



EFFECTS OF FLIPPED CLASSROOM AND COOPERATIVE LEARNING STRATEGIES ON STUDENTS' PERFORMANCE IN SOCIAL STUDIES IN UPPER BASIC SCHOOLS IN ADAMAWA STATE, NIGERIA.

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Abstract

This study examined the effects of the flipped classroom and cooperative learning strategies on students' performance in Social Studies in upper basic schools in Adamawa State, Nigeria. A quasi-experimental design was employed with a sample of 172 JS II students, purposively selected from three intact classes. Two research questions and two null hypotheses guided the study. Data were collected using the Social Studies Performance Test (SSPT). Descriptive statistics (mean and standard deviation) were used to answer the research questions, while paired and independent t-tests were used to test the hypotheses at a 0.05 significance level. Findings showed that students taught using a flipped classroom and cooperative learning strategies had significantly higher post-test scores than their pre-test scores. In addition, both groups outperformed those taught using conventional instruction. Among the strategies, the flipped classroom yielded the greatest improvement in student performance. The study concluded that both flipped and cooperative methods are effective in enhancing learning outcomes in Social Studies. It recommends that Social Studies teachers in Adamawa State integrate these learner-centred approaches to improve academic performance and classroom engagement.

Keywords: Flipped Classroom, Cooperative Learning, Social Studies, Academic Achievement, Adamawa State, Teaching Strategies

Introduction

In recent years, the global educational system has experienced a paradigm shift from traditional teacher-centred methods to student-centred approaches that promote critical thinking, collaboration, and active engagement. This shift has been driven by the increasing recognition that learners should play an active role in constructing knowledge, particularly in subjects such as Social Studies that demand societal awareness, civic responsibility, and reflective thinking (Oloruntegbe&Omoifo, 2019). Social Studies, a core subject in Nigeria's basic education curriculum, is designed to develop informed, responsible, and participatory citizens. However, the conventional lecture-based instructional model widely used in Nigerian schools, including those in Adamawa State, often results in passive learning and limited comprehension.

The advancement of technology and its integration into education have paved the way for innovative instructional models such as the flipped classroom and cooperative learning. These strategies emphasise learner autonomy, interaction, and deeper content engagement. The flipped classroom model involves delivering instructional content—such as videos or readings before class, while in-class time is reserved for collaborative tasks and problem-solving activities (O'Flaherty & Phillips, 2015). Research shows that this approach can significantly enhance academic achievement, self-regulated learning, and classroom interaction (Akçayır&Akçayır, 2018; Bergmann &Sams, 2012).

Similarly, cooperative learning promotes teamwork by engaging students in small groups to achieve shared academic goals. Strategies like jigsaw, think-pair-share, and reciprocal peer tutoring foster communication, accountability, and peer support, all of which have been associated with improved academic outcomes in

Social Studies and other disciplines (Slavin, 2019; Gillies, 2016). Yet, despite global evidence supporting these strategies, their implementation and effectiveness in Nigerian classrooms, particularly at the upper basic level in Adamawa State, remain underexplored.

Academic performance is a major measure of educational effectiveness, and poor outcomes are often linked to inappropriate teaching approaches (Duruji, 2014). Given the persistent challenges facing Social Studies instruction in Nigerian schools, there is a compelling need to adopt evidence-based, learner-centred methods. While some studies have examined flipped and cooperative learning separately, few have investigated their combined effects within the Nigerian context.

This study, therefore, seeks to fill this gap by examining the effects of the flipped classroom and cooperative learning strategies on the academic performance of students in Social Studies in upper basic schools in Adamawa State. By comparing student outcomes across innovative and conventional instructional methods, the study aims to provide empirical insights that can inform more effective teaching practices and policy decisions.

Statement of the Problem

Social Studies at the upper basic level plays a vital role in preparing students for civic responsibility and further studies in disciplines such as Government, History, and Economics. Despite its importance, students in Adamawa State continue to underperform academically in the subject. Challenges such as large class sizes, limited student engagement, excessive reliance on note-copying, and an inability to complete the syllabus hinder effective teaching and learning. Traditional lecture-based methods dominate classrooms, leading to passive learning and poor knowledge retention.

Although innovative approaches like flipped classroom and cooperative learning have shown promising results in other educational settings, their effectiveness within the specific context of Adamawa State remains under-researched. There is limited empirical evidence on how these strategies influence students' academic performance in Social Studies. Additionally, the potential combined effect of both methods has not been adequately explored. These gaps make it difficult for educators and policymakers to implement data-driven instructional improvements.

