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The Influence of the Implementation of the Guided Inquiry Learning Method on Students' Critical Thinking Skills

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ABSTRACT

This study aims to examine the effect of the guided inquiry learning method on students' critical thinking skills in Economics, particularly on the topic of "Monetary and Fiscal Policy" at SMAN 7 Bandung during the 2024/2025 academic year. The research used a quasi-experimental design (non-equivalent control group design), involving Class XI I as the experimental group and Class XI H as the control group. Data were collected through observation and a written test consisting of 10 essay questions developed based on critical thinking indicators. The hypothesis was tested using paired sample t-test and independent sample t-test. The results showed a significant improvement in the critical thinking skills of students in the experimental class after receiving treatment using the guided inquiry method. The N-gain score in the experimental class reached 0.70, classified as moderate and "fairly effective," while the control class only reached 0.34, categorized as "ineffective." These findings indicate that the guided inquiry learning method is more effective than conventional teaching in enhancing students' critical thinking skills. Thus, guided inquiry can serve as a suitable alternative to improve learning outcomes in Economics by promoting analytical thinking and active student engagement.

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INTRODUCTION

Education plays a vital role in shaping intelligent, skilled, creative, innovative, and virtuous individuals, serving as the foundation for building a better future (Leoni, 2025). It is not only a means of acquiring knowledge but also a key instrument in shaping character, developing individual potential, and enlightening the nation (Vătămănescu et al., 2023). True education goes beyond the mere transmission of knowledge (Concannon-Gibney, 2023). It is a holistic process that harmoniously involves the heart, mind, and body to form well-rounded individuals. Furthermore, education prepares individuals to face the challenges of life with strong knowledge, practical skills, and moral integrity (Gazibara, 2020). Its ultimate goal is to cultivate a generation that is intellectually capable, morally grounded, and resilient in navigating life's complexities (Bauer & Hermann, 2024). In addition to fostering academic competence, education also aims to cultivate critical thinking skills, which empower students to analyze problems deeply and develop innovative solutions (Anggraeni et al., 2023).

In the context of rapid globalization, education plays an increasingly crucial role in preparing individuals to adapt and innovate. It influences not only individual growth but also the broader trajectory of societal progress and civilization building (Schofer et al., 2021). A quality education system is essential for promoting social and economic welfare by enhancing social mobility, reducing economic disparities, and creating equal opportunities for all (Carvalho et al., 2024).

In the 21st century, inclusive and quality education must be designed to equip learners with essential higher-order thinking skills (HOTS), such as critical thinking, creativity, collaboration, and problem-solving (Bhuttah et al., 2024). In Indonesia, the 2013 curriculum places strong emphasis on the development of HOTS. However, its implementation in schools faces significant challenges. One of the most pressing issues is the relatively low level of students' critical and creative thinking skills (Dilekçi & Karatay, 2023). According to data from the Trends in International Mathematics and Science Study (TIMSS), Indonesian students consistently rank low in scientific literacy. Most students only achieve a basic level in terms of knowledge, comprehension, and application. This reflects a significant gap in the development of the critical thinking skills required to solve complex, higher-order problems.

Substantial reform efforts are urgently needed to address these challenges and enhance the overall quality of education in Indonesia, particularly in improving students' thinking abilities. The issue of low critical thinking skills is also evident at the local level. Observations conducted at SMAN 7 Bandung provide a clear example. The results of a critical thinking skills test administered to 11th-grade students in Economics reveal concerning outcomes, as shown in the table below:

Table 1. *Critical Thinking Skills Test Results of 11th Grade Students at SMAN 7 Bandung (Academic Year 2024/2025)*

Score	Category	Frequency	Percentage (%)
90–100	Very High	0	0.00
80–89	High	3	3.23
65–79	Moderate	22	23.66
55–64	Low	41	44.09
0–54	Very Low	27	29.02
Total		**93**	**100**

Source: Processed Data

Based on the data, the majority of students fall into the "low" and "very low" categories in terms of critical thinking ability, with only 3.23% achieving a "high" level and none achieving a "very high" level. These results reflect a significant concern regarding students' preparedness for higher-level cognitive tasks, particularly in Economics, where analytical reasoning and problem-solving are essential. One of the main contributing factors to this issue is the learning method used in classrooms, which often does not promote critical thinking. Erceg (Priyadi et al., 2018) noted that students struggle to connect calculations with real-world problems, while Romadona et al. (2017) found that students tend to passively accept teacher explanations without deeper inquiry.

