Empowering Student Critical Thinking Skills: How Guided Inquiry Enhances Critical Skills in Economics

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ARTICLE INFO	ABSTRACT
	Purpose—Critical Thinking is an important skill that students must possess in understanding and applying the concept of Basic Accounting in Economic Subjects. Many students have difficulty analyzing financial transactions and compiling accounting reports. This study aims to analyze students' critical thinking skills in economics subjects of basic accounting materials. The learning process employs a guided inquiry model. **Methodology-** The study involved 32 senior high school students in Sidoarjo Regency. This research utilizes a quantitative descriptive method structured with a one-group pre-test-post-test design. Data collection was conducted through observation and testing, using observation sheets to assess the implementation of the learning model and question sheets to evaluate critical thinking skills. Quantitative analysis with statistical tests was employed to analyze the data. **Findings-**The findings revealed an improvement in students' critical thinking skills, as reflected in the n-gain score, particularly for the interpretation indicator, which achieved a value of 0.78, inference worth 0.77, analysis value of 0.64, and explanatory worth 0.85. These four indicators fall into the high category. The paired sample t-test results showed a significance value (2-tailed) of 0.000, indicating a substantial and significant difference between the pre-test and post-test scores. This demonstrates that implementing the guided inquiry model positively impacts enhancing students' critical thinking skills. **Significance**-The guided inquiry learning model can be used as an alternative in teaching activities to enhance students' critical thinking skills, particularly in basic accounting materials.

INTRODUCTION

Merdeka Curriculum emphasizes project-based learning and in-depth exploration to improve students' critical thinking skills. According to *Kemendikbud* and Nadiem Makarim, replacing the *2013* Curriculum with the *Merdeka* Curriculum in 2022 allows freedom of thought and innovation. This policy emerged as a desire to make a country intelligent, fair, wise, and wise. *Merdeka* Curriculum is a key foundation for enhancing students' creative and critical thinking skills. These abilities are crucial for fostering a collaborative and democratic learning environment, allowing students to engage in the learning process actively. (Xiaomeng & Ravindran, 2024).

The challenge lies in equipping the younger generation to be critical, active, and creative in education. Among the key skills prioritized since the 21st century is critical Thinking. This skill encompasses analyzing information, assessing arguments, and making well-reasoned decisions grounded in accurate data, ultimately leading to thoughtful solutions for complex problems (Dias-Oliveira et al., 2024). In the era of education shaped by the Industrial Revolution 4.0 and advancements in AI (Artificial Intelligence), referred to as Education 5.0 or even 6.0, students must be equipped to navigate future challenges. This is in accordance with research by Suwono et al. (Suwono et al., 2019). Their ability to evaluate their thought processes is crucial for problem-solving, decision-making, enhancing academic performance, applying knowledge in real-world contexts, and fostering evaluative and reflective Thinking in addressing various issues.

Research by Medriati et al. (Medriati et al., 2021) stated that learning involves efforts to provide stimuli, guidance, direction, and motivation to students to ensure the learning process proceeds effectively. Meanwhile, according to Dewi & Wardani (Dewi & Wardani, 2020), learning is a process designed by teachers to assist students in learning, including acquiring and processing knowledge, skills, and attitudes. Accounting is deeply connected to the preparation of a company's financial statements. It provides information about the company's financial condition, which serves as the basis for presenting accurate financial reports. The financial statements of service companies are carried out to determine a company's profit or loss, and this report is proof of accountability from the accountant or company manager (Parra et al., 2021). Before that, students need to understand basic accounting that supports individuals in thinking critically and using the right learning strategies. Each accounting material in economics requires a different approach to the learning process. Applying the appropriate strategy for each topic within accounting is essential for enhancing the learning process. This is because each subject has its unique characteristics and differences (Saadullah et al., 2024).

Essential accounting learning in senior high school includes introducing material about the accounting cycle presented systematically and sequentially (Yadav et al., 2024). Students are expected to grasp the accounting cycle and perform as skilled accountants in managing accounting transactions and addressing potential issues. Basic accounting education aims to familiarize students with real-world environments and encourage critical Thinking. Therefore, essential accounting learning can be defined as a teaching and learning process where teachers deliver foundational accounting topics, such as recording, identifying, and reporting financial transactions, enabling students to gain practical knowledge that can be applied in everyday life.

