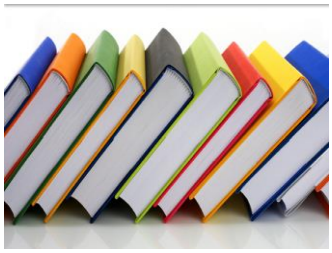

Assessing the effect of Reflective instructional strategy on students' achievement in senior secondary 2 Government in Umuahia North L.G.A of Abia State

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Received October, 2023, Accepted November and, Published December, 2023

Abstract

This study assessed the effect of Reflective instructional strategy on senior secondary school 2 academic achievement in Government in Umuahia North L.G.A of Abia State. The study adopted a quasi-experimental control design, specifically the pre-test post-test non-equivalent control group design. Two research questions were posed, and one hypothesis formulated to guide the study which was carried out in a Government co-education school in Umuahia North Council Area in Umuahia Education Zone of Abia State. Eighty-two (82) SSS two students were used for the study. The study is a quasi- experimental study which employed pretest posttest control design and a 2x1 factorial design. Instrument used for data collection was Government Achievement Test (GAT) developed by the researchers. GAT was validated by three experts and the reliability coefficient using Kuder Richardson (KR-20) was found to be 0.80. Mean and standard deviation were used to answer the research questions while Analysis of Covariance (ANCOVA) statistics was used to test the hypothesis at o.o5 significance level. The result revealed that method was a significant factor on students' achievement in Government. Thus, it was confirmed that students taught Government using reflective instructional strategy performed better than those taught using lecture method. The result also revealed that gender was not a factor in the achievement of students in Government. It was recommended among other things that efforts should be made by curriculum experts to incorporate reflective instructional strategy into the teaching of Government.

Key words: Reflective learning instructional strategy, Government, Academic achievement

Introduction

In the dynamic landscape of education, the quest for effective instructional strategies is perpetual, especially within the context of senior school education in Nigeria. The pivotal role of education in shaping the future of individuals and nations underscores the importance of continually evaluating and refining teaching methodologies (Akpan, 2016). In the context of Nigeria, academic achievement in senior secondary school is of paramount importance due to its far-reaching implications on students' future educational and career endeavours. Several scholars have explored

the multifaceted importance of academic achievement in senior secondary schools, shedding light on its implications for students, communities, and the nation at large.

Firstly, academic achievement in senior secondary school serves as a foundational element for higher education pursuits. In Nigeria, successful completion of senior secondary education is often a prerequisite for admission to tertiary institutions. As noted by Okwilagwe (2013), access to higher education is a key factor in improving socioeconomic status and opportunities for individuals. Therefore, academic achievement in senior secondary school becomes a gateway to expanded educational horizons, enabling students to pursue specialized fields of study and enhance their future career prospects. The impact of academic achievement in senior secondary school extends beyond individual development to community and national levels.

A well-educated populace is essential for national development, economic growth, and social progress (Ololube, 2016). The skills and knowledge acquired during senior secondary education contribute to the human capital of the nation, enhancing its capacity for innovation, productivity, and competitiveness in the global arena. Now, considering the context of assessing the effect of reflective instructional strategy on senior secondary school academic achievement in Government in Nigeria, the significance of academic success becomes even more pronounced. Reflective instructional strategies, which encourage students to think critically, engage with course content, and apply their knowledge, are integral to fostering meaningful learning experiences (Dewey, 1933).

The academic achievement in government, a subject that plays a crucial role in civic education, governance, and national development, is particularly relevant in this assessment. A reflective instructional strategy applied to the teaching of government can enhance students' understanding of political processes, governance structures, and civic responsibilities (Okoye, 2017). This, in turn, can contribute to the development of informed and active citizens, aligning with the broader goals of education in Nigeria (National Policy on Education, 2013).

Reflective instructional strategies play a crucial role in the educational landscape, offering a dynamic approach that goes beyond mere dissemination of information (Garcia & Martinez, 2018). In the context of senior secondary school academic achievement in Government in Nigeria, the significance of reflective instructional strategies becomes particularly pronounced. Reflective instructional strategies, characterized by activities that promote critical thinking, encourage students to analyze, evaluate, and synthesize information. According to Dewey (1933), reflective thinking involves active, persistent, and careful consideration of a belief or supposed form of knowledge.