Students with low levels of critical thinking often operate at a surface level, lacking the ability to interpret questions or problems critically (Fajari, 2021). As such, teachers must adopt teaching strategies that encourage analytical thinking. Ge et al. (2024) argues that shifting the teaching approach is crucial in creating a classroom environment that stimulates critical thinking. One such strategy is the guided inquiry learning method, which has been shown to promote active engagement, experimentation, and problem-solving (Walker & Warfa, 2017). Guided inquiry focuses on student participation in discovering and constructing knowledge, making learning more meaningful and personal (Ge et al., 2024).

In the context of Economics education, critical thinking is particularly crucial. Economics as a subject requires students to interpret data, evaluate economic issues, analyze cause-and-effect relationships, and make reasoned decisions based on evidence. Without strong critical thinking skills, students may struggle to understand complex economic concepts or apply them to real-life scenarios. The traditional lecture-based teaching methods that dominate many classrooms often fail to foster

such skills, as they emphasize memorization rather than analysis and inquiry. Thus, there is a pressing need to adopt teaching strategies that shift the focus from teacher-centered instruction to student-centered exploration, particularly in subjects like Economics where analytical reasoning is essential.

The guided inquiry learning model offers a promising alternative. Unlike conventional approaches, guided inquiry encourages students to ask questions, investigate problems, and construct their own understanding through structured support. This model balances independence with guidance, allowing students to engage deeply in the learning process while still being directed by the teacher when necessary. By encouraging exploration and reflection, guided inquiry can help students build connections between concepts, develop hypotheses, test ideas, and draw logical conclusions, all of which are core components of critical thinking. Furthermore, when students are actively involved in constructing knowledge, their motivation, engagement, and retention of material tend to improve significantly.

In addition, the implementation of guided inquiry supports the development of metacognitive skills, such as self-regulation, reflection, and strategic planning. These skills enable students to monitor their own thinking processes, identify errors in reasoning, and adjust their strategies for problem-solving. In a broader educational framework, these competencies are aligned with 21st-century learning goals that emphasize the ability to learn how to learn. When students are equipped with metacognitive awareness, they become more independent learners who can adapt to different academic and real-world challenges. This is especially important in the digital age, where access to information is abundant, but the ability to critically assess and apply that information is what truly matters.

Moreover, guided inquiry fosters collaboration and communication among students. Many guided inquiry activities are conducted in groups, requiring students to discuss ideas, justify their thinking, and listen to others' perspectives. This collaborative environment not only enhances cognitive development but also builds social-emotional skills such as empathy, teamwork, and mutual respect. In the context of Economics, group discussions and cooperative investigations simulate real-world economic decision-making processes, where diverse viewpoints must be considered, and consensus must be reached. This makes the learning experience more authentic and prepares students for the kind of collaborative work they may encounter in their future careers.

Lastly, integrating guided inquiry into the Economics curriculum also supports the role of the teacher as a facilitator rather than a sole knowledge provider. Teachers become mentors who guide the learning process, provide scaffolding, and encourage students to take ownership of their learning. This paradigm shift

empowers students to become active participants rather than passive recipients of information. However, successful implementation requires adequate teacher training, classroom resources, and curriculum alignment. Therefore, further research into the effects of guided inquiry on students' critical thinking, particularly in Economics education, is essential to provide empirical support for its broader adoption and to identify best practices for overcoming practical challenges in its application.