Teachers play a crucial role in the learning process as educators, bearing significant responsibility for enhancing student success. This places an essential obligation on teachers to guide students who struggle to understand the material during lessons. Accounting, in particular, is a challenging subject for many students, especially when analyzing basic accounting transactions (Gualdi, 2020). The limited development of students' critical thinking skills during the learning process, including in economics lessons, is a contributing factor. Preliminary research conducted at Al-Islam Krian Senior High School in Sidoarjo Regency revealed that students' critical thinking abilities are still relatively low. This is evident from the percentage of correct answers on interpretation indicators (41.5%), inference (48%), analysis (38%), and explanation (42.5%). The data on critical thinking skills were gathered through test results using a question sheet designed to assess critical Thinking in basic accounting materials. The pre-research findings indicate that students' ability to identify and understand problems remains suboptimal, particularly due to challenges in interpreting, analyzing, and distinguishing various pieces of information.

Critical thinking skills are not innate but skills that can be developed through learning. These skills involve a person's capacity to think logically and reflectively. These thoughts must be directed to the beliefs and decisions to be taken. According to Diana et al. (Diana et al. 2023), the theory of constructivism suggests that students can construct their knowledge through active and independent problem-solving activities grounded in the concepts and frameworks they understand. As a result, one effective method to enhance students' critical thinking skills and learning outcomes is implementing a guided inquiry learning model (Aydın & Yildirim, 2020). The inquiry learning strategy is a learning process that focuses on critical and analytical Thinking to explore and discover solutions and answers from a given case study. Critical thinking skills possessed by students can improve public speaking skills, broad Thinking, and solutions in facing problem challenges (Hakim et al., 2015; Kurniawan & Lestari, 2019; Surjanti et al., 2022; Yin et al., 2024).

One of the experts who discussed critical thinking skills is Facione (2020). According to him, six indicators characterize essential thinking skills, namely: (1) Interpreting refers to students' ability to comprehend and explain the meaning of an event, data, or experience; (2) Analysis, which is the student's skill in investigating the cause-and-effect relationship of a statement or event; (3) Conclusion, which is the ability of students to draw conclusions based on data, statement events, or events supported by relevant evidence and reasons; Evaluating, which is the student's skill in providing assessments to the truth of information obtained through inductive and deductive reasoning; (5) Explaining, namely students' skills in explaining an event or phenomenon in detail, based on solid concepts, methods, and considerations; (6) Self-regulation, which is the student's ability to ensure that they have understood an event or information (Facione, 2020).

According to Umar et al. (Umar et al., 2023), critical Thinking encompasses both dispositions, such as confidence, curiosity, and open-mindedness, as well as cognitive skills, such as interpretation, analysis, evaluation, and explanation. When students master critical thinking abilities, they will have broad and practical thinking skills in dealing with a problem in the real world or through case studies. Critical thinking skills in basic accounting are often synonymous with solving complex business problems. Case studies of issues in a variety of basic accounting materials can improve critical thinking skills so students can play an active role in the learning process, understand the relevance of accounting to the real world, and improve their understanding of basic accounting concepts with structured learning models or guided inquiry (Nisa et al., 2019).

Learning with a guided inquiry model involves a process through guidance that aims to help students acquire new knowledge. This process can also help students enhance their critical thinking skills (Muhamad Dah et al., 2024). The inquiry model can also be used in the learning process to assist students in understanding various basic accounting concepts through teacher guidance, allowing them to acquire new knowledge. In addition, this model supports the development of an economic application mindset by placing students as active learners. This model encourages students to understand topics in depth and increases their motivation to improve their understanding of a concept and get good learning results. However, it can enhance their critical thinking skills (Imjai et al., 2024). The inquiry model, implemented with teacher guidance, is a learning approach designed to improve students' thinking skills. This is achieved through its focus on exploration and discovery activities, making the learning process more engaging and profound (Ma, 2023).

The guided inquiry model applies a strategy that focuses on the maximum activity of the learner, primarily through searching and finding. This approach places students as learning subjects, where all activities are directed to find answers to questions asked independently. In this way, the guided inquiry model seeks to encourage student confidence (Egitim, 2024). The purpose of applying this model is to develop intellectual abilities as part of the mental aspect of students (Gunawan et al., 2019). As a result, inquiry learning not only aims to make students master the subject matter but also to utilize the potential they have for exploration and problem-solving.