By engaging in reflective practices, students develop critical thinking skills, enabling them to assess and comprehend complex concepts within the realm of Government studies (Dewey, 1933). One of the central tenets of reflective instructional strategies is the application of knowledge to real-world situations. Schön (2017) introduced the concept of "reflection-in-action" and "reflection-on-action," emphasizing the importance of practitioners reflecting on their experiences to improve future actions. In the context of Government studies, reflective strategies can bridge the gap between theoretical concepts and practical application, fostering a deeper understanding of governance structures and political processes (Schön, 2017).

Reflective instructional strategies often involve interactive and participatory activities, promoting student engagement. According to Vygotsky's socio-cultural theory (1978), learning is an inherently social process. Collaborative reflection allows students to construct knowledge collectively, fostering a sense of ownership and motivation in their academic pursuits (Vygotsky, 1978). In the specific context of Government studies, this collaborative engagement can lead to a more nuanced understanding of political systems and civic responsibilities. The reflective process contributes to long-term retention of knowledge.

Bransford, Brown, and Cocking (2021) highlight the importance of creating a learning environment that supports the transfer of knowledge to new contexts. Reflective instructional strategies, by encouraging students to connect new information with their existing knowledge, facilitate this

transferability. In the realm of Government studies, this means students are more likely to retain and apply their understanding of political concepts beyond the classroom (Bransford, Brown, & Cocking, 2021).

Reflective instructional strategies, when applied in the teaching of Government in senior secondary school, offer a transformative approach that goes beyond traditional pedagogies. The application of reflective strategies in this context is integral to assessing their effect on academic achievement. Integrate real-world case studies and examples into the teaching of Government. Encourage students to critically analyze political events, policies, and governance structures. This approach aligns with the reflective practice of applying theoretical knowledge to practical situations (Dewey, 1933). By engaging with case studies, students develop a deeper understanding of the complexities and challenges within the field of Government. Foster a reflective atmosphere through Socratic questioning and class discussions. Pose open-ended questions that prompt students to analyze and evaluate political concepts.

According to Vygotsky's socio-cultural theory (1978), collaborative dialogue enhances cognitive development. In the context of Government studies, class discussions can facilitate the reflection-in-action process, allowing students to critically think about political issues in real-time (Vygotsky, 1978). Incorporate reflective journals and writing assignments into the curriculum. After studying a particular topic, students can express their thoughts, questions, and insights in a reflective journal. This not only encourages meta-cognition but also provides educators with valuable insights into students' understanding and thought processes (Schön, 2017). Writing assignments can further prompt students to analyze their beliefs and assumptions about political systems.

Organize debates on controversial political issues to stimulate critical thinking and reflection. This strategy encourages students to consider multiple perspectives and articulate their views coherently. Debates promote reflection-on-action by challenging students to evaluate their own beliefs and those of their peers in the context of political discourse (Mezirow, 2021). Establish a system of

constructive feedback and peer review for students. Encourage them to assess and provide feedback on each other's projects, papers, or presentations related to Government studies. This reflective peer-review process not only enhances collaborative learning but also helps students refine their analytical and argumentative skills (Dewey, 1933). Integrate self-assessment opportunities within the curriculum. Encourage students to set learning goals, assess their progress, and reflect on their achievements. This meta-cognitive approach, in line with transformative learning theory, empowers students to take ownership of their learning journey and continually adapt their strategies for understanding political concepts (Mezirow, 2021).

In the specific context of assessing the effect of reflective instructional strategy on senior secondary school academic achievement in Government in Nigeria, these applications provide a foundation for gauging the impact of reflective practices on students' comprehension, critical thinking skills, and overall academic success.

Reflective instructional strategies have been explored in diverse educational contexts, demonstrating their impact on academic achievement across subjects. In a study by Zhang and Burry-Stock (2018), reflective instructional strategies were applied in Mathematics classrooms. The research found that students engaged in reflective practices, such as journaling about problem-solving approaches, exhibited increased mathematical reasoning skills. The findings highlight the potential of reflective strategies to enhance academic achievement in a quantitative subject like Mathematics. The application of reflective instructional strategies in Science education was explored by Anderson, Smith, and McKay (2015).