Given the importance of enhancing critical thinking in education and the potential of inquiry-based learning to contribute to this goal, this study seeks to explore the effectiveness of the Guided Inquiry Learning Method in improving students' critical thinking skills. Therefore, the author is motivated to conduct research titled: **"The Influence of the Implementation of the Guided Inquiry Learning Method on Students' Critical Thinking Skills in Economics Education."**

LITERATURE REVIEW

This research explores the application of the guided inquiry learning method as an effective approach to enhance students' critical thinking skills. The theoretical foundation of this study is rooted in constructivist learning theory, which posits that the learning environment plays a crucial role in encouraging diverse perspectives and interpretations of reality, facilitating the construction of knowledge, and promoting experiences that are grounded in active engagement. Constructivism views learning not as a passive absorption of information but as an active process in which learners build knowledge through experience, reflection, and social interaction.

According to Malik et al. (2025), learning occurs most effectively in social contexts, where individual engagement can be seen through activities such as argumentation and collaborative discussion. Vygotsky emphasized that social interaction is essential for students to internalize complex understandings, problems, and processes. (This internalization process involves constructing psychological functions through language use, which serves as a key medium for students to negotiate the meaning of their experiences (Kjell et al., 2019). Wale & Bishaw (2020a) supported this perspective by demonstrating that the implementation of guided inquiry learning assisted by PowerPoint media had a significant positive effect on students' critical thinking skills when compared to traditional control groups (Hakam et al., 2024).

From the constructivist standpoint, knowledge is a result of the learner's active construction process. Although knowledge cannot be transferred directly from one individual to another, it is built collectively through learning interactions. (Reynolds, 2016) emphasized that students who engage in learning from a constructivist

perspective can construct their own conceptual frameworks using their cognitive skills. The teacher's role is to support and facilitate this development, rather than acting as the sole source of information. Constructivist theory thus underscores that students must be actively involved in learning, applying concepts to real-life situations, solving problems independently, and discovering rules through exploration and reflection. This approach not only fosters deeper understanding but also encourages the formation of independent, reflective learners.

In this study, the guided inquiry method is selected for use in experimental classroom research because it is considered highly suitable for beginner learners and novice teachers. This method maintains teacher involvement as a facilitator and guide while allowing students to engage in the inquiry process themselves. Guided inquiry encourages learners to explore, observe, and mentally process questions or problems, while the teacher provides structured support without dominating the learning process (Aditomo & Klieme, 2020). Roll et al. (2018)explains that guided inquiry learning is student-centered, encouraging students to formulate questions, identify problems, propose hypotheses, and synthesize knowledge through independent learning.Barta et al. (2022) further supports that this approach is more effective in improving students' critical thinking skills than traditional methods such as lecturing or problem-solving.

Aligned with constructivist principles of student cognition Geng et al. (2024)describe critical thinking as a process involving curiosity, information-seeking, and analysis. Curiosity drves individuals to explore what works, what does not, and why. Information-seeking involves collecting relevant data, while analysis breaks down problems into manageable parts for deeper understanding. Wale & Bishaw (2020b) argue that guided inquiry learning positively impacts students' critical thinking abilities by encouraging them to participate actively in the learning process, think independently, and collaboratively construct new knowledge. This method helps students become more autonomous and responsible learners.

Guided inquiry shares strong alignment with constructivist learning, as it allows students to be active participants in the learning process. They engage in self-directed inquiry to solve problems and discover new concepts independently. Negrón et al. (2025) noted that guided inquiry emphasizes collaboration among students to solve problems in groups and construct understanding collectively. Singh et al. (2019) also stresses that learning is more effective when methods used require students to be active. Therefore, it is essential to update the instructional strategies employed by teachers. Teachers play a pivotal role in encouraging critical thinking, and active learning methods such as guided inquiry can significantly enhance students' critical thinking skills by allowing them to construct their own ideas and concepts. Chengere

et al. (2025) emphasize that guided inquiry instruction significantly improves students' critical thinking, especially when tailored to students' learning styles.