According to Triyono & Suparman (Triyono & Suparman, 2019), guided inquiry learning can enhance reflection skills. Reflection in learning activities is implemented alongside planning and monitoring, recognized in various studies as metacognitive skills integrated into the teacher-guided inquiry process. This aligns with research conducted by Makmur et al. (Makmur et al., 2019), which states that implementing the Guided Inquiry Learning Model is essential for teachers and students. For students, this model aids in

developing critical thinking skills by engaging in focused observations to draw inferences or generalizations. It aims to help students understand processes, observe events or objects, and formulate relevant generalizations.

Meanwhile, teachers serve as facilitators, managing specific aspects of learning such as events, data, and materials while also leading and guiding classroom activities (Suwono et al., 2020). Each student works to construct meaningful patterns based on their classroom observations. The teacher encourages all students to share their observation results, enabling the entire class to benefit from the shared insights.

This study's novelty lies in using a guided inquiry learning model to evaluate students' thinking skills in basic accounting materials. This approach remains uncommon in existing literature. Most prior research has primarily concentrated on applying guided inquiry in science (Gunawan et al., 2019; Indana et al., 2020; Pursitasari et al., 2020). Thus, this study broadens the application of the guided inquiry model to a social context, particularly in basic accounting materials. It aims to contribute significantly to developing innovative and effective learning strategies that enhance students' critical thinking skills beyond the realm of science.

Applying the guided inquiry model to basic accounting materials can increase the learning innovation level and impact students because this model focuses on actively involving students in the learning process with structured teacher guidance. In addition, the guided inquiry method not only updates the learning method but also makes learning more meaningful and empowers students. By training students to think critically by asking, analyzing, and finding Solutions, this approach can effectively address the weaknesses in traditional teaching methods.

Based on the above explanation, this study aims to assess students' critical thinking skills in basic accounting materials through the guided inquiry model, evaluate the improvement of students' critical thinking skills across each indicator, and examine the impact of the guided inquiry learning model on enhancing critical thinking skills.

METHODOLOGY

Research and Design

This study uses a quantitative descriptive method with a one-group pre-test–post-test design. This design measures students' critical thinking skills on basic accounting material before and after implementing a guided inquiry learning model to evaluate its effectiveness. The primary advantage of this design lies in its simplicity and ability to highlight the difference in student performance before and after the intervention. Statistical analysis, such as paired samples t-tests, is applied to ensure that any observed changes are statistically significant.

Sample and Population

The study was conducted in grade 12th in Al-Islam Krian High School with a total student population 512. Still, the research sample focused on a class comprising 32 students from grade 12th in Al-Islam Krian Senior High School. The sampling method used was purposive sampling, which involves selecting participants based on specific criteria that align with the research objectives. This class was chosen because it represented the population's characteristics relevant to the research, such as age, educational level, and academic abilities. Additionally, selecting one class allowed for practical data collection within the constraints of time and resources, while ensuring consistency in the curriculum and instructional approach across all students. This approach follows Creswell's (2002) recommendation that purposive sampling is suitable for studies targeting specific subgroups within a population. Although the sample represents only a tiny portion of the population, the data analysis was conducted rigorously to maintain validity and reliability within the study's context.

Instrument and Data Collection

Data were collected through observation and testing adapted and developed by (Faria & Lobato Miranda, 2024). The observation technique was used to monitor the implementation of the learning process with instruments in the form of observation sheets. In contrast, the testing technique assessed critical thinking skills

using pre-test and post-test descriptive questions consisting of 10 items. The observation technique involves pre-tests and post-tests to measure students' critical thinking skills before and after implementing the learning model. The test instrument was validated by two experts, yielding very satisfactory results (Saputra et al., 2024).

Data Analysis

Statistical data analysis was carried out using the SPSS 25.0 application to test the hypothesis, which included a normality test and a t-test (paired samples t-test). The normality test used the Shapiro-Wilk method to determine whether the data had a normal distribution. Suppose the test results show a value of Sig. >0.05, then it can be concluded that the data is normally distributed (Fiandini et al., 2024). The paired t-test between the pre-test and post-test results was carried out to compare students' average critical thinking ability. Based on the t-test results following the Indonesian SPSS guidelines, where the probability value or Sig. (2-tailed) < 0.05, then Ha is accepted. This shows that the guided inquiry model applied during learning influences students' skills, especially critical thinking skills. Conversely, if the probability value or Sig. (2-tailed) > 0.05, then Ha is rejected (SPSS Indonesia, 2020).

