

Effect of Guided Inquiry as a Teaching Method on Social Studies Students' Academic Capability

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Abstract

The study examined the usage of Guided Inquiry Teaching Methods (GITM) for Social Studies Students' Academic capability, with gender as an intervening variable. Three research questions and three hypotheses were posed and subjected to data analysis. Jean Piaget theory of constructivism was the theoretical underpin for the study. Research design was quasi-experimental pre-test and post-test control group. A sample size of one hundred and ninety four (194) junior secondary school 2 students of Social Studies from 2 mixed schools were selected from a population of 12,612 students across 7 public schools in Ethiopia East Local Government Area. Random sampling technique was used to select the schools and the students. The instrument for data collection was a capability test titled "Guided Inquiry Academic Test" (GIAT). Test retest reliability method was used to measure the reliability of the instrument, and a coefficient index of 0.86 was realized. Research questions were subjected to mean and standard deviation, while hypothesis were subjected to t-test and Analysis of Covariance (ANCOVA) at 0.05 level of significance. Findings from the study, showed substantial effect of GITM teaching method on academic capability of Social Studies Student; there was significant difference in the academic capability of students taught with GITM and those in the control group; gender did not intervene with the effect of GITM on the academic capability of the students. Considering these findings, Guided Inquiry Teaching Method (GITM) should be practiced by Social Studies teachers in junior secondary schools, without cognizance to gender role.

Keywords: Guided inquiry, gender, teaching method, academic capability, social studies and lecture teaching method.

Introduction

The teaching of Social Studies across the different levels of education in Nigeria is beginning to look like how army officers reel out orders to their subordinates, without considering the subordinates input. The critical thinking and value-laden nature of Social Studies, has shown over time that the teacher-centered methods currently and widely used for teaching Social Studies is grossly ineffective in promoting students' academic performance (Oke, 2020). Observations have revealed that the majority of Social Studies teachers in Nigeria junior secondary schools conduct their classes using mainly the lecture teaching method which is teacher centred. Most worrisome, students' performance in Social Studies in the Basic Education Certificate Examination (BECE) in Nigeria have not been very impressive in recent times (Atubi, 2024). This could be attributed to the inconsistent academic performance of students in Social Studies due to ineffective usage of only teacher centred instructional methods and strategies. If this fluctuating performance in Social Studies continues, it may negatively impact the fulfilment of educational goals of the subject. Therefore, this study advocated the use of innovative student centred instructional methods that could promote and encourage Social Studies students' academic capability, require students to think critically and contribute effectively in class as well as the society at large. On this premise the study determined the effectiveness of Guided Inquiry Teaching Method (GITM), with a view of improving

academic capability junior secondary school students in Social Studies.

The Guided Inquiry Teaching Method (GITM) is a student-centred teaching method that may be capable of improving the academic capability of students in Social Studies, because it allows students to learn independently while receiving guidance from the teacher. According to [Ekomaye \(2019\)](#); [Akpokiniovo \(2022\)](#); and [Afolabi \(2024\)](#), GITM promotes critical thinking, problem-solving abilities, and active engagement in students. It entails leading students through an inquiry-based process in which they investigate issues, compile data, conduct research, and create knowledge either alone or in groups. [Berhanu & Sheferaw \(2022\)](#), [Chen et al., \(2021\)](#) described GITM as a type of instructional method where students examine ideas and problems that have already been in existence freely, by exploring and asking questions independently and with minimal teacher guidance. In GITM, students look for information to help them with their problems and find answers by completing tasks. GITM is therefore both instructional, exploratory and can be a fun way of learning. GITM emphasizes how important it is for students to think like scientists.

[Irinoye et al, \(2015\)](#) emphasized the value of GITM by describing how it improves scientific students' academic achievement. GITM fosters comprehension and independent learning by allowing students to identify their own learning styles and aptitudes ([Uzezi & Zainab, 2017](#)). GITM can also motivate students to pursue careers that entails practical tasks and scientific research. In GITM, the teacher selects the topic that has to be learned and then goes above and beyond to help the students understand or research about topic ([Atubi, 2023](#)). The teacher may begin the class by asking the students questions or presenting a problem, then helping them come up with how to find a solution. By doing this, the likelihood of them acquiring concrete knowledge increases because the students are actively engaged in the class.