Their study revealed that incorporating reflective practices, such as post-laboratory reflections and collaborative discussions, contributed to deeper conceptual understanding and improved academic performance in Science subjects. Reflective instructional strategies have also shown promise in English Language Arts. A study by Moon and Lee (2015) investigated the impact of reflective writing on literature analysis. Students engaged in reflective writing activities demonstrated

enhanced critical thinking skills, leading to improved academic performance in English literature. In the realm of Social Studies, a study by Li and Lee (2017) explored the effectiveness of reflective instructional strategies in fostering historical thinking skills. The incorporation of reflective activities, such as analyzing primary sources and writing historical reflections, positively influenced students' ability to critically engage with historical content, ultimately improving academic achievement.

The academic achievement of students, particularly in subjects like Government, can be influenced by various factors. One significant aspect is the consideration of gender perspectives in the application of reflective instructional strategies. In a study by Smith and Johnson (2019), reflective instructional strategies were implemented in Mathematics classrooms, considering gender differences. The findings indicated that female students, when engaged in reflective practices, showed increased self-efficacy and motivation, contributing to improved academic achievement. This suggests that reflective strategies may positively impact female students in subjects traditionally perceived as challenging. A study by Garcia and Martinez (2018) explored the gendered effects of reflective instructional strategies in Science education.

The research demonstrated that male students, through reflective activities like collaborative experiments and journaling, exhibited enhanced conceptual understanding. This highlights the potential for tailoring reflective strategies to address gender-specific learning needs in Science subjects. Reflective instructional strategies in English Language Arts were examined by Taylor and Brown (2017) with attention to gender differences. The study revealed that male students, when engaged in reflective writing activities, demonstrated improvements in critical analysis and interpretation of literary texts. This suggests that incorporating reflective practices can contribute to gender-inclusive academic achievement in language-oriented subjects.

The current state of academic achievement in Senior Secondary School Government subject in Nigeria presents a concerning trend characterized by poor performance and suboptimal outcomes,

especially in Umuahia North Local Government Area of Abia State (Okeke,2021). The rationale for the study lies in the recognition of an existing problem, the desire to enhance learning outcomes, the need to align with educational goals, the importance of considering local contexts, the contribution to educational research, and the potential policy implications that may arise from the findings. It is on this note that the researchers investigate the effect of Reflective instructional strategy on senior secondary 2 students in Umuahia north LGA of Abia State Nigeria.

The following research questions were raised and answered in the study:

1. What is the differential effect of reflective instructional strategy and Lecture teaching method on SS students' achievement in Government?

2. What are the differences in male and female SS2 students' mean achievement scores when reflective instructional strategy is used in teaching Government?

Hypothesis

This null hypothesis was formulated and tested at 0.05 level of significance:

There is no significant difference between the mean achievement scores of students' taught Government using reflective instructional strategy and those taught using Traditional method of teaching.

Method

This study adopted pre-test, post-test, control group experimental design with a 2 x 2 factorial matrix to determine the effects of training in reflective instructional strategy and lecture method on students' academic achievement in Government. The experimental group adopted reflective instructional strategy and the control group used the lecture method for teaching. The population of the study comprised all the senior secondary school two (SS2) Government students in all the Government owned co-educational Secondary schools in Abia State in the 2022/2023 academic session numbering ,2868 students (1941 male and 927 female students) in Abia State (Abia State Secondary Education Management Board, 2022).

The SS II Students of Ibeku High School were purposively sampled. SS 11 students were chosen for the study because the class is neither trying to adjust to senior secondary school because they

are already in SS 11 nor are they preparing for external exams like those in SS111, Ibeku High School is one of the coeducational public secondary schools in Umuahia Educational Zone with adequate teachers and students. The sample of the study consist of 81students comprising 42 students assigned to the experimental groups and 39 students assigned to the control group from the same school. One class for experimental group has 23 males and 19 females (reflective group) while the other class for control group has 22 males and 17 females.

Instrument used for data collection is The Government Achievement Test (GAT) which consists of 25 multiple-choice questions along with two types of lesson plans: One for the experimental group using reflective instructional approach and the other for control group using traditional method of teaching strategy. The Pre-test Post- test achievements test items were based on the unit topics that consist of Government topics for SS2 that was taught to the students.