This study, therefore, seeks to investigate the effects of the flipped classroom and cooperative learning strategies on the academic performance of upper basic school students in Social Studies in Adamawa State. It aims to provide empirical evidence that can guide the adoption of effective, student-centred instructional practices.

Objectives of the Study

The study aimed at achieving the following objectives:

1. To examine the pre-test and post-test performance of students taught Social Studies using the flipped classroom strategy in upper basic schools in Adamawa State.
2. To compare the performance of students taught Social Studies using the flipped classroom, cooperative learning, and conventional instructional strategies in upper basic schools in Adamawa State.

Research Questions

The study was guided by the following research questions:

1. What is the difference between the pre-test and post-test performance of students taught Social Studies using the flipped classroom strategy in upper basic schools in Adamawa State?
2. How does the performance of students taught using flipped classrooms, cooperative learning, and conventional instructional strategies differ in Social Studies at upper basic schools in Adamawa State?

Hypotheses

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

H₀₁: There is no significant difference in the pre-test and post-test performance of students taught Social Studies using the flipped classroom strategy in upper basic schools in Adamawa State.

H₀₂: There is no significant difference in the performance of students taught Social Studies using flipped classroom, cooperative learning, and conventional instruction in upper basic schools in Adamawa State.

Methodology

This study employed a quasi-experimental design of the pre-test and post-test non-equivalent groups type, which allowed the use of intact classes without randomisation (Akorede et al., 2019; Biu et al., 2025). Three groups were involved in the study: two experimental groups and one control group. The experimental groups were exposed to the flipped classroom and cooperative learning strategies, respectively, while the control group received conventional instruction. All groups were administered a pre-test to determine their baseline performance in selected Social Studies topics, followed by an eight-week treatment phase, and subsequently, a post-test using the same instrument to measure the impact of the interventions.

The population comprised all Junior Secondary School II (JSII) students in public upper basic schools in Adamawa State. A total sample of 172 students was drawn using a purposive sampling technique from three intact classes. The instrument used for data collection was the Social Studies Performance Test (SSPT), a 50-item multiple-choice test developed by the researcher based on the JSII Social Studies curriculum. Items were constructed using NECO and qualifying examination standards, covering all six cognitive domains of Bloom's taxonomy. The instrument underwent expert validation by curriculum specialists and test-and-measurement professionals. A pilot study was conducted in a non-sampled school to ascertain reliability using the test-retest method, and a Cronbach's Alpha coefficient of 0.901 was obtained, confirming the instrument's reliability.

Data collection involved administering pre-tests before the intervention, followed by the teaching phase. Flipped classroom participants received materials and video lectures before class and engaged in discussions, problem-solving, and clarification activities in class. The cooperative learning group used the jigsaw method to collaboratively work through content. The control group was taught the same content using conventional lecture and note-copying methods. Post-tests were administered to all groups after the intervention. Data were analysed using descriptive statistics (mean and standard deviation) to answer the research questions. Paired t-tests were used to compare pre-test and post-test scores within groups; independent t-tests were used to compare between experimental and control groups, and one-way ANOVA was used to compare overall performance among the three instructional strategies. All hypotheses were tested at a 0.05 level of significance.

Results

This research aimed to determine the effects of the flipped classroom and cooperative learning strategies on students' academic performance in Social Studies at the upper basic level in Adamawa State.

Research Question One: What is the difference between the pre-test and post-test performance of students taught Social Studies using the flipped classroom strategy in upper basic schools in Adamawa State?

Table 1: Mean and standard deviation on the difference in the pre- and post-test performance of students taught Social Studies using the flipped classroom at the upper basic level of education in Adamawa State

Variable	N	Mean	SD	Mean Diff.
Pre-test Flipped	61	12.34	3.21	
Post-test Flipped	61	36.24	3.45	23.9

Source: (Field survey, 2025)

The descriptive analysis shows that students exposed to flipped classroom instruction had a pre-test mean score of 12.34 with a standard deviation of 3.21, while the post-test mean score rose to 36.24 with a standard deviation of 3.45. The mean gain of 23.90 indicates a marked improvement in performance after the

intervention. This suggests that the flipped classroom strategy positively enhanced students' understanding and learning outcomes in Social Studies.

Research Question Two: How does the performance of students taught using flipped classrooms, cooperative learning, and conventional instructional strategies differ in Social Studies at upper basic schools in Adamawa State?