Guided Inquiry Method is one of the learning methods where students play a role and think actively, learn independently to solve a problem and find concepts or information themselves with the guidance of the teacher. By using the Guided Inquiry Method, the Social Studies teacher does not act as the only source of information, but make students as recipients of information. Thus, it can train Social Studies students' understanding, knowledge and thinking power. The environmental approach, inquiry approach, integrated approach and process skills approach are the right approaches to achieve GITM learning objectives ([Daeli et al., 2025](#) and [Dani et al., 2021](#)). Innovating with GITM makes learning to become more effective, Social Studies students become more active in learning, and this can positively affect the students' learning outcome. With the use of GITM, it is expected that Social Studies students' creative thinking ability will be developed, this is significant in the learning process of an integrated Social Studies.

From the foregoing, GITM is generally regarded as a motivating method, enjoyed by learners. Students can learn independently, they are interested to learn the new material guided by the teacher. In line with that, GITM is a process that Social Studies teachers could use to introduce new materials, explore centers or areas of the classroom, and prepare learners for various aspects of the curriculum. The teacher in this approach of instruction is behind the scene, and only guides, facilitates and prompts students to conduct investigations, as well as construct new meaning from the events and phenomena that they study ([Ogunjimi & Gbadeyinka, 2023](#)). Looking at the enormous advantages of integrating the GITM in Social Studies, the researchers considered it an important variable to be investigated, hence this study.

A variable which the researchers believe is capable of intervening in the usage of GITM is gender. Gender is the biological makeup of an individual, whether male or female, and examining the relationship between gender and academic capability of students' is crucial due to the sociocultural differences that exist between male and female gender in Nigeria. [Abdu-Raheem \(2012\)](#) and [Akpochafo and Oghenakoke \(2015\)](#) have looked into the relationship between gender and academic capability of students in Social Studies and submitted no differences. [Abdu-Raheem \(2012\)](#) and [Akhogbai et al., \(2024\)](#), reported that male and female students perform comparably well in Social Studies, suggesting that gender differences in academic accomplishment are minimal. Nonetheless, [Igiri and Efiog \(2015\)](#) also examined how Social Studies course materials and instructional strategies might support or contradict conventional gender roles, which in turn influence students' academic capability. The academic performance of junior high school pupils at GomoaManso Basic School in Gomo East, Ghana, was investigated by [Abaidoo \(2018\)](#). The results demonstrated that gender influences academic achievement/capability. Similar results were posited by [Dania \(2014\)](#) and [Bamidele & Adekola \(2017\)](#). Therefore, the stud specifically ascertained how gender can be an intervening variable in the usage of GITM to enhance the academic capability of Social Studies students.

The findings in this study will be very significant to junior secondary school social studies students' through encompassing the acquisition of knowledge, the capacity for critical thought, the ability to solve problems, and general competence in Social Studies. Curriculum makers will also find the findings helpful, because it could provide them with a comprehensive method in the Social Studies curriculum that promotes critical thinking, problem-solving, and active learning. Research scholars will also have the opportunity to expand on the findings, carry out further studies, and investigate the long-term effects of GITM on students' academic capability. Knowledge on the effect GITM can help policymakers make decisions about emphasis on the integration of active learning methods in Social Studies education. Therefore, this study will investigate the

effect of Guided Inquiry Teaching Methods (GITM) on Social Studies students' academic capability, while adopting gender as an intervening variable. To direct the study, three research questions and three hypotheses were posed. They are:

Research Question 1: How did Guided Inquiry Teaching Method (GITM) improve the academic capability of Social Studies students?

Research Question 2: What is the effect of Guided Inquiry Teaching Method (GITM) on the academic capability of Social Studies students?

Research Question 3: Can gender intervene in the effect of Guided Inquiry Teaching Method (GITM) on students' academic capability?

Hypothesis 1: Guided Inquiry Teaching Method (GITM) cannot improve the academic capability of Social Studies students.

Hypothesis 2: Guided Inquiry Teaching Method (GITM) do not have any effect on the academic capability of Social Studies students.

Hypothesis 3: Gender did not intervene in the effect of Guided Inquiry Teaching Method (GITM) on students' academic capability.