The analysis of learning implementation is conducted by observing the progression of the learning process (Aydın & Yildirim, 2020). Additionally, scores are assigned based on the criteria met by the teacher, following the provided rubric. Subsequently, the percentage of learning implementation is calculated using the formula below.

$$\% \, Implementation = \frac{the \, number \, of \, points \, obtained}{maximum \, score} \times 100\%$$

The scores obtained are then categorized according to the classifications presented in Table 1 below:

Table 1. Likert Scale Score

Percentage	Category
0% - 20%	Very low
21% - 40%	Low
41% - 60%	Average
61% - 80%	Good
81% - 100%	Excellent

Source: (Anjaria, 2022)

The learning model implementation percentage is considered good if it is≥ 61% (Triyono & Suparman, 2019). The analysis of students' critical thinking skills is based on the pre-test and post-test scores derived from scoring each question item according to the provided rubric.

$$Value = \frac{the \, number \, of \, points \, obtained}{maximum \, score} \times 100\%$$

Critical thinking skills can be enhanced by calculating the n-gain value. This value reflects the difference between the pre-test and post-test results. According to Triyono & Suparman (Triyono & Suparman, 2019), Calculating N-Gain can provide a clear picture of the level of development or improvement achieved in learning activities using the guided inquiry method. The calculation is performed using the following formula:

$$<g> \frac{post-test \, score - pre \, test \, score}{maximum \, score - pre \, test \, score}$$

The obtained (g) value is then classified according to the categories presented in Table 2 below:

Table 2. Gain Score Category

Value <g>	Category
<0,3	Very low
0,7 > <g> ≥ 0,3	Medium
<g> > 0,7	High

Source: (Saputra et al., 2024)

If the (g) value falls within the range of (0.7 > <g> ≥ 0.3), indicating a medium category, or if the value is > 0.3, placing it in the high category, it can be concluded that there has been an improvement in skills following the implementation of learning using the guided inquiry model.

FINDINGS

Implementation of the Guided Inquiry Learning Model

This study applies the syntax of the guided inquiry model based on the opinions of Yanti et al. (Yanti et al., 2019), which consists of five phases. The implementation of each phase of this learning model was observed by three observers using an observation sheet during two sessions. All classroom learning activities were conducted offline, focusing on the factors influencing basic accounting activities. The percentage of the learning model's implementation during these two sessions is shown in Table 3 below:

Table 3. Percentage of Implementation of Guided Inquiry Learning Model

Rated Syntax	Implementation	
	Meeting 1 (%)	Meeting 2 (%)
Phase 1: introduce the problem	92,8	95,5
Phase 2: collect data and verification	95,3	98,8
Phase 3: collect experimental data	86,7	96,4
Phase 4: organize and formulate explanations	92,8	100
Phase 5: evaluate the investigation process	94,1	100
Average	92,34	98,14

The data in Table 3 above shows the percentage of learning implementation during the two meetings by applying a guided inquiry model. The first meeting had an average rate of 92.34%, and the second 98.14%. The percentages obtained show that meetings 1 and 2, using the guided inquiry learning model, achieved very good criteria, contributing to developing students' critical thinking skills. Student activities in phase 1, as indicated by the data, supported essential thinking skills, as students could formulate problems and interpret them based on the presented phenomena. In phase 2, students were asked to formulate hypotheses, demonstrating their ability to infer. Phases 3 and 4 were crucial in enhancing students' critical thinking skills. In phase 3, students collected data to test their hypotheses through experiments, while in phase 4, they analyzed and concluded the results of the experiments to improve their critical Thinking further. Another study emphasized that phase 4 in the guided inquiry learning model is the most dominant (Armstrong et al., 2020).

