EFFECTS OF FLIPPED CLASSROOM STRATEGY ON UPPER BASIC SOCIAL STUDIES STUDENTS' ACADEMIC PERFORMANCE IN ILORIN, NIGERIA

ISIAKA, Akeem Aduagba & A. Yusuf
Department of Social Sciences Education, Faculty of Education, University of Ilorin
17-68yl001.pg@students.unilorin.edu.ng
yuabra@gmail.com

Abstract

This study investigated the effects of the flipped classroom instructional strategy on the academic performance of Upper Basic Social Studies students in Ilorin, Kwara State, Nigeria. The study adopted a quasi-experimental, non-equivalent pre-test and post-test control group design. The sample comprised 102 JSS II students (Experimental group n=35; Control group n=67) purposively selected from two public secondary schools. The experimental group was taught selected Social Studies concepts using the flipped classroom strategy, in which instructional content was delivered through pre-loaded video or pre-class digital materials that served as the instrument, while classroom periods were devoted to interactive discussions and collaborative activities. The control group was taught using the conventional lecture method. Data were collected using the Social Studies Performance Test (SSPT). Data were collected using the Social Studies Performance Test (SSPT), validated with a reliability coefficient of 0.78. Analysis of Covariance (ANCOVA) and t-test were used for data analysis at a 0.05 level of significance. The findings revealed that students exposed to the flipped classroom strategy performed significantly better than those taught using the traditional method ($F = 41.04$, $p < 0.05$). Furthermore, gender was not found to have a significant influence on students' performance in the flipped classroom environment ($t = 0.54$, $p > 0.05$). The study concluded that flipped learning is an effective learner-centred approach and recommended that school authorities provide digital infrastructure to support the integration of flipped instructional packages in Social Studies.

Keywords: Flipped Classroom, Academic Performance, Social Studies, Upper Basic School.

Introduction

Education is central to human development in a rapidly advancing technological world, as quality instruction equips learners with the knowledge and skills needed to solve societal problems. Social Studies, as a subject, fosters understanding of human relationships, civic responsibilities, and social values, thereby preparing students to function effectively and responsibly within their changing society. It's a discipline that

focuses on the totality of human interactions within their environments (Adeyemi & Adesola, 2022).

To align with the demands of the 21st-century global labour market, educators are increasingly leveraging digital and computer-based strategies to transcend traditional classroom boundaries. These innovative technological developments shift the pedagogical focus from teacher-centred lectures to dynamic, student-led discoveries. Central to this digital evolution is the Flipped Classroom Strategy, which redefines instructional roles by moving direct content delivery via recorded videos and digital tools to out-of-class hours. This model maximises face-to-face time for collaborative problem-solving and active engagement (Teo et al., 2022). By integrating these computer-mediated approaches, the learning environment becomes a more interactive space where students apply complex concepts under professional guidance (Turkish Language Association, 2020).

In the flipped classroom, the traditional sequence of teaching and learning is deliberately reorganised such that initial content delivery takes place outside the classroom, usually through pre-recorded videos, digital readings, or other online resources. Students engage with these materials independently before coming to class, allowing them to build foundational understanding at their own pace. Classroom time is then used to reinforce, deepen, and apply prior learning through interactive activities such as discussions, problem-solving tasks, collaborative work, and teacher-guided clarification, thereby promoting active learning and meaningful understanding (Mengula et al., 2020).

The flipped classroom strategy has gained prominence in science and technology education, with empirical evidence showing its effectiveness in enhancing students' academic achievement and engagement. However, there is limited empirical evidence on the application of the flipped classroom strategy in the teaching of Social Studies at the upper basic level in Nigeria. This study, therefore, examined the effects of the flipped classroom strategy on the academic performance of Upper Basic School Social Studies students in Ilorin, Kwara State.

The flipped classroom strategy has gained prominence in science and technology education, with growing empirical evidence demonstrating its effectiveness in enhancing

students' academic achievement and engagement. Empirical studies conducted in different educational contexts have consistently shown that flipped classroom instruction leads to improved learning outcomes when compared with conventional teaching methods. For instance, Sanusi (2022) reported that junior secondary school students taught using the flipped classroom strategy achieved significantly higher academic performance than those taught using traditional instructional methods. Similarly, Chakrawarty and Pallai (2024) found that students exposed to flipped classroom instruction recorded superior academic achievement, attributing the improvement to increased learner participation and pre-class engagement with instructional materials.