Theoretical Underpin

The study is centred on the constructivism theory of Jean Piaget of 1972, according to this theory, learning is an activity that is socially constructed and achieved through interaction with others or media resources. Constructivism theory holds that learning is constructed from of socially sharing and discussion of real knowledge. Constructivism theory is relevant to Guided Inquiry Teaching Method (GITM) as it affect students' academic capability because Social Studies adhere to constructivist learning principles (Fox, 2001). The development of critical thinking and problem-solving abilities is the main goal of constructivism, this is also a major objective in Social Studies. By encouraging students to question, analyze, and evaluate information, GITM help them develop critical thinking skills. Students acquire problem-solving abilities through rigorous assignments and real examinations, which are essential for their academic success in social studies. In a similar vein, the constructivism theory places a strong emphasis on the value of interpersonal relationships and teamwork, which usually happen during GITM. GITM help students to interact, exchange ideas, and work together with their peers. Through interaction and group knowledge production, this collaborative learning environment increases students' academic capability and help them gain Social Studies knowledge better.

Review of Literature

Adejo (2015) demonstrated that chemistry students taught with the guided inquiry method outperformed their peers taught through the traditional technique by a large margin. Similarly, Uzezi and Zainab (2017) demonstrated that students exposed to chemistry through guided inquiry laboratory experiments improved in their performance. However, there was no significant difference in their academic achievement based on their gender. On the contrary, Adebayo (2016) findings, demonstrated that students who were taught physics using the traditional approach performed better than those who were exposed to GITM. Adebayo went on to submit that there is no discernible difference between male and female pupils who were exposed to GITM in terms of mean scores. Research findings from Fadilah & Nasrudin (2020), indicated that the application of the GITM gained very good criteria and students' critical thinking skills increased with the average N-gain 0.74 - 0.84 with high criteria. Studies such as Rambe, et al (2020), Maknun (2020), and Odukwe & Nwafor (2021) also found that the application of GITM is effective in improving student learning outcomes and improve students' critical thinking skills. Besides, research conducted by Hikmah & Nasrudin (2016) revealed that the implementation of GITM on chemical equilibrium material was carried out well, and students' critical thinking skills had increased with an N-Gain score of 0.75 with high criteria. The GITM help students in finding their answers to the problems, while the teacher acts as a facilitator and guide for students to actively learn (Sanjaya, 2014). GITM can promote students' creativity more effectively than can brainstorming because they can establish connections with previous ideas (Hagtvedt et al., 2019). One characteristic of GITM is the generation of uncertainty (Schijndel et al., 2018), which is embodied in the possibility of collecting different information, using different methods, and obtaining different results. From the foregoing, literature reviewed on Guided Inquiry Teaching Method (GITM) and Social Studies students' academic capability showed that quite a lot of studies have been done in the method. However, most of the research were carried out mainly in the science subjects such as mathematics, physics, chemistry and biology. The use of GITM in Social Studies seems to be left out of the loop and are practically non-existent, hence this gap need to be filled with this study.

Research Methods

Research design employed was quasi-experimental pre-test and post-test control group. A sample size of one hundred and ninety four (194) junior secondary school 2 students of Social Studies from 2 mixed schools

were selected from a population of 12,612 students across 7 public schools in Ethiopia East Local Government Area. The sample were placed into two groups of experimental with ninety five (95) students and control group with ninety nine (99) students. Random sampling technique was used to select the schools and the students. The instrument for data collection was a capability test titled “Guided Inquiry Academic Test” (GIAT). The instrument had sections A and B respectively, section A, required demographic information of gender, while section B consisted of 50 multiple choice items. The instrument was validated by Social Studies professors at the Delta State University Abraka. The reliability was conducted with a pilot study in another school different from those used for the sample with 20 students. Reliability was measured with test-retest reliability method, a coefficient index of 0.86 was realized.

Data Collection

The students were first pretested, thereafter the experimental group received instruction through small group guided inquiry teaching methods (GITM). There were 5 steps the teacher used in guided inquiry teaching method which was as follow: (a) the teacher planned behavioral objective: this has to do with the teacher focusing on the student’s abilities. (b) Designing Teaching Materials: the teachers provided students with appropriate titles. At the same time, teachers also ensure that the resources for a title are adequate and provide the resources needed to implement them. Such resources includes references material, textbooks, maps, magazine, electronic media and others. (c) The teacher Designs Questioning Strategies: the teacher planned the questions that can guide the students towards the learning objectives they want to achieve. The teacher provided questions to develop critical and creative thinking among students. The questions usually begin with the question of ‘why’ then ‘how’ and so on. (d) The teacher designed teaching and learning strategies. Before implementing the inquiry method, teachers was clear about what their students need to achieve and learn. Next, the teachers planned student activities according to specific steps. Teachers also instruct students to understand what they need to do. In this case, teachers also decide whether the inquiry is to be conducted individually or in groups. (e) Evaluation: Evaluation was done by the teacher through questions that students ask, how they perform in learning activities, and how they handle information evaluation was also done using media or audiovisual tools for viewing, listening, and analyzing. Meanwhile the control group were taught traditionally, without any treatment