Nguyen & Le (2024) explains that within constructivist learning, the teacher's role is to assist students in smoothly constructing their own knowledge, rather than transmitting predefined information. According to Reeve & Cheon (2021), educators must be sensitive to students' thought processes and perspectives, avoiding rigid instructional models that limit student autonomy. In Economics education, this means that the teacher should not merely deliver content but adopt a method that fosters engagement and critical thinking. Adhikari et al. (2025) notes that students are more motivated and intellectually active when engaging learning strategies are used. Wale & Bishaw (2020c) also confirm that inquiry-based instruction enhances critical thinking across multiple dimensions, including interpretation, evaluation, and self-regulation.

The guided inquiry method inherently supports the development of critical thinking because it encourages students to investigate problems, formulate hypotheses, design experiments, collect data, and draw conclusions (Sari et al., 2021). The essence of inquiry-based learning lies in creating a student-centered environment where learners are guided just enough to independently discover scientific principles and conceptual understanding. This approach makes students more active during lessons, enhances their skills, strengthens cognitive performance, and sharpens their ability to think critically. Duran & Jourian (2023) also found that inquiry-based learning has a significant impact on students' critical thinking development, helping them become thoughtful, analytical, and reflective learners.

METHODS

His study investigates the influence of the guided inquiry learning method (X) on students' critical thinking skills (Y). The research focuses on senior high school students as the target population, specifically students in Grade XI of the Social Sciences (IPS) program at SMAN 7 Bandung, Indonesia. The research adopts a quantitative experimental approach, aiming to examine the causal relationship between the independent and dependent variables under controlled conditions.

The population in this study consists of all students in the 11th-grade Social Sciences program at SMAN 7 Bandung during the 2024/2025 academic year. From this population, a sample of 72 students was selected using a random sampling technique, ensuring that each student had an equal opportunity to be chosen. The sample was divided into two groups: Class I was assigned as the experimental group, which received instruction using the guided inquiry method, and Class H served as the control group, which received conventional learning. This design allows for the comparison of learning outcomes between the two instructional approaches.

To gather relevant data, the researchers employed a combination of documentation and test instruments. Documentation was used to collect background data and class records, while the main instrument used to measure students' critical thinking skills was a critical thinking test. The test was developed based on indicators of critical thinking and aligned with the learning objectives of the Economics subject. The test items were designed to assess students' abilities in analyzing problems, reasoning logically, drawing conclusions, and evaluating arguments.

The data analysis process involved several key statistical procedures. First, a test item quality analysis was conducted to ensure that the instrument items were valid and reliable. This was followed by a normality test to examine whether the data distributions conformed to the assumptions of parametric statistics. A homogeneity test was then carried out to determine whether the variances between the two groups were equal (Hakam et al., 2024. These preliminary tests were essential to validate the assumptions required for hypothesis testing.

To assess the effectiveness of the guided inquiry learning method, two main statistical tests were applied. The Paired Sample t-Test was used to analyze within-group differences by comparing students' pre-test and post-test scores in each class. This test determined whether significant improvement occurred within each group over time. Additionally, the Independent Sample t-Test was used to compare the post-test results between the experimental and control groups. This test provided insight into whether the differences in students' critical thinking outcomes were statistically significant due to the instructional method applied. Together, these analytical techniques offer a comprehensive evaluation of the impact of guided inquiry on critical thinking skill development.

RESULT

1. Overview of Students' Critical Thinking Skills

This study was conducted over three instructional sessions, focusing on the basic competency of analyzing the role of monetary and fiscal policies in the national economy. Prior to the learning sessions, both the experimental and control groups were administered a pre-test to measure their baseline critical thinking skills. At the end of the instructional sessions, a post-test was conducted to assess the extent of improvement following the intervention.