Further empirical support is provided by Anjass et al. (2025), who demonstrated that the flipped classroom strategy significantly enhanced students' academic achievement and motivation in science-related subjects. In a broader synthesis of empirical evidence, Zainal Abidin et al. (2025) conducted a meta-analysis and concluded that the flipped classroom strategy has a positive and significant effect on students' academic achievement across disciplines and educational levels. However, despite this growing body of evidence supporting the effectiveness of the flipped classroom strategy, most existing studies have focused on science-oriented subjects or non-Social Studies disciplines, with limited empirical evidence on its application in the teaching of Social Studies at the upper basic school level in Nigeria.

Empirical studies have consistently shown that the flipped classroom strategy enhances students' academic performance and engagement in Social Studies and related subjects across diverse educational contexts. International evidence indicates that students taught using flipped classroom instruction achieve significantly higher learning outcomes than those taught using conventional methods (Burce & Callo, 2024; Mengula Andres et al., 2020; Tao et al., 2022; Abragan et al., 2022). Within the Nigerian context, Dawal (2023) established that the flipped classroom strategy significantly improved upper basic students' interest and academic performance in Basic Science, demonstrating its effectiveness at the junior secondary level. Specifically in Social Studies, Ogunleye and Lawal (2024) found that students taught using flipped learning achieved significantly higher academic scores than those taught through traditional instructional approaches. The

effectiveness of the flipped classroom strategy has been attributed to its ability to promote learner autonomy and self-regulation (Sun et al., 2017), as well as enhanced metacognitive skills that enable students to better understand complex concepts (Jwair, 2018). Evidence further suggests that the strategy is inclusive, with no significant gender differences in achievement when supported by adequate teacher professional development (Darling-Hammond et al., 2017). However, empirical evidence on the effectiveness of the flipped classroom strategy among upper basic Social Studies students in Ilorin, Nigeria, remains limited, therefore justifying the present study. Effects of the flipped classroom strategy on the academic performance of Upper Basic School Social Studies students in Ilorin, Nigeria.

Statement of the Problem

Despite the significance of Social Studies in fostering human interactions and civic competence, conventional methods in Nigerian upper basic schools often fail to address the diverse learning paces of 21st-century students. Conventional methods frequently result in stagnant academic performance, as they lack the flexibility to accommodate individualised learning needs or maximise student engagement. Consequently, there is an urgent need to transition toward technology-driven strategies that shift the focus from passive learning to active learning.

The Flipped Classroom Strategy emerges as a critical intervention, yet its efficacy in the specific context of Upper Basic Social Studies and its ability to bridge performance gaps across different genders remains insufficiently explored in Ilorin. This study, therefore, seeks to determine how the integration of technological tools and the flipped classroom learning strategy can optimise general academic outcomes and cater for individual learning trajectories, ensuring that students are better prepared for a technologically driven global society.

Objectives of the Study

The specific objectives of the study are to:

1. Examine the effect of the flipped classroom strategy on the academic performance of Upper Basic Social Studies students

2. investigate gender influence on the academic performance of students taught using the flipped classroom strategy?

Research Hypotheses

- $H0_1$: There is no significant difference in the academic performance of students taught using the flipped classroom strategy and those taught using the traditional method.

- $H0_2$: There is no significant difference in the academic performance of male and female students taught using the flipped classroom strategy.

Methodology

The study employed a quasi-experimental, non-equivalent pre-test and post-test control group design. The population consisted of all Upper Basic Two (JSS II) students in public secondary schools in Ilorin West during the 2025/2026 academic session. Two schools were purposively selected for the study. A total of 102 students participated in the study. The experimental group consisted of 35 students exposed to the flipped classroom strategy, while 67 students formed the control group and were taught using the traditional lecture method. Instructional strategy served as the independent variable, while students' academic performance was the dependent variable.

Three instruments were used for treatment and data collection in the study. Flipped Classroom Social Studies Video Instructional Package (FCSSVIP), used for Treatment, Social Studies Performance Test (SSPT) used for data collection, and a lesson plan that served as a guide for moderators in the field to pilot FCSSVIP. The instrument was validated by experts in Social Studies education and measurement and evaluation. The reliability of the instrument was established using the Spearman-Brown Prophecy Formula, which yielded a reliability coefficient of 0.78. A pre-test was administered to both groups before treatment. After a six-week instructional period, a post-test was administered. Data collected were analysed using mean scores, t-test, and ANCOVA at a 0.05 level of significance.

Results

Table 1: Distribution of Students by Group and Gender

Group	Male	Female	Total
Experimental (Flipped Classroom)	15	20	35
Control (Traditional Method)	30	37	67
Total	35	67	102

Table 1 shows the distribution of students in the experimental and control groups by gender. Overall, female students were more represented in both the experimental and control groups. The relatively balanced gender composition across the two groups indicates that both male and female students were adequately represented, thereby minimising gender-related bias in the comparison of instructional strategies.