Table 2: Mean and standard deviation on the difference in the performance of students taught Social Studies using cooperative learning and those taught using conventional instruction at the upper basic level of education

Variable	N	Mean	SD	Mean Diff.
Post-test Cooperative	52	34.15	3.52	
Post-test Conventional	59	19.85	3.60	14.30

Source: (Field survey, 2025)

The result revealed that students taught using cooperative learning recorded a post-test mean score of 34.15 (SD = 3.52), while their counterparts taught using conventional instruction had a mean score of 19.85 (SD = 3.60). The mean difference of 14.30 clearly shows that cooperative learning was more effective than conventional instruction in improving students' academic performance in Social Studies.

Hypothesis One: There is no significant difference in the pre-test and post-test performance of students taught Social Studies using the flipped classroom strategy in upper basic schools in Adamawa State.

Table 3: t-test analysis on the mean difference between pre- and post-test performance of students taught Social Studies using a flipped classroom at the upper basic level of education in Adamawa State

Variable	Mean	SD	df	t-cal.	Sig.
Pre-test Flipped	18.24	3.40	60	12.65	.000
Post-test Flipped	36.24	3.45			

Source: (Field survey, 2025)

The result in Table 3 shows a statistically significant difference between the pre-test and post-test scores of students exposed to the flipped classroom. The calculated p-value (.000) is less than the 0.05 level of significance, leading to the rejection of the null hypothesis. This indicates that the flipped classroom strategy had a significant positive effect on students' academic performance in Social Studies at the upper basic level of education in Adamawa State.

Hypothesis Two H₀₂: There is no significant difference in the performance of students taught Social Studies using flipped classroom, cooperative learning, and conventional instruction in upper basic schools in Adamawa State.

Table 4: t-test analysis on the mean difference between the performance of students taught Social Studies using cooperative learning and those taught using conventional instruction at the upper basic level of education in Kano State

Variable	Mean	SD	df	t-cal.	Sig.
Post-test Cooperative	34.15	3.52	118	6.74	.000
Post-test Conventional	19.85	3.60			

Source: (Field survey, 2025)

The result in Table 4 indicates a statistically significant difference between the two groups. The p-value (.000) is less than the 0.05 significance level, leading to the rejection of the null hypothesis. This implies that the cooperative learning strategy significantly enhances students' performance in Social Studies more than the conventional instructional method at the upper basic level of education in Adamawa State.

Discussion of Findings

The findings of this study revealed a significant improvement in students' academic performance in Social Studies when taught using flipped classroom and cooperative learning strategies, compared to those taught using conventional instruction. Specifically, the flipped classroom strategy enabled students to interact with instructional content before classroom sessions, allowing for deeper engagement and understanding during in-class discussions. This aligns with the assertions of O'Flaherty and Phillips (2019), who noted that the flipped model enhances active learning, critical thinking, and learner autonomy.

Similarly, students taught with cooperative learning outperformed those taught using conventional instruction. The collaborative nature of the approach encouraged peer interaction, knowledge sharing, and a sense of responsibility among learners. This supports the findings of Slavin (2019), who emphasised that cooperative learning not only improves academic performance but also fosters social skills and positive interdependence.

Overall, both strategies significantly contributed to higher post-test scores, reaffirming the relevance of learner-centred approaches in improving performance in Social Studies at the upper basic level. These findings are consistent with Akçayır and Akçayır (2018), who noted that interactive and participatory instructional methods lead to better academic outcomes than traditional teacher-centred approaches.

Conclusion

Based on the findings of this study, it was concluded that the flipped classroom and cooperative learning strategies are effective instructional approaches for improving students' performance in Social Studies at the upper basic level of education in Adamawa State. The flipped classroom method proved to be highly effective, allowing students to access instructional materials beforehand and promoting meaningful engagement during class. Likewise, cooperative learning encouraged collaboration and active participation, which significantly enhanced understanding and performance. The conventional method, in contrast, was found to be less effective in promoting performance in the subject.

Recommendations

1. School authorities and curriculum planners in Adamawa State should incorporate flipped classroom and cooperative learning strategies into the Social Studies curriculum to enhance teaching effectiveness and student outcomes.
2. Teachers should be trained through workshops and professional development programs on the effective implementation of flipped classroom and cooperative learning methods to maximise student engagement and achievement.
3. Further studies should be conducted in other subjects and educational levels to explore the broader applicability of these strategies across Nigeria's basic education system.

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