This study investigates four indicators of critical thinking skills, as Facione (2020) outlined. These indicators are interpretation, inference, analysis, and explanation. The instrument used consisted of 10 descriptive questions covering these four indicators. Each indicator was assessed based on students' responses, with scores assigned according to the provided rubric. The average pre-test and post-test scores for students' thinking skills, systematically processed in terms of these indicators, are presented in Figure 1 below:
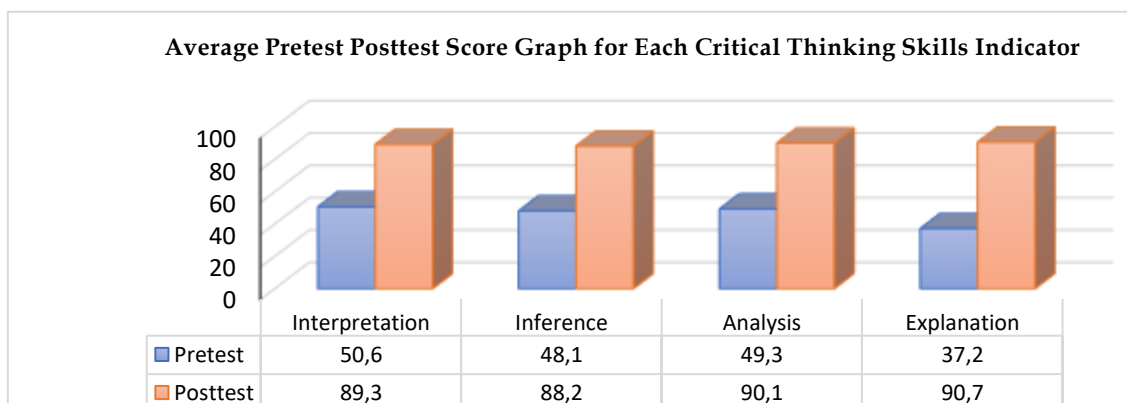
Figure 1. Average Pre-test Post-test Scores for Each Critical Thinking Skills Indicator

The figure above shows that the indicators of critical thinking skills, namely interpretation, inference, analysis, and explanation, have a higher post-test score graph compared to the pre-test score. This shows that there is an increase in critical thinking skills with the guided inquiry method in each indicator, demonstrated by the results of the n-gain score presented in Table 4 below:

Table 4. Critical Thinking Skills n-gain Score for Each Indicator

No.	Komponen KBK	Average Value		n-gain	Criteria
		Pre-test	Post-test	Score	
1	Interpretation	50,6	89,3	0,78	High
2	Inference	48,1	88,2	0,77	High
3	Analysis	49,3	90,1	0,64	High
4	Explanation	37,2	90,7	0,85	High

Table 4 shows the result of the n-gain score on the critical thinking skills indicator, including interpretation (0.78), inference (0.77), analysis (0.64), and explanatory (0.85) with high criteria. To find out the significant value of the results of the pre-test and post-test scores, see the table below:

Table 5. Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pre-test	.155	32	.059	.945	32	.075
Posttest	.114	32	.200*	.911	32	.202

Table 5 above displays the results of data analysis conducted using SPSS 25.0. It reveals a significance value of (0.075) for the pre-test and (0.202) for the post-test. Since these significance values exceed 0.05, it can be concluded that the data follows a normal distribution. Consequently, further testing can proceed using the paired sample t-test. The results of this t-test are presented below.

Table 6. Test Result of Pre-test Post-test One-Sample Test

	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Pretest	36.478	31	.000	49.37500	46.6144	52.1356
Posttest	72.780	31	.000	90.15625	87.6298	92.6827

Table 6 presents the pre-test and post-test results using a one-sample t-test. The pre-test yielded a t-value of 36.478 with 31 degrees of freedom (df), and the significance value (Sig. 2-tailed) was .000, indicating that the

difference in pre-test scores is statistically significant. The mean difference was 49.375, with a 95% confidence interval ranging from 46.6144 to 52.1356. For the post-test, the t-value was 72.780 with 31 degrees of freedom, and the significance value was also .000, suggesting a statistically significant improvement. The mean difference was 90.15625, with a 95% confidence interval between 87.6298 and 92.6827. These results suggest a substantial increase in learning outcomes from the pre-test to the post-test.