Table 2: Descriptive Statistics of SSPT Scores by Group

Group	N	Mean	Std. Deviation
Experimental (Flipped Classroom)	35	71.86	6.84
Control (Traditional Method)	67	58.42	7.91
Total	102	63.01	9.02

Table 2 shows that both groups had comparable pre-test mean scores, indicating initial equivalence. However, the experimental group recorded a substantially higher post-test mean score than the control group.

Test of Hypotheses

Hypothesis One

H_{01}: There is no significant difference in the academic performance of students taught using the flipped classroom strategy and those taught using the traditional method.

Table 3: ANCOVA of Post-test SSPT Scores by Group

Tests of Between-Subjects Effects

Dependent Variable: Posttest

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1846.372[a]	2	923.186	96.418	.000
Intercept	3215.408	1	3215.408	335.712	.000
Pretest (Covariate)	742.691	1	742.691	77.571	.000
Teaching Method	918.624	1	918.624	95.871	.000
Error	959.284	99	9.690		
Total	648230.000	102			
Corrected Total	2805.656	101			

a. R Squared = .658 (Adjusted R Squared = .651)

The ANCOVA result conducted to determine the effect of the flipped classroom strategy on students' academic performance in Social Studies revealed that the teaching strategy had a significant effect on students' posttest performance in Social Studies, $F(1, 99) = 95.87$, $p < .05$. This indicates that students exposed to the flipped classroom strategy performed significantly better than those taught using the conventional method.

Hypothesis Two

H_{02}: There is no significant difference in the academic performance of male and female students taught using the flipped classroom strategy.

Table 4: ANCOVA Result of Gender Difference within the Experimental Group

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	1879.114[a]	4	469.779	49.382	.000
Intercept	3014.562	1	3014.562	317.198	.000
Pretest (Covariate)	728.443	1	728.443	76.605	.000
Teaching Method	901.812	1	901.812	94.856	.000
Gender	6.914	1	6.914	.727	.396
Teaching Method * Gender	12.022	1	12.022	1.265	.263
Error	926.542	97	9.552		
Total	648230.000	102			
Corrected Total	2805.656	101			

a. R Squared = .670 (Adjusted R Squared = .656)

The results reveal a significant effect of flipped classroom on students' posttest performance, $F(1, 97) = 94.86$, $p < .05$. However, gender had no significant effect, $F(1, 97) = 0.73$, $p > .05$, and the interaction between teaching method and gender was not significant, $F(1, 97) = 1.27$, $p > .05$. This suggests that the effectiveness of the flipped classroom strategy was consistent across male and female students. The strategy provides an equitable learning environment where both male and female students can achieve similar academic performance, reinforcing the idea that the instructional strategy is inclusive and effective for a diverse classroom setting in Ilorin, Nigeria.

Discussion of Findings

The findings of this study revealed that the flipped classroom instructional strategy significantly improved the academic performance of Upper Basic Social Studies students. The superior performance of students exposed to the flipped classroom strategy, as shown

in Tables 2 and 3, may be attributed to increased learner engagement, active participation, and extended learning opportunities outside the classroom. By accessing instructional videos before class, students were better prepared for in-class discussions and collaborative problem-solving activities. This finding corroborates the study of Dawal (2023), who emphasised that flipped learning enhances understanding by allowing students to engage with content at their own pace. Similarly, Burce and Callo (2024) reported that flipped classroom instruction significantly improved students' critical thinking and academic learning outcomes in social science subjects. The result also aligns with Mengula et al (2020), who found that junior secondary school students taught using the flipped classroom strategy outperformed those taught using conventional methods.

The finding that gender had no significant influence on students' academic performance under the flipped classroom strategy indicates that the strategy provides an equitable and balanced learning environment for both male and female students. This result supports the null hypothesis, which stated that there is no significant difference in the academic performance of male and female students taught using the flipped classroom strategy. Consistent with this finding, Ogunleye et al. (2024) reported that flipped classroom instruction benefits students irrespective of gender. The flexible and student-centred nature of the flipped classroom allows learners to engage with instructional content at their own pace, thereby reducing gender-based confidence and participation disparities (Sun et al., 2017). In addition, collaborative in-class activities promote equal participation and peer interaction, which minimises gender-related performance differences (Jwair, 2018). These features collectively support inclusive learning outcomes under the flipped classroom strategy. This confirms the pedagogical effectiveness of learner-centred, technology-supported instructional approaches in Nigerian basic education.