The face and content validity were established for the Government Achievement Test (GAT) Forms 1and 11. To ensure the face validity of the Government Achievement Tests (GAT), they were presented to three specialists in Measurement and Evaluation, Government Education and Curriculum studies from Alvan Ikoku University of Education. The content validity of the Government Test (GAT) Forms 1and 11 were ensured through the use of the test blueprints and item analysis. Thereafter, the test items generated were sent to experts in Curriculum Studies, Measurement and Evaluation and Mathematics education from Alvan Ikoku University of Education for comments and suggestions.

The researchers in collaboration with some teachers developed a 25-item multiple-choice achievement test that was based on the Government topics in SS2. The reliability of the Government Achievement Test (GAT) was 0.80. The instrument was subjected to trial testing. The Government Achievement Test (GAT) instrument was administered to 30 students who were not sampled for the study. The scores obtained from the trial testing were subjected to Kuder-Richardson (KR-20) formular to determine the internal consistency of the Government achievement Test. The conduct of

the study took place during the normal Government lesson periods, and it lasted for six weeks. The normal timetable of the school was followed. For effective conduct of the study, researchers conducted the teaching by themselves both for the experimental group and control group.

Table 1: Pre-test and posttest mean score and standard deviations scores of students in Government achievement test due to exposure to Reflective instructional strategy and Lecture Method

Teaching Method	Number of Students	Types of Test				Achievement Mean Gains
		Pre-test		Post test		
		$\bar{X}$	S.D	$\bar{X}$	S.D	
RIS Method	42	18.65	4.81	40.05	6.73	21.40
Lecture Method	39	18.35	4.53	29.90	4.89	11.55

The data presented on Table 1 indicated that students taught using Reflective instructional strategy had a mean achievement score of 18.65 and a standard deviation of 4.81 in the pre-test and a mean of 40.05 and a standard deviation of 6.77 in the post-test with a pre-test post-test gain of 21.40. The data also showed that students taught using the Lecture method had a mean score of 18.35 and a standard derivation of 4.53 in the pre-test and a mean score of 29.89 and a standard deviation of 4.53 in the post test, making a pre-test posttest gain to be 11.55. The findings reveal that students taught Government with Reflective instructional strategy had a higher mean achievement gain score than those taught with Lecture method of teaching.

The data presented on the Table 2 indicated that the male students in the RIS experimental group had a mean score of 18.05 and a standard deviation of 5.61 in the pre-test while in the post-test, the male scored a mean score of 38.45 and a standard deviation of 7.52, with achievement gain score of 20.40. The result also shows that the female students in the RIT experimental group had a mean score of 17.85 and a standard deviation of 4.62 in the pre-test of RIS experimental group which is lower than that of male students in the pre-test of RIS experimental group, while the female students also had a mean score of 38.79 and a standard deviation of 6.71 in the post-test of the

experimental group with achievement mean score of 20., which is higher than that of the male students in the post-test score of the RIS experimental group.

Table 2: Pre-test and post –test mean achievement score and standard deviation scores of students in Government achievement test due to teaching methods and gender.

Teaching method	Types of test	Gender							
		Male				Female			
		Student			Achievement gain	Students			Achievement mean gain
			$\bar{X}$	S.D	$\bar{X}$		$\bar{X}$	SD	
1. RIS	Pretest	23	18.05	5.61		19	17.85	4.62	
	Post-test	23	38.45	7.52	20.40	19	38.79	6.71	20.94
2. Lecture method	Pretest	22	17.68	4.22		17	18.51	5.83	
	Post-test	22	27.05	6.53	9.37	17	26.61	6.71	8.10

The data presented on Table 2 also indicate that male students had a mean score of 17.68 and a standard deviation of 4.22 in the pre-test of the control group which was lower than the pre-test of the experimental group, while in the post-test, the male students had a mean score of 26.05 and a standard deviation of 6.53, with mean achievement gain of 9.37 which was lower than the experimental group. The result also shows that the female students had a mean score of 18.51 and a standard deviation of 5.83 in the pre-test of the control group which is higher than that of the male students score in the pre-test of the control group, while the female students had a mean score of 26.61 and a standard deviation of 6.53, with mean achievement gain of 8.10 which is higher than that of the male students in the post-test of the control group. This finding shows that statistically sex is not a significant factor in academic achievement of male and female students taught Government with IRL and Lecture method though in every endevour there is always gender perceptive.

