to assess themselves in order to discover their learning strengths and weaknesses through feedback and improve on their achievement in school.

3. The learners who have weaknesses during assessment should be counseled by school counsellors for improvement in their areas of weaknesses.

References

1. Agi, C. I., Ayegba, S. I. & Igwue, D. O (2024) Effect of Peer Assessment Technique (PAT) on Students' Academic Achievement in Junior Secondary School Computer Studies in Makurdi metropolis, Benue State, Nigeria. Downloaded at <https://www.researchgate.net/publication/383863126> on the 25th of August, 2025.
2. Allahnana, K. M; Kuza, G.L; Musa, B and Babale, D (2018) The Effects of Formative Assessment with Feedback on Secondary School Economics Students' Achievement in Lafia, Nasarawa State, Nigeria. *University of Delta Journal of Contemporary Studies in Education 1(1)*
3. Enem, E.U & Bahago, S. B. (2021). Demystifying the impact of covid-19 on the Healthcare Workers in Abuja, Nigeria: counselling inference. A Journal of Education Conundrum, Department of General Studies, Federal School of Surveying, Oyo in Conjunction with The Great Thinkers Research Group (GTRG). 119-128
4. Fajemidagba, P.L., Sule, K. (2019) Determinants of Individuals' Differences and Gender Differences in Knowledge. *Journal of Educational Psychology*, 93 (4), 787-825.
5. Gabrielle, H(2020) Formative Assessment as a Collaborative act. Teachers' intention and Students' Experience. *Journal of Studies in Educational Evaluation*. 66(20). September, 2020 [Formative assessment as a collaborative act. Teachers' intention and students' experience: Two sides of the same coin, or? - ScienceDirect.](https://www.sciencedirect.com/science/article/pii/S0959630920300000)
6. http://flagship.luc.edu/login?url=http://search.proquest.com/docview/8961337_70?ac
7. Konyefa, B.I. and Okigbo, E.C. (2021). Effect of Ethnochemistry Instructional Approach on secondary School Students' Achievement in Chemistry in Bayelsa State. *International Journal of Education and Evaluation (IJEE)*, 7(4), 16-22.
8. Olagunju, A.M. (2020) The effect of Formative Assessment on Students' Achievement in Secondary School Mathematics in Public Schools in Iseyin Local Government of Oyo State, Nigeria. *International Journal of Science, Arts and Commerce*.5(10). October, 2020.
9. Shikwari, L. (2014). Students' Perception of Emotional and Instrumental Teacher Support: Relations with Motivational and Emotional responses. *Journal International Education Studies*, 7 (1), 21-36.