Immediately after the treatment for the experimental group and teaching the control group, students were given a post-test, then the results of the pre and posttest were then collated. Research questions were subjected to mean and standard deviation, while hypothesis were subjected to t-test and Analysis of Covariance (ANCOVA) at 0.05 level of significance.

Results

Research Question 1: How did Guided Inquiry Teaching Method (GITM) improve the academic capability of Social Studies students?

Table 1. Mean of Guided Inquiry Teaching Method (GITM) and Academic Capability of Social Studies Students

A. Performance of Students	N	Mean($\bar{X}$)	SD	Standard Error
Pre-test	95	26.3	13.75	1.84
Post-test	95	55.25	15.87	2.12

Table 1, shows mean descriptive statistics on the academic capability of students taught using GITM. The mean was 26.32 and 55.25 in their pretest and posttest scores respectively, this shows that their posttest scores after been exposed to the GITM is higher than their pretest scores before been exposed to the GITM. This implies that GITM improved the academic capability of Social Studies.

Research Question 2: What is the effect of Guided Inquiry Teaching Method (GITM) on the academic capability of Social Studies students?

Table 2. Effect of Guided Inquiry Teaching Method (GITM) on the Academic Capability of Social Studies Students

Group	N	Mean ($\bar{X}$)	SD
Control	99	44.43	13.33
GITM	95	67.91	15.02
Total	194		

In table2, results showed the mean score of students taught using lecture and GITM had a mean of 44.43 and 67.91 respectively and this implies that there is difference in the mean performance scores in Social Studies

among students taught using lecture and guided inquiry methods. The GITM group recorded the highest score, it implies that the method had a substantial effect on Social Studies students' academic capability.

Research Question 3: Can gender intervene in the effect of Guided Inquiry Teaching Method (GITM) on students' academic capability?

Table 3. Intervening effect of Gender on GITM on Students' Academic Capability

	N	Mean ($\bar{X}$)	SD	Standard Error
Male	45	53.35	17.09	3.35
Female	50	56.90	14.82	2.71
Total	95			

Table 3, revealed the Social Studies academic performance of male and female students taught using GITM. According to their performance it showed 53.34 and 56.90 for male and female students respectively. There is a little difference in the academic performance of students exposed to GITM on the bases of. This implies that the treatment was beneficial to both the male and the female students, however the significance of the difference was tested with hypothesis 3.

Testing of Hypotheses

Hypothesis 1: Guided Inquiry Teaching Method (GITM) cannot improve the academic capability of Social Studies students.

Table 4. T-test statistics on the GITM teaching method and academic Capability of Students.

GITM Group	N	Mean	df	t.cal	t.crit	P(sig)	Decision
Pre-test	95	26.32	94	-14.87	2.01	0.00	Reject
Post-test	95	55.25	94				

P Calculated < 0.05 T Calculate > 2.01 at df of 94

The pair sample statistics above, showed that the GITM improved the academic capability of Social Studies Students. This is because P value of 0.00 is less than the 0.05 alpha level of significance and the calculated t-value of -14.87 is greater than the t- Critical value of 2.01 at a df of 94. Implying that GITM improved academic performance of Social Studies after being exposed to the treatment of GITM. Therefore the null hypothesis is hereby rejected, and its alternate accepted.

Hypothesis 2: Guided Inquiry Teaching Method (GITM) do not have any effect on the academic capability of Social Studies students.

Table 5. Result of Analysis of Covariance of Students, Performance Score by GITM

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	24786.990a	3	8262.330	43.107	0.000	0.400
Intercept	42497.057	1	42497.057	221.722	0.000	0.533
Pretest	5268.653	1	5268.653	27.488	0.000	0.124
Treatment	16141.588	2	8070.794	42.108	0.000	0.303
Error	37183.657	194	191.668			
Total	670418.000	198				
Corrected Total	61970.646	197				

a. R Squared = .400 (Adjusted R Squared = .391)

The data displayed in table 5, suggest that there was a significant effect of Guided Inquiry Teaching Method (GITM) on academic capability, more than the lecture method. The F value was $F(2,194) = 42.103$, $P = 0.000$. Thus, the null hypothesis was rejected. Therefore, there is a significant effect of GITM than using only the lecture method.