Hypothesis

There is no significant difference the mean achievement scores of students' Reflective instructional strategy and those taught using Lecture method.

Table 3: Analysis of covariance (ANCOVA) for Government Test mean achievement scores of students when taught using RIS instructional strategy and lecture teaching method.

Sources of Variation	Type II sum of square	Df.	Mean sum of square	F.	Significance
Correlated model	5952.991[a]	2	2976.496	189.597	.000
Intercept	3674.011	1	3674.011	193.662	.000
Pre-test	408.541	1	408.541	17.199	.000
Teaching strategy/ method	4886.773	1	4886.773	517.685	.000
Error	1728.559	79	22.449		
Total	86684.000	81			
Corrected total	7681.554				

Table 3 shows the ANCOVA analysis of the data collected from the posttest scores of students taught Government using RIS strategy and those taught using Lecture method. From the analysis, $F(1, 79) = 518.645$, $p<0.05$. Hence, the null hypothesis was rejected. This means that there is a statistically significant difference between the mean academic achievement scores of students taught Government using Reflective instructional strategy and lecture method of teaching in favour of those taught using RIS strategy. This further indicates that there was higher improvement in the academic achievement scores of the experimental group than students in the control group.

Discussion

The research questions and hypothesis framed for this study aimed to explore the differential effects of reflective instructional strategy (RIS) and lecture teaching method on senior secondary 2 (SS2) students' achievement in Government, as well as to investigate potential gender differences in mean achievement scores when RIS is employed. The analysis of the data, presented in Tables 1, 2, and 3,

provides valuable insights into the impact of instructional strategies on academic achievement in Government. The results presented in Table 1 indicate a significant difference in mean achievement scores between students taught with RIS and those taught with the Lecture method.

The experimental group, exposed to reflective instructional strategy, demonstrated a substantially higher mean achievement gain compared to the control group taught using the Lecture method. This finding aligns with previous research (Zhang & Burry-Stock, 2018; Anderson, Smith, & McKay, 2015) emphasizing the importance of effective teaching strategies in improving student achievement across various subjects. Reflective Instructional Strategy, characterized by self-assessment opportunities, goal-setting, progress assessment, and reflective practices, seems to have positively influenced students' engagement and understanding of Government topics. The instructional procedural process inherent in RIS integrates critical thinking and self-evaluation, fostering a deeper comprehension of political events, policies, and governance structures.

Table 2 provides a breakdown of mean achievement scores by gender and teaching method. Surprisingly, there were no statistically significant differences between male and female students in their academic achievement when exposed to either RIS or the Lecture method. This contrasts with the findings of Smith and Johnson (2019), who reported increased self-efficacy and motivation among female students engaged in reflective practices. However, it's crucial to note that gender dynamics in academic achievement can vary across contexts and subjects. The results of this study are consistent with Moon and Lee (2015) and Li and Lee (2017), supporting the notion that reflective instructional strategy enhances academic achievement better than the lecture method.

RIS, by encouraging critical analysis, open-ended questioning, and collaborative dialogue, aligns with contemporary pedagogical approaches that emphasize active student participation and cognitive development. The significant difference in mean academic achievement scores between the RIS and lecture groups (Table 3) suggests practical implications for teaching practices. This

finding is in line with the result of Moon and Lee (2015) and Li and Lee (2017) that reflective instructional strategy method when used in teaching students enhances students' academic achievement better in school subjects than lecture method of teaching.

Conclusion

This study was carried out to assess the effect of reflective instructional strategy on senior secondary 2 students' academic achievement in Government in Umuahia North L.G.A Abia State. The result of the study shows that students exposed to reflective instructional strategy had higher mean academic achievement score gain than their peers exposed to lecture method of teaching. Also, gender was not a significant factor on students' academic achievement in Government when exposed to reflective instructional strategy. This implies that RIS in Government enhances students' academic achievement in Government.

Recommendations

Based on the findings of the study, the following were recommended by the researchers.

1 In-service programme should be organized by relevant authorities for senior secondary class teachers on some innovative teaching methods like RIS that improve students' academic achievement of lesson content.

2 Efforts should be made by curriculum experts to incorporate RIS into the teaching of Government in SS classes.

3 There should be a review in the current instructional procedure to accommodate RIS in SS teaching syllabus. This is to increase students' academic interactivity.

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