DISCUSSIONS

This study applies a guided inquiry learning model to analyze students' thinking skills; this is supported by research (Gunawan et al., 2019; Indiana et al., 2020; Pursitasari et al., 2020) which explains that the application of the guided inquiry model to learning can improve critical thinking skills in students in the fields of science and research by (Campbell et al., 2024; Wirantaka et al., 2024) explain that guided inquiry models can improve students' thinking skills in mathematics. This research is a novelty by focusing on Economics subjects of Basic Accounting material. Through the results of observations and interviews with Economics teachers, students still find it challenging to understand the material because teachers apply contextual learning methods through books and memorize accounting financial cycles. Students cannot also think critically about the application of basic accounting. Therefore, the researcher conducted research by applying a guided inquiry model on basic accounting materials to improve students' critical thinking skills so that they can apply solutions to solve financial accounting cycle problems in daily life. This research is expected to significantly contribute to developing innovative learning strategies that are relevant and effective in improving students' critical thinking skills outside the dominant science. This can be seen from implementing the guided inquiry model through the results of the n-gain score and the significance of the pre-test, post-test, and t-test scores using the SPSS 25.0 application.

In measuring the level of students' critical thinking skills using the guided inquiry method in the Economics subject of Basic Accounting material, according to Facione (2020), there are four indicators: interpretation, inference, analysis, and explanation. The results of this application can be seen in Figure 1 above, which illustrates that each indicator shows an increase in critical thinking skills. Descriptively, the average pre-test and post-test scores for students' critical thinking skills have risen, indicating a noticeable difference. However, inferentially, this increase does not necessarily indicate a significant change. A paired sample t-test was conducted to assess the improvement. The average results showing improvements in critical thinking skills across these indicators are supported by research by Yanti et al. (Yanti et al., 2019). This indicates that the average achievement of critical thinking indicators has improved and become more effective after implementing the guided inquiry learning model in the learning process. The explanatory essential skills of thinking indicator showed the most significant average increase in scores at 90,7 compared to the other indicators, while the inference indicator showed the smallest improvement at 88,2. The enhancement of critical thinking skills is measured using the n-gain score, which helps assess the difference between the post-test and pre-test scores.

Interpretation is the ability to formulate a problem from a problem or phenomenon, which aims to understand and explain the meaning of the problem (Facione, 2020). In the interpretation indicators in the questions, students are asked to formulate problems and determine experimental variables. This indicator achieved an n-gain score 0,78 (Table 4), categorized as high. This score indicates a significant improvement in students' ability to interpret a problem, as reflected in the increase from an average pre-test score of 50,6 to a post-test score of 88,3. The improvement is attributed to students gaining a deeper understanding of the concepts through the guided inquiry learning model, allowing them to develop problem formulations involving manipulation and interconnected response variables. This was facilitated by their experience in conducting experiments with these variables. This explanation aligns with the perspective of Davies et al. (Davies et al., 2024), which states that students can understand the reason and meaning of the concept of a problem or phenomenon that occurs and can observe the phenomenon presented in the question and then write a formulation of the problem through interpretation indicators.

Inferential is searching for and identifying the essential elements needed to draw conclusions or build provisional conjectures (hypotheses) while referring to relevant information as a reference basis. In the context of pre-test and post-test questions, inference indicators assess students' ability to formulate hypotheses and draw conclusions. Initially, the students' pre-test score for the inference indicator was relatively low at 48,2. This was due to their difficulty linking the response variable with the manipulation variable required to draw accurate conclusions, resulting in incorrect answers. However, after implementing the guided inquiry learning model, the average post-test score significantly increased to 88,2. This improvement occurred because students gained hands-on learning experiences in formulating hypotheses and conclusions, enabling them to provide more accurate answers. The inference indicator achieved an n-gain score of 0,77 (Table 4), which falls into the high category. The guided inquiry learning model effectively enhanced critical thinking skills for inference indicators, fostering students' confidence in their ability to conclude (Fernandes et al., 2024).

The analysis identifies relationships between questions, statements, concepts, descriptions, or other forms. Analytical indicators are evaluated through description questions that ask about the mechanism of an experiment. The analytical indicator obtained an n-gain of 0,80 (Table 4), which belongs to the high category. This can be seen from the students' pre-test score, which is 49,3 because students do not give complete answers, so they do not reflect the optimal analysis process, in addition to the lack of accuracy and the tendency to provide answers that are too short is the cause of less than optimal results. The post-test score produced by students increased to 90,1 because they had carefully understood the analysis of a problem after implementing guided inquiry learning. Through teacher guidance, students get reliable information to support their discoveries. Analysis indicators are essential in explaining a problem carefully and thoroughly because analysis is a critical thinking skill that students must understand (Oo et al., 2024).