The results revealed a notable difference in students' critical thinking abilities between the two groups. In the experimental class, where students were taught using the guided inquiry learning method, there was a significant improvement in performance from the pre-test to the post-test. The control class, which received instruction through conventional teaching methods (primarily lectures),

demonstrated less substantial gains. The table below presents the comparative results of the average critical thinking scores for both groups:

Table 2. *Comparison of Critical Thinking Skills Between Experimental and Control Classes*

Class	Session	Test Type	Average Score	N-Gain	Category
Experimental	First	Pre-test	40.4	0.70	Moderate
	Last	Post-test	73.8		
Control	First	Pre-test	50.1	0.34	Moderate
	Last	Post-test	58.1		

Source: Processed Data

Based on Table 2, it is evident that there is a significant improvement in the critical thinking abilities of students in the experimental group compared to those in the control group. The experimental group experienced a score increase of approximately 33 points, while the control group showed a modest increase of only 8 points. This means the gain in the experimental group was nearly four times higher than that of the control group. These results strongly suggest that the guided inquiry learning method is considerably more effective than conventional lecture-based teaching in enhancing students' critical thinking skills, particularly in the Economics topic of Monetary and Fiscal Policies.

2. Data Analysis

The statistical analysis in this study includes several key tests: normality test, homogeneity test, and hypothesis testing. Data analysis was performed using SPSS version 27. To evaluate learning gains, the Paired Sample t-Test was used to compare pre-test and post-test scores within each group, while the Independent Sample t-Test was applied to assess the differences in normalized gains (N-Gain) between the experimental and control groups.

1.1 Normality Test

The Kolmogorov-Smirnov and Shapiro-Wilk tests were used to assess whether the data followed a normal distribution. A significance level (α) of 0.05 was used as the threshold. The hypotheses were formulated as follows:

1. H_0: The sample is drawn from a normally distributed population (Sig > 0.05)
2. H_1: The sample is not drawn from a normally distributed population (Sig < 0.05)

Table 3. *Normality Test of Critical Thinking Ability*

Class	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
1	0.109	36	0.200*	0.969	36	0.391
2	0.109	36	0.200*	0.965	36	0.311
3	0.099	36	0.200*	0.973	36	0.499
4	0.109	36	0.200*	0.965	36	0.311

Since all significance values were greater than 0.05, it can be concluded that the data in each group were normally distributed. This satisfies the assumption required for conducting parametric tests.

1.2 Homogeneity Test

Table 4. *Homogeneity Test Results*

Test Condition	Levene Statistic	df1	df2	Sig.
Based on Mean	0.000	1	70	1.000
Based on Median	0.000	1	70	1.000
Adjusted Median	0.000	1	68.813	1.000
Trimmed Mean	0.001	1	70	0.973

Source: Processed Data

The results show that the variance is homogeneous across groups, as all significance values are greater than 0.05. This confirms the appropriateness of using parametric tests that assume equal variance.

1.3 Hypothesis Testing

Two hypotheses were tested in this study:

1. **Hypothesis 1**
   H_0: There is no significant difference in students' critical thinking ability in the experimental group before and after the use of the guided inquiry method.
   H_1: There is a significant difference in students' critical thinking ability in the experimental group before and after the use of the guided inquiry method.

2. **Hypothesis 2**
   H_0: There is no significant difference in critical thinking ability between students in the experimental group (guided inquiry) and the control group (lecture method).
   H_1: There is a significant difference in critical thinking ability between students in the experimental group and those in the control group.

Table 5. *Paired Sample t-Test Results*

Group	Mean Difference	Std. Deviation	t-Value	df	Sig. (2-tailed)
Experimental (Pre–Post)	-33.39	6.99	-28.66	35	0.000
Control (Pre–Post)	-8.00	7.56	-6.35	35	0.000

Source: Processed Data

As the significance value (Sig. 2-tailed) is less than 0.05 for both groups, H_0 is rejected and H_1 is accepted. This indicates a significant improvement in critical thinking skills in both groups, but with a more substantial improvement in the experimental group.