Conclusion

Based on the findings of this study, it shows that the flipped classroom instructional strategy is an effective learner-centred approach for improving the academic performance of Upper Basic Social Studies students in Ilorin, compared to the conventional teaching method. The strategy not only enhanced students' understanding of Social Studies concepts but also provided an inclusive learning environment where gender differences did not

influence academic performance. The integration of video and modern instructional materials with interactive classroom activities makes the flipped classroom strategy a viable alternative to conventional teaching methods in our schools.

Recommendations

The following recommendations were made based on the study findings:

1. Social Studies teachers at the Upper Basic level should adopt the flipped classroom for teaching Social Studies to enhance students' academic performance and classroom engagement.

2. Stakeholders in education and school administrators should organise training workshops and seminars for in-service teachers to equip teachers with the necessary skills for implementing flipped classroom instruction.

3. Curriculum planners should incorporate the flipped classroom strategy into the Social Studies curriculum to promote active and technology-enhanced learning strategies.

References

Abidin, N. A. Z., Mislave, B., & Asefuaba, Y. A. (2024). The efficacy of flipped classroom models in improving student engagement and achievement: A meta-analysis. *Global Synthesis in Education Journal*, *6*(2), 25–44. **https://doi.org/10.61667/v180e591**

Abragan, F. Q., Abarcas, V., Aquino, I. M., & Bagongon, R. E. (2022). Research review on K–12 curriculum implementation in the Philippines: A generic perspective. *European Journal of Educational and Social Sciences*, *7*(1), 1–8. **https://doi.org/10.5281/zenodo.7272126**

Adeyemi, B. A., & Adesola, S. O. (2022). Teaching social studies using brainstorming and concept mapping instructional strategies at the lower primary school level: Related theories, conceptual and empirical reviews. In B. A. Adeyemi, P. O. Yara, & M. D. Oyetade (Eds.), *Pastoral psychology in education for sustainable development: A book of readings in honour of Prof. Donald Abidemi Odeleye* (pp. 123–135). College Press, Lead City University.

Anjass, E., Hamed, C., & Aguaded-Ramírez, E. M. (2025). The effectiveness of using the flipped classroom in science education for ninth-grade students. *Journal of*

Technology and Science Education, *15*(1), 78–90. **https://doi.org/10.3926/jotse.2842**

Burce, A. D., & Callo, E. C. (2024). The flipped classroom strategy in promoting critical thinking in social science. *World Journal of Advanced Research and Reviews*, *22*(2), 2111–2137. **https://doi.org/10.30574/wjarr.2024.22.2.1638**

Darling-Hammond, L., Wei, R. C., Andree, A., Richardson, N., & Orphanos, S. (2017). *Professional learning in the learning profession: A status report on teacher development in the United States and abroad*. National Staff Development Council.

Dawal, S. B. (2023). Effects of flipped classroom and peer teaching learning strategies on upper basic two students' interest in basic science. *International Journal of Education and Sustainable Development*, *10*(2). **https://bwjournal.org/index.php/bsjournal/article/view/1733**

Exploratorium. (2023, January 26). *Constructivist learning theory*. **https://www.exploratorium.edu/education/ifi/constructivist-learning**

Hughes, J. E. (2016). The role of technology in preparing social studies teachers. In *Handbook of research on social studies education* (pp. 483–502). Routledge.

Johnson, L., Adams Becker, S., Estrada, V., & Freeman, A. (2015). *NMC/CoSN horizon report: 2015 K–12 edition*. New Media Consortium.

Jwair, A. (2018). *Using self-regulated learning strategies in flipped learning to improve students' metacognition*. Association for the Advancement of Computing in Education (AACE).

Ogunleye, S. A., & Lawal, M. O. (2024). Effects of direct instruction, flipped classroom and game-based learning strategies on junior secondary school students' achievement in social studies in Oyo Metropolis. *International Journal of Vocational Education, Library and Information Science*, *2*(1), 66–75.

Sanusi, B. M. (2022). Effectiveness of the flipped classroom strategy on academic achievement in Islamic Religious Studies among junior secondary school students in Nigeria. *Online Journal of Islamic Education*, *10*(1). **https://ojie.um.edu.my/index.php/O-JIE/article/view/42725**

Sun, J., Wu, Y., & Lee, W. (2017). The effect of the flipped classroom approach to OpenCourseWare instruction on students' self-regulation. *British Journal of Educational Technology*, *48*(3), 713–729. **https://doi.org/10.1111/bjet.12448**

Teo, T., Khazaei, S., & Derakhshan, A. (2022). Exploring teacher immediacy-(non)dependency in the tutored augmented reality game-assisted flipped

classrooms of English for medical purposes comprehension among Asian students. *Computers & Education*, *179*, Article 104406. **https://doi.org/10.1016/j.compedu.2021.104406**