Explanatory is the ability to convey the results of one's reasoning with reasons supported by strong, directed evidence and considering conceptual, methodological, and evidentiary aspects. The explanatory indicator achieved an n-gain score of 0,85 (Table 4), which falls into the high category. This indicator is assessed through a question item that tests the relationship between the conclusions of the experiment results and the theory that has been studied previously. The average pre-test score in this indicator is low, 37,2 because students have not been able to relate the experimental conclusions to the theory that has been obtained. However, the post-test scores of the students increased to 90,7 because the teacher guided the students in explaining the relationship between the experimental conclusion and the theory studied. The explanatory indicator, with an n-gain score of 0,85, is classified in the high category. This indicates that students can connect the experimental conclusions and the studied theory (Zeng & Ravindran, 2025).

Learning activities incorporating an innovative guided inquiry model are structured to actively engage students and foster the development of critical thinking skills in accounting topics (Costa & Pinheiro, 2021). This approach enhances students' critical thinking abilities by employing active learning techniques such as utilizing real-world and practical examples to clarify abstract concepts, facilitating group discussions, conducting simulations, and incorporating reflective practices under teacher guidance. These skills enable students to explore better and realize their potential (Rossouw & Steenkamp, 2025).

The impact of the guided inquiry model on students' critical thinking skills was evaluated through hypothesis testing using a paired sample t-test. A prerequisite for this test is that the data must follow a normal distribution. To verify this, a normality test was conducted before further analysis. If the normality test results indicate a significance value (Sig.) > 0.05, the data is deemed to be normally distributed (Fiandini et al., 2024). The normality test results, conducted using the Shapiro-Wilk method, are presented as follows.

According to the Indonesian SPSS guidelines, The results of the one-sample test on the pre-test data (Table 6) showed that the average pre-test score (49.375) was significantly different from the test value of 0 (t (31) = 36.478, p < 0.001). These findings show that before applying the guided inquiry model, students already have basic abilities in critical Thinking. The 95% confidence interval (46.6144 to 52.1356) further reinforces that the average pre-test score is statistically well above the test score. Therefore, students' critical thinking skills before the intervention are pretty good.

In the results of the one-sample test Post-test (Table 7), the average score increased significantly to 90.156, with the test results showing a very significant difference to the test score of 0 (t (31) = 72.780, p < 0.001). This

increase indicates that applying the guided inquiry model has improved students' critical thinking skills. The 95% confidence interval (87.6298 to 92.6827) supports that the post-test score is much higher than the pre-test. Thus, the guided inquiry model has proven effective in developing students' critical thinking skills, as seen from the significant difference between the pre-test and post-test results. This is supported by research findings that highlight the effectiveness of these phases in fostering critical thinking Diana et al. (Diana et al., 2023). Applying the guided inquiry model's syntax, which achieves at least a "good" category encompassing investigative exercises through question formulation, hypothesis development, data collection and analysis, and result interpretation, holds significant potential for enhancing critical thinking skills. Other studies by (Dewi & Wardani, 2020; Rossouw & Steenkamp, 2025). also demonstrate that using the guided inquiry model enhances students' critical Thinking. This is evident from the increase in critical thinking skills, as reflected in the average n-gain score, which falls in the high category.

CONCLUSION

Based on the data analysis and discussion of the research findings, students' critical thinking skills in the overall reaction rate material have improved. This improvement is reflected in the n-gain scores for each indicator: interpretation (0.78), inference (0.77), analysis (0.80), and explanation (0.86), all of which fall into the high category. The results of the paired sample t-test revealed a significance value (2-tailed) of 0.000, indicating a significant difference between the pre-test and post-test scores. Guided inquiry, particularly with strategies like advanced organizers and reading assignments, has consistently enhanced students' critical thinking skills. This approach offers structured support and promotes active engagement, making it an effective method for fostering higher-order thinking skills. These findings confirm that applying the guided inquiry model in teaching positively impacts improving students' critical thinking abilities.

Based on the research findings, the following suggestions can be made: (1) For economics teachers, the guided inquiry learning model can be used as an alternative in teaching activities to enhance students' critical thinking skills, particularly in basic accounting materials. (2) For future researchers interested in studying students' critical thinking skills, Facione recommends utilizing all six indicators of critical thinking skills rather than focusing on just four indicators. This approach could provide broader insights.

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