Table 6. *Independent Sample t-Test Results*

Test	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	95% CI (Lower–Upper)
Equal variances assumed	0.000	1.000	13.386	70	0.000	15.667	13.332 – 18.001

Source: Processed Data

The results of the Independent Sample t-Test show a significance value of 0.000, which is well below 0.05, confirming that the difference between the experimental and control groups is statistically significant. Hence, it can be concluded that the guided inquiry method significantly outperforms the conventional lecture method in improving students' critical thinking in the context of learning Economics.

DISCUSSION

This study was conducted at SMAN 7 Bandung with the primary objective of investigating the impact of the guided inquiry learning method on students' critical thinking abilities within the context of Economics, specifically on the topic of "Monetary and Fiscal Policy." The study involved a comparison between two groups: the experimental group (Class XI I), which received instruction using the guided inquiry method, and the control group (Class XI H), which was taught using conventional lecture-based instruction. The design aimed to assess the extent to which the guided inquiry approach could foster meaningful improvement in students' higher-order thinking, especially in drawing logical conclusions, analyzing complex information, and applying economic principles.

The results of this study provide compelling evidence that the guided inquiry method significantly enhances students' critical thinking skills. A clear and measurable improvement was observed in the experimental group after the intervention. This improvement is particularly evident in students' ability to make inferences, reason analytically, and solve problems collaboratively, skills that are central to 21st-century education (Brookhart, 2010). The structured yet exploratory nature of the guided inquiry process allowed students to take greater ownership of their learning, which in turn promoted deeper cognitive engagement. Unlike passive learning environments, the guided inquiry model encouraged students to ask meaningful questions, explore economic phenomena, and synthesize their findings through reflection and group dialogue.

The alignment of these results with constructivist learning theory Bhuiyan et al. (2025) further strengthens the theoretical foundation of the study. Constructivism posits that knowledge is not passively received but actively constructed by learners through meaningful interaction with their environment. Within the guided inquiry framework, students constructed economic knowledge through authentic learning experiences such as analyzing policy implications, debating fiscal strategies, and linking macroeconomic concepts with everyday issues. These processes mirrored Vygotsky's notion of the Zone of Proximal Development (ZPD), where learners can reach higher cognitive levels when supported through scaffolding and social interaction.

Although the control group also exhibited a slight improvement in critical thinking, the gain was significantly lower than that of the experimental group. The lecture method, though efficient in delivering large volumes of information in a short period, tends to foster passive learning and rote memorization Roberts (2019). This instructional approach often fails to cultivate critical reasoning, as it leaves little room for students to investigate, hypothesize, or connect abstract concepts with real-life applications. As such, the control group's relatively stagnant development in analytical thinking highlights the limitations of traditional pedagogy in promoting the competencies required for complex problem-solving.

The disparity in normalized gain (N-Gain) scores between the two groups underscores the effectiveness of the guided inquiry method. Students in the experimental group reached a gain categorized as "moderate to high," indicating not only significant knowledge acquisition but also a deeper internalization of the subject matter. This finding is consistent with prior studies Fang et al. (2016) that have demonstrated how guided inquiry methods promote sustained improvements in both conceptual understanding and critical thought. Moreover, it supports the argument by Tiruneh et al. (2018) that critical thinking thrives in learning

environments that encourage curiosity, inquiry, and the active processing of information.

Despite its advantages, the implementation of the guided inquiry model presented several practical challenges. Effective application of this method depends on multiple factors: student preparedness, teacher competence, instructional time, and curricular flexibility. Teachers must be willing to shift their roles from authoritative knowledge-givers to facilitators of learning, a transition that requires both professional development and mindset change. Additionally, students who are accustomed to passive learning may initially struggle with the independence and responsibility required by inquiry-based instruction. Therefore, proper scaffolding, gradual adaptation, and supportive learning tools (such as concept maps, worksheets, or digital simulations) are essential to ensure successful outcomes (Munshi et al., 2023; Hakam & Hakam, 2024).

The implications of these findings are significant for curriculum designers, educators, and policymakers. As the global educational landscape shifts toward competency-based learning, it becomes imperative to embed teaching methods that foster critical thinking, creativity, and adaptability. Guided inquiry learning not only aligns with national curriculum standards that emphasize Higher Order Thinking Skills (HOTS), but also prepares students to be thoughtful, analytical, and socially responsible citizens. In economics education, where students must interpret data, evaluate policy impacts, and make informed decisions, cultivating such skills is particularly crucial.

Furthermore, this study highlights the importance of integrating formative assessments into the guided inquiry process. Continuous assessment allows teachers to monitor student progress, adjust instruction in real-time, and provide timely feedback that promotes metacognition. This iterative process helps students reflect on their thought processes, identify gaps in understanding, and refine their reasoning skills, key components of lifelong learning.

In conclusion, this research confirms that the guided inquiry learning method is substantially more effective than conventional lecture-based teaching in enhancing students' critical thinking abilities in Economics. It validates the theoretical underpinnings of constructivist pedagogy and offers practical insights for improving classroom instruction. As educational demands continue to evolve, adopting interactive and student-centered approaches such as guided inquiry can serve as a powerful catalyst for fostering analytical, independent, and reflective learners who are well-equipped to navigate the complexities of the modern world.

CONCLUSION

The findings of this research have firmly established that the guided inquiry learning method exerts a significant and positive influence on enhancing students' critical thinking skills, particularly in the context of learning Economics, with a focused examination on the topic of "Monetary and Fiscal Policy." This conclusion is supported by empirical data showing that students in the experimental class, who were exposed to guided inquiry-based instruction, experienced a notable and statistically significant increase in their ability to analyze, interpret, and evaluate complex information compared to their peers in the control class, who were taught using conventional lecture methods and exhibited only minimal progress.

Prior to the application of the guided inquiry method, both the experimental and control classes demonstrated relatively low levels of critical thinking, as measured by pre-test scores. However, following the implementation of the guided inquiry approach, students in the experimental class exhibited a substantial improvement in post-test performance, with the gain scores indicating a moderate to high level of effectiveness, in contrast to the control class which achieved a gain categorized as low. This stark contrast highlights the potential of guided inquiry not only to facilitate deeper learning but also to engage students more actively in the learning process through problem-solving, hypothesis testing, and reflective thinking, all of which are essential components of higher-order cognitive development.

Furthermore, the outcomes of this study resonate with key tenets of constructivist learning theory, particularly as articulated by theorists such as Vygotsky and Piaget, who emphasize that knowledge is not passively received but rather actively constructed by learners through interaction with their environment, collaboration with peers, and engagement in meaningful tasks. The guided inquiry method, by design, fosters a learning environment where students are encouraged to question assumptions, explore diverse perspectives, and draw logical conclusions, thereby allowing them to construct understanding in a manner that is both personally meaningful and academically rigorous.

In this regard, the effectiveness of the guided inquiry method can also be interpreted as a response to the demands of 21st-century education, which calls for learners who are not only knowledgeable but also capable of thinking critically, adapting to change, and solving real-world problems with creativity and independence. The success of this method in improving students' critical thinking skills demonstrates the need for a paradigm shift in teaching practices, from teacher-centered instruction toward student-centered learning environments that emphasize exploration, inquiry, and intellectual autonomy.

Therefore, it can be concluded that the guided inquiry learning method is a powerful and effective instructional strategy for enhancing critical thinking skills among high school students. Its implementation offers a practical solution for addressing the shortcomings of traditional teaching methods and provides a valuable framework for fostering deeper cognitive engagement, improving academic performance, and preparing students to navigate the complexities of contemporary life with a thoughtful and analytical mindset. In light of these findings, educators, school administrators, and curriculum developers are strongly encouraged to adopt and integrate guided inquiry methods more widely to ensure the cultivation of a generation of critical, creative, and lifelong learners.

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