Hypothesis 3: Gender did not intervene in the effect of Guided Inquiry Teaching Method (GITM) on students' academic capability.

Table 6. T-test sample statistics on Intervening Effect of Gender on GITM and Social Studies Academic Capability

GITM Group	N	Mean	df	t.cal	t.crit	P(sig)	Decision
Male	45	53.35	94	-0.834	2.01	0.408	Accept
Female	50	56.90					

Outcome of the independent sample t-test statistics showed in [table 6](#), suggest that there is no intervening effect of gender on academic capability of male and female students taught Social Studies using GITM. This is because the calculated p-value of .408 is higher than the 0.05 alpha level of significance while the t- value calculated is -.834 is lower than the t-critical value of 2.00 at df of 94. Consequently the null hypothesis which says that gender did not intervene in the effect of Guided Inquiry Teaching Method (GITM) on students' academic capability is hereby accepted and retained.

Discussion

The first finding in this study reported that GITM improved the academic capability of Social Studies students. In the same vein, the second finding revealed that GITM had a compelling effect on Social Studies student' academic capability. Therefore, both findings presuppose that GITM could become a good innovative pedagogy, and goes to show that it can bring positive changes to Social Studies education. These findings indicate that GITM approach has a number of benefits, such as enhancing student engagement, stimulating active learning, and developing critical thinking abilities. The use of GITM could have made students have a deeper comprehension of the lesson content, by being given the freedom to investigate and learn on their own with the teacher's assistance. It therefore means that with proper guidance from a teacher, GITM can help students improve their academic performance.

These finding discovered in this study are in line with those of [Maknun \(2020\)](#); [Odukwe & Nwafor \(2021\)](#); [Akpokiniovo \(2022\)](#); [Berhanu & Sheferaw \(2022\)](#); [Ogijimi & Gbadeyinka \(2023\)](#); [Afolabi \(2024\)](#) and [Daeli et al, \(2025\)](#). These authors carried out different studies on the effectiveness of Guided Inquiry Method on Secondary School Students' Performance in mostly the science subjects' curriculum across different locations in Nigeria. The achievement scores of students taught with Guided Inquiry method in the pretest increased in the posttest indicating a mean gain. Students in the control group taught with traditional lecture method obtained a mean gain between pretest and posttest in various subjects. This indicates that students taught with Guided Inquiry Method performed significantly better and participated more in school lessons than those taught with the traditional lecture method. It was only [Adebayo \(2016\)](#) that recorded a contrary findings.

Intervening effect of gender on academic capability of students taught Social

Studies with Guided Inquiry Teaching Model (GITM) wasn't significant as the results showed that gender had no significant effect in this study. This results might be due to the fact that the both the male and female students were very serious with GITM. Also, it could be because GITM is not gender discriminatory and typically easy for students to relate with irrespective of gender. This result is in consonance with the study carried out by [Akpochofo and Oghenakoke \(2015\)](#); [Akhogbai et al., \(2024\)](#); and [Abaidoo \(2018\)](#) have looked into the relationship between gender and academic performance in Social Studies. According to [Abdu-Raheem \(2012\)](#), male and female students perform comparably well in Social Studies, suggesting that Sex differences in academic accomplishment are minimal. This finding is in line with the authors' investigation on the effect of gender on computer science students' academic achievement. However, the findings are in contrast to [Dania \(2014\)](#); [Bamidele and Adekola \(2017\)](#) and [Abaidoo \(2018\)](#) and [Arubi \(2024\)](#). The studies found significant difference in the academic performance of male and female students in their various studies. Therefore, this study concluded that there was no significant difference between male and female students' performance as it concerns GITM.

Conclusion

The study reaffirmed the effectiveness of Guided Inquiry Teaching Method as an instructional method that can improve students' performance in Social Studies. The study also established that GITM is more effective than the traditional lecture method of teaching and that guided Inquiry teaching method is very good for improving Social Studies students' academic capability. The study's findings suggest that implementing the Guided Inquiry Teaching method in Social Studies classes is the best for improving students' cognitive performance. The study also concluded that the intervening effect of gender on GITM and academic capability of Social Studies students is